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## **List of Publications Reflected in the Present Issue**

1. Pediatric Cardiology, #5, 2011.
2. Gaenati Herald, volume 3, #3, 2010; volume 3, #4, 2010.
3. Experimental and Clinical Medicine, #1-6, 2010; #1, 2011.
4. Tbilisi State Medical University's Collection of Scientific Works, #43, 2009; #44, 2010.
5. Caucasus International University Herald, # 2, 2010.
6. Cardiology and Internal Medicine, #3-4(31-32), 2010.
7. Critical Care & Catastrophe Medicine, #5, 2009; #6, 2010.
8. Science and Technologies, #10-12, 2009; #7-9, 2010.
9. Georgian Journal of Radiology, #1-2(34-35), 2010.
10. Proceedings of the Georgian National Academy of Sciences. Biomedical Series, #1-2(36), 2010.
11. Bulletin of the Georgian National Academy of Science, volume 5, #1, 2011.
12. Georgian Pediatrician, #1-4, 2009; #1-2, 2010.
13. Materials of the II International Congress of Respiratory Association of Georgia, Batumi, 2010.
14. Georgian Medical News (GMN), #1-11, 2010; #1-2', 2011.
15. Georgian Scientific News (GSN), #1(5), 2010.
16. Transactions of Technical University of Georgia, #1(479), 2011.
17. Social, Ecological and Clinical Pediatrics, #13-8-7, 2011.
18. Materials of Sukhishvili University International Scientific Conference, 2010.
19. Scientific Works of Sukhisvili University, 2009.

## **SUBJECT ENTRIES**

- G.13.1. Internal Diseases**
- G.13.2. Surgery**
- G.13.3. Pediatrics, Obstetrics and Gynecology**
- G.13.4. Stomatology**
- G.13.5. Roentgenology and Radiology**
- G.13.6. Public Healthcare**

## 8.G.13.1. Internal Diseases

**8.G.13.1.1. Difficulties in the treatment of patients with chronic hepatitis C and ulcerative colitis.** /T. Gegeshidze, E. Vashakidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 27-30. – geo.; abs.: eng.

According to the WHO data, 3-4 million people worldwide are being affected annually with HCV infection. Official registration of HCV infection in Georgia started in 1996. NCDC states that number of chronic cases increased from 6.9 to 44.86 during the period of 2001-2008. Cases of chronic hepatitis C and other chronic diseases are quite common. Such a mixture of diseases makes not only the treatment but also management of such patients rather difficult. We are pointing out the medical history of the patient with ulcerative colitis and hepatitis C virus. Antiviral therapy for hepatitis C was stopped due to decreased blood indices as well as for worsening of the intestinal syndrome. Nowadays antiviral treatment of chronic hepatitis C, as well as follow-up, remains a problem during ulcerative colitis as an underlying disease, as the treatment indicated for UC inflates the damage of the liver, due to its hepatotoxic effect.

Auth.

**8.G.13.1.2. The etiological structure and antibiotic sensitivity of bacterial prostates.** /K. Aphridonidze, M. Dzagnidze, N. Cholokashvili, E. Mirvelashvili, E. Kikacheishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 11-14. – geo.; abs.: eng.

In the study, the chronic prostatitis microbe and the prostate secretion of 84 patients were tested bacteriologically. From the prostate secretion of all the patients the microorganisms of different genera were grown up: TRV-38%, *Staphylococcus aureus* – 35.7%, *Enterococcus fecallis* – 14.2%, *Staphylococcus epidermidis* – 11.9%. Gram-positive microbes have high sensitivity to penicillin, makropan and tarivid and resistance to kanamycin, gentamicin and ampicillin.

Auth.

**8.G.13.1.3. Risk assessment and management in case of asymptomatic high-degree AV blocks.** /I. Venkata Kiran Kumar Raju, K. Jalabadze, K. Etsadashvili, I. Avaliani/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp 52-53. – eng.

Permanent pacemaker implantation is a well-established indication for the patients with high degree AV block and syncope, but there are the controversial data about the device implantation for the patients with asymptomatic high degree AV block. We report the case of 56-old patient with accidentally diagnosed asymptomatic high degree AV block, (proximal location) according to surface ECG. During the EP study 6 second- long asystole was developed. This case stresses on misleading interpretation of ECG to assess the risk and further prognosis in such cases.

Auth.

**8.G.13.1.4. Clinical and laboratory peculiarities of the anthrax infection in Georgia.** /E.Vashakidze, T. Gegeshidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 55-57. – geo.; abs.: eng.

The aim of the study was to evaluate clinical and laboratory peculiarities of the anthrax (infection based on the infectious diseases, AIDS and Clinical Immunology Scientific Centre data. 17 patients underwent follow-up during 2007-2008 years. 14 (82.3%) out of 17 were males and 3 (17,7%) out of 17 were females. In the majority of the patients rout of infection was the contact with the infected animal and/or their products. In one case, the rout of infection was the contact with the contaminated soil (during rural activities In 3 (17.6%) patients the disease progression was mild, in 8 (47.1%) - moderate, and in 6 (35.3%) - severe. The diagnosis was confirmed on the basis of clinical and epidemiological data. Bacteriological and/or PCR analyses of the carbuncle contents were done for the identification of *B. anthracis*. Patients with mild and moderate severity were treated with oral antibiotics of the ftorquinolone group, namely – ciprofloxacin 1000 mg/day for 10-14 days. In-patients with severe disease combination of two antibiotics-ciprofloxacin and benzyl penicillin were administered. At the parallel I/V transfusion of glucose and electrolytes were managed.

Auth.

**8.G.13.1.5. Comparative results of treatment of patients with cerebral stroke in neurology department and hospital with a stroke unit.** /I. Verulashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 58-60. – geo.; abs.: eng.

A comparative analysis of treatment results in patients with an acute stage of cerebral stroke treated in 2007-2008 both in the N. Khipshidze Central University Hospital by a stroke unit, equipped with high-tech equipment and staffed with specialists of a multidiscipline team (158 patients; mean age  $56.3 \pm 7.5$ ) and in a neurology department of Municipal Hospital #1 (169 patients; mean age  $53.83 \pm 6.1$ ) was conducted. The obtained data prove the fact that a medical aid to cerebral stroke patients rendered in the hospital with a stroke unit, has apparent advantages: therapy is accompanied by a good regress of a neuralgic deficit (correspondingly 76% to 28%) and somatic complications (correspondingly 7% to 2.5%). Lethality (correspondingly 3.2 to 5.8 lethal events per 100 patients), invalidation and domestic incapability of a patient to the end of the third month of a disease onset are greatly decreased in-patients treated in stroke unit. An advantage of stroke units is that this specialized care can be given to a broad spectrum of patients regardless of the interval after stroke or severity of neurological impairments.

Auth.

**8.G.13.1.6. Acute toxic damage of liver: pathogenesis and new ways of treatment.** /D. Tophuria, R. Khetsuriani, A. Shukakidze., N. Mzareulishvili, Z. Tophuria, G. Didava/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 60-63. – geo.; abs.: eng.

Pathomorphological changes of the liver due to the action of numerous toxic agents (CCL4, various medications) are generally manifested by two types of damages, the so called hepatocellular or cytotoxic and cholestasis. In serious toxic damage cases may develop massive necrosis and fulminant liver insufficiency, the most frequent causative toxic substances being halothane, isoniazid, phenytoin and organic solvents. Mammalian mature cells do not have affinity to division and reparative regeneration, but hepatocytes in this case serve as unique objects; oval progenitor cells can proliferate and differentiate both in hepatocyte and bile secreting epithelial cells. These cells are highly resistant to hypoxic conditions and easily cultivate *in vitro* conditions. By an electron microscopy study of progenitor cells, a high number of oval mitochondrias and endoplasmic reticulum microtubules can be observed. According to these findings, we can postulate that such ultrastructural changes are leading to high functional activity of cells and reparative regeneration process intensity.

Auth.

**8.G.13.1.7. Main factors in the development of local hyperthermia-induced morphological changes in the cerebral tissue of rats.** /H. Bicher, N. Mitagvaria, I. Kvatchadze, R. Khetsuriani, A. Shukakidze, I. Lazrshvili, M. Arabuli, Ts. Khomeriki/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 17-18. – eng.

In regard to CNS, there are some discrepancies in published data concerning irreversible damages induced by local hyperthermia. We studied sensitivity of cerebral tissue to hyperthermia, its immediate effect, manifested by histological changes and the role of local blood flow, blood rheological properties, and the possible role of free radicals in development of mentioned damages. Through the cranial window local area of cerebral surface was irrigated by artificial CSF heated up to 41, 43 or 45°C. Serial brain coronal sections 50 mm thick were analyzed under light microscope. ICBF was measured by the hydrogen clearance method. Blood rheological properties were changed by injection of Dextran T-500 and free radicals existence was controlled by DMSO injection. High sensitivity of cerebral tissue to hyperthermic exposure even at a temperature of 41°C has been confirmed. We consider cerebrovascular thrombosis as one of the most significant complication of brain hyperthermia. Deteriorated blood rheological properties aggravates hyperthermia-induced cerebral lesion. Administration of free radicals scavengers can partially lessen hyperthermia induced cerebral lesion.

Auth.

**8.G.13.1.8. Prevalence of depression and anxiety in postmenopausal women.** /T. Gegenava, M. Gegenava, G. Kavtaradze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 24-27. – geo.; abs.: eng.

Depression affects twice as many women as men. Midlife is often considered a period of increased risk for depression in women. Menopause is often believed to be a time when women are more likely to become depressed. This period is associated with gradual declines in estrogen levels. Some studies suggest that changes in estrogen levels are associated with onset of depression. The symptoms of depression in menopause or perimenopause are: two or more weeks of depressed mood, decreased interest or pleasure in activities, change in appetite, change in sleep patterns, fatigue or loss of energy, difficulty concentrating, excessive feeling of guilt or worthlessness, thoughts of suicide, extreme restlessness and irritability. Many symptoms of menopause overlap with symptoms of depression, including problems with sleep, physical symptoms such as hot flashes, fatigue, irritability, anxiety and difficulty concentrating. Research was performed in 88 postmenopausal women. Depression was assessed by the Beck Depression Inventory, which includes 21 questions and assesses the state of patients during the last two weeks. Anxiety was assessed by Spilberger's State and Trait Anxiety Inventory. Our study demonstrated that depression was revealed at high and moderate degree in postmenopausal women  $\chi^2 = 11.92$  ( $p=0.008$ ), as well as anxiety was revealed at high degree in this group  $\chi^2 = 5.73$  ( $p = 0.058$ ). Sleep disorder was found in 75% postmenopausal women. Our study demonstrated that there is a high prevalence of depression and anxiety in postmenopausal women.

Auth.

**8.G.13.1.9. Assessment of heart rate variability in chronic heart failure.** /N. Mamamtavrishvili, P. Matchavariani, N. Nakashidze, R. Abashidze, L. Burduli, A. Kvirkvelia/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 84-87. – geo.; abs.: eng.

The making of prognosis of patients with chronic heart failure and the establishment of independent predictors of mortality are among the most urgent clinical objectives. To date it has been established that, together with many factors, the analysis of the state of the neurovegetative control of the heart, in particular, the spectral analysis of heart rate variability (HRV) with long-term (24-hour) ECG recordings, makes it possible to assess the risk of unfavorable outcome in CHF patients. A depression of the heart rate variability indices in patients with chronic heart failure against the norm has been found to be in correlation with the disease severity and may be considered as an independent prognostic marker of the unfavorable outcome.

Auth.

**8.G.13.1.10. Clinical characters and treatment of varicella-zoster virus infection at the modern stage.** /T. Megrelishvili, E. Vashakidze, E. Pachkoria, E. Chilindrishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 88-89. – geo.; abs.: eng.

Tendency of varicella-zoster virus infection among children and adults has increased in Georgia in recent years. According to the data presented in the above-mentioned research, severe hemorrhagic form of varicella-zoster virus infection may develop in immunocompetent adults. The efficiency of treatment depends on timely diagnosis and adequate antiviral therapy of the disease.

Auth.

**8.G.13.1.11. The effect of calcium antagonists to the amount of monoamines in different structures of the brain of albino rats under extreme conditions.** /A. Mirzayeva, A. Baghirov, G. Ganiyeva, V. Asmatov, M. Ganiyev/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 93-96. – eng.

Taking into consideration the necessary role of monoamines in the realization of brain functions, the effect of one-time and prolonged administration of calcium antagonists in albino rats under extreme conditions on the amount of monoamines in different structures of brain (norepinefrin, serotonin, dopamine) was studied. Based on the neurochemical study results, it was detected that under extreme conditions, the acute and chronic experiments, the amount of norepinefrin and dopamine decreased and the amount of serotonin increased. Under extreme conditions, upon administration of 25mg/kg verapamil, 10mg/kg amlodipin, 10 mg/kg flunarizin in different structures of the brain (hypothalamus, striate body, frontal cortex) the amount of norepinefrin and dopamine decreased and serotonin increased in acute and chronic experiments.

Auth.

**8.G.13.1.12. Use of cytopathologic methods in modern pulmonology.** /T. Mamaladze, L. Vashakidze, N. Museridze, M. Phochkhua/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 99-101. – geo.; abs.: eng.

In the 20<sup>th</sup> century, laboratory diagnosis has undergone revolutionary changes. In cytology one of the most successful automated complex AutocytoPrep, CytoScreen, ThinPrep was implemented. This system is successfully used in pulmonology. A combined cytological analysis of sputum and chest X-ray provides the most accurate diagnosis of lung tumors. It was confirmed by our study that to improve the accuracy of lung tumor diagnosis the chest X-ray and sputum cytology should be applied jointly.

Auth.

**8.G.13.1.13. The etiological structure of viral hepatitis in Georgia – current stage.** /I. Mchedlishvili, D. Gelovani, T. Mchedlishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 120-122. – geo.; abs.: eng.

The etiological structure of viral hepatitis has been studied based on the data received in 2001-2008. In the 21<sup>st</sup> century, the disease tends to increase. The rate of incidence in 2007-2008, as compared with 2003-2004, had a 2-fold increase. The incidence of viral hepatitis type B and C prevails, especially their chronic forms. According the 2007-2008 data, hepatitis type C is considered to be the most common disease. Its exact Percentage equals to 27.4%. We should point out that mostly an increase of specific volume for hepatitis type B and C is detected in the capital of Georgia -Tbilisi. An increase in the Incidence rate and specific volume of hepatitis type B and C indicates the need for incorporating all the adequate changes into the prophylactic system.

Auth.

**8.G.13.1.14. QT-interval prolongation after ventricular premature contractions (VPCs).** /Mohammed Haroon Rashid, K. Etsadashvili, A. Melia, K. Jalabadze, I. Avaliani/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 128-129. – eng.

Long QT syndrome (LQTS) is an inherited ion channelopathy resulting in abnormal ventricular repolarization and abnormal prolongation of QT interval on the ECG. Syncope, fainting, cardiac arrest and sudden death are common manifestations of LQTS; this case report describes a patient with prolonged QT interval after extrasystole and a family history of sudden cardiac deaths.

Auth.

**8.G.13.1.15. Treatment of patients with atypical chronic cholecystitis by natural factors in Lashichala balneotherapeutic health resort.** /N. Saakashvili, I. Tchabashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 130-132. – geo.; abs.: eng.

Chronic cholecystitis is frequently complicated due to changes of secondary development of the cardiovascular system. As the mentioned disease is not subordinated by medical treatment assigned to the cardiovascular system, with the curative purposes we applied "Lashichala" – a mineral water with carbon dioxide of low mineralization, hydrocarbonate and potassium-sodium. 120 patients with chronic non-petrosal cholecystitis were evaluated. After crenotherapy (spa treatment), the majority of the patients (with cardiac syndrome) showed clinic improvement signs: decrease of angina pains, normalization of heart rate, blood pressure, etc.; all the mentioned are correlatively connected with the improvement of subjective and objective indices of the gallbladder. The treatment with "Lashichala" mineral water resulted in a decrease of inflammatory process in the gallbladder, improvement of quality of bile, which consequently decreased the influence of pathological reflexes from the gallbladder to the heart. The "Lashichala" mineral water is ecologically safe and effective means for persons with biliary system disease.

Auth.

**8.G.13.1.16. Prevention and treatment of gastroduodenitis with new mineral water "Vardzia".** /N. Saakashvili, I. Tchabashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 132-134. – geo.; abs.: eng.

For normal functioning of body, the conservation of microelements balance is very important and is possible by means of mineral waters. For the first time, we have studied the effect of carbonic acid hydrocarbonate, sodium chloride mineral water of high mineralization (17.9 g/dm<sup>3</sup>) "Vardzia" in 20 patients with chronic gastroduodenitis. From its optimal composition by microelements,



monotherapy with mineral water "Vardzia" gave rise to the positive dynamics of sickness' clinical symptoms among the patients and improved mucous membrane structure of duodenum. The physico-chemical, organoleptic features, as well as high curative properties of the mineral water "Vardzia" make it possible to apply this water not only for bowel treatment, but also for preventing asiderotic (iron-deficiency) anemia and atherosclerosis.

Auth.

**8.G.13.1.17. Family case of Wilson disease.** /Ts. Pharulava, M. Chkhaidze, T. Gotua/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 146-148. – geo.; abs.: eng.

Wilson disease is rare inherited autosomal recessive disorder, in which the deficiency of a copper transporting protein leads to intracellular retention of copper in the liver, brain and eyes, causing liver damage, neuro-psychiatric changes and Kayser-Fleischer rings at the limbus of the cornea. The diagnosis of Wilson disease is made by relatively simple tests. With proper therapy the disease progress can be halted and often symptoms can be improved. Treatment for Wilson disease is a lifelong process. This case report is about three cases of Wilson disease in the family: brother, sister and their father. The children cases had a fatal outcome. The authors conclude that it is necessary to carry out laboratory testing of children for Wilson disease with unexplained damage of the liver and in cases of confirmed diagnosis, the testing of family members.

Auth.

**8.G.13.1.18. Long-term effect of subchronic manganese intoxication on the rat's memory.**

/A. Shukakidze, R. Khetsuriani, D. Tophuria, T. Bikashvili, N. Mitagvaria, I. Lazrshvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 159-161. – geo.; abs.: eng.

The one of the most important aspects of neurotoxicity, induced by manganese excess is the revealing of long-term effects of manganese subchronic intoxication. The effect of a 30-day peroral administration of manganese chloride –  $MnCl_2 \cdot 4H_2O$  (10, 20 and 50 mg/kg per day) on adult male albino rats' memory has been investigated. Before exposure to manganese, the rats were tested in a multi-branch maze (learning of optimal way to get from the start platform to the nest-box). The repeated session of the maze testing was provided both 1 and 90 days after completion of manganese administration. It has been established that everyday manganese administration during 30 days after completion of maze learning and acquisition of automatic behavior skill causes temporal disturbances (increased quantity of mistakes), but more important is statistically significant prolongation of time necessary for maze-test solution. Thus, the mentioned doses of  $MnCl_2 \cdot 4H_2O$  do not essentially affect the memory – the animals are able to slowly but completely accomplish the earlier acquired stereotype of behavior.

Auth.

**8.G.13.1.19. The attributive value of risk factors in forming digestive disorders in adolescents.** /M. Chikava, I. Phavlenishvili /. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp164-167. – geo.; abs.: eng.

The aim of the research was to assess the attributive value of risk factors of digestive disorders in 14-21 year-aged adolescents. One-stage epidemiological research was conducted among the medium and late period adolescent population of Georgia. The representative contingent, 430 adolescents, was selected using the method of simple, accidental randomization. Statistical processing of the obtained data was provided through SPSS software package. The ranking of risk factors was held according to a decrease of relative risk (RR) values. Out of those, high rank 10 main factors were separated. Their attributive values were assessed by the indices of attributable (additional) risk (RA), population attributable risk (PRA), attributable risk population fraction (FRPA). The attributable risk of digestive disorders is mostly created by the hereditary factor (RA=0,43); to a lesser extent, but approximately equal influence have such factors as: alimentary disorders (PRA=78; FPRA=0,93), chronic overloads (PRA=74; FPRA=0,88), and psycho-emotional tension (PRA=68; FPRA=0,81). In terms of the attributive risk, the lesser effect reveal other factors, varying within RA=0.15-0.2. Given the attributive value of risk factors, it is possible that an effective science-based model of digestive disorders prevention be elaborated.

Auth.

**8.G.13.1.20. The morphological index for cervical carcinoma prediction.** /Ts. Gatenadze, J. Ungiadze, O. Chakhoian, M. Nakashidze, I. Sulaberidze/. Georgian Medical News. – 2010. – # 1(178). – pp. 20-26. – rus.; abs.: geo., eng., rus.

The aim of the research is a complex clinical and morphological evaluation of the factors influencing the development and prediction of cervical carcinoma. The case histories of 505 patients (from 20 to 70 year- old) with I-III clinical stages of primary cervical carcinoma having undergone a surgical and combined treatment in an oncology center in Batumi during 1970-2005 were evaluated. The factors that influence the prognosis of cervical carcinoma were revealed: cancer cell emboli in vessels of tumor stroma, sharpness of the tumor growth borders, the tumor tissue types, and the depth of invasion. The imaging characteristics of the tumors are described. The cervical canal carcinoma, whatever its localization, has more favorable prognosis against the squamous cell carcinoma.

Auth.

**8.G.13.1.21. The effect of TORCH infections on spermatogenesis in men.** /T. Bukia, L. Shanidze, K. Maisuradze/. Georgian Medical News. – 2010. – # 1(178). – pp. 27-31. – rus.; abs.: geo., eng., rus.

The purpose of the study was to reveal causal relations between infection of the urinogenital tracts by intracellular parasites, the so-called TORCH infections, and the decrease of spermatogenesis. For observation 182 men of the reproductive age (from 22 to 38 years) with oligozoospermia and aspermia, without any complaints or clinical symptoms indicating the existence of the urinogenital tract infections, were selected. Out of those, 131 revealed oligozoospermia, i.e. the quantity of spermatozoons was no higher than 20 mln/ml of the ejaculate, and 51 revealed – aspermia. For examination of some TORCH infections, medical doctors in charge directed 44 oligozoospermia patients and 15 aspermia patients, who respectively constituted the group I and the group II. Examinations were carried out for Chlamydia trachomatis – (Ch.t), Herpes simplex virus – (HSV), Ureaplasma urealiticum - (U.u.), Cytomegalovirus - (CMV), and Mikoplasma hominis – (M.h.). In the group with oligozoospermia, cases of infection by Chlamydias (41.5%) and Herpes virus (51.3%) were frequent, but Ureaplasma (56.5%) was more frequent than any infections. Cytomegalovirus occurred in the least number of cases. The making of any conclusions on the frequency of infections by M.h. is difficult due to the low number of examinations. A similar picture was observed in Group II as well. Following the successful treatment of infections in Group I, 8 patients with Ch.t. and 8 patients with U.u. showed an improved spermogram after several months. Treatment of other infections did not yield tangible results. In Group II spermatogenesis remained without any changes.

Auth.

**8.G.13.1.22. Patients with allergic rhinitis.** /Sh. Tsiklauri/. Georgian Medical News. – 2010. – # 1(178). – pp. 34-40. – rus.; abs.: geo., eng., rus.

High prevalence of allergic rhinitis makes more topical the problem of searching for new, more effective means of treatment of this pathology. 67 patients with allergic rhinitis were examined. 35 of them had a persistent form of pathology and 32 of them – an intermittent form of allergic rhinitis. It has been established that the treatment by vanadium intranasal electrophoresis caused attenuation up to disappearance of the complaint, had a normalizing action on the olfactory nasal function, motor activity of scintillation epithelium of nasal mucosa, and other objective indices of clinical status. The mentioned positive shifts were more pronounced in the patients with an intermittent form of allergic rhinitis.

Auth.

**8.G.13.1.23. The risk of myocardial infarction in out-patients with type II diabetes.** /E. Kerimova, V. Azizov, V. Mirzazade/. Georgian Medical News. – 2010. – # 1(178). – pp. 41-45. – rus.; abs.: geo., eng., rus.

The aim of this study was the identification of a risk of myocardial infarction in out-patients with type 2 diabetes. The study was carried out on 340 patients with type 2 diabetes. The risk of ischemic disease was determined during 10 years by PROCAM program. It was found that 178 (52.4%) patients with type 2 diabetes had low risk of development of myocardial infarction, 89 (26.2%) patients with moderate and 73 patients (21.4%) with high risk of myocardial infarction.

The following interconnection was determined: the age of the patients ( $r=+0,46$ ;  $P<0,001$ ); the family history of diabetes ( $r=+0,22$ ;  $P<0,01$ ); smoking ( $r=+0,23$ ;  $P<0,01$ ); systolic arterial pressure ( $r=+0,18$ ;  $P<0,05$ ); cholesterol ( $r=+0,20$ ;  $P<0,01$ ); high-density lipoprotein ( $r=-0,24$ ;  $P<0,001$ ); low-density lipoprotein ( $r=+0,21$ ;  $P<0,001$ ).

Auth.

**8.G.13.1.24. A correlation of rheological properties of blood, II-1 $\beta$  and lipid profile in patients with chronic cor pulmonale.** /L. Nanijanyan, M. Sargsyan, G. Khachatryan/. Georgian Medical News. – 2010. – # 1(178). – pp. 46-48. – rus.; abs.: geo., eng., rus.

Cor pulmonale is a frequent complication of chronic pulmonary diseases. Despite its long-term study, a number of issues of this problem still remains unsolved and disputable; the diagnosis of the disease at the early stage of development is complicated; its treatment is of little effect, while the death rate is high. This study aims at working-out an algorithm of diagnosis of cor pulmonale on the basis of mathematical modeling and analysis of laboratory data. The worked-out dimensionless coefficients of the most informative indices of the level of blood corpuscles, blood lipids spectrum, and the human interleukin-1 $\beta$  will permit, independently, within the acceptable ranges, diagnosing the early stages of the disease, estimating its dynamics and predicting its further development.

Auth.

**8.G.13.1.25. Dimensionless coefficients counted on the basis of instrumental indices in patients with chronic cor pulmonale.** /L. Nanijanyan, M. Sargsyan, G. Khachatryan/. Georgian Medical News. – 2010. – # 1(178). – pp. 48-51. – rus.; abs.: geo., eng., rus.

Cor pulmonary remains one of the actual tasks of modern pulmonology, cardiology. The aim of the investigation is working-out algorithm diagnoses of cor pulmonary on the grounds of mathematical modeling and analyses of the results of several instrumental indices. The results of the investigation indices showed that worked-out by means of mathematical analyses the dimensionless coefficients permit find out the necessary instrumental indices for CP diagnose. Dimensionless coefficients promote control over the efficiency of treatment and also enable the development of new optimal scheme CP therapy.

Auth.

**8.G.13.1.26. Effects of neurotoxic lesions of the CA1 region of the hippocampus on place and cue learning in Morris water maze trial.** /G. Maghlakelidze, G. Beselia, N. Chkhikvishvili, M. Burjanadze, M. Dashniani/. Georgian Medical News. – 2010. – # 1(178). – pp. 56-60. – rus.; abs.: geo., eng., rus.

The aim of the present study was to investigate the effects of neurotoxic lesions of the dorsal CA1 region of the hippocampus on place-cue learning in a Morris water maze task. The injections of ibotenic acid injections to the hippocampal CA1 caused a loss of pyramidal cells in CA1, while saving most of the pyramidal cells in CA3 and granule cells in DG intact. Under conditions of a visible platform training trials, differences in the platform reaching latency between the animals of different groups were not found. When testing was performed under conditions of a submerged platform, the platform finding latency significantly increased ( $P<0,05$ ). This fact evidences of a deficit of the place learning strategy in the CA1-lesioned rats. The decreased place-bias in the CA1-lesioned rats in the hidden platform training trials compared to the sham-operated rats was significant, but in trials when the animals had to choose between the earlier learned place and the visible platform's new location, most of them swam first to the old spatial location. The place learning deficit in the CA1-lesioned rats compared to the sham-operated rats was not significant. We suggest that spatial learning deficit caused by the dorsal hippocampus lesions cannot be accounted solely to the loss of dorsal hippocampal CA1 region cells.

Auth.

**8.G.13.1.27. Study of object learning and reactions to spatial and non-spatial changes in rats with dentate gyrus lesions.** /G. Beselia, G. Maghlakelidze, N. Chkhikvishvili, M. Burjanadze, M. Dashniani/. Georgian Medical News. – 2010. – # 1(178). – pp. 61-65. – rus.; abs.: geo., eng., rus.

In order to investigate the possible involvement of DG in spatial and object recognition memory, we have opted for a non-associative task where no explicit reward was present. Colchicine was used for bilateral DG lesions for its well-known specificity for DG lesion. The colchicine-induced lesions produce severe damage in the granule cells of DG, while minimally affecting pyramidal cells in CA1 and CA3. The main results are as follows: The overall habituation to the familiar environment in the rats with DG lesions was decreased against the sham operated rats. There was no significant impairment in detecting spatial novelty. THE DG lesions did not affect the detection of a novel object placed in a familiar location. Considering both the impaired habituation and the generally intact detection of spatial changes, we suggest that the exploratory activity in relation to the entire environment and to the particular objects is thought to be preserved by diverse nervous substrate, and testing under the given conditions allows for their differential estimation.

Auth.

**8.G.13.1.28. Study of potential cytoprotective activity of different antioxidants.** /L. Ratiani, T. Ratiani, G. Sharashenidze, G. Janigashvili, T. Sanikidze/. Georgian Medical News. – 2010. – #1(178). – pp. 72-77. – rus.; abs.: geo., eng., rus.

It is known that infiltration of atherosclerotic plaques by activated T lymphocytes occurs at the early stage and cytokines produced by those lymphocytes become actively involved in an inflammatory process. Consequently, the preparations capable of stabilization of immune cells will probably be effective for treatment and prevention of atherosclerosis. Intensively proliferated Jurkat leukemia T cell line (human leukemia cell culture) is widely used in scientific and therapeutic research as human T lymphocyte pattern. The aim of the study was to establish the cytoprotective action of different antioxidant preparations on Jurkat cells incubated under oxidative stress conditions. The dose- (100  $\mu$ l, 50  $\mu$ l) and time-related decrease of viability of Jurkat cells incubated under high oxidative stress conditions was determined. Low doses of hydrogen peroxide ( $H_2O_2$ ) (25  $\mu$ l, 11  $\mu$ l) reveal cytotoxicity only during a short-term incubation (8 hours). Vitamins C and E have cytotoxic effects on intact Jurkat cells separately, while Megavite and Phenovin are not characterized by cytotoxicity. Upon simultaneous incubation of Jurkat cells with antioxidants under conditions of a moderate oxidative stress ( $H_2O_2$  25  $\mu$ l, 50  $\mu$ l) all antioxidative preparations (except vitamin C) reveal static activity on viability of Jurkat cells. Upon incubation of Jurkat cells with antioxidants under conditions of an intensive oxidative stress ( $H_2O_2$  100  $\mu$ l), the cytoprotective activity of antioxidant preparations is rather low.

Auth.

**8.G.13.1.29. Impact of treatment with intranasal electrophoresis of vanadium on the allergic reactivity and immunological indices in patients with allergic rhinitis.** /Sh. Tsiklauri/. Georgian Medical News. – 2010. – #2(179). – pp. 19-26. – rus.; abs.: geo., eng., rus.

67 patients with allergic rhinitis were investigated. Out of these patients, 35 had a persistent form of allergic rhinitis and 32 – an intermittent form of pathology. It has been established that in patients with allergic rhinitis the treatment with intranasal electrophoresis of vanadium strengthens T-cellular immunity, has a desensitization action, increases non-specific resistance of the organism and has a normalizing effect on the indices of humoral immunity. The above positive shifts were more pronounced in the patients with an intermittent form of allergic rhinitis.

Auth.

**8.G.13.1.30. The spirometry findings of broncho-obstructive syndrome during concomitant intestinal parasitosis.** /K. Aliyev, G. Aliyeva, N. Gadjiyeva/. Georgian Medical News. – 2010. – #2(179). – pp. 34-39. – rus.; abs.: geo., eng., rus.

The aim of research is to study spirometry findings of the broncho-obstructive syndrome (BOS) during a concomitant intestinal parasitosis. 81 patients aged from 5 to 61 years (male 43, female 38) were examined. The patients were divided into 2 groups: group I – 40 patients treated only with a bronchodilator therapy (14 patients with protozoa, 14 – with helminthes, 12 – diseased with a combination of parasites); group II – 41 patient treated with a bronchodilator therapy together with an anti-parasitic therapy (14 patients with protozoa, 17 - with helminthes, 10 - diseased with a combination of parasites). 22 patients with BOS without parasites made a control group. Functional disorders at the initial examination did not significantly differ among the patients with protozoa,

helminthes, a combination of parasites and the patients without parasites. A considerable difference was observed in the post-treatment dynamics: the bronchodilator therapy of patients infected with parasites only cannot attain a significant improvement of the external respiratory function indices, whereas in the patients with helminthes many parameters can be found to decrease. The lowest growth of indices was observed in the patients of group I – 2.17/ 5.09% (-6,81min; 10,54max). The highest growth was observed in the patients of group II – 20.26/12.45% (2,77min; 43,85max). An increase in indicators in the post-treatment spirometry of the control group was more moderate against those of the groups I and II – 5.96/ 2.97% (0,39min; 9,59max). Thus, the use of the anti-parasitic therapy in combination with the bronchodilator therapy to treat patients with intestinal parasitosis (group II leads to reliably significant positive dynamics of spirometry findings not only in group I ( $p < 0.05$  by many parameters) but also in the control group ( $p < 0.01$  by many parameters).

Auth.

**8.G.13.1.31. The effect of dorsal hippocampal lesion upon development of a fixed set in albino rats.** /S. Tsagareli, A. Stamateli, N. Archvadze, M. Gvajaia/. Georgian Medical News. – 2010. – #2(179). – pp. 40-45. – rus.; abs.: geo., eng., rus.

The experiments have been carried out on intact and hippocampectomized white (albino) rats. At the first stage of these experiments, in a two-entrance communicating chamber, behind which a feeding trough was placed, the animals were to develop a food-procuring conditioned reflex for visual stimulus differentiation. The two doors of this chamber were illuminated at different intensity. After the animals had achieved the learning criterion, the development of a fixed set was initiated. At the given stage of the trial, the rats used to be let go in the same direction several times, in particular toward the brightly lit door, after which the doors in the control test were again illuminated at equal intensity. If the animal went up to the cued door, the response was considered to be assimilated, or to be contrasted where it chose the opposite direction. The frequency of the assimilated and contrasted responses was quantitatively established. The experiments confirmed the possibility of development of a fixed set in the rats. It has been established that the gradual character of a fixed set depends upon the stimulus frequency. The intensity of the set is increased in parallel with the stimulus frequency growth. The active role of the dorsal hippocampus in the development of a fixed set has been revealed.

Auth.

**8.G.13.1.32. Postsynaptic responses of the cerebral hemisphere cortex neurons being activated by nociception during stimulation of locus coeruleus.** /T. Labakhua, T. Janashia, G. Gedevanishvili/. Georgian Medical News. – 2010. – #2(179). – pp. 46-51. – rus.; abs.: geo., eng., rus.

In acute experiments on curare-administered cats, the effects of stimulation of the locus coeruleus on postsynaptic processes evoked in neurons of the somatosensory cortex by stimulation of nociceptive (intensive stimulation of the tooth pulp) and non-nociceptive (moderate stimulation of the infraorbital nerve and ventro-posteromedial (VPM) nucleus of the thalamus) afferent inputs. Seven cells activated exclusively by nociceptors and ten cells activated by both nociceptive and non-nociceptive effects (hereafter, nociceptive and convergent neurons, respectively) were recorded intracellularly. In the neurons of both groups, responses to nociceptive stimulation (of sufficient intensity) looked like in EPSP-spike-IPSP (the latter of significant duration, up to 200-300 msec) complex. Conditioning stimulation of the LC which preceded test stimulus applied to the tooth pulp or VPM nucleus by 100 to 800 msec, induced a 40-60% decrease of the IPSP amplitude only, while maximal effect of the effect, in both cases, was noted within intervals of 300-700 msec between conditioning and test-stimulus. During stimulation of the LC, noradrenaline released via receptor and second messengers, provides postsynaptic modulation of GABA-ergic system, decreasing the IPSP amplitude, which occurs after stimulation of both the tooth pulp and VPM thalamic nucleus. This process may be realized through either pre- or postsynaptic mechanisms.

Auth.

**8.G.13.1.33. C-KIT-positive multipolar cells in human penile erectile tissue: expression of connexin 43 and relation to trabecular smooth muscle Cells.** /S. Ückert, G. Kedia, I. Satzger, U. Gaismar, M. Sohn, M. Kuczyk, P. Hedlund, E. Waldkirch/. Georgian Medical News. – 2010. – #3(180). – pp. 13-19. - eng.; abs.: geo., eng., rus.

The aim of this study was to evaluate the hypothesis that interstitial cells might play a role in controlling and synchronizing via gap junctions the electrical activity of smooth muscle cells. The expression and distribution of interstitial cells in human penile erectile tissue was evaluated to determine whether or not cavernous interstitial cells express the gap junction protein connexin 43. Specimens of human corpus cavernosum were excised from full preparations of human penises. Cryostat sections (10 µm to 15 µm) of formaldehyde-fixed tissue segments were incubated using a double-labelling technique with antibodies directed against smooth muscle α-actin, C-KIT, and connexin 43. Then, sections were exposed to secondary antibodies. Visualization was commenced by means of laser fluorescence microscopy. Double-staining techniques revealed immunosignals specific for C-KIT (transmembrane receptor protein) and connexin 43 (gap junction protein) in multipolar cells located adjacent to smooth muscle cells. The number of C-KIT-positive cells was significantly lower within the smooth musculature than within bundles of connective tissue surrounding smooth muscle cells of corpus cavernosum or cavernous arteries. Our findings demonstrate the distribution of c-kit- and connexin 43-positive interstitial cells in the connective tissue and smooth musculature of the corpus cavernosum. Additional studies are needed in order to evaluate further the ultrastructure of human penile erectile tissue and enable the identification of gap junctions mediating direct cell-to-cell communication.

Auth.

**8.G.13.1.34. The efficacy of atorvastatin in the case of paroxysmal atrial fibrillation in patients with ischemic heart disease.** /G. Dundua, G. Abuladze, N. Jinjolia, M. Nebieridze/. Georgian Medical News. – 2010. – #3(180). – pp. 29-32. - rus.; abs.: geo., eng., rus.

The purpose of the study was to estimate the efficacy of atorvastatin in complex treatment with antiarrhythmic drugs against the background of an ischemic heart disease in patients with paroxysmal atrial fibrillation (AF). The investigation was conducted on 65 patients (37-72 years old) during 2 years. Two groups were composed. Group I included 28 patients who underwent an anti arrhythmic treatment on the background of standard therapy. Group II was composed of 37 patients who underwent a combined treatment with therapy by atorvastatin (at a 10-20mg daily dose). During period of investigation AF was observed in 32% of patients in Group I and in 14% of patients in Group II. It was revealed that the complex therapy with atorvastatin minimizes the episodes of AF.

Auth.

**8.G.13.1.35. Tolerance induced by non-opioid analgesic microinjections into rat's periaqueductal gray and nucleus raphe.** /N. Tsiklauri, I.No zadze, G. Ghurtskaia, V. Berishvili, E. Abzianidze, M. Tsagareli/. Georgian Medical News. – 2010. – #3(180). – pp. 47-55. - eng.; abs.: geo., eng., rus.

Several lines of investigations have shown that the microinjection of non-opioid analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) in the midbrain periaqueductal gray matter (PAG) induces antinociception with some effects of tolerance. Our recent findings also have shown the same effects of tolerance in intraperitoneal (i.p.) injections of analgin (metamizol), ketorolac, and xefocam. Moreover, just recently, we have shown that microinjection of three NSAIDs analgin, ketorolac and xefocam into the central nucleus of amygdala produces tolerance to these drugs and cross-tolerance to morphine. The present study was designed to examine whether together with analgin, microinjection of another type of NSAIDs clodifen, ketorolac and xefocam into the PAG and the nucleus raphe magnus (NRM) leads to the development of tolerance in male rats. The experiments were carried out on experimental and control (with saline) white male rats by the models of tail-flick (TF, to the stimulation of focusing light beam) and hot plate (HP, paw withdrawal) tests. For microinjections of NSAIDs stainless steel guide cannula was implanted into the PAG and NRM by the stereotaxic atlas. Latency increase of these reflexes indicated the degree of antinociception. Analysis of variance with post-hoc Dunnet Multiple Comparison Test was used for statistical evaluations. Our study showed that microinjection of NSAIDs into the PAG produced antinociception as revealed by a latency increase in TF and HP compared to the baseline control with saline microinjected into the same nucleus. However, when these drugs microinjection subsequent testing also took place in the following days the antinociceptive effects progressively diminished so that on the 4th and especially the 5th experimental days the TF and HP latencies were similar to the averaged control baseline for rats that received repeated (5 days)

injections of only saline. On the 5th day, one hour after of NSAIDs testing, experimental groups of rats received i.p. Injections of  $\mu$ -opioid antagonist naloxone and we did not reveal significant alterations in TP and HP latencies in non-opioid tolerant rats as well as in control animals. Microinjections of NSAIDs into the NRM also produced antinociception as revealed by a latency increase in TF and HP compared to the baseline control of as in intact rats so with saline microinjected ones into the same nucleus. Subsequent NSAIDs microinjections caused progressively less antinociception, so by day 4 there was no effect, similar to saline microinjections (baseline control) for both the TF and the HP tests, except analgin. The later did not show complete tolerance even on the 5th experimental day. Special control experiments showed that post-treatment with naloxone in RVM diminished NSAID-induced antinociception on the first and second experimental days and impeded the development of tolerance to the antinociceptive effect of NSAIDs. Obtained results underscore the strong convergence of antinociceptive mechanisms of opioids and non-opioids, particularly NSAIDs in the PAG-RVM downstream circuit in the acute effect of and the development of tolerance to both types of analgesics. On the other hand, our data confirm the results of other authors that NSAIDs are in close relation with endogenous opioids and the tolerance to these non-opioid drugs probably depends on opioid tolerance.

Auth.

**8.G.13.1.36. Correction of oxidative stress in the rat brain cortical cellular culture with vitamins E and C.** /D. Davitashvili, D. Museridze, I. Svanidze, N. Pavliashvili, T. Sanikidze/. Georgian Medical News. – 2010. – #3(180). – pp. 56-60. - rus.; abs.: geo., eng., rus.

The oxidative stress-induced alteration in concentration of oxygen, lipid and nitrogen free radicals in the cultured brain cortex of newborn albino rats and its correction with vitamins E and C were investigated. Modeling the oxidative stress was achieved with addition of  $H_2O_2$  into the nutrient medium. In order to prevent an oxidative stress-induced cytotoxic effect, concomitantly with  $H_2O_2$ , vitamins E and C were added into the nutrient medium. Oxygen, lipid and nitrogen free radicals were registered by the Electron Paramagnetic Resonance (EPR) method and spin-traps. The data obtained in our study revealed decreasing of intensity of NO content and increasing of spin trapped superoxide - ( $O_2^-$ ) and lipoperoxide-radicals ( $LOO^\cdot$ ) in explants of brain cortex of the newborn albino rats cultured under oxidative stress conditions. These changes were attenuated following the action of vitamins E and C (decreasing of intensity of EPR signals of  $O_2^-$  and  $LOO^\cdot$ , increasing of free NO content).

Auth.

**8.G.13.1.37. Interrelation of the lipid status with staging of breast cancer.** /N. Kebabdze, U. Gabunia, N. Kakauridze/. Georgian Medical News. – 2010. – #3(180). – pp. 61-64. - rus.; abs.: geo., eng., rus.

The lipid status of 30 women (38-64 years) with breast cancer (stages I-II A, B) was investigated. Selection and distribution of patients in groups occurred on the basis of the accepted classification by the size, invasiveness and presence of metastases. The main changes in the lipid formula of blood included increased levels of total cholesterol and low-density lipoproteins' cholesterol. The relationship between dislipoproteinemia and invasiveness was revealed. Thus, these changes can be considered as a predictor of growth, distribution, and correction of lipid homeostasis (dietary and drug) as a primary factor of secondary preventive maintenance of breast cancer.

Auth.

**8.G.13.1.38. Influence of some simple phenols on biochemical and morphological indices of rat blood.** /B. Arziani, Ts. Chikhladze, N.Gumbaridze, G. Lekishvili/. Georgian Medical News. – 2010. – #3(180). – pp. 69-76. - rus.; abs.: geo., eng., rus.

Influence of various doses of xenobiotics on several biological and morphological indices of rat blood has been studied. It was established that intraperitoneal injections of the investigated phenols influenced biochemical indices of rat blood, specific to the particular phenolic compound. The strongest effect was observed in the case of 4-nitrophenol and the weakest one in the case of hydroquinone; it evidences strong toxicity of 4-nitrophenol and the antioxidant properties of hydroquinone. Influence of various doses of phenol, 4-nitrophenol and hydroquinone on the change of structural indices of the constituents of blood has been studied. Importance of the immune system for selection of adaptation

pathways of the organism has been demonstrated. A correlation between the administered concentration of the investigated phenols and several biochemical and morphological indices of blood has been established.

Auth.

**8.G.13.1.39. Peculiarities of atherosclerosis developed after Chlamydia infection and behaviour of some hematological and biochemical parameters.** /M. Emukhvari, M. Akhvlediani, T. Bukia, N. Sharashidze, E. Vorobiova/. Georgian Medical News. – 2010. – #3(180). – pp. 77-87. - rus.; abs.: geo., eng., rus.

The aim of our study was to establish diagnostically informative criteria of hematological and biochemical analyses and their combinations as well as to establish a relationship between *Chlamydia pneumoniae* and atherosclerosis. This is to be done for the purpose of establishing the entire pathogenesis of carotid and coronary atherosclerosis and inflammation. The investigation of *Chlamydia pneumoniae* infection is proved to be a possible risk factor for the carotid atherosclerosis developed in adults that makes the course of atherosclerosis heavier. As a result of the atherosclerotic process, changes in the blood laboratory parameters were more expressed in the group of patients having repeated cases of pneumonia in childhood.

Auth.

**8.G.13.1.40. Pro- and antioxidant activity of bilirubin. EPR Study.** /M. Shengelia, E. Chikvaidze, T. Sanikidze/. Georgian Medical News. – 2010. – #3(180). – pp. 88-92. - rus.; abs.: rus., eng., geo.

The aim of the study was to establish mechanisms of bilirubin oxidation and their involvement in the physiological and pathological processes in the living body (EPR study of photoradiated bilirubin). The photosensitized formation of free radical of bilirubin with  $g=2.003$  and  $\lambda_{\max} H=1.0mTI$ , under action of blue light with  $\lambda_{\max}=450$  nm by means of electronic spin resonance (ESR) was shown. Irradiation of sample in vacuum by visible light does not cause formation of free radicals. Irradiation of powder of bilirubin and also its solution in chloroform leads to formation of the radical of bilirubin. An analysis of a spectrum (ESR) as powder, also its solution in chloroform, that induces free-radical signal shows that it belongs to bilirubin rather than to the solvent. Irradiation of the bilirubin chloroform solution causes  $\lambda_{\max}=650$  nm lines in the absorption spectrum that is characteristic of the absorption spectrum of solutions in the biliverdin chloroform.

Auth.

**8.G.13.1.41. Therapeutic bronchoscopy in critical patients with ventilator-associated pneumonia.** /Z. Kheladze, S. Jaiani, B. Tsutskiridze, Zv. Kheladze, G. Chakhunashvili, D. Chakhunashvili/. Georgian Medical News. – 2010. – #4(181). – pp. 17-23. – rus.; abs.: geo., eng., rus.

The study material is based on the experimental treatment of broncho-pulmonary derangements, including ventilator-associated pneumonias (VAP). 105 critically ill patients were studied. The authors recommend methods of prevention and treatment of these types of pathologies, which are based on the therapeutic fiber-optic bronchoscopy with the use of different curative mixtures. The more satisfying course of pathological processes, a decrease of clinical presentations and manifestations of intoxication, an indisputable improvement in the course of disease, and a reduction in average length of treatment prove the advantages of this method. An important economical effect is also achieved due to the reduction of the length of stay and the use of costly drugs and diagnosticums. The achieved results allow us to recommend the widespread use of the therapeutic fiber-optical bronchoscopy in patients with acute diseases of lungs, particularly with VAP. The expressed efficiency, reliability and the important economical effect are the basic advantages of this method.

Auth.

**8.G.13.1.42. Clinical and demographic analysis of a prehospital diagnosis of myocardial infarction in Adjara in 2006-2008.** /N. Tsintsadze/. Georgian Medical News. – 2010. – #4(181). – pp. 33-42. – rus.; abs.: geo., eng., rus.

The goal of the investigation is to study the results of a prehospital diagnosis of myocardial infarction in 519 patients of different gender and age. Myocardial infarction was atypical in 27.8.0% and typical in 72.0% of patients. Late diagnosis of typical and atypical MI made 13.4% and 21.2%



respectively. No statistically significant differences were found in the frequency of diagnostic errors in different demographic groups of the patients. For the three years of the study, a tendency for an MI overdiagnosis was observed, especially in young patients and males. The cases of late diagnosis were equal in both males and females. A reduction of hypo and rise in overdiagnosis during the three years was, generally, conditioned by an atypical course of the disease.

Auth.

**8.G.13.1.43. Atrial myxomas: histopathologic variants.** /Z. Tsagareli, Z. Bakhutashvili, F. Phrangishvili, L. Gogiashvili, M. Dgebuadze/. Georgian Medical News. – 2010. – #4(181). – pp. 63-66. – rus.; abs.: geo., eng., rus.

Atrial myxomas are rare, usually benign, intracardiac tumors composed of mucopolysaccharides. Almost all myxomas are found attached to the endocardium in the atria with vast majority being on the left side and can be removed by surgical resection. Two rare cases of myxomas ablated from the left atrial cavity are presented. Surgical correction is curative with a low operative mortality and an excellent long-term prognosis. Tumor morphology and histological appearance are presented. The effect of age on the left atria morphology was observed.

Auth.

**8.G.13.1.44. On a hypothetic model of the involvement of the immune system in the proliferation of cells and dissemination of tumors.** /D. Sephiashvili/. Georgian Medical News. – 2010. – #4(181). – pp. 67-71. – rus.; abs.: geo., eng., rus.

Tumor cells lose their ability of apoptosis. It makes one think that phagocytes which absorb malignant cells are themselves transformable into cancer cells. It is not excluded that the cloning–transposition of the cells absorbed by phagocytes is carried out within a norm and participates in the cell renovation (reparation-regeneration) and differentiation process. The role of transposition in the metastasis of tumor cells and in the etiopathogenesis is to be determined. An experimental proof of transposition will assist in development of new approaches to the treatment of various diseases, including tumor pathologies.

Auth.

**8.G.13.1.45. Criteria development for making a working program of a Critical Care Medicine clinic.** /D. Tabaghua, Z. Kheladze, Zv. Kheladze, N. Ramishvili, Kh. Phruidze/. Georgian Medical News. – 2010. – #5(182). – pp. 7-11 – rus.; abs.: eng., rus., geo.

The Critical Care Medicine clinic's 20-year long experience has been studied and summarized for elaborating a long-term development program to enable each critical care medicine clinic better plan its operations and make them more cost-effective. The study data included: the admission rate and distribution of patients according to seasons, months, weeks and days, as well as according to the critical state. The study results show that maximum admission by seasons was fixed in spring (27%; by months - in May (10%); by weeks – in the first week of the month (27%); and by hours - during 18-24 hrs (35%). The maximum mortality rate by seasons was observed in spring (28%); by months - in April and December (12%). The nervous system pathologies prevailed (24%); the percentage of cardiovascular, respiratory and digestive system pathologies was almost equal - 9, 8 and 8% respectively. The maximum mortality (36%) was observed in the case of the nervous system pathologies; also high mortality (20%) was observed during traumas

Auth.

**8.G.13.1.46. An experimental research in the efficacy of using saffron extract in treating ocular pathologies.** /P. Shukurova, R. Babaev/. Georgian Medical News. – 2010. – #5(182). – pp. 38-42. – eng.; abs.: geo., eng., rus.

The aim of the present research was to study the mechanism of efficacy and therapeutic action of a saffron extract (*Crocus sativus* L.) during retinal degeneration and a light corneal injury. Experiments on Chinchilla rabbits were conducted to evaluate the state of free radical-based oxidation of the retina and its electric activity. The experimental retinal degeneration was found to be accompanied with the deterioration of all the electroretinogram parameters and the free radical-based retinal oxidation stirring up. The conducted experimental study allows concluding that the saffron extract's antioxidation function plays a crucial role in its therapeutic action and serves as a pathogenic basis for its application in visual impairments of various origins.

Auth.

**8.G.13.1.47. Primary chlamydial infection correlates with high level of serum interleukin 12 (IL-12).** /N. Shavlakadze, B. Gorgoshidze/. Georgian Medical News. – 2010. – #5(182). – pp. 46-50. – eng.; abs.: geo., eng., rus.

According to the existing data, cytokines actively participate in the pathogenesis of chlamydial infection. However, the role of IL-12 in chlamydiosis development has not been studied yet. The aim of our research is to define the role of IL-12 in the pathogenesis of the disease. The levels of IL-12, IL-4 and IFN- $\gamma$  were determined in 27 healthy and 56 Chlamydia-infected individuals by using sandwich ELISA *in vitro*. An enzyme-linked immunosorbent assay, direct and indirect immunofluorescence were used for laboratory testing of Chlamydia. A statistical analysis of the results showed that the level of IL-12 was raised in the serum of some patients compared to the control group. The patients demonstrating high levels of IL-12 also had high levels of IFN- $\gamma$  and low to normal levels of IL-4. The high levels of IL-12 were mainly in the patients with primary chlamydial infection. Thus, IL-12 may participate in the development of the primary immune response to Chlamydia, in particular in the Th1 direction.

Auth.

**8.G.13.1.48. Valuation of diagnostic methods of pneumonia alveolitis.** /S. Mahmudova/. Georgian Medical News. – 2010. – #5(182). – pp. 55-67. – rus.; abs.: geo., eng., rus.

The aim of this study was to identify the effectiveness of a modern complex of roentgenological, endoscopic, functional, citomorphologic and immunological methods in diagnosis of alveolitis. Between May-June 2002 and July-August 2003, a single-stage diagnosis was conducted among 1192 workers (400 in Siasan broiler factory, 391 in Baku flour mill, and 401 tobacco-workers from Gabala zone). The patients with the diagnosis of various forms of alveolitis were examined. 89 patients with symptoms of tympanal, acrocyanosis, tachycardia, tarnished glass effect, vascular lungs deformation were selected. Cough, short breath, crackling, infiltrative and cystous changes in lungs, acceleration of erythrocyte sedimentation rate (ESR) up to 27-36 mm/hour on average, decrease of total lung capacity, lymphocyte reaction, opacity, symptom of honeycomb lung and alteration in mucous of lung were considered as auxiliary factors. The investigation proved a computed tomography to be an effective technique for the diagnosis of alveolitis; the diagnostic reliability of computed tomography for the evaluation of various forms of alveolitis made 100%.

Auth.

**8.G.13.1.49. Influence of carbamazepine on kindling grades in depressive and non-Depressive rats.** /M. Barbakadze, I. Bilanishvili, M. Chkhetiani, N. Khizanishvili, A. Koreli/. Georgian Medical News. – 2010. – #5(182). – pp. 68-71. – eng.; abs.: geo., eng., rus.

It has been clinically established that epilepsy and depression frequently represent a comorbid pair. Most investigators consider epilepsy as a cause of such emotional disorders as anxiety and depression. On the other hand, some anti-epileptic drugs were found to aggravate the depressive state, even to a suicidal outcome. Bearing in mind these findings, we endeavoured an experimental study on laboratory rats, 25% of which display an inborn depressive behaviour. An anti-epileptic drug to be tested was carbamazepine, while the epileptic state was elicited by means of the kindling method. Selection of animals was made with the Porsolt's forced swimming test. Seven rats had clear depression-like traits; the same number of the non-depressive animals served as controls. Along with the inherently depressive rats, the third group of animals was used, in which depression was elicited with the immobilisation stress procedure (exogenous depression). Epileptization of the rats was performed with sub-threshold electrical stimulation of the ventral hippocampus. The rapid kindling paradigm has been implemented in these experiments (40 stimulations in one day). Following development of epileptic state up to the grades 4-5 according to the Racine scale, the animals were intraperitoneally administered carbamazepine, once a day, for three consecutive days. On the fourth day the animals were tested again in order to assess their epileptic state; after this procedure, depressiveness of the animals was re-evaluated. It was found that: a) the fastest and most vigorous kindling developed in the endogenously depressive rats; b) carbamazepine almost completely abolished the highest grades of convulsions; and c) kindling procedure did not alter initial emotional status of the animals and carbamazepine administration

also did not change their behaviour. The latter observation allows concluding that in our model depression and epilepsy interact insignificantly.

Auth.

**8.G.13.1.50. The efficacy of propafenone treatment of supraventricular tachycardia.** /T. Chachua, G. Abuladze, M. Nebieridze/. Georgian Medical News. – 2010. – #6(183). – pp. 18-21. – rus.; abs.: geo., eng., rus.

Drug therapy remains one of the main methods of treatment of patients with supraventricular paroxysmal tachycardia, which involves the prevention attacks of cardiac arrhythmias. Drugs of choice for termination and prevention of paroxysmal supraventricular tachycardia in the absence of pronounced signs of structural myocardial damage are antiarrhythmic IC class drugs (Propafenone–Propanorm, Promed CS, Prague, Czech Republic). The efficacy of propafenone action on the functional state of heart in patients with paroxysmal atrioventricular tachycardias was studied. Propafenone was found to be highly effective in preventing paroxysmal atrioventricular reciprocating tachycardia and atrioventricular nodal tachycardia. The drug has no negative effect on the functional state of heart.

Auth.

**8.G.13.1.51. Microbiological investigation of diabetic foot infections.** /D. Chikviladze, Kh. Gachechiladze, M. Mikeladze, D. Metreveli, D. Avazashvili/. Georgian Medical News.– 2010.– #6(183). – pp. 22-26. – rus.; abs.: geo., eng., rus.

The aim of the article was to determine the structure of infections agents in diabetic foot infections and their sensibility to antibiotics. The total of 295 microbial isolates was obtained from 115 patients with confirmed diabetic foot infection, treated in 2005-2009. Of these, aerobes were found in 92.88%, anaerobes - in 7.12%. Microbial associations, various aerobic bacteria were found in 58.49% of cases, associations of aerobes with anaerobes - in 17.92% of cases; microbial monocultures were isolated from 21.70% of patients. The most common gram-positive infectious organism of diabetic foot infection was *S. aureus*, while the gram-negative - *P. aeruginosa*. A share of methicillin-resistant *S. aureus* strains was 57.52%. In 95.57% of cases *S. aureus* strains were sensitive to vancomycin. The strains of *P. aeruginosa* were highly resistant to all the investigated antibiotics. The Enterobacteriaceae family pathogens have shown high sensitivity to carbapenemes (95.96%). It is concluded that the success of antimicrobial therapy depends on a correct choice of an antibiotic, which is based on timely detection of the infection's etiology and determination of the separated microbial agent's sensitivity to antimicrobial drugs, considering the pharmacokinetic features of the chosen drug.

Auth.

**8.G.13.1.52. Effects of the uncompetitive NMDA receptor antagonist memantine on recognition memory in rats.** /M. Dashniani, M. Burjanadze, G. Beselia, N. Chkhikvishvili, T. Naneishvili/. Georgian Medical News. – 2010. – #6(183). – pp. 27-33. – rus.; abs.: geo., eng., rus.

Memantine is an NMDA receptor antagonist that has been recently approved in EU for the treatment of moderate to severe Alzheimer's disease. The previous studies have not allowed for the evaluation of the possible effects of this drug at therapeutic doses on different forms of memory. To address this question, we administered memantine to adult rats, using 2.5 or 5 mg/kg doses to evaluate their effects on open field activity and recognition memory. Memantine or saline was administered daily by intraperitoneal injection during 5 days. The memantine treatment was found to produce a dose-related suppression of total ambulation. There was no significant memory impairment in the rats treated with the 2.5 mg/kg memantine. However, the 5 mg/kg intraperitoneal dose of memantine disrupted both the recognition memory and locomotor behaviors. It can be supposed that the therapeutic effects of memantine in patients with Alzheimer disease are attributable to its interaction with other neurotransmitter systems.

Auth.

**8.G.13.1.53. Noradrenergic modulation of convulsive activity.** /T. Chachua, I. Bilanishvili, N. Khizanishvili, Z. Nanobashvili/. Georgian Medical News. – 2010. – #6(183). – pp. 34-39. – rus.; abs.: geo., eng., rus.

The mechanisms underlying pathogenesis of epileptic responses have been insufficiently studied.

Therefore, determination of the structures, transmitters and receptors of the brain, which putatively produce the development and intensity modulation of convulsions, is of much importance. The locus coeruleus is a noradrenergic structure and an endogenous modulator of epilepsy, which role determination in the course of seizure activities is an important problem of epileptology. The goal of the study was to assess the importance of the noradrenergic synapses in the development of the local hippocampal convulsive activity. Studies were carried out on adult rats, under conditions of an acute experiment. The effects of microinjections of agonist (clonidine) and antagonist (yohimbine) of the  $\alpha$ -2 adrenergic receptors on the course of local hippocampal convulsive responses (without behavioral manifestation) have been evaluated. It was found that microinjection of  $\alpha$ -2 adrenergic receptors' agonist conditioned blockage of the local hippocampal convulsions, while the  $\alpha$ -2 adrenergic receptors' antagonist increased the convulsive activity. It is suggested that the effects of locus coeruleus are conditioned by activation of the  $\alpha$ -2 adrenergic receptors.

Auth.

**8.G.13.1.54. The nitric oxide production in monocytes and macrophages in patients infected with *Chlamydia trachomatis* depends on the amount of cytokines.** /N. Shavlakadze, B. Gorgoshidze/. Georgian Medical News. – 2010. – #6(183). – pp. 40-45. – rus.; abs.: geo., eng., rus.

We studied the NO production in the peripheral blood monocytes in patient infected with *Chlamydia trachomatis* and in the macrophages located in the *Chlamydia*-caused inflammation centers. With this aim we have investigated 132 patients with chlamydiosis and 85 probands for control group. The infections were identified by IFA, IFU and PCR. The 20-ml venal blood of the patients was examined and the Versant's solution was used to excrete monocytes, microphages being excreted from the urethra and cervix areas. The monocyte and macrophage cultures were distributed according to different schemes. The statistic elaboration of the results showed that the monocytes in the peripheral blood and the macrophages in the infected area actually secreted NO. Its induction depends on IFN gamma and TNF alpha amounts (correlation coefficients: 0.98,  $p < 0.05$ ). The process increases especially under the joint influence of these cytokine (correlation coefficients: 0.91,  $p < 0.001$ ). The process seems to be considerably subdued in the *Chlamydia*-infected patients (correlation coefficients: - 0.97,  $p < 0.05$ ). The patients seem to be affected significantly by the additional factors.

Auth

**8.G.13.1.55. Interleukin-17/23 and *Chlamydia trachomatis*.** /N. Shavlakadze, B. Gorgoshidze/. Georgian Medical News. – 2010. – #6(183). – pp. 45-51. – rus.; abs.: geo., eng., rus.

*C. trachomatis* is a gram-negative bacteria infecting most organs of the urogenital tract and harming greatly the female or male reproductive field. Moreover, as this is not the limit of its destructive nature, it can form a favorable ground for developing ulcer and tumor processes. As observed, it is characterized of a special chronization ability, which is developed irrespective of the mighty immune humoral and cell-mediated immune response of the host. T(CD4) lymphocytes and their products – cytokines are also known to be directly involved into these processes. IL-17 and its regulator IL-23 are among them. Our study aimed at investigating the above two cytokines in the patients chlamydiosis. We have investigated 56 *Chlamydia*- infected patients; 31 non-infected patients who were the carriers of a different pathology flora and 21 healthy donors. The investigation covered some impaired localities as well as the whole organism. To attain the objective, we analyzed the clinical-anamnesis data and carried out the appropriate instrumental, laboratorial and immunological researches. Stating the chlamydia infection was carried on with the serological and immunofluorescence and PCR methods. The study of IL-17 and IL-23 is carried out by the ELISA and RT-PCR methods. Based on a statistical analysis of the obtained results, it may be concluded that IL-17 occurs in almost all the patients infected with chlamydia – their organs or systemic environment compared with the patients of non-chlamydia infection (97% against 21%,  $P < 0.05$ ). At the same time, IL-17 has been measured by higher parameters, than IL-23. The highest parameters of IL-17 were recorded in the patients having acute chlamydiosis in the impaired localities, also in the patients having arthritis and antiovary antibodies, IL-23 in a reliably increased amount was recorded in the metaplasia-prone patients. The obtained data are a direct indication of the real participation of IL-17 and IL-23 in the immune pathogenesis of chlamydiosis.

Auth.

**8.G.13.1.56. The features of complete blood count in the geriatric population in the north-western part of Azerbaijan.** /Z. Gadimova, Ch. Kasumov/. Georgian Medical News. – 2010. – #6(183). – pp. 52-57. – rus.; abs.: geo., eng., rus.

The present work is devoted to the study of complete blood count in the geriatric population in the north–western part of Azerbaijan, where the level of longevity is not studied. The results of the count showed that in all the three old-age groups living in these regions the level of hemoglobin and the number of erythrocytes were below the norm. The low level of blood hemoglobin and the number of erythrocytes in all the old-age groups is indicative of anemia in these areas. No deviation from the norm was observed in the levels of leukocytes and platelets. Given the age features, the erythrocyte sedimentation response dynamics analysis showed that this index was identical in the geriatric population of these regions and tended to approach the highest standard level; the blood coagulation time in the studied old-age groups was shorter and slightly differed from the standard. All these processes are deemed to substantially affect the longevity index and active longevity in the population of the Zagatala and Gakh regions.

Auth.

**8.G.13.1.57. Metabolic syndrome and risk factors for developing arterial hypertension.** /N. Dadasheva/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 27-33 – rus.; abs.: geo., eng., rus.

Insulin resistance and the resulting hyperinsulinemia is a set of heart disease risk factors that increase the chance of developing arterial hypertension – a key symptom of metabolic syndrome (MS). The basic role in pathogenesis of AH at MS belongs to insulin resistance (IR) and is caused by its compensative hyperinsulinemia (HI) in a combination with accompanying metabolic infringements. In addition, during MS evident dislipidemia develops, in particular an increase in the TH level, the general XS, LPLD and a decrease in LPHD. Recently, one more theory of AH pathogenesis with adiposity has been discussed, according to which the AP growth is caused by an increase in the leptin level in these patients. Thus, the AH pathogenesis in patients with metabolic variations and risk factors is very combined, varied and requires differentiated and multilateral methods of treatment.

Auth.

**8.G.13.1.58. The impact of thyroid diseases on bone metabolism and fracture risk.** /M. Amashukeli, E. Giorgadze, M. Tsagareli, N. Nozadze, N. Jeiranashvili/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 34-39 – eng.; abs.: geo., eng., rus.

Osteoporosis is a systemic skeletal disease characterized by low bone mass and micro-architectural deterioration of bone tissue, leading to enhanced bone fragility and a consequent increase in fracture risk. One of the leading causes of secondary osteoporosis is thyroid diseases; this fact is of special importance for Georgia owing to the thyroid disease prevalence in the Georgian population. The present article deals with the mechanisms, by which thyroid hormones and thyroid stimulating hormone (TSH) act on bones. Based on the analysis of large material, it is established that in the case of thyroid pathologies special attention should be paid to the bone bulk and timely conduct of measures to prevent osteoporosis. The presented article will assist clinician endocrinologists, rheumatologists and therapists in diagnosis and treatment of thyroid gland disease-related osteoporosis.

Auth.

**8.G.13.1.59. Epidemiological assessment of the hepatitis B and C infectious disease markers in Baku and Nakhtchivan healthy population.** /Z. Ibrahimov, R. Tagi-zadeh, A. Dadasheva, M. Mamedov/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 40-44 – rus.; abs.: geo., eng., rus.

The article deals with an estimation of spreading of the subclinical form of hepatitis B and C viruses in the healthy adult inhabitants of Baku and Nakhchivan cities by detection of frequency of revealing serological markers of HBV (HBsAg) and HCV (anti-HCV) infections. By means of a meta-analysis the results previously received in several seroepidemiological studies among healthy inhabitants of these cities are generalized. Average HBsAg and anti-HCV detection rate has made - 3.0% and 4.0%, respectively. Based on the above results, the Azerbaijan Republic can be classified as the territory with moderate intensity of circulation of HBV and HCV.

Auth.

**8.G.13.1.60. Unexpected increase in the cases of bacterial meningitis in the 2009 summer in Georgia.** /N. Mebonia, M. Eloshvili, N. Malakmadze, R. Tchlikadze, E. Maes/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 44-50 – eng.; abs.: geo., eng., rus.

In the 2009 summer, during a period from 20 June to 31 August, 32 patients with the clinical diagnosis of bacterial meningitis were hospitalized in two hospitals of Tbilisi (Center for Infectious Pathologies and Iashvili Children's Clinic). In a week time (13 July-19 July), 9 persons with suspected cases of bacterial meningitis were hospitalized in the both clinics. Our attention was attracted by the increased number of hospitalized patients within a non-seasonal period. The goal of the investigation was to establish the extent of the outbreak, to detect possible exposures, and to work out recommendations for preventing the disease. For a laboratory confirmation the biochemical and bacteriological (culturing) testing of the cerebral spinal fluid was used, although no single causative agent was isolated. To detect risk factors, the patients were interviewed. 78.5% (25) of the hospitalized persons were under 14 years of age – 70% (22) of the preschool children. The most common exposure identified through the interviews with patients included the active or passive exposure to tobacco smoking (38%), the existence of the recent upper respiratory infection (31%), and attending crowded places (23%). Since the causative agents were not isolated, we were not able to establish whether the increased number of the disease was caused by different etiologic pathogens or from a single agent. The previous use of antibiotics remains the only likely reason for low detection of the pathogen. The detected risk-factors for distribution of the disease were smoking, existence of the recent upper respiratory infection, and attending crowded places. Our recommendations for preventing the increasing rate of bacterial meningitis are: the improvement of laboratory examination by introducing an advanced serological method/testing that is not affected by the prior use of antibiotics; increasing awareness of the population about the risk factors of bacterial meningitis and the importance of early addressing for medical care.

Auth.

**8.G.13.1.61. Immunohistochemical expression of BRCA1 protein in invasive ductal carcinoma of the breast.** /G. Burkadze, O. Khardzeishvili, M. Gudadze, G. Tsikhiseli, G. Turashvili/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 51-60 – eng.; abs.: geo., eng., rus.

Immunohistochemically detected BRCA1 positivity has been reported to indicate the presence of full-length functional protein, while immunohistochemical negativity may be a result of sporadic BRCA1 mutation. We set out to study the immunohistochemical expression of BRCA1 protein in breast cancer and assess associations with lymph node status, histologic grade and expression of other biomarkers. We examined 100 patients aged from 21 to 71 years diagnosed with invasive ductal carcinoma. Immunohistochemistry was performed using anti-BRCA1, ER, PR, HER2/*neu*, and Ki-67 (MIB-1) antibodies. Cytoplasmic or nuclear-cytoplasmic BRCA1 expression was identified in a total of 64 breast cancer patients. None of the breast cancer tissue samples showed solely nuclear BRCA1 immunoreactivity. BRCA1 expression was associated with higher histologic grade, and majority of BRCA1-positive patients were below 50 years of age. Most BRCA1-negative patients had intermediate grade tumors. BRCA1 expression was positively associated with ER and PR positivity, and negatively associated with HER2/*neu* overexpression. Although immunohistochemistry can be an inexpensive and valuable preliminary method for detecting the BRCA1 status, BRCA1 protein localization is a complex issue. Well designed studies are needed to further investigate the performance of various anti-BRCA1 antibodies in formalin- fixed paraffin-embedded tissue samples, assess their association with BRCA1 gene mutations and determine clinical usefulness of BRCA1 immunohistochemistry.

Auth.

**8.G.13.1.62. The macro-microscopic peculiarities of the human urinary bladder glands.** /G. Huseynova/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 77-81– eng.; abs.: geo., eng., rus.

We studied the glands of the 130 persons, victims from the casual reasons (a trauma, an asphyxia, etc.) from newborn to senile age; we investigated different variants of bladder gland forms, the changes in different parts of the organ's wall (proximal, average, distal one-third) from the newborn period to senile age by the method of macro-microscopy and morphometry of the total specimens

of the urinary bladder. The glands were preliminarily stained with the 0.05% methylene dark blue solution by the Sinelnikov's method and by hematoxylin and eosin. The glands were investigated with the application of stereo binocular microscope MBS-9. The statistical data processing included the calculation of arithmetic-mean values, their errors, confidential intervals (excel). The view of the human urinary bladder glands in the macro-microscopy investigation is different. The glands have roundish, oval, ribbon forms. The form of the glands in the different parts of human urinary bladder (proximal, middle and distal) is different. In the micro-topography the glands have proximal-distal changes; the number of glands increases in the proximal- distal direction together with the content of complex glands (the glands with 3, 4 and more initial parts).

Auth.

**8.G.13.1.63. Prevention of errors and complications in the formation of esophageal layer-by-layer apparatus anastomosis.** /O. Ghibradze, M. Gurgenidze, G. Bakuradze, D. Tevdoradze, M. Samsonia/. Georgian Medical News. – 2010. – #9(186). – pp. 7-13 rus.; abs.: geo., eng., rus.

The aim of the research is to analyze the outcome of treatment of patients with cardioesophageal cancer. Subtotal resection of esophagus with gastrectomy was performed on 3 patients. On 9 patients the resection of esophagus with gastrectomy from left thoracophrenolaparotomy was performed. Gastrectomy with resection of abdominal part of esophagus was performed on 10 patients. Transhiatal mediastinal lymphadenectomy S2D2 was carried out in all cases. The esophageal anastomosis has been formed by circular apparatus EEA and SPTU. The functional condition of anastomosis was investigated by X-ray, endoscopical and endo-sonographical methods in the postoperative period. The complications caused by technical errors of esophageal anastomosis were reviewed. The regeneration of circular anastomosis depends of adequate blood supply of anastomosis, observance of safety rules of imposing circular anastomosis. Reasonable application of circular apparatus, the refined techniques of imposing anastomosis, X-ray, endoscopical and endo-sonographical research methods decrease complications and promote recovery.

Auth.

**8.G.13.1.64. Dominated EEG patterns and their prognostic value in coma caused by traumatic brain injury.** /M. Beridze, M. Khaburzania, R. Shakarishvili, D. Kazaishvili/. Georgian Medical News. – 2010. – #9(186). – pp. 28-33. – eng.; abs.: geo., eng., rus.

The study aimed at investigating dominated EEG patterns in traumatic coma of different severity and elucidating their prognostic value for outcome of disease within a month. A total of 53 coma patients with severe traumatic brain injury have been investigated. Exclusion criteria comprised the patients needing the neurosurgical intervention due to hemorrhage. Brain injury was visualized by conventional CT at admission. The level of consciousness was evaluated by Glasgow Coma Scale (GCS). Patients were divided in 5 groups according to GCS. Electrophysiological investigations were performed on 5<sup>th</sup> day from development of coma by application of 16-channel computer encephalography. Outcome of coma (death, vegetative state, recovery) was evaluated within month from disease onset. According to dominated EEG background activity patterns the 1<sup>st</sup> group (GCS=4) showed the delta EEG pattern in 50 % of patients, the beta EEG pattern- in 33.4% and the alpha EEG pattern – in 16.6%. The 2<sup>nd</sup> group (GCS=5) revealed the delta EEG in 40%, the beta EEG- in 6.7% and the theta EEG - in 53.3%. The 3<sup>rd</sup> group (GCS=6) showed the delta EEG pattern in 27.8% and the theta EEG pattern- in 72.2%. In 4<sup>th</sup> group (GCS=7) the theta EEG pattern found in 77.7% and the beta EEG pattern in 22.3%. The 5<sup>th</sup> group (GCS=8) revealed the theta EEG activity in 80% and beta EEG activity –in 20%. Positive correlation was found between the GCS and the frequency of theta EEG pattern ( $r=+0.62$ ;  $p<0.05$ ). Positive correlation was established between the frequency of delta EEG pattern, death and persistent vegetative state ( $r=+0.57$  and  $r=+0.16$  respectively,  $p<0.05$ ) within month. Positive correlation was established between the frequency of delta EEG pattern and the size of brain injury ( $r=+0.3$ ;  $p=0.04$ ). Multinomial logistic regression revealed the significance of brain lesion size, GCS and EEG pattern for functional outcome of coma. In severe traumatic coma patients, the delta EEG pattern is associated with the deep coma state and predicts the poor functional outcome within a month.

Auth.

**8.G.13.1.65. Pulmonary hypertension in female patients with cardiovascular and respiratory tract disease.** /M. Gegenava, T. Gegenava, G. Kavtaradze/. Georgian Medical News. – 2010. – #9(186). – pp. 34-37. – eng.; abs.: geo., eng., rus.

Pulmonary arterial hypertension (PAH) is defined as a group of disease characterized of a progressive increase of pulmonary vascular resistance (PVR) leading to right ventricular failure. The aim of our study was to determine the frequency of PAH in female patients with cardiovascular and pulmonary tract disease. The research was performed on 80 postmenopausal women (mean age, 54±3 yr). They were divided into groups according to the main disease: 1. Chronic obstructive pulmonary disease COPD n=16. 2. Acute pneumonia n=23. 3. Cardiovascular disease n=25. This group was compared with the control group (nonpostmenopausal women). In postmenopausal women high level of PAH by echocardiographic trial was manifested in patients with cardiovascular disease n=17 (68%); In cases of pneumonia n=13; 56,5% (P<0.001) and in COPD n=12; 75% (P=0.001). There wasn't revealed significant level of pulmonary hypertension in nonpostmenopausal women (P=0.001). By transthoracic echocardiography tricuspidal regurgitation (TR), right atrial (RA) and right ventricular (RV) dilatation was showed in every patient with important degree of PH. By electrocardiography (ECG) signs of RV and RA hypertrophy were expressed in great majority of patients with high degree of PH. Furthermore, RV hypertrophy revealed in n=64 (80%) of patients and right deviation of axis in n=60 (75%). The results have indicated that PAH is widely extended in postmenopausal period, when the protective effects of oestrogens on the endothelium decrease. The problem is urgent and needs particular attention. Early diagnosis and treatment of pulmonary hypertension make it possible to control cardiovascular and pulmonary disease and avoid complications.

Auth.

**8.G.13.1.66. Enterohemorrhagic E. coli and hemolytic-uremic syndrome in Georgia.** /E.Vashakidze, T. Megrelishvili, E. Pachkoria, L.Tevzadze, M. Lashkarashvili/. Georgian Medical News. – 2010. – #9(186). – pp. 38-41. – eng.; abs.: geo., eng., rus.

It is important to consider that between July-October 2009 in the Pathology Center of Infectious Diseases (Tbilisi State Medical University's Department of Infectious Diseases) among hospitalized patients with hemorrhagic colitis 25 patients developed HUS syndrome. Most of patients were rural residents 20 (80%), only 5 (20%) were urban. 11 (44%) patients were children, 14 (56%) were adults. Male and female rate was equal. All the patients related the onset of the disease with the consumption of unwashed raw fruits or vegetables, non-pasteurized dairy products, food from street vendors, soft cheeses made from raw milk and untreated water in areas lacking adequate chlorination. The onset of the disease was not acute: low grade fever (37.5-37.8°C), severe diffuse pain in abdomen accompanied with cramps, frequent bowel movement with loose, watery stools 5-6 times a day. On the 2<sup>nd</sup>-3<sup>rd</sup> day of the disease, condition was worsened by increased intoxication and frequent bowel movement with bloody stools about 10-15-20 times a day. On the 3-4<sup>rd</sup> days of the onset of the diarrhea developed oliguria, anuria, edema. Among other complications important were: polyserositis – 8 (32%), encephalopathy – 2 (8%), disseminated intravascular coagulation – 3 (14%), ileus -1 (4%) acute reactive psychosis – 1 (4)%. In 15 (60%) cases became necessary to carry out hemodialysis. died 5 patients, lethality is – 5 (20%). Treatment options included: pathogenic and symptomatic. Thus, increased rate of patients in the recent years indicates to circulation of shiga toxin-producing E. coli in Georgia.

Auth.

**8.G.13.1.67. Epidemiologic peculiarities of infections caused by the hepatitis B and C viruses among lung tuberculosis patients.** /M. Mamedov, N. Rzayeva, A. Dadasheva/. Georgian Medical News. – 2010. – #9(186). – pp. 42-46. – rus.; abs.: geo., eng., rus.

The article presents the results of serological investigation for presence of specific markers of hepatitis B (HBV) and hepatitis C (HCV) infections in serum samples obtained from 600 patients with acute and chronic forms of lung tuberculosis (LT) and in control group I – 600 healthy adults and in control group II - 796 patients with somatic pathology from a multiprofile hospital. It has been established that among LT patients the frequency of revealing HBsAg and anti-HCV is statistically steady; similar indicators are among persons from both control groups. The frequency of revealing of these markers in patients with chronic forms of LT is considerably higher than the in patients with acute forms of LT. At the same time, both infections in patients with LT were often



presented in the form of subclinical hepatitis identified by increase in the aminotransferase activity in blood.

Auth.

**8.G.13.1.68. The efficacy of topical drugs in the treatment of non-inflammatory acne vulgaris.** /N. Merkviladze, T. Gaidamashvili, P. Tushurashvili, E. Ekaladze, N. Jojua/. Georgian Medical News. – 2010. – #9(186). – pp. 46-50. – eng.; abs.: geo., eng., rus.

Treatment of acne vulgaris still remains a pressing problem. The purpose of the research was to study the treatment and side effects of topical drugs – Diacneal and Skinoren in patients with non-inflammatory acne vulgaris. The results of the research have confirmed the swift and stable treatment effect of both preparations being expressed in a decrease in the number and size of comedonal and papulo-comedonal formations, actually without side effects. Thus, in spite of divergence of either chemical composition or mechanism of action, both, Diacneal and Skinoren, may be recommended as a very good choice for monotherapy of non-inflammatory acne vulgaris.

Auth.

**8.G.13.1.69. Parameters of innate immunity manifested in clinical and subclinical forms of infections caused by hepatitis B and C viruses.** /A. Guliyeva, M. Mamedov, A. Dadasheva, S. Safarova/. Georgian Medical News. – 2010. – #11(188). – pp. 29-33. – rus.; abs.: geo., eng., rus.

The authors determined parameters of innate immunity (IIM) in patients with acute and chronic forms of viral hepatitis B and C and in persons with subclinical infections caused by hepatitis B and C viruses. The results obtained demonstrated that the clinically manifested (acute and chronic) and subclinical forms of infections caused by hepatitis B and C viruses were accompanied by the development of IIM depression. At the same time, the signs of IIM depression in the patients with clinically manifested forms of infections were expressed in higher degree than in the persons with subclinical forms of infections.

Auth.

**8.G.13.1.70. The evaluation of nitrogen metabolism and the reactivity of the organism in patients with dry skin.** /N. Tsiskarishvili, A. Katsitadze, N. Tsiskarishvili/. Georgian Medical News. – 2010. – #11(188). – pp. 34-38. – rus.; abs.: geo., eng., rus.

It is known that in norm horny layer of the epidermis is able to retain water due to the presence of hygroscopic substances inside corneocytes in the form of so-called natural moisturizing factors (NMF), consisting of free amino acids and their derivatives, which are formed during the decay of filaggrin as well as lactic acid, urea, sugars, and intercellular lipid membranes, creating a barrier that prevents transepidermal water loss. At the same time, the results of recent studies have shown that urea - a kind of natural antioxidant that protects tissues from the accumulation of aggressive forms of oxygen. It is able to stabilize the lysosomal membranes, thus preventing autolysis of cells. The ability of urea at low concentrations to modify the reactivity of functional groups of proteins leads to conformational changes of immunoglobulin, which has an inhibitory effect on the immune system, including the diminishing impact on the development of reaginic type reactions. Urea has anti-inflammatory, hyposensitizing, and antioxidant effect. Based on the above the aim of this study was to determine the content of urea and some indicators of cellular and humoral immunity in case of chronic dermatoses, accompanied by dryness of the skin. Indicators of nitrogen metabolism of blood serum (urea, ammonia), some parameters of cellular and humoral immunity were studied in 27 patients, who according to nosological units were distributed as follows: atopic dermatitis (12), psoriasis (7), xerosis (8). In the study of the concentration of urea in the blood, and some indicators of cellular immunity, as well as the content of immunoglobulin E in the blood of our patients a decrease in the number of T-lymphocytes, mainly due to T – suppressor and raising the level of immunoglobulin E have been revealed. Specific patterns of changes in these parameters, depending on nosological unit, severity of disease and degree of dryness of the skin have also been observed.

Auth.

**8.G.13.1.71. Traditional Chinese medicine in diagnosis and treatment of fibromyalgia syndrome.** /R. Aliyev, T. Vieth, G. Gaiger/. Georgian Medical News. – 2010. – #11(188). – pp. 38-45. – rus.; abs.: geo., eng., rus.

Fibromyalgia syndrome (FS) is known for the difficulties arising from classification. The

accompanying pain in skeletal muscles, myofascial peri-articular structures and a number of polymorphic symptoms cannot be separated into complexes of symptoms. The application of principles of traditional Chinese medicine (TCM) helps in analyzing the symptoms of FS to detect a leading syndrome and thereby establish an individual therapy. Medical histories and objective examinations of 25 patients with FS and 22 patients with vertebrogenic pain syndromes were analyzed according to TCM. A questionnaire was used to determine the leading constitutional type according to the 5-elements-theory. Analyses of the results showed that 83% of patients with FS were of constitutional type of the element earth. The following syndromes were found to be important in FS: 1) liver-Qi-stagnation, 2) Yin and blood deficiency of the liver, 3) Yang-weakness of the spleen and kidney, 4) Yin-weakness of the kidney. Applying TCM for FS allows for separating a group of symptoms and thus individual therapy. The determination of the constitutional type according to the 5-elements-theory may be used for a better understanding of the disharmony pattern.

Auth.

**8.G.13.1.72. Heterogeneity and gene-geography of  $\beta$ -thalassemia in Georgia.** /I. Mestiashvili/. Georgian Medical News. – 2010. – #11(188). – pp. 45 -51. – rus.; abs.: geo., eng., rus.

Georgia is situated between latitude 44 and 41 North. This is an area, which belongs to "Malarial zone" of the Earth. This country is characterized by peculiar geographic contrasts as well as by peculiar ethnic variety of population on the small territory. So it represents an important region for study of thalassemiias. The main purpose of this work is to present the unpublished results of long-term clinical and population investigations for study of heterogeneity and gene-geography of  $\beta$ -thalassemia in Georgia; about 11.428 practically healthy persons were investigated in different Georgian and non-Georgian ethno-territorial groups under expeditionary conditions and about 600 patients (proband and members of their families) – in clinical laboratory. Screening tests under expeditionary conditions and special tests for the differentiation of thalassemiias in clinical laboratory as well as familial-genetic investigation were performed for diagnostics of thalassemiias. Common form of  $\beta$ -thalassemia in Georgia was found  $\beta(A_2)$ -thalassemia, which was revealed not only in Georgian families but also among Azeris, Armenians, Daghestans, Greeks, Georgian Jews, leaving in this country. Very rare  $\delta \beta$  (F) – thalassemiia was also revealed. From genetic point of view most heterogeneous was found thalassemiia intermedia, due to different combinations of  $\alpha$ ,  $\beta$ ,  $\delta \beta$  – thalassemiias. Population study revealed regularities of gene-geography of  $\beta$ -thalassemia in Georgia: a) statistical significantly higher gene frequency in lowlands and valleys than in highlands, b) Difference of gene frequency in Georgian and non-Georgian ethnic groups in similar geographic conditions, c) Direct correlation between  $\beta$ -thalassemia gene frequency and degree of malariogeneity of territory, d) Direct correlation between  $\beta$ -thalassemia gene frequency and intensity of former malaria focuses, e) Direct correlation between gene frequency and *p. vivax* distribution area (in the past). Gene-geographic card of "Distribution of  $\beta$ -thalassemia gene in ethno-territorial groups and malariogenic zones of Georgia" was made up. By means of this card  $\beta$ -thalassemia gene frequency in non-investigated territories of Georgia was prognosticated. The prognosis has been almost fully justified. Also, this card may be recommended for use in other countries taking into consideration malaria distribution (even in the past) as well as the ethnic structure of population.

Auth.

**8.G.13.1.73. Orexinergic system and pathophysiology of epilepsy.** /N. Doreuli, M. Alania, G. Vashalomidze, E. Skhirtladze, Ts. Kapanadze/. Georgian Medical News. – 2010. – #11(188). – pp. 74-79. – rus.; abs.: geo., eng., rus.

Neuropeptides orexins, also known as the hypocretins, are expressed in the lateral hypothalamus. Orexin-containing cells project widely throughout the brains, are crucial for the regulation of wakefulness and dysfunction of this system is associated with pathophysiology of narcolepsy-cataplexy. Orexin neurons play an important role in motivation, feeding and adaptive behaviors. Distribution of orexinergic receptors in the hippocampus tended to the ideas that orexins might be involved in the functions relating to the hippocampus. Effects of neuropeptide orexin-A on epileptiform activity in hippocampal slices were investigated. 500 $\mu$ m thick hippocampal slices from 8-10 week-old rodents were used. Field excitatory postsynaptic potential (pop-FEPSP) and population spike in CA1 of hippocampus were registered using standard protocol of *in vitro*

electrophysiological experiments. Initial slope of the FEPSP and amplitude of II pop-spike were measured. Bursting neurons in CA3 were recorded in modified saline. We have found that orexin-A decrease duration/amplitude of multiple discharges of pop-spikes and inhibits spontaneous epileptiform after discharges induced by bicuculline methiodide in CA1. Orexin-A also modulates the frequency of discharges of bursting neurons in CA3. Our results suggest possible involvement of orexinergic system in antiepileptic action.

Auth.

**8.G.13.1.74. The Level of fluoxetine in blood plasma and washed from erythrocyte supernatant.** /D. Zurabashvili, I. Giorgobiani, M. Arveladze, I. Gamkhrelidze, E. Kavsadze/. Georgian Medical News. – 2010. – #11(188). – pp. 80-83. – rus.; abs.: geo., eng., rus.

Antidepressant fluoxetine and their major therapeutically active metabolite Norfluoxetine was monitored in albumen and glycoprotein of blood plasma and washed from erythrocyte supernatant. In the paper we describe rapid and reliable method using high-performance liquid chromatography for simultaneous measurement of plasma and supernatant concentration of fluoxetine and norfluoxetine. The described method has been successfully used in clinical and laboratory cases. Large inter-individual variations in plasma and supernatant concentrations of fluoxetine and its major metabolites have been shown. In albumen fractions of blood plasma the level of fluoxetine is higher than in supernatant. A successful development of the clinico-pharmacokinetic direction at the present stage is due to improvement and standardization of methods of clinical and pharmacokinetic examination, which help to ensure a reliable pretreatment identification of the patients potentially sensitive to pharmacotherapy with antidepressants.

Auth.

**8.G.13.1.75. Quantitative Changes of Schwann and mast cells in the process of peripheral nerve regeneration.** /T. Giorgadze, R. Rukhadze, S. Giorgadze, N. Gujabidze, N. Tevzadze/. Georgian Medical News. – 2010. – #11(188). – pp. 84-88. – rus.; abs.: geo., eng., rus.

One of the most common problems in the fields of orthopedic surgery and neurology is that of the injured peripheral nerve. Injured nerve fibers in the adult mammalian peripheral nervous system can and often do regenerate, thereby restoring at least some lost functions. During the past decade enormous progress has been made in the understanding of the cellular events and molecular changes during degeneration and regeneration of peripheral nerves. However, our knowledge of the regulatory mechanisms and signaling cascades underlying the complex molecular regeneration program is still very limited despite an enormous amount of new experimental data. Injury to peripheral nerve initiates a complex cascade of signals involving neurons, glia and cells of the immune system. The question of what cells are responsible for nerve survival and tissue repair mechanisms after injury remains controversial. Although it has largely been demonstrated that macrophages and Schwann cells play important roles in degrading and removing myelin few data have been reported regarding mast cells in Wallerian degeneration. The present study has been designed to evaluate the correlation between Schwann and mast cells during regeneration of the injured peripheral nerve. Animals were divided into two groups: experimental and intact rats. The left sciatic nerve was separated from the surrounding tissue, was transected in its mid-thigh portion and sewed up. Sewed sciatic nerves were obtained and used for morphological and Immunocytochemical observation 2 and 12 day, and 1 month after transection. Our experimental data reveals that the mast cells, as well as Schwann cells, play a pivotal role in regeneration process after injury. The correlation between the changes of quantity of Schwann cells and mast cells during the regeneration of injured peripheral nerve was not revealed.

Auth.

**8.G.13.1.76. Comparative evaluation of indicators of local, humoral immunity and nonspecific resistance in patients with different pathology of the cervix.** /A. Harutyunyan/. Georgian Medical News. – 2011. - #1(190). - pp. 7-15. – rus.; abs.: geo., eng., rus.

A comparative evaluation of some indicators of immune system and analysis of the dependence of these parameters (correlation) are carried out to identify interrelated mechanisms. The observed changes in the concentrations of indicators of immune system and the correlation between cytokines, humoral immunity and nonspecific resistance in cervical mucus in patients with cervical pathology demonstrate the complex, interrelated and changing interactions of the local immune system at various stages of development of the pathological process of the cervix.

Auth.

**8.G.13.1.77. Novelties in treatment approach of poly-neoplasias developed during thyroid pathologies.** /T. Makaridze, K. Mardaleishvili/. Georgian Medical News. – 2010. – #11(188). – pp. 15-20. – rus.; abs.: geo., eng., rus.

The publication discusses the pathogenic mechanisms developed during concordance of malignant tumors of the thyroid gland and reproductive systems and dishormonal hyperplasias, also functional disturbances which accompany the thyroid gland diseases and the principles of treatment during synchronic and metachronic manifestations. The treatment of polyneoplasias by "neurotransmitive control" is proposed. Importance of thyroid suppressive therapy is assessed. The efficacy of thyrotrophic hormone suppression by neurotransmitters in prevention of malignant tumors of reproductive system is reported.

Auth.

**8.G.13.1.78. The prognostic significance of heart rate variability in patients with diabetes mellitus type 2 against the background of ischemic heart disease and arterial hypertension.** /G. Tabidze, O. Leonidze, L. Basiladze, A. Tsibadze/. Georgian Medical News. - 2011. - #1(190). pp. 33-36. – rus.; abs.: geo., eng., rus.

In recent decades the special attention has been given to the heart rate variability (HRV) to assess the prognosis of the patients with cardiovascular diseases. There were studied 47 male with arterial hypertension and heart failure, by which the HRV was researched. In the group of patients with diabetes mellitus (DM) type 2, ischemic heart disease (IHD), arterial hypertension (AH) and heart failure (HF), the heart rate variability (HRV) has been considerably lower in comparison with the group of patients without DM. The initial activation of the sympathetic nervous system in the group of patients with DM, IHD, AH and HF, we can speak about the expected progression of heart failure even before occurrence of any significant changes of central hemodynamics. It has been established that the higher is the functional class of heart failure the more revealed are sympathetic influences and worse is the heart rate variability.

Auth.

**8.G.13.1.79. Two clinical cases of the antiphospholipid syndrome.** /E. Kartvelishvili, T. Astvatsaturova/. Georgian Medical News. - 2011. - #1(190). - 37-41. – rus.; abs.: geo., eng., rus.

Because of importance of early diagnosis of the antiphospholipid syndrome (APS) we present two case histories from clinical practice of the Scientific-Practical Center of Rheumatology. The first clinical case (male, born in 1961, diagnosed with systemic lupus erythematosus and secondary APS) shows that verification of diagnosis in men is much harder than in women. The patient was diagnosed with secondary APS only 8 years after the onset of the disease. The second clinical case (female, born 1959, diagnosed with primary APS) is interesting because during many years the patient was diagnosed with SLE and secondary APS. We performed careful analysis of the case and made the diagnosis of primary antiphospholipid syndrome. Nowadays the patient is given an adequate treatment and his health is stable, but the risk of recurrent thrombosis still remains. Presented case histories show the variety of clinical symptoms and the complexity of diagnosis of APS.

Auth.

**8.G.13.1.80. Opioid sensitivity of nucleus raphe magnus after analgesia by non-steroidal anti-inflammatory drugs.** /I. Nozadze, N. Tsiklauri, G. Ghurtskaia, E. Abzianidze, M. Tsagareli/. Georgian Medical News. – 2011. - #1(190). – pp. 50-55. – eng.; abs.: geo., eng., rus.

Our recent investigations have shown that microinjection of three non-steroidal anti-inflammatory drugs (NSAIDs), analgin, ketorolac and xefocam, into the central nucleus of amygdala produces tolerance to these drugs and cross-tolerance to morphine. We have observed the same phenomenon in midbrain periaqueductal grey matter and nucleus raphe magnus. The medullar nucleus raphe magnus (NRM) is one of important parts of CNS circuit that controls nociceptive transmission at the level of spinal cord. It is functionally involved in descending pain modulation, and mainly consists of serotonergic neurons. The aim of this study was to examine opioid sensitivity of NSAIDs action in NRM of male rats. For this purpose 30 minutes later of NSAIDs administrations we microinjected  $\mu$ -opioid antagonist naloxone and tested rats for tail flick and hot plate latencies. Our investigation showed that microinjection of naloxone in NRM significantly

decreased antinociceptive effects of NSAIDs at the first day in the TF and HP latencies. At the second day, naloxone generally had trend effects in both TF and HP tests. These results strongly support the suggestion on endogenous opioid involvement in NSAIDs antinociception and tolerance. On the other hand, our evidence confirms once more that NRM is involved in the descending pain control circuit inhibiting spinal nocifensive reflexes.

Auth.

**8.G.13.1.81. Changes of redox processes in liver under PV-88 during an experimental hemorrhagic shock.** /Gr. Sulaberidze, M. Ghvaladze, G. Didava, B. Kotchlamazashvili, M. Chkhaidze, T. Gegeshidze/. Georgian Medical News. – 2011. - #1(190). – pp. 65-69. – rus.; abs.: geo., eng., rus.

PV-88 is the Ca<sup>2+</sup> L channel blocker from pyrrole compounds that was used on the 60<sup>th</sup> minute of a hemorrhagic shock (HS) modeled by the Wiggers-Feine method (intravenous administration, 3 mg/kg). The mean arterial pressure was 40 mmHg. The effects were studied on the 80th minute after blood letting. Blood was exfused 40 ml/kg. Effect of PV-88 on redox processes in liver was studied. Experiments were carried out on male cats. Right lobe of the liver and the metabolic indices: ATP, CO, NAD, NADP, ALP, SDH, LDH were studied with the use of histochemistry (Pearse). Investigations have shown that on 80th minute after PV-88 administration CO (p<0.05), NADP (p<0.05), ALP (p<0.001), SDH (p<0.05), and LDH (p>0.05) were increased, while ATP (p<0.001) and NAD (p<0.001) were decreased. Increase in LDH was not statistically significant. According to the results of investigations, after administration of PV-88 at HS 60 on the 80th minute the oxygen concentration in the liver and the aerobic process increased respectively.

Auth.

**8.G.13.1.82. Cytokine regulation in patients with brain tumors.** /L. Haroutunian, Z. Ter-Pogossian, N. Jagatspanian, Z. Karalyan/. Georgian Medical News. – 2011. - #2(191). - pp. 7-11. - rus.; abs.: geo., eng., rus.

The aim of the study was to investigate serum levels, as well as the ability to produce in vitro, some pro-inflammatory and anti-inflammatory cytokines in patients with brain tumors (BT). Serum concentrations of IFN-gamma, IFN-alpha, TNF-alpha, IL-4, IL-6, IL-8, and RA IL-1 were determined in 17 patients with brain tumors, and in 21 healthy donors. The results showed that baseline levels of cytokines studied was above normal in most patients (78%) had the highest rates of IFN-gamma. During the whole observation period, slightly higher in patients compared with healthy individuals (t=1,8) was the content of IFN-alpha. Serum concentrations of IL-4 in patients before treatment were significantly higher than in control group (p<0,01), remaining at about the same level, and after treatment. Levels of Rail-1, IL-6 and IL-8 in patients before treatment were within normal limits, while remaining unchanged at the end of the survey. Indicators induced in vitro production of cytokines studied to some extent correlated with their serum levels. Hyperproduction in vitro IFN-gamma was observed in 61% of patients, low production - 28% of patients, and only in 11% of cases, these figures were within normal limits. In patients with malignant brain tumors were identified violations of serum levels and production of cytokines studied. The most significant was the increase of PHA-induced production of IFN-gamma, which was not reduced by the end of treatment. High serum and, in particular, PHA-induced levels of IFN-gamma at the end of treatment may be recommended as an additional criterion for immunodiagnosis in a dynamic laboratory monitoring.

Auth.

**8.G.13.1.83. Epidemiological aspects of breast cancer in women in major cities of the Azerbaijan Republic.** /S. Vatanakha/. Georgian Medical News. – 2011. - #2(191). - pp. 18-22. – rus.; abs.: geo., eng., rus.

Breast cancer is the most frequent type of cancer among women and is a leading cause of cancer death among women in the Azerbaijan Republic. The prevalence of the disease varies in different regions of the country. The purpose of this study was to examine statistics of breast cancer in large areas of Azerbaijan Republic (the state of cancer care, morbidity, mortality) and assessment of statistical indicators in the dynamics. In the structure of malignant tumors mamma cancer in the large cities of Azerbaijan Republic is more than 20% (Shirvan – 21.2%, Mingachevir – 22.5%, Sumgait – 25.4%, Ganja – 23.8%). The highest rate recorded in Sumgait (25.4%). Intensive

incidence of breast cancer among patients registered in the city of Ganja was 74.5% per 100 thousand people. The overall mortality rate is relatively low and varies in the range 0.1-0.8% per 100.000 population, and case-fatality rate - in the range 7.1 - 19.0%.

Auth.

**8.G.13.1.84. Treatment of Non-accommodated concomitant strabismus.** /M. Kikolashvili, D. Shengelia, L. Tsomaia/. Georgian Medical News. – 2011. - #2(191). - pp. 22-26. – rus.; abs.: geo., eng., rus.

The aim of the study was a comparative evaluation of surgical treatment and complex pre- and postoperative pleoptic, orthoptic, diploptic treatment of non-accommodated concomitant strabismus and identification of the optimum age for surgical treatment of strabismus. The 75 patients (from 2 to 10 years old) with manifested concomitant convergent strabismus were divided into two groups: patients operated at the age from 2 to 4 years old; patients operated at the age of 4-10 years). The 75 of patients operated at the age from 2 to 4 years old, which underwent orthoptic-diploptic treatment pre- and postoperatively got binocular vision showed the full recovery in only 40% of the cases of the same age-group undergone the surgical treatment in combination with the direct occlusion. Binocular vision was achieved in 68% of the patients operated at the age of 4-10 years with complex treatment, and in 25% in the patients of the same age group with surgical treatment plus occlusion. The findings showed the efficacy of complex treatment as well as pre and postoperative pleoptic-orthoptic-diploptic treatment of strabismus and direct occlusion. Thus, the results of this study suggest that the delay of surgical treatment limits the ability to obtain optimal results.

Auth.

**8.G.13.1.85. Sporadic pancreatic head sarcoidosis: a rare clinical case analysis.** /M. Tsintsadze, T. Beridze, U. Volker, G. Loppel, R. Schauer/. Georgian Medical News. – 2011. - #2(191). - pp. 26-32. – rus.; abs.: geo., eng., rus.

Systemic sarcoidosis is an autoimmune disease with a prevalence of 40 per 100.000 people which mostly affects young adults. It is characterized of non-caseous granulomatous changes of interstitial tissue, predominantly in the lungs. Extrapulmonary sarcoidosis has been described in every organ but is present only in 1-5% with pancreatic involvement. Furthermore, sarcoidosis leading to a symptomatic mass in the pancreas is extremely rare and must be differentiated from cancer and pancreatitis. For therapy, it is crucial to find the right diagnosis before planning an operation. Otherwise a radical surgery may lead to an unwanted outcome.

Auth.

**8.G.13.1.86. Prevention of insult with nondirective anticoagulant therapy by warfarin (warfarex) in patients with atrial fibrillation.** /G. Abuladze, N. Jinjolia, M. Nebieridze, G. Dundua, T. Chachua/. Georgian Medical News. – 2011. - #2(191). - pp. 32-36. – rus.; abs.: geo., eng., rus.

The aim of the study was to estimate efficiency and safety of treatment by non-direct anticoagulant - warfarex in the patients with persistent and paroxysmal forms of AF for the prevention of thromboembolic complications. 55 patients between 37 and 75 years old with atrial fibrillation (AF) were investigated. Follow-up was 2 years. Primary diseases were post myocardial cardiosclerosis, cardiomyopathy, IHD, arterial hypertension. The patients with persistent form of AF underwent treatment by warfarex. In the case of paroxysmal form of AF patients were prescribed warfarex during the first 48 hours from the beginning of paroxysm and for 3-4 weeks after cardioversion. The dose of warfarex was chosen according to the International Normalized Ratio (2.0-3.0). The results of the study show that warfarex is effective and safe for the prevention of thromboembolic complications in the case of persistent and paroxysmal forms of AF.

Auth.

**8.G.13.1.87. Study of self-regulating behavior at different stages of psychogenic stress before the formation of depressive-like state in rats.** /T. Matitaishvili, T. Domianidze, K. Tchitchinadze, I. Phantsulaia, M. Khananashvili/. Georgian Medical News. – 2011. - #2(191). - pp. 44-48. – rus.; abs.: geo., eng., rus.

During last decades abnormalities of the neuro-psychic sphere have become a topic of great interest. Among them an important place takes depression. Psychogenic factors are commonly the most frequent cause of a depressive condition and until now the study of the so-called transitional period (from the beginning of stressor action till the formation of depressive state) continues to be an actual task of scientific research. This in mind, we studied the self-regulating behavior in rats in different stages of psychogenic stress until the formation of a depression-like condition. To access the behavioral changes, the "open field" test, FST (forced swimming test, "Porsolt" test) and TST (tail suspension test) were used. We also registered behavioral indices while applying stressors. Stress was applied in a modified shuttle chamber. At the very beginning of the study (the first stage of stress - alarm) an animal was forced to develop a reaction of active avoidance on metronome beats (100 beats per second), later, after its fixation, the same reaction was developed on tone (500 Hz). Then simultaneous testing of two developed reactions of active avoidance was performed (the second stage of stress). After the long-term application of stressors (48 days) the second stage of stress proceeds into the deep (the third) one. On this stage animals showed decreased motor activity in the "open field" test, decreased mobility in FST and TST, changes being statistically valid. All behavioral changes indicating depression-like condition in the animals were normalized after per os administration of antidepressant Fluoxetine at doses of 40 mg/kg. The results obtained in the study confirm that on different stages of psychogenic stress changes in behavioral indices are natural and self-regulating. They appear to be compensatory as only on their exhaustion the depression-like condition is formed.

Auth.

**8.G.13.1.88. Anti-diabetic activity of berberin and extract obtained from the bark of Phellodendron Lavalei, introduced in the subtropical regions of Georgia in streptozotocin-induced diabetic rats.** /M. Meskheli, N. Antelava, A. Bakuridze, E. Berishvili, K. Pachkoria/. Georgian Medical News. – 2011. - #2(191). - pp. 53-60. – rus.; abs.: geo., eng., rus.

The goal of the study was to identify anti-diabetic impact of berberin and extract obtained from the bark of Phellodendron Lavalei introduced in the subtropical regions of Georgia. The study was conducted on streptozotocin-induced diabetic rats. Diabetes in animals was induced by a single intraperitoneal injection of streptozotocin in 1M citrate buffer, pH 4.5, dose 40mg/kg per body weight, 1ml volume. Treatment was conducted using berberin hydrochloride dose 150mg/kg and extract of the bark of Phellodendron Lavalei dose 400mg/kg per orally, on an everyday basis, once a day during 3 weeks. The following indicators were measured: weight gain during the observation period, amount of food intake g/day, food efficiency ratio (%), relative mass of internal organs and blood glucose level. Blood glucose level was measured after 3 weeks from the day experiment started, after fasting all night. It was determined that per oral administration of berberin hydrochloride dose 150mg/kg and extract of the bark of Phellodendron Lavalei dose 400mg/kg, during 3 weeks caused decrease in blood glucose level in streptozotocin induced diabetic rats. The marker of this efficacy was improvement of symptoms: decrease in hyperglycemic values, decrease in polyuria and polyphagia and relative weight of kidneys and heart, improvement of food efficiency ratio and mark decrease of weight loss. It should be noted that berberins antidiabetic activity was more marked. It is suggested that medicinal plants containing studied active components can be used as a crude drug for obtaining medicinal agent of promising antidiabetic phytotherapy and along with standard treatment can be used against metabolic syndrome and prevention of diabetes type 2.

Auth.

**8.G.13.1.89. Changes of metabolic indices caused by berberin and extract obtained from the bark of Phellodendron Lavalei introduced in the subtropical regions of Georgia in streptozotocin-induced diabetic rats.** /M. Meskheli, N. Antelava, A. Bakuridze, M. Ghonghadze, M. Okujava/. Georgian Medical News. – 2011. - #2(191). - pp. 61-68. – rus.; abs.: geo., eng., rus.

The goal of the study was to identify changes in lipid metabolism, functional condition of liver and kidney influenced by berberin and extract, obtained from the bark of Phellodendron Lavalei, introduced in sub tropic regions of Georgia, in streptozotocin-induced diabetic rats. Diabetes in animals was induced by a single intraperitoneal injection of streptozotocin in 1M citrate buffer, pH 4.5, dose 40mg/kg per body weight, 1ml volume. Treatment was conducted using berberin hydrochloride dose 150mg/kg and extract of the bark of Phellodendron Lavalei dose 400mg/kg per

orally, on an everyday basis, once a day during 3 weeks. Afterwards the concentrations of the following agents were measured in blood: glucose, uric acid, creatinine, AST, ALT, bilirubin, triglycerides, cholesterol and high density lipoproteins. It was determined that per oral administration of berberin hydrochloride dose and extract of the bark of *Phellodendron Lavalei* during 3 weeks caused decrease in blood glucose level, improved morpho-functional characteristics of liver and kidneys, and modulated lipid spectrum in streptozotocin induced diabetic rats. In conclusion we can suggest that these phytodrugs can be a valuable asset to the treatment of metabolic syndrome and prevention of diabetes type 2, associated with metabolic and systemic disorders.

Auth.

**8.G.13.1.90. In vivo investigation of the effect of extracellular ubiquitin effect on liver histoarchitectonics.** /R. Sujashvili, E. Bakuradze, I. Modebadze, D. Dekanoidze, L. Kirikashvili/. Georgian Medical News. – 2011. - #2(191). - pp. 77-81. – eng.; abs.: geo., eng., rus.

Ubiquitin is a small regulatory protein of living cells. It affects almost all cellular processes. Investigation of ubiquitin is very important for discovering the new therapeutics for different heavy human diseases. The main goal of the work was to reveal the effect of extracellular ubiquitin on liver histoarchitectonics of mature and immature white rats. The obtained data indicate the inefficiency of used doses - 200µg/ml and 500 µg/ml - of extracellular ubiquitin single and multiple in vivo injections to evident changes of histoarchitectonics of immature and mature white rat liver. Further investigation of the in vivo injection effects on the histoarchitectonics of intact and damaged liver and hepatocyte cell cycle regulation by immunological assays seems to be actual and interesting.

Auth.

**8.G.13.1.91. Optimization of venous return during the anhepatic phase of experimental liver transplantation.** /E. Azmaipharashvili, M. Geldiashvili, Z. Chkhaidze, N. Khodeli, O. Philishvili, G. Tomadze, M. Jangavadze, J. Phartsakhashvili, D. Kordzaia/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 9-14. – geo.; abs.: eng.

To assess the effectiveness of different schemes of veno-venous bypass during the anhepatic phase (AP) of experimental liver transplantation, experiments have been performed on 8 male dogs weighing 15–20 kg. After hepatectomy, a pump-driven venous bypass from the infrahepatic segment of the caudal vena cava and portal vein was conducted into the brachiocephalic vein (I group; n=4) or the suprahepatic segment of the caudal vena cava (II group; n=4). Hemodynamics was monitored for 3 hours. During the entire AP in the I group the pressure in the cranial venous system was increasing ( $p>0.05$ ), while the blood flow index was decreasing ( $p<0.05$ ); the same parameters in the II group were maintained unchanged. The obtained results confirm that veno-venous bypass into the suprahepatic segment of the caudal vena cava can be considered as more physiologic and can prolong a safe AP up to 3 hours.

Auth.

**3 8.G.13.1.92. Comparative influence of  $\beta$ -blockers on the liver under conditions of acute toxic hepatitis induced by acetaminophen.** /L. Gabunia, I. Khabeishvili, N. Kvernadze, S. Chkhaidze, G. Kapanadze/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 20-24. - geo.; abs.: eng.; rus.

The effects of non-selective  $\beta$ -blocker propranolol, selective  $\beta$ -blocker bisoprolol and non-selective  $\beta$ -blocker with additional vasodilatory properties - carvedilol on the functional parameters and morphology of the liver during the paracetamol-induced acute toxic hepatitis have been studied. The experimental results have shown that hepatotoxicity is not a characteristic side effect for all types of  $\beta$ -blockers. Propranolol worsens, bisoprolol has no effect and carvedilol slightly but still improves the functional parameters of the liver in case of acute toxic hepatitis. The positive treatment effect of carvedilol on hepatocytes could be explained by its antioxidant or Ca-antagonist properties. Investigation of functional parameters of the liver before treatment course with propranolol is strongly recommended, especially in patients suffering with liver insufficiency.

Auth.



**8.G.13.1.93. Phage therapy of surgical infections.** /G. Gvasalia, E. Kutter, Z. Alavidze, T. Danelia/. Experimental and Clinical Medicine. - 2010. - #2(57). - pp. 9-14. – geo.; abs.: eng.

The study represents an analysis of thirty years' experience in phage therapy of surgical infections, which proves that the phage therapy does not represent an alternative for antibiotic therapy but has a summary or synergistic effect. Unlike antibiotics, the acquired resistance of bacteria to phages is rare and the primary resistance is usually to commercial preparations. This kind of resistance is surmountable by using selected or adapted bacteriophages against isolated bacterial strains. Antibiotic resistance is not related to the resistance to bacteriophages. Possibility of using bacteriophages locally is advantageous due to their reproductive ability in the wound and stability to enzymatic inactivation and dilution. Therefore, local bacteriophage therapy can cause the inhibition of infection in ischemic-neuropathic, granulation, sclerotic tissues and extensive wounds, where systemic antibiotics cannot achieve therapeutic concentration. Phage therapy and prophylactics of soft tissue gunshot wounds on battlefield (Abkhazia 1992-1993) prolongs the "golden" period for wound care, decreases the chances for tissue infection by 14-4% and treatment of purulent wounds by 6-8 days. Bacteriophages were successfully used for environmental and personnel sanitation in surgical and critical care wards due to its high efficacy and low price. The reason why bacteriophages are not still used as a potent antibacterial means is subjective as well as there is lack of information in clinical bacteriophage therapy. Further research in this field should be planned according to the evidence based medicine standards, to answer the questions about phage dynamics and phage kinetics during therapy of surgical infections, as well as the mathematic modelling of correlative relationship between quantitative bacteriology and bacteriophages.

Auth.

**8.G.13.1.94. Changes in liver during alloxan diabetes.** /N. Janashia/. Experimental and Clinical Medicine. – 2010. - # 2(57). - pp. 29-32. – geo.; abs.: eng.

This study has been conducted to detect the histological changes that could be induced in the liver of Wistar rats. Animals were killed one month after injection. The results showed several morphological alterations in liver tissues (granular and vacuole dystrophy), changes in micro-circular channel, inflammatory the injury of liver histology over a short time in alloxan diabetic rat.

Auth.

**8.G.13.1.95. Cytokines and their role in the development of cardiovascular system diseases.** /N. Mamamtavrishvili, N. Silagava, M. Dzamukashvili, N. Gelashvili, N. Zarnadze/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 32-35. – geo.; abs.: eng.

The role of cytokines in the development of cardiovascular organic pathologies is shown in the reviewed article. One of the main factors which affect the progress of ischemic heart diseases along with hemodynamic abolition is the activation of inflammatory reactions with participation of preinflammatory cytokines. Changes in the levels of cytokines are associated with the disease progression, as well as with its outcome. There is also shown the need for new preparations along with the presence of "traditional preparations".

Auth.

**8.G.13.1.96. Alterations of gonadal axis and concentration of sexual steroids in the phenol-intoxicated male organism.** /E. Melikadze, T. Kvatchadze, I. Korkia/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 64-66. - geo.; abs.: eng.

It is known that the male reproduction system is too sensitive to the impact of environmental conditions. One of such endocrine deregulators is phenol. An experiment was conducted on 60 adult male albino rats (body mass 200-250g). Each animal experienced phenol intoxication daily during 15 days in a special closed cabin. On the 60th day the animals were decapitated, and afterward in the blood serum was defined the alternation of the concentration of the gonadotropic hormones LH, FSH and sexual steroids - testosterone, estrone, estradiol - by means of the immunoenzymatic method. Significant alternations in the hormones concentration were revealed during the experiment: it was revealed that LH did not stimulate testosterone secretion; conversely, it decreased, while the estrogen concentration increased. The mentioned data enable us to conclude that the impact of phenol vapor caused disorders in the male reproduction function.

Auth.

**8.G.13.1.97. Age-related changes of cholesterol index in erythrocyte membrane and their influence on deformability of erythrocytes.** /M. Arabuli, R. Khetsuriani, A. Shukakidze, D. Tophuria, N. Tchlikadze, I. Kirvalidze/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 40-43. – geo.; abs.: rus., eng.

The research objective was to study age-related changes of the index of erythrocyte membrane cholesterol and their influence on the deformability of erythrocytes. Studies have been performed in 3 age groups: new-borns (umbilical cord blood), adults (22-30 years old) and elderly people (75-89 years old). Based on the results, we can assume that erythrocyte deformability depends on the cholesterol index of the erythrocyte membrane, and with less cholesterol the deformability of erythrocytes increases. Erythrocyte deformability in new-borns is high, which is due to the low content of cholesterol in their membranes. Deformability is higher also in the elderly, because in their membranes cholesterol is less than in the membranes of adults.

Auth.

**8.G.13.1.98. Treatment of chronic prostatitis in light of concomitant cardiovascular disease.** /A. Bakuridze, B. Iakobadze, N. Shavdia, N. Mikeladze/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 32-36. – rus.; abs.: eng.; geo.

Given the favourable impact of  $\beta$ -adrenoblockers on the prostate function in order to improve blood circulation in the organ, the preparation "Kardura" (2 mg once per day) was prescribed to 20 patients with chronic elderly prostatitis-associated cardiovascular problems and diuretic disorders. In the complex treatment of urethroprostatitis, the activity of the immune system increased, indicators of the pituitary-gonadal system became settled, which makes it possible to recommend Kardura for the treatment of prostatitis in the elderly.

Auth.

**8.G.13.1.99. The action of biflazim on the hypophyseal-gonadal and hypophyseal-adrenal systems during non-gonorrhoeal urethritis.** /A. Bakuridze, B. Iakobadze, N. Shavdia, N. Mikeladze/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 9-12. – rus.; abs.: eng.

To investigate the efficacy of thrombin-biflazim, the preparation was given per os after meals to 34 patients with non-specific urethritis complicated with scrotal inflammation. Biflazim was effective to resolve gonadal inflammation and pathospermia. Biflazim did not affect prolactemia, reduced follitropin and luteotropin to the normal level, increased the level of testosterone and estradiol in the blood, and regulated the function of gluco- and mineral cortical hormones.

Auth.

**8.G.13.1.100. Morphological changes developed in rat pancreatic islets during alloxan diabetes and after the effect of plaferon.** /I. Latsabidze/. Experimental and Clinical Medicine. - 2010. - #3(58). - pp. 12-15. – geo.; abs.: eng.

We have studied sclerotic changes developed in rat pancreatic islets at different stages of alloxan diabetes and after treatment with Plaferon. At the later term of alloxan diabetes, the infiltration of islets with fibroblasts, lymphocytes, plasmocytes, and collagen fibers takes place. In animals treated with plaferon the activation of macrophages occurs and at the same time collagen lysis is marked. It facilitates the movement of insular granules towards the capillary, which is revealing of the compensatory-adaptation process.

Auth.

**8.G.13.1.101. Immunotropic effects of the preparation *eskus-gel* in the complex treatment of arthritis.** /T. Ghlonti, B. Korsantia, K. Ghlonti/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 18-22. rus.; res.:eng.

The ointment *eskus-gel* possessing anti-inflammatory, analgesic and local antiseptic properties is widely used to treat arthritis caused by various diseases or injuries. For the first time the immunotropic effect of the drug for pain in the knee joint was tested. The results showed a more rapid normalization of the immune status of patients, especially – of the interferon system against the control group. The immune response dynamics depended on the treatment efficacy.

Auth.

**8.G.13.1.102. Some clinical-cardiologic indices in patients with chronic tonsillitis and rheumatic carditis.** /I. Kekelidze, T. Khechinashvili, N. Jashi, N. Nakudashvili/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 16-18. – rus.; abs.: eng.

A diagnosis of chronic tonsillitis is frequently associated with certain difficulties. At the same time, the solution of diagnostic problems of tonsilogenic cardiac lesions is of major importance in both theoretical and practical medicine. Therefore, the authors of the conducted study have tried to work out efficient methods of diagnosing, prevention and treatment of chronic tonsillitis and rheumatic carditis. For this reason, based on the methods of clinical and echodopplerography, 86 subjects, aged 11-45 years, have been studied. As a result: a) close interrelation between the above-mentioned pathological conditions was determined, b) accurate subsidiary methods of differential diagnosis were developed; c) rational therapeutic tactics, including surgical and conservative means of treatment, and timely preventive measures against the disease and its complications were worked out.

Auth.

**8.G.13.1.103. Modern literary data concerning pancreatic cancer treatment.** /L. Basiladze, A. Tsalughelashvili, Z. Chomakhashvili/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 41-48. – geo.; abs.: eng.

The authors have studied 103 literary sources, the bulk of which was published after 2000. The object of the study is the data concerning the epidemiology, etiology, clinic, diagnosis of cancer pancreatic and all kinds of cancer treatment. On the basis of their study and analysis, the authors has concluded that the study of pancreatic cancer is to start from the very beginning, that is the results existing at the current stage should be analyzed and the ways of their improvement via available methods should be implemented.

Auth.

**8.G.13.1.104. Morphological characteristic of fibroblasts in different histological types of colon and breast cancer.** /T. Ghvamichava, I. Gachechiladze, T. Matchavariani, K. Kavtiasvili, E. Janberidze/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 25-28. – rus.; abs.: geo., eng.

The investigation showed an active process in the stromal elements of malignant tumors. The growth and proliferation in the fibroblasts of malignant tumors were determined. The changes in the stromal elements are supposed to be one of the reasons for malignant tumor spread and growth.

Auth.

**8.G.13.1.105. Symmetry of nervous plexuses of human spinal cord and sympathetic trunk.** /N. Javakhishvili/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 8-13. – geo.; abs.: eng.

A study of the symmetry and order of the spinal cord nervous trunks allows to suggest that the connection of the thoracal nerves with the branchial, lumbar and sacral plexuses displays a tendency of the human nervous system to develop the torso size reduction and upper extremity lengthening. The same appears less characteristic of the sympathetic nervous system. However, such tendency is observed in its separate component – stellate ganglions of the branchial plexus, i.e. the system has some connection with the human extremities innervation.

Auth.

**8.G.13.1.106. Functional anatomy of intercostal muscles given biomechanical principles.** /Z. Katsitadze, M. Abesadze/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 13-17.- geo.; abs.: eng.

A century long dispute on the role of the external and internal intercostal muscles in the process of respiration is still topical. Some of the authors consider them synergists, the others – antagonists. As the authors of this article note, the dispute was caused by the fact that all the above-mentioned researches were based on the data of electromyography, according to which both types of muscles during inspiration and expiration showed equally positive impulsation which must be considered a display of reciprocal interaction. The authors of the article, using a method of the biomechanical

analysis, have proved the antagonism of the external and internal intercostal muscles during respiration.

Auth.

**8.G.13.1.107. Exfoliative cytology in diagnostics of basal cell carcinoma.** /N. Kiladze, I. Shurghaia, T. Shulaia/. *Experimental and Clinical Medicine*. – 2010. - #6(61). - pp. 31-34. – rus.; abs.: eng.

Basal cell carcinoma is the most common type of malignant non-melanoma skin cancer. It is locally invasive, aggressive and destructive, but has limited capacity to metastasize. Since the proportions of these tumors are heavily pigmented, clinically they may resemble invasive melanoma. The aim of this study was to evaluate the reliability of the cytological method of examination, and comparison of results with pathomorphologic data and dermatoscopic picture. 98 cases of pigmented basal cell carcinoma were analyzed, and it was proved that exfoliative cytology may become the method of choice as it has high sensitivity and specificity and as well numerous advantages to offer the patient and dermatologist working in an outpatient clinic.

Auth.

**8.G.13.1.108. Detection of maspin and mammaglobin transcripts as circulating tumor cell markers in peripheral blood samples from patients with invasive ductal carcinoma of different malignancy potential and molecular phenotype.** /G.Burkadze, Z. Avaliani, I. Khureli, G. Turashvili, M. Gudadze/. *Experimental and Clinical Medicine*. – 2011. - #1. - pp. 13-21. – geo.; abs.: eng.

The presence of lymph nodes and distant metastases is the most powerful prognostic factor for patients with invasive ductal carcinoma (IDC) of the breast. Nowadays, there is growing evidence that the detection of circulating tumor cells (CTC) in peripheral blood samples might serve as one of the important markers of metastatic potential, prognosis and relapse of IDC. Maspin and mammaglobin transcripts in blood are frequently used as reliable markers for CTC. The aim of our study was to evaluate CTC in peripheral blood samples from patients with IDC of different malignancy potential and molecular phenotype, using maspin and mammaglobin transcripts as CTC markers. Neither maspin nor mammaglobin transcripts were detected in the I and IV group patients. Both maspin and mammaglobin transcripts were detected in one patient from group II and 7 patients from group III. Only mammaglobin transcript was detected in one patient from group II and also one patient from group III. The only CTC - positive patient in group II was Her2-/ER/PR- as well as 6 CTC, positive patients from group III. One CTC positive patient from group III was Her2+/ER/PR-. Both mammaglobin positive patients from II and group III were Her2+/ER/PR-. In conclusion, CTC is more likely to be detected in patients with Her2-/ER/PR- IDC. This might be useful for evaluation of prognostic and predictive factors in patients with IDC. This study was supported by the research grant from the Georgia National Science Foundation #GNSF/ST08/6-461.

Auth.

**8.G.13.1.109. Primary intracranial gliomas: biological "behaviour".** /T. Mermanishvili, T. Jorbenadze, I. Tchelishvili, G. Chachia/. *Experimental and Clinical Medicine*. – 2011. – #1. - pp. 25-27. – geo.; abs.: eng., rus.

The studies have clearly shown that the degree of malignancy of glial tumours depends on their origin (astrocytic, oligodendroglial and ependymal), as well as on the age and sex of patients. Along with clinical parameters, these morphological data can contribute to the selection of optimal prognosis and treatment for disease.

Auth.

**8.G.13.1.110. Variants of division of the hepatic artery in the liver portal.** /N. Zosidze, G. Tsetskhladze, Z. Chomakhashvili, R. Bolkvadze/. *Experimental and Clinical Medicine*. – 2011. - #1. - pp. 34-38. – geo.; abs.: eng.

According to the results of the conducted anatomic research the authors have come to the conclusion that in cases when the left branch of the hepatic artery did not divide in the portal area (3.7%) and the additional left artery of liver was revealed as the only source for supplying the left part with arterial blood (2,5%), the only one artery existed in the distal part of the left portal

complex. In the distal part of the left portal complex, in 81.2% of cases two arteries were revealed (arteries of II and III segments), in 11.3% - three arteries (trifurcation type division of either the left branch of the hepatic artery or of the left additional artery), whereas in 1.3% - four arteries were found (trifurcation type division of the hepatic artery's left branch and the left additional artery). In this part of the right portal complex, in 87.5% of cases the lobe vein is accompanied by the right branch of the hepatic artery, in 2.5% by the - right paramedial and lateral arteries, in 1.3% - by the right sector and bladder arteries. In the rest 8.75% there were right additional and IV segment arteries, out of which in 7.5% the IV segment artery was coming from the right branch of the hepatic artery. The middle part of the right portal complex in 37.5% contained only the right lobe branch of the portal vein, while in 62.5% there were two sector veins in this area.

Auth.

**8.G.13.1.111. The effect of electromagnetic field and vegetable preparation "Seratonus" on the active avoidance reaction.** /G. Iordanishvili, M. Nikolaishvili, T. Museliani, G. Jiqia, M. Tchitchakhua, K. Archvadze, S. Zenaishvili, M. Jojua/. Experimental and Clinical Medicine. – 2011. - #1. - pp. 40-44. – geo.; abs.: eng., rus.

The electromagnetic field of communication frequency evolves in rats a strong emotional reaction of fear in response to the electric irritation. Chaotic movements and emotional activity of the experimental rats caused by fear prevent them from forming a stable response to the light-induced irritation in the nerve structures and between the complexes of nerve structures responsible for the avoidance reaction to a painful irritation, conditioning the reaction deliverance from ailing irritation. Feeding the animals with the amino-acidic preparation "Seratonus" removes the reaction of fear, decreases pain, intensifies attention, and positively influences the animals' behaviour in the reflex avoidance reaction acquisition process.

Auth.

**8.G.13.1.112. The effect of marigold extract on experimental diabetes mellitus.** /M. Esaiashvili, N. Gogia, T. Meladze, I. Chkhikvishvili, A. Sefhashvili, M. Gongadze/. Experimental and Clinical Medicine. - 2011. - #1. - pp. 44-47. – geo.; abs.: eng., geo.

Diabetes is a chronic metabolic disorder that continues to be a major health problem worldwide. Many studies suggest a central role for oxidative stress in the pathogenesis of this multi-faceted metabolic disorder. This has prompted to investigate antioxidants as a complementary therapeutic approach. *Tagetes patula* L. is one of the French marigold groups of the Asteraceae family. It is recognised in folklore for its medicinal and pesticide properties. Marigold flowers produce lutein ester and patuletin, which have antioxidant activity. We performed a diabetes study in mice exposed to streptozotocin and antioxidant, marigold extract. Summarizing the experimental results obtained in mice treated with STZ, we can conclude that an antioxidant, marigold extract reduces blood glucose level, increases lifetime, and can, therefore, be used as a complementary therapeutic agent.

Auth.

**8.G.13.1.113. Determination of hereditary characteristics of thyroid gland disease based on research of family forms.** /N. Zosidze, T. Lezhava, G. Tsetskhladze, Z. Chomakhashvili, R. Bolkvadze/. Experimental and Clinical Medicine. – 2011. - #1. - pp. 47-48. – geo.; abs.: eng.

The article aims at determining the hereditary characteristics of the thyroid gland disease based on family forms. The patients with a high index of composition of variable metaphases were subjected to a treatment course that resulted in a reduction in the rate of abnormalities and their approximation to the norm (3.3%). In the mentioned groups, indices were corrected after the therapy course had been over.

Auth.

**8.G.13.1.114. Orexin-A to inhibit bicuculline-induced multiple discharges in CA-1 field and modulate the activity of bursting neurons in CA-3 field of hippocampal slices.** /N. Doreuli, M. Alania, G. Vashalomidze, E. Skhirtladze, T. Kapanadze/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 159-164. - geo.; abs.: geo., eng.

The effects of neuropeptide orexin-A on the epileptiform activity in hippocampal slices were investigated. Orexin-A was found to decrease the duration/amplitude of multiple discharges of

population spikes and to inhibit the spontaneous epileptiform after-discharges induced by bicuculline methiodide. Analyses of the effects of orexin-A on the spontaneous activity of bursting neurons in CA-3 of hippocampus has revealed that orexin-A modulates the bursting frequency of these neurons by inhibiting neurons with high-frequency bursting discharges and by increasing activity in silent or slow active neurons. Our results suggest a possible involvement of orexinergic system in antiepileptic action.

Auth.

**8.G.13.1.115. Age-related alterations of some physical characteristics of red blood cells.** /T. Sanikidze, M. Arabuli, G. Lomsadze/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 176-178. - geo.; abs.: geo., eng.

Aim of the study – establishment of some age related physical characteristics of red blood cells. Eritrocytes' deformability, intracellular concentration of Na<sup>+</sup>, K<sup>+</sup> ions, and cells diameter in different groups (I group – 22-30 year, II group – 75 – 89 group) of men-volunteers were studied. As a result, it was established that in the red blood cells of young volunteers the intracellular content of K<sup>+</sup>, Na<sup>+</sup> ions was lower than in the aged volunteers, due to a decrease in cellular energotones with age. Age-related alterations of the ions content induces the disorders of the cellular osmotic balance, swelling and increasing diameter of the erythrocytes. As a result, in the aged volunteers their deformability decreases.

Auth.

**8.G.13.1.116. Reasons of pro-inflammatory cytokines elevation in chronic heart failure.** /N. Bregadze-Tabagari, L. Tvildiani, T. Talakvadze, S. Tabagari/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 186-190. - rus.; abs.: geo., eng.

The aim of this study was the investigation of TNF- $\alpha$  and IL-6 levels in blood serum and clinical-laboratory parameters of the "protein-energy" status in patients with chronic heart failure (CHF) of different functional classes (FC) and etiology. A group of 95 patients with CHF was divided into 2 subgroups: (by etiology – ischemic/non-ischemic: 50/45 and functional classes – II/III/IV: 32/40/23 respectively). We studied TNF- $\alpha$ , IL-6, albumin, total protein, iron, creatinine, ferritin, BMI, lymphocyte differential count, also T<sub>3</sub>; T<sub>4</sub>, T<sub>3</sub>/T<sub>4</sub>. Our data indicate statistically significant elevation of TNF- $\alpha$  and IL-6 with increasing the FC and decreasing "protein-energetically" status. It may be concluded that one of the possible reasons of cytokines expression is protein insufficiency in cellular nutrition.

Auth.

**8.G.13.1.117. The pathomorphological, pathophysiological and psycho-physiological equivalents of psychosomatic pathology.** /L. Ninoshvili/. Sukhishvili University International Scientific Conference Proceedings. – 2010. – pp. 201-208. - geo.; abs.: geo., eng.

Psychosomatic diseases are unique and distinctive: they invade human organism, disband the unity of body cover. This time, the agent of disease provoker is not a substrate or a physico-chemical agent. The frequency of psychic stresses and resultant psychosomatic deviation is very great today: the pathologies clearly associated with mental stress have increased. The frequency of suicides has risen by 60% during the last 50 years. The affective-cognitive structure is always corporeally reflected, or has a material impress- the somatic substratum equivalent, which, in this case, means the brain problems caused by the nerve-cell dysfunction. This is expressed by an acute excitation and increased activity of nerve cells in a definite section and/or interconnected sections of the brain. Such activation of the cells is always followed by a rise in arterial blood pressure. The brain tissue responds to it by swelling of the local microscopic level, which is expressed by the formation around blood vessels of some "clouds", or the so-called "muffs". Finally, after some time, this results in the formation of demyelination loci, slowing down and deteriorating the excitation processes of the nervous fibers in the damaged places. As a result, disintegration of the excessive mediator or its recapture is impeded and catecholamines flow out through perivascular liquor ducts. The brain cortex inhibitor GABAergic interneurons fall victim to the catecholamines' aggression. Thus, it can be rightly to speak of the involvement of all the sections of CNS in the psychosomatic pathology development process.

Auth.

**8.G.13.1.118. Mechanisms of preventions of a sudden cardiac death in patients with old myocardial infarction.** /A. Isakadze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 22-33. – geo.; abs.: geo.; eng., rus.

A high risk of a sudden cardiac death in patients with old myocardial infarction urges to look for new alternative ways of treatment. The pathologic mechanisms of development of a sudden cardiac death promote to the development of electrical non-stability both in the zone of myocardial infarction and outside it, leading finally, to the provoking of a "malignant" arrhythmia. According to literary data, in addition to the use of a cardioverter-defibrillator, the utilization of ethyl esters of omega-3 fatty acids is recommended for reducing the risk of a sudden cardiac death. As clinical observations show, they have physiological cardioprotective effects. A study of the current state of the aforesaid question has shown the necessity of further research in the problems of a sudden cardiac death in order to ascertain the limits of the reversible pathophysiological upheavals during 6 hours after detection of acute symptoms, when the patient's can be still saved.

Auth.

**8.G.13.1.119. Peculiarities of metabolic processes upon action of noxious agents in lungs.** /A. Isakadze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 33-41. – geo.; abs.: geo.; eng., rus.

During pathologic condition of the organism and the lung proper, the adaptation-compensation transformation of tissue metabolism and gaseous exchange take place, requiring additional energy spending. The effects of the expired air, hypoxia and bronchial asthma condition provoke transformation of the redox process, the restoration of generation of macroergic admixtures that are necessary for the formation of surface-active components of the surfactant and bronchial secretion of the lungs.

Auth.

**8.G.13.1.120. Clinical presentation development peculiarities.** /R. Mzhavanadze, I. Shanidze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 42-47. – geo.; abs.: geo.; eng., rus.

The progress achieved in the cell structure study has conditioned a substantial rapprochement of morphology and biochemistry. The weaker are the compensatory-adaptive reactions on noxious agents, the more expressed is the correlation between the morphological changes and dysfunctions and the clinical presentation.

Auth.

**8.G.13.1.121. The Morgan-Adams-Stokes syndrome and difference of its signs from signs of an epilepsy attack.** /D. Gugeshashvili, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 48-54. – geo.; abs.: geo.; eng., rus.

The number of disorders requiring the assistance of a pacemaker has widened. Lately it is being also used in the cases when chronotropic and dromotropic preparations are used for various occasions. The Morgan-Adams-Stokes syndrome is the most frequent expression of a circulatory collapse. In contrast to an epilepsy seizure, it is not characterized by aura, salivation, foaming at the mouth, but by a change of complexion. Prognosis depend on a timely beginning of electrocardiac stimulation in the case of the Morgan-Adams-Stoke syndrome recurrent attacks.

Auth.

**8.G.13.1.122. Mechanisms of dysfunction of vital organs in case of various anemias.** /A. Isakadze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 55-61. – geo.; abs.: geo.; eng., rus.

In most cases, the type of anemia in the structure of disease should be identified. Identification of the pathogenic mechanisms promotes to the conduct of an adequate therapy. The chronic hypoxia and circulatory dysfunction can provoke a heart failure. Identification of the dysfunctions dependent on the localization of hemodynamic disorders will be identified in various body organs and parts.

Auth.

**8.G.13.1.123. Dynamics of arterial hypertension in population surveys.** /D. Gugeshashvili, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 69-75. – geo.; abs.: geo.; eng., rus.

A significant variability in the spread of arterial hypertension in individual populations is conditioned by a whole series of factors: ethnic, socio-economic, etc. Upon conduct of treatment and preventive activities and forming patient groups, both systolic and diastolic arterial pressure should be taken into account. Given high myocardial ischemia mortality, isolated systolic arterial hypertension should be prioritized as the main cause of the above.

Auth.

**8.G.13.1.124. Evolutionary changes in the structure and secretion of salivary glands.** /G. Eliava, I. Chikobava/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 61-66. – geo.; abs.: geo.; eng., rus.

The evolutionary principles have been detected in salivary glands, the essence of which consists in assuming a reinforcing function in the creation of a material substratum and additional functions in duplication of other organs.

Auth.

**8.G.13.1.125. Structural and functional changes of lungs in an antenatal and postnatal ontogenesis.** /D. Kobeshavidze, N. Sharashenidze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 67-72. – geo.; abs.: geo.; eng., rus.

In addition to breathing, lungs have other functions as well, such, for example, as the taking part in heat regulation, secretory function, and protective function. The maximum quantity of bronchial rows is achievable by the sixteen-week development upon embryonic development of lungs. Intensive “alveolization” is characteristic of newborns till the age of five. In a postnatal ontogenesis, the development of lungs is characterized of both the growing of acinuses and the continuous transformation of all their structures.

Auth.

**8.G.13.1.126. Perspectives of use of balloon coronary angioplasty and coronary artery bypass grafting during different manifestations of ischemic heart disease.** /D. Gugeshashvili, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 85-90. – geo.; abs.: geo.; eng., rus.

In addition to drug treatment, coronary angiography is recommended for patients with a severe angina, in order that balloon coronary angioplasty or coronary artery bypass are conducted according to the degree and character of the damage of coronary arteries. The use of early revascularization technologies improves both the short-term and long-term prognosis.

Auth.

**8.G.13.1.127. Characteristics of a change in the cardiovascular system state during patent Botallo's duct lumen of different size.** /D. Gugeshashvili, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 91-96. – geo.; abs.: geo.; eng., rus.

Congenital malformations are anomalies of the embryonic development of heart. One of the frequent anomalies is the patent Botallo's duct functioning in the embryonic period. When the Botallo's duct has a small lumen, the decompensation effects are not manifested for a long time. When the duct is large, the prognosis is unreliable, this being associated with the development of a septic process in the duct and its further transfer to both the valves and the development of decompensation.

Auth.

**8.G.13.1.128. Novel approaches to the prevention of chronic kidney disease in patients with the metabolic syndrome.** /N. Khipshidze, T. Gamezardashvili/. Bulletin of the Georgian National Academy of Science. – 2011. – vol. 5. - #1. – pp. 121-125. – eng.; abs.: geo., eng.

The metabolic syndrome (MS) is a major public health threat. Individuals with MS are at increased risk for development of chronic kidney disease (CKD). Despite effective medical interventions that have targeted vascular renin-angiotensin system (RAS) blockade, the prevalence of CKD remains considerably high. Few studies have directly compared the reno- protective effects of Angiotensin II-receptor blockers and Angiotensin-converting-enzyme inhibitors (ACE) in patients with MS. The aim of the present study was to compare the renoprotective effects of Angiotensin II-receptor blockers and Angiotensin-converting-enzyme inhibitors (ACE) in patients with MS and early nephropathy. In this prospective three year study, we randomly assigned 123 patients (mean age



45.8±11.7 years, range 31-57 years, 72 male and 51 female) with metabolic syndrome and early nephropathy to receive either the ACE inhibitor Quinapril (Accupro, Pfizer International, 20mg daily, 43 subjects) or Angiotensin II- receptor blocker Valsartan (Diovan, Novartis, 160 mg daily, in 41 subjects) or in combination Valsartan/Quinapril (160 mg/20 mg daily, in 39 subjects). The endpoint was the change in the glomerular filtration rate (GFR) (determined by measuring the plasma Clearance of Creatinine) between the baseline value and the last available value during the three-year treatment. After three years, indices of GFR increased by 4.2 ml/min/1.73m<sup>2</sup> in Quinapril-treated patients, compared with - 4.7 ml/min/1.73m<sup>2</sup> in Valsartan-treated subjects, and - 7.1 ml /min/1.73m<sup>2</sup> in Valsartan /Quinapril group (p<0.01). The results indicated that Valsartan was not superior to Quinapril, but the renoprotective effects of the combined therapy with Valsartan/Quinapril significantly improved after three years.

Auth.

**8.G.13.1.129. Effects of DASH and sodium-restricted diets on blood pressure in the normotensive elderly.** /I. Andronikashvili, G. Simonia, N. Basishvili/. Bulletin of the Georgian National Academy of Science. – 2011. – vol. 5. - #1. – pp. 126-129. – eng.; abs.: geo., eng.

During the past century, the evidence for the risks imposed on human health by excess salt consumption was compelling. The causal relation between habitual dietary salt intake and blood pressure has been established through experimental, epidemiological, migration, and intervention studies. The aim of the work was to select from persons having normal arterial pressure the salt sensitive ones and using DASH and sodium-restricted diets to set the perspective for the development of preventive measures. Salt sensitivity was assessed in normotensive 54 young and 68 elderly males. Accordingly salt sensitive subjects were divided into two groups in accordance with age. Salt sensitivity was assessed by the difference of mean arterial pressure (MAP) on high (200 mmol/day) vs. low (40 mmol/day) salt diet. Compliance with the diet was confirmed by measurement of 24-hour urinary sodium excretion during the last 2 days of both weeks. As was mentioned, both the DASH diet and DASH diet with lower sodium intake caused mean arterial pressure decrease, but the combination of the DASH diet plus lower sodium intake consistently produced the greatest mean reductions in blood pressure with peak levels in the elderly. Based on our results, we can suggest that in spite of the fact that diet modifications cannot influence the genetic nature of salt sensitivity, it can lower the mean arterial pressure in normotensive salt sensitive individuals, thus creating the possibility of its use for hypertension prevention.

Auth.

**8.G.13.1.130. A new method of conservative residual OME treatment.** /S. Khechinashvili, M. Gedevanishvili, N. Sharashenidze, N. Gogitidze, P. Khokhashvili/. Bulletin of the Georgian National Academy of Science. – 2010. – vol. 4. - #3. – pp. 132-136. – eng.; abs.: geo., eng.

Nonsurgical conservative therapy was used for residual OME (otitis media with effusion) treatment. In this article OME is considered as chronic secretory salpingootitis. Secretory salpingootitis in all patients studied developed in consequence of acute otitis media (AOM). Patients were distributed in 4 groups and were treated by instillation of Sinuforte/Nasodren spray (standardized Cyclamen tuber sap, S/N) in both nostrils once daily for 10 days. The results of S/N monotherapy were compared with outcomes of combined S/N/antibiotic, and standard antibiotic/decongestant therapy. Results indicate that treatment based on administration of S/N as a constituent of the therapy is associated with a significant clinical benefit. Outcomes in S/N monotherapy group and combined S/N/antibiotic group were obviously more favorable than in the group to which the standard method of conservative OME treatment was applied. Clinically proved curative outcomes of salpingootitis in humans treated with S/N could be explained by prompt reflex discharge from hyperplastic/hypertrophic glands, resulting reduction in edematous state of the mucosal lining in the auditory tube, opening of the pharyngeal orifice of the tube and consequent facilitated propulsion of exudates out of tubar, and respectively, middle ear cavities. In other words, beneficial outcome is achieved due to effective draining of middle ear cavity by inherent, natural way. These results permit to consider topically applied S/N as an adequate stimulus for physiologic reflex discharge of inflammatory secretions out of the auditory tube and for its frequent opening.

Auth.

**8.G.13.1.131. Assessment of functional relationship between the arterial pressure and heart rate variability in patients with arterial hypertension.** /M. Janiashvili, T. Matcharashvili/. Bulletin of the Georgian National Academy of Science. – 2010. – vol. 4. - #3. – pp. 137-139. – eng.; abs.: geo., eng.

The report presents the results of an analysis of functional relationship between arterial pressure and heart rate variations in patients with arterial hypertension. We used the method of mutual information calculation, which enables to assess both linear and nonlinear correlations in analyzed data. It was found that functional relationship between systolic and diastolic pressure increases at the first and second stages of arterial hypertension, while at the third stage of disease it decreases to the initial value. On the other hand, changes in the extent of functional relationship between arterial pressure and heart rate variability were not detected at increased severity of arterial hypertension.

Auth.

**8.G.13.1.132. Diabetes mellitus and impaired glucose tolerance among patients with coronary heart disease.** /G. Chapidze, S. Kapanadze, N. Dolidze, N. Latsabidze, N. Meshveliani/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

Diabetes mellitus (DM) and impaired glucose tolerance (IGT) are associated with increased cardiovascular disease (CVD) morbidity and mortality. DM and IGT prevalence and their relation to other risk factors were investigated among coronary heart disease (CHD) patients. 250 In- and outpatients with CHD visited or/and admitted to the Emergency Cardiology Center in Tbilisi, Georgia were enrolled in the study. Information on medical and surgical histories, CVD risk factors and current medical condition was obtained via interviews, medical record abstraction, physical examinations and laboratory studies. Fasting blood glucose and 2-hour post load glucose concentration were determined for each patient. Overall 40.8% (46% among males and 12.9 among females) of patients were diagnosed with DM, and 13% were diagnosed with IGT. Of the DM cases, more than half was previously undiagnosed. IGT and DM were highly associated with a dyslipidemic profiles and elevated inflammatory marker concentrations in this population. Undiagnosed DM cases shared similar CVD risk factors as previously diagnosed DM cases including dyslipidemia, other metabolic syndrome components and inflammation. Both DM (diagnosed and undiagnosed) and IGT are prevalent; and are associated with other important CVD risk factors among CHD patients. Future studies assessing associations of DM and IGT with CVD morbidity and mortality in this population, as well as studies that assesses prevalence of DM and IGT and their relation with CVD in the general population are needed.

Auth.

**8.G.13.1.133. Progenitor precursors' commitment during an acute stroke.** /Z. Kheladze, E. Kartsivadze, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

According to the Critical Care Medicine Institute, 659 patients with stroke, 49.1% of which were with ischemic heart and 50.9% - hemorrhagic stroke were treated. The coma degree in all the patients was GCS-8 and less; general mortality constituted 49.3%, stroke mortality - 26.5%, and that of hemorrhagic stroke - 71.3%. The stroke treatment standard included respiratory therapy (SIMV, PS & PC modes), accompanied with a moderate hyperventilation and control of acid-base balance markers, magnesium and polyelectrolyte therapy, enteral/tube feeding (400 kcal/kg/24 hrs), etc. In addition to traditional therapy, the progenitor precursor commitment was managed by nitroglycerine, electric current and plasma beams (Zv.Kheladze, et al "New usage of electro impulses generator", patent, 2008.07.01 #4857; Zv.Khelade at all. "New usage of plasma flow producer", patent 2008.06.26 #4825, Z.Kheladze, Zv.Kheladze "New usage of nitroglycerin", patent of 2008.07.11 # P4858). In the course of the therapy, it was established that the management of commitment of progenitor precursors improves the critical state treatment results, especially in patients with ischemic heart disease. In particular, the treatment reduces lethality and disability, shortens the length and cost of the treatment.

Auth.

**8.G.13.1.134. Cardiohemodynamics at bi-directional A-V & V-A blockade.** /R. Shonia/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

At the bi-directional A-V and V-A blockade of fourth degree accompanied with various frequencies of atrial and ventricular rhythm several kinds of transient cohesion of atrial and ventricular cycles that determined quantitative characteristics of hemodynamic loading on myocardium, its contractility and systolic output were detected. The sizeable change (decrease or increase) of ventricular rate in comparison with atrial rhythm leads to a reduction in the absolute number of hemodynamically effective atrial systoles and prodigal pattern of the heart functioning. During this pathology, the maximum number of hemodynamically effective atrial systoles is formed only if the length of the atriums and ventricles cycle is equal. Many compensatory mechanisms in the pathological regime of myocardium have been studied. They elucidate the formation of the pathological clinical symptoms, which develop in patients with the mentioned abnormalities.

Auth.

**8.G.13.1.135. Peculiarities of treatment of the elderly in critical medicine.** /Z. Kheladze, L. Lobzhanidze, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

In the Critical Care Medicine Institute the number of old-aged critical patients during last three years has markedly increased. Only in 2000-2009 hospitalized were 152 critical patients from 81 to 101 years of age (average age – 89.6). The treatment of one patient on average costs USD 1678.5. The most frequent diagnosis was stroke, the ischemic stroke being prevailed. Patients were subjected to artificial pulmonary ventilation and other therapeutic measures, including the progenitor precursors' commitment therapy. General mortality rate made 48%; the highest death rate was registered in the cases of various shocks and acute stroke, making 49.4% and 30-80% respectively. The mortality was the lowest during the hypovolemic shock. In old-aged critical patients' group the "ventilator adaptation syndrome" was typical. Also of importance were the question of selection of the optimum dosage of drugs, plurality of concomitant diseases and other peculiarities. The analysis shows the efficiency of the intensive care in old-aged critical patients.

Auth.

**8.G.13.1.136. Breast cancer in critical and non-critical patients.** /N. Gordadze, M. Kakabadze, U. Gabunia, I. Khureli/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo. The breast cancer of the IV stage is morphologically and clinically heterogeneous disease. However, it is less clear how clinical features relate to tumor characteristics and histological specificity in critical and non-critical female patients. In accordance with these goals, it was necessary to accomplish a morpho-epidemiological research in Georgia. We evaluated relations between clinical features of breast cancer patients (age, reproductive function, marital status, childbirth, breastfeed, number of abortions, date of primary diagnostics, heredity) and tumor characteristics (histological type, stage, localization, nodal status, metastatic spread) in a population-based 3550 breast cancer cases and 6000 control cases of recruits in Georgia. The case-reports of 1997 –2006 in Georgia were studied. The data obtained revealed that there is a very high percentage of lately established diagnoses among the patients with all types of breast cancer and, as a consequence, in all cases the II, or III stage of cancer predominated. That emphasizes the importance of the breast cancer screening-program started in Georgia. The mostly dangerous for development of critical states during breast cancer are the Paget's disease and invasive ductal carcinoma, while the invasive lobular carcinoma and medullary-cribriform carcinoma were ranked as less risky for developing the critical states. The invasive lobular carcinoma was found to be most metastasizing against other forms of breast cancer. Most patients had in anamnesis many abortions. A direct and close correlation between the age and menopauses, as well as between the hereditary factor and the Paget's disease was established, while the lesser correlation – among women with intraductal carcinoma in situ..

Auth.

**8.G.13.1.137. Two cases of the neuroleptic malignant syndrome.** /Z. Kheladze, Ts. Kharashvili, N. Marshania, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

The neuroleptic malignant syndrome was first described by Dr. Delei in 1960. It is caused by negative side-effect of the neuroleptic and anti-psychotic drugs. The frequency of the neuroleptic malignant syndrome makes about 3-27%, the mortality rate being 40%. The neuroleptic malignant

syndrome's pathogenesis is dysfunction of the central, dopamine and sympathetic nervous system and skeleton muscle membrane, etc. It diagnosed based on antecedent anamnesis, past drug, life and family history and clinical presentation. The treatment program includes muscle relaxants and dopaminergic drugs, psychotropic activity decreasing medications, plasmapheresis, hormonotherapy, brain anti-edema, nosotropic, routine infusion therapy, etc.

Auth.

**8.G.13.1.138. Ventricular tachycardia in critical patients.** /R. Shonia/. Critical Care & Catastrophe Medicine. – 2010. - #6. – eng.; abs.: eng., geo.

The effect of various electrical versions of ventricular tachycardia on cardiohemodynamics has been studied.

Auth.

**8.G.13.1.139. New data on the pathogenesis of intracerebral hematomas.** /T. Kerdzevadze, G. Gegia, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2010. - #6. – eng.; abs.: eng., geo.

The present work is another attempt to study the pathogenesis of hemorrhagic stroke; the analysis is based on the several well-known facts in medical practice and the experimental data. Sudden, uncontrolled changes of arterial blood pressure results in recurrent hemorrhage, ICP growth and perfusion blood pressure reduction. For arterial blood pressure correction ganglioblockers and peripheral venodilatatores should be used. Sudden decrease of intracranial pressure leads to sharp expansion of vascular diameter prior to hydrodynamic attacks (for example due to lumbar puncture). It may be one of the reasons of sudden deterioration of neurological status. Also likely to be assumed, that a strong headache due to aneurysm rupture is caused by blood intrusion into the ventricular system.

Auth.

**8.G.13.1.140. Subconscious management problems in the critical care medicine.** /Z. Kheladze, G. Bakaia, T. Kurtsikidze, M. Dvalidze/. Critical Care & Catastrophe Medicine. – 2010. - #6. – eng.; abs.: eng., geo.

The aim of the first part of the research was to find out the Midazolam's effect on rats movement activity and behavior. The research was performed on white, male 250- 300 g rats. In the clinical part of the research, 12 adult patients were observed with an attempt to manage their subconscious. The results obtained found Midazolam to be an effective and desired sedative agent for managing the subconscious. This does not exclude usage of other agents for the purpose.

Auth.

**8.G.13.1.141. Hepatic encephalopathy – damage of neurolinguistic code.** /M. Meparidze, T. Kodua, Zv. Kheladze, K. Lashkhi/. Critical Care & Catastrophe Medicine. – 2010. - #6. - eng.; abs.: eng., geo.

A variable spectrum of psycho-mental symptoms developed due to hepatic insufficiency, disruption of communication between the body and the environment, the digestive and the nervous systems is given. 106 patients with different gastrointestinal pathologies, divided into 4 groups and 19 patients of the control group were observed. The study results are given and the following conclusions made: The damage of neuromatrix and linguistic matrix under the impact of external (environmental, verbal, nonverbal) and internal (dismetabolic) factors and deformation of those matrixes are formed at different levels (interpersonal, mind-body, etc.). Hepatic encephalopathy is not a pathology caused by the liver failure. The full-blown picture of HE may be produced by verbal or nonverbal influence on the patient's brain – through deformation of the linguistic code.

Auth.

**8.G.13.1.142. The hepatoprotective effect of verapamil during a hemorrhagic shock in an experiment.** /M. Gvaladze, T. Gegeshidze, Gr. Sulaberidze, G. Didava, M. Chkhaidze, I. Tavzarashvili, T. Buachidze, M. Svanidze/. Science and Technologies. – 2010. - #7-9. – pp. 117-121. – geo., abs.: eng., rus.

During hypoxic state, especially for the period of hemorrhagic shock, lyses of liver parenchymal cell membranes occur due to calcium ion excess. Membrane protection from such a pathologic process is theoretically possible through blockage of the calcium L channels, namely – by

verapamil. The later was utilized to study its hepatoprotective effect. Modeling of the hemorrhagic shock was performed by Wiggers-Feine method. Blood was exfused from sedated male cats (nembutal 40mg/kg, intravenous blood exfusion 40ml/kg) till arterial blood flow dropped to 40 mm/Hg (HS60). During artificial ventilation - 130-150 ml/min/kg in the period of 1 hour, pH in the arterial blood was 7.35-7.45,  $P_{O_2}$  – 90mm/Hg; the airflow measurement was controlled by the “Corning” device. Animal were put to sleep by blood exfusion. On the 80<sup>th</sup>-90<sup>th</sup> minute after the blood exfusion the below edge of the right lobe of liver was excised and rinsed with 2% osmium acid and 0,1mol phosphatic buffer and glutaraldehyde. Contrasting was carried out by uranyl acetate. The extracted material was examined by electronic microscope JEM-100B (Japan). 2 series of experiments were done on male cats – hemorrhagic shock model (n=5. 10 animals in total) and throughout the effect of verapamil (dose 0,250mg/kg i/v), which together with the physiologic solution did not exceeded 1/20 of the exfusion volume. As a result of experimental data, it is clear that in the hemorrhagic shock model, the calcium L channel blocker – verapamil is characterized by a slightly expressed hepatoprotective effect on the 80<sup>th</sup> min after the blood exfusion.

Auth.

**8.G.13.1.143. Influence of arterial pulse on blood flow.** /M. Beraia/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 8-11. - eng.; abs.: ge.

Description of blood flow only by means of Navier-Stoke equation is impossible currently, since hemodynamics in large arteries is unsteady, with the flow separation and waveform propagation of the viscoelastic mass. The purpose of the present paper is to study the influence of arterial pulse on blood flow. Pulse pressure is increasing stain rate at the contiguous flow layers. At the circular sites in protodiastola flow separation and wave superposition promote to high net flow. At the circular sites flow wave interference and reflection constrain the endothelial boundary layer to shift.

Auth.

**8.G.13.1.144. Non-epileptic paroxysmal disorders.** /D. Gigineishvili, R. Shakarishvili/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 12-15. - rus.; abs.: eng.

We retrospectively analyzed diagnoses of all inpatients (34), of whom non-epileptic seizures (NES) have been identified in the Epilepsy Centre during a period of 12 months. NES of psychogenic origin (82.4%) prevailed over physiologic NES (17.6%) and conversion-somatoform disorders (ICD-10) were the most frequent diagnostic in the first group (71.4%), whereas neurally mediated syncope – in the latter (50%). There was a female predominance (20/14) in the whole group. Evidence of coexisting epilepsy was found in 3 cases, all of them in the group with conversion-somatoform disorders. Our data indicate that psychiatric as well as cardiologic evaluation of patients with treatment-refractory or undiagnosed seizures can clarify the final diagnosis.

Auth.

**8.G.13.1.145. The quantitative estimation of cerebral blood flow in patients with severe traumatic brain injury.** /R. Fanarjian/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 16-19. - eng.; abs.: rus.

Our study of cerebral blood flow in severe traumatic brain injury is an example of the effective use of TCD in the daily practice of neurological and neurosurgical hospitals. High self-descriptiveness, relative simplicity and non-invasive usage allow monitoring of cerebral hemodynamics and identifying efficiency of the conducted pharmacotherapy. The obtained quantitative data can serve as criteria for prediction of outcomes. Many aspects of pathophysiological mechanisms of blood flow alterations in severe head injury require further research. A combination of clinical data and highly informative methods of study is required to identify effective methods for their correction.

Auth.

**8.G.13.1.146. Manganese encephatolopathy induced by synthetic psychostimulants.** /M. Okujava, M. Janelidze, I.Khatiashvili, N. Lobzhanidze/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 20-24. - geo.; abs.: eng.

In the last two decades the use of a "designer drug" - methcathinone (otherwise known as Jeff or Ephedrine) has increased in Eastern European countries. This psychoactive substance is synthesized from widely available and relatively cheap ingredients – over-the-counter drugs, which

contain ephedrine and potassium permanganate. The increasing number of patients with chronic use of methcathinone having addressed our department indicates on the threatening scale of the problem. During the last 4 years we have investigated 32 patients with chronic intravenous use of methcathinone. The duration of the substance abuse ranged from 1.5 month to 3 years. The frequency of indication ranged from 1 injection per week to 4 injections per day. The most common symptoms were: bradykinesia, postural disturbance, ataxia, dysarthria, dysphonia, hypometric vertical saccades, dystonia (mostly of the face and lower extremities), apathy and cognitive decline. Disability of the patients was evaluated using Schwab and England Scale. Twelve cases showed deep disability (Schwab and England Scale <50%). Patients from this group needed assistance during their daily activities due to the evident ataxia and postural disturbances. Substance abuse with the duration of more than 6 months was associated with stable strong disability which was not regressing despite the cessation of the drug abuse and the treatment with the L-dopa medications. All patients underwent MRI of the brain.

Auth.

**8.G.13.1.147. Primary intracranial astrocytic neoplasms: some epidemiologic considerations.** /T. Mermanishvili, T. Jorbenadze, I. Chelishvili, G. Chachia, M. Geldiashvili/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 42-45. - geo.; abs.: eng.

The aim of our study was to perform a hospital-based epidemiological analysis of primary intracranial astrocytomas in Georgia: the frequency of distribution of these neoplasms and their age and sex aspects. We have studied 444 cases (female 59.9% and male 40.1%) of surgically removed primary intracranial neoplasms from five medical institutions of Tbilisi. According to our data, astrocytic tumors (pylocytic, diffuse, anaplastic astrocytomas and glioblastomas) comprise 15.3% of intracranial neoplasms and 55.3% of glial neoplasms. Among patients there were 48.5% - male and 51.5% - female (male: female ratio - 0.94). Most frequently encountered astrocytic tumor are glioblastomas - 66.2% that comprise 10.1 % of primary intracranial neoplasms. For evaluation of the neoplasms biological "behavior", we arranged astrocytic tumors into malignant (anaplastic astrocytomas and glioblastomas) and nonmalignant (polycytic and diffuse) groups. Obvious prevalence of malignant astrocytomas could be seen - 85.3%, while nonmalignant astrocytomas were only 14.7% (malignant: nonmalignant ratio - 5.8). We used three groups of patients for identification of variability of age related pathology: group I -- 21-44 years, group II - 45-64 years and group III -- 65 years and above. The age of patients with astrocytic neoplasms varied from 24 to 73 years (average 53.1 years). More than half of the patients were grouped in 45-64 age group. The spectrum of the astrocytic neoplasms is variable in different ages. The tendency of increased frequency of malignant neoplasms with aging is evident. For astrocytic neoplasms among groups statistically significant male: female differences are not found. Our data suggest that biologic "behavior" of primary intracranial astrocytomas has an evident relationship with patient's age. Our data are different from those received in different countries. Perhaps it is related to the influence of ecological and socio-economic factors that require further investigations.

Auth.

**8.G.13.1.148. The role of mammography in the diagnosis of breast pathologies in males.** /T. Daraselia, K. Gigauri, T. Chagnelia/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 62-66. - geo.; abs.: eng.

Gynecomasty in males gives a vivid clinical picture of steroid hormone imbalance caused with absolute and relative hyperestrogenemia. In males the tumor of mammary gland is not frequent and it needs differentiated diagnostics other than the nodular form of gynecomasty. Early diagnostics of the tumor has the decisive meaning from the viewpoint of the treatment and prognosis of the disease, but the screening program is not provided for the early stage of revealing of the pathology of mammary glands in males and the mammography is usually made at later period after revealing of the clinical signs.

Auth.

**8.G.13.1.149. Analysis of data of dysbacteriosis syndromes in patients with diarrhea, constipation and mixed symptomatology.** /I. Giorgadze, N. Tophuria, M. Giorgadze, N. Balarjishvili, N. Cholokashvili, L. Tkemaladze/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). –pp. 23-34. - geo.; abs.: rus., eng.

In the classification of WHO, dysbacteriosis or disbios is considered to be not a separate nosologic unit but a syndrome and, therefore, secondary. It is supposed that there is a direct connection between the symptoms of dysbacteriosis and gastrointestinal diseases - diarrhea, constipation and their combinations. The goal of this study was to establish which of the symptoms was leading in patients with dysbacteriosis syndrome - diarrhea, constipation or their alteration and average clinical manifestation. Total of 1040 patients were investigated. Only dysbacteriosis or decay from normal flora was revealed in 814 cases. In cases of dysbacteriosis the quantity of the patients with diarrhea symptoms significantly exceeds the quantity of the patients with constipation and combined symptoms in the whole contingent of the patients as well as in the patients with dysbacteriosis during the changes in one, two, three or all the four representatives (bifidumbacter, lactobacteria, enterococci and intestinal bacillus). In age groups - children's contingent - cases of symptoms of diarrhea were revealed twice more than in adults. So, in patients with dysbacteriosis syndrome, the symptoms of diarrhea were more as compared to constipation and mixed symptomatology.

Auth.

**8.G.13.1.150. Microbiological diagnosis of mixed anaerobic-aerobic infections during complicated infections.** /M. Giorgadze/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). – pp. 35-39. - rus.; abs.: geo., eng.

Treatment of wounds is one of the pressing problems that are hard to solve. Totally, we have investigated 35 cases in dogs of random breed. In the first group, the animals with symptoms of mixed anaerobic-aerobic infections were included, 11 of them had infection of abdominal cavity, 13 - inflammation of soft tissue. In the second group, the operated animals with symptoms of peritonitis and generalized infection were included. Using bacteriological analysis, in 22 animals of the first group obligate anaerobic bacteria were found, 20 of them from peritoneum, and 14 animals had them in the mediastinum area and pleural cavity; 10 of bacterial isolation was in case of soft tissue infection. Gram-positive bacteria and cocci were sensitive to most antibiotics, but aminoglycosides. Staphylococci are sensitive to monomycin, streptomycin, tetracycline, macrolides. *E. coli* was still sensitive to aminoglycosides, but penicillin group antibiotics are losing their efficacy.

Auth.

**8.G.13.1.151. Alteration of blood redox-status during cholelithic disease in postmenopausal women.** /M. Shengelia, N. Gogebashvili, I. Datunashvili, T. Sanikidze/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). – pp. 135-140. - geo.; abs.: rus., eng.

Cholelithic disease is one of the most widespread diseases of the digestive tract. Taking into attention that the cholelithic production often is associated with the inflammatory and other processes connected with oxidative stress, we have proposed that the alterations of oxidative metabolism and formation of signal molecules - reactive oxygen and nitrogen species are very important pathogenetic links in the pathogenesis of the cholelithic disease. The aim of our study was the establishment of alterations of blood's redox-status during the cholelithic disease in postmenopausal women. As a result of our studies, we have shown that during the cholelithic disease in postmenopausal women an oxidative degree of blood ceruloplasmin increases, and  $Fe^{3+}$ - transferrin content decreases which points to the disorders of the one of the links of blood antioxidant system, which is favorable for alteration of redox-homeostasis and injury of membrane structures in patients' body. This is revealed by increasing the content of products of lipoperoxidation ( $Mn^{2+}$ ions, lipoperoxides, superoxides). Under oxidative stress conditions it is possible to excess oxidation of natural antioxidants (bilirubin), which is accomplishing for the development of inflammatory processes and cholelithic formation.

Auth.

**8.G.13.1.152. The effect treatment with intranasal electrophoresis of vanadium on the function of external breathing in patients with allergic rhinitis.** /Sh. Tsiklauri/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). – pp. 141-148. - geo.; abs.: rus., eng.

Total of 67 patients have been examined, out of which 35 patients had a persistent form of allergic rhinitis. 32 patients had an intermittent form of allergic rhinitis. It has been established that treatment with intranasal electrophoresis of vanadium induced expressed improvement of bronchial permeability in these patients, as well as increase of reserve possibilities of lungs and decrease, up to complete elimination, of arterial and venous hypoxemia. The above-mentioned positive shifts were significant in patients with intermittent form of allergic rhinitis.

Auth.

**8.G.13.1.153. Effectiveness and safety of early treatment by ezetimibe and statins in patients with acute coronary syndrome.** /N. Khipshidze, Th. Gegenava, K. Nadaraia/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . – pp. 9-12. – geo.; abs.: eng.

According to our study, for patients with NSTEMI-ACS, a ezetimibe/atorvastatin combination provided superior lipid-lowering efficacy vs doubling the statin doze. After 16 weeks of study, superior clinical benefit was revealed on nonfatal MI and unstable angina that requires hospitalization, although without a statistically reliable difference on the frequency of coronary death, coronary revascularization and nonfatal stroke.

Auth.

**8.G.13.1.154. Hospital mortality and cardiovascular event risk stratification in patients with acute coronary syndrome.** /N. Emukhvari, I. Mamatsashvili, R. Napetvaridze, N. Bregvadze-Tabagari, E. Tsetskhladze, I. Khintibidze/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . - pp. 14-17. - geo.; abs.: eng.

The acute coronary syndrome (ACS) is a topical and significant problem nowadays. Development of ACS predicts transfer of chronic ischemic disease into the acute phase and is the most frequent reason of hospitalization. Evaluation of risks of patients with acute coronary syndrome has shown that the main factors associated with in-hospital mortality and development of cardiovascular diseases are: age (70-80 year); ST-segment elevation, myocardial infarction and heart failure. Diabetes and age - 60-69 years are associated with the average risk, and 40-59 years – with the low one.

Auth.

**8.G.13.1.155. Surgical treatment of heart failure caused by coronary heart disease and severe valvular pathology (case report).** /E.Pirvelashvili, L. Janelidze, E. Sakhvarelidze, K. Beria, Z. Bakhutashvili/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). - pp. 20-23. - geo.; abs.: eng.

Severe mitral and tricuspid regurgitation associated with myocardial ischemia is a Class I indication for cardiac surgery. Mitral and tricuspid annuloplasty or mitral valve replacements are performed during coronary bypass surgery with the aim of improving the patient's ventricular function and clinical symptoms. The purpose of this case is to review the role of cardiac surgery in the management of such combined pathological conditions.

Auth.

**8.G.13.1.156. Resistant arterial hypertension.** /N. Katamadze, S. Beridze/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . - pp. 23-29. - geo.; abs.: eng.

Resistant arterial hypertension is diagnosed when the target tension according to the optimal treatment with a three-component scheme (including thiazid diuretics) is not achieved or the treatment with a four- component (or more) scheme is effective. Arterial hypertension with corrected reasons and/or forms which need motivated additional research also belong to resistant hypertension. Distribution of resistant arterial hypertension is high - 10-30% of patients with arterial hypertension have this form. Elimination of the reasons of pseudo-persistence, correction of secondary reasons of arterial hypertension and effective treatment improve the prognosis of arterial hypertension.

Auth.

**8.G.13.1.157. Crohn's disease and Melkersson-Rosenthal syndrome.** /Kh. Pachkoria, M. Abesadze, S. Kemoklidze, M. Kikvidze, E. Adamia/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). - pp. 30-33. - geo.; abs.: eng.



The Melkersson-Rosenthal syndrome (MRS) is a rare condition characterized of a triad of recurrent oral-facial swelling, commonly affecting lips, intermittent facial nerve palsy and tongue changes (lingua plicata). Oligosymptomatic forms are more common. The authors observed 2 women with a classic triad of MRS. In the first case, treatment with corticosteroid was successful, but after 5 months swelling relapsed. In the second case, diagnosis of jejunal Crohn's disease (CD) and Melkersson-Rosenthal syndrome were established. Treatment with corticosteroid (Medrol) was successful, but lip and facial swelling relapsed and hirsutism and obesity were detected.

Auth.

**8.G.13.1.158. Liver function and outcome in patients with chronic heart failure: abnormal elevation of serum hepatic enzyme and therapeutic efficacy of NAD-containing drugs.** /M.Rogava, T. Bochorishvili, K. Kapanadze, E.Berberashvili/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). - pp. 33-37. - eng.; abs.: geo.

Therapy of Nadcin in patients with heart failure and preserved left ventricle function and Adenocin in patients with pronounced contractile dysfunction leads to a pronounced improvement of NYHA FC of CHF and exercise capacity. Cardiac deremodeling and LV systolic function rising and improvement of liver functions abnormalities are observable. The proposed mechanism of the beneficial action of NAD-containing drugs, Nadcin and Adenocin, could lead to the restoration of capacity of energetic metabolism and homeostasis of redox state reactions and, as a result, the improvement of cell function and cessation of necrotic processes not only in myocardium but in the hepatocytes too.

Auth.

**8.G.13.1.159. Dysmetabolic arterial hypertension.** /J. Lezhava/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . - pp. 38-48. - geo.; abs.: eng.

Since the first publications about the metabolic syndrome, a large amount of data about its clinical significance has appeared. A series of investigations have demonstrated the important role of this syndrome in the development of diabetes mellitus, coronary heart disease, atherosclerosis and arterial hypertension, often accompanied by dangerous complications. Nevertheless, controversial points still exist regarding diagnostic criteria, which allow us to identify metabolic syndrome in scientific studies and routine practice. In this review we made an attempt to analyze different approaches to this problem in light of results of contemporary investigations.

Auth.

**8.G.13.1.160. The urgency of cystic fibrosis problem.** /N.Badriashvili, N.Sharikadze, M.Giorgobiani/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . - pp. 49-51. - geo.; abs.: eng.

CF is a chronic multi-system disorder characterized by recurrent endobronchial infections, progressive obstructive pulmonary disease and pancreatic insufficiency with intestinal malabsorption. We investigated 38 children with CF aged from 1 month to 14 years who were hospitalized in pediatric clinic of TSMU. The sweat chloride test (chloride concentration 60) was used to diagnose CF. The investigation showed that in 38 patients 25 were with combined and 13 with pulmonary form of CF. The study revealed a marked depression of immunity characterized by reduction of quantity: of CD3, CD4, CD19-lymphocytes and the concentration of IgG, IgA, IgM. Parameters of interferon-producing leukocyte function were studied in vitro using the Soloviev-Bektenirov technique. Patients with CF received complex treatment, which included: Creon, Bronchodilators, Mucolytic agents, and Antibiotics, Imudon, URS-19, vitamins for correction of immune system. There were also used nutrition and kinesis therapy.

Auth.

**8.G.13.1.161. Allergic rhinitis and its impact on asthma - ARIA.** /N. Khaltayev, J. Bousquet/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 27-35. – geo. eng.

Allergic rhinitis is a global health problem. It influences social life, sleep, study, and work process. In 1999 as a result of activities of WHO, a document ARIA was adopted, which was a recommendation with special significance for specialists and professionals, also general profile doctors. The ARIA update started in 2004, although the 1999 ARIA work group recommendations are still in force.

**8.G.13.1.162. Damage of the cardiovascular system during juvenile rheumatoid arthritis.** /G. Chakhunashvili, N. Jobava, M. Lekishvili, K. Chakhunashvili/. Pediatric Cardiology. - 2011 - № 5. - pp. 8-16. - geo.; abs.: geo., eng.

Juvenile rheumatoid arthritis is urgent nowadays and it is extremely interesting to forecast further disorders of organ systems. The article deals with modern literary discussions about the damage of the cardiovascular system during juvenile rheumatoid arthritis. Our literary discussion proves once more that the cardiovascular system's damage plays a great part in the development of juvenile rheumatoid arthritis. It needs proper attention and treatment in the early stages. Often the cardiovascular system's damage develops without any symptoms; therefore, routine cardiologic examination should serve as a basis for prognostication and monitoring of these patients.

Auth.

**8.G.13.1.163. Myopericarditis (case study).** /G. Chakhunashvili, T. Kutubidze, M. Shvangiradze/. Pediatric Cardiology. - 2011 - № 5. - pp. 33-34. - geo.; abs.: geo., eng.

The article describes the treatment of a 14-year aged patient having addressed the clinic with severe sternal and back pain and diagnosed with an acute myopericarditis.

Auth.

**8.G.13.1.164. Cost effectiveness of an antimicrobial therapy.** /R. Jashi/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 55-60. – geo.; abs.: geo., eng.

Switching early from IV to PO antibiotics is the single most important cost saving strategy in hospitalized patients, as the institutional cost of IV administration may exceed the cost of the antibiotic itself. Antibiotic costs can also be minimized by using antibiotics with long half-lives and by choosing monotherapy over combination therapy. Other factors adding to the cost of antimicrobial therapy include the need for an obligatory second antimicrobial agent, antibiotic side effects (e.G. diarrhea, cutaneous reactions, seizures, phlebitis) and outbreaks of resistant organisms, which require cohorting and prolonged hospitalization.

Auth.

**8.G.13.1.165. Blood groups, food and parasitic diseases.** /D. Tskhomelidze/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 74-75. – geo.; abs.: geo., eng.

It is known that taenia solium, taenia saginata, trichinella spiralis, diphyllbothrium latum and some other parasites are correlated with eating undercooked or raw meat (pork, beef, fish). We studied the relationship between different blood groups of humans with eating meat and meaty food. As a result of our research, it was revealed that humans with the blood group (A) or (O) are less predisposed to eating meat and meaty food than people with the other groups of blood. Given this, we think that the above-mentioned category of humans are less liable to such infections as taeniasis, trichinosis, etc.

Auth.

**8.G.13.1.166. Endothelium-dependent regulation of the tone of brain blood vessels.** /N. Mitagvaria, E. Bibiluri, M. Nebieridze, M. Darbaidze, E. Sukhishvili, N. Sakhvarelidze, M. Devdariani, L. Gobechia/. Scientific Works of Sukhisvili University. – 2009. - # 6. – pp. 132-146. - geo.; abs.: eng., geo.

The role of endothelium in the local regulation of vascular tone is considered.

Auth.

**8.G.13.1.167. Pathomorphological, pathophysiological and psychophysiological equivalents of psychosomatic pathologies.** /L. Ninoshvili/. Scientific Works of Sukhisvili University. – 2009. - # 6. – pp. 159-166. - geo.; abs.: eng., geo.

The article deals with the involvement of all sections of the central neural system into pathological psychosomatic and morphological processes during maldevelopment of psychosomatic pathologies.

Auth.

**8.G.13.1.168. Halogen-containing preparations in medicine.** /E. Tskrialashvili/. Scientific Works of Sukhisvili University. – 2009. - # 6. – pp. 185-189. - geo.; abs.: eng., geo.

The halogenated preparations used in medical practice - sodium and potassium chlorides, bromides, iodides, iodine - are discussed and characterized.

Auth.

**8.G.13.1.169. The Mesenteric neoplasm (case report).** /L. Akhmeteli, L. Saghinashvili, L. Dzneladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 13-14. – geo.; abs.: eng.

The mesenteric neoplasm is one of the rarest abdominal tumors. Since the first report of a mesenteric neoplasm by the Italian anatomist Beneveni in 1907, only about 820 cases have been reported. Schwannomas (malignant neurilemmomas) are benign neurogenic tumors that arise from Schwann cells, which are the cells forming nerve sheaths (neurolemma). They may involve all peripheral, cranial or autonomic nerves. Schwannomas are very homogeneous tumors and they typically appear as a solitary, well encapsulated and smooth surfaced round mass. They are usually benign, relatively slow-growing. Abdominal schwannoma may cause diagnostic problems because clinical symptoms are misleading or uncharacteristic even if the tumor is large. Our case-report involves a 62 years old woman who was admitted to the emergency service in a heavy condition with acute cerebral dishaemia, ischemic stroke, fibrillation arrhythmia, diabetes mellitus (II). On the 3-rd day generalised abdominal tenderness and muscle spasm was noted. Abdominal CT revealed a free air and fluid. A large inhomogeneous mass with dimensions 15X19 cm and without clear borders in lower abdomen was detected. Emergency laparotomy revealed a ruptured, partly necrotic mass located in mesentery, very close to the ileac bowel. Blood clots, necrotic tissues and puss were in the lower abdomen. The mass was completely resected together with adjacent intestinal segment of 40 cm. Side-to-side anastomosis, sanation and drainage of abdominal cavity had been performed. The patient died on the third day after surgery because of her main disease (stroke). Hystopatologic and immunohistochemical examination revealed a malignant mesenteric schwannoma. Although schwannomas are rare and generally asymptomatic, these tumors can become quite large, may complicate and cause acute abdominal problems. The rarity of this tumor and lack of clinical manifestations make a presurgical diagnosis extremely difficult or even impossible.

Auth.

**8.G.13.1.170. Two cases of complicated gastric MALT lymphoma.** /L. Gophodze, G. Tomadze, G. Asatiani, Z. Demetrashvili, G.Chikobava, A. Megreladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 36-38. – geo.; abs.: eng.

Helicobacter pylori infection plays a central role in the development of gastric MALT-type (mucosa-associated lymphoid tissue) lymphoma. Invasion and destruction of the gastric epithelium with the development of so-called lympho-epithelial lesions is the most important diagnostic criterion. We reported 2 cases of complicated gastric MALT lymphoma. In the first case it was the destruction and perforation of stomach body, with diffuse purulent peritonitis, in the second one – ulceration of small curvature and profuse gastro-duodenal bleeding. In both cases gastrectomy was performed. The phenotype of MALT-type lymphoma was identical to non-neoplastic B-lymphocytes of the marginal zone (CD20+). Individual therapy is strongly dependent from histological type and lymphoma stadium. Postoperative therapy includes H. pylori eradication as a rule.

Auth.

**8.G.13.1.171. Intrastromal corneal ring segments in keratoconus treatment.** /M. Dvali, N. Tsintsadze, B. Sirbiladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 39-40. – geo.; abs.: eng.

To describe the visual, refractive, and corneal aberrometric outcomes, topography maps and OCT images in the eyes of keratoconic patients that underwent implantation of KeraRing Intrastromal corneal ring segments (ISCRS) and modified ISCRS – KeraBow. Setting/Venue: Tbilisi State Medical University, eye clinic "Akhali Mzera" Tbilisi, Georgia This prospective analysis comprised eyes with grade I, II or grade III corneal ectasia (keratoconus, ectasia after Lasik), as well as patients with mild to moderated myopia with abnormal corneal topography maps that had ISCRS implantation using standard technology. Visual, refractive, and corneal aberrometric outcomes were analysed over follow up period of one to seven years. ICL (Staar Surg.) implantation was combined with ISCRS in presence of High Myopia and Keratoconus. Statistical analysis included

preoperative and postoperative UCVA, BCVA and keratometry (K) values. The mean UCVA improved from 0.04-0.2 preoperatively to 0.2-1.0 postoperatively and the mean BCVA, from 0.4 to 0.6 respectively; One month postoperatively, there was a statistically significant reduction in sphere. At 6 months, there was a statistically significant reduction in manifest cylinder. That was consistent with the significant reduction in corneal astigmatic aberration. Corneal topography showed corneal flattening in all eyes. The maximum K value changed from 45.5 – 58.4 D preoperatively to 43.5 to 52.1 D postoperatively, the changes were statistically significant. After implantation of the both models, the UCVA and BCVA were improved in eyes with keratoconus. There was significant postoperative corneal flattening that remained stable over the follow-up period. Implantation of ISCRS is a measure of vision correction in patients with mild or moderate myopia and abnormal corneal topography, which makes the laser correction inexpedient. Important results were received in keratoconic patient with myopia using combination of ICL and ISCRS implantation as well.

Auth.

**8.G.13.1.172. Influence of halothane on emotion, behaviour and adaptation ability of a rat against the background of the midazolam premedication.** /Z. Vadachkoria, L. Dzidziguri, E. Mitaishvili, G. Mosidze, E. Bakuradze, I. Modebadze, D. Dzidziguri/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 43-45. – geo.; abs.: eng.

Influence of halothane on behavioral parameters and adaptation ability of experimental animals has been studied. The high level research activity has been determined in all three groups in the first three days of experiment. The adaptation to environment has been revealed in control group after 2 days from sham operation and halothane anaesthesia while the high level of research activity has been maintained in the test group. The adaptation and decreasing of fear has been detected in the control group on the 5th day of experiment. The high level research activity in the test group indicates to the difficulties in adaptation and space orientation. It is established that decreasing of adaptation ability and difficulties in space orientation in rat are stipulated by suppression of inhibitory neurotransmission in hippocampal CA3 field. The Modulating influence of midazolam on secretion of GABA from these cells has also been shown.

Auth.

**8.G.13.1.173. Malignant hypertension.** /N. Katamadze/ Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 54-56. – geo.; abs.: eng.

Malignant hypertension is considered as an emergency hypertensive (in comparison with hypertonic crisis) case, which had already caused such injuries of target organs as retinopathy of III-IV degree. Malignant hypertension is characterised by arterial hypertension with neuroretinal symptoms and progressive loss of renal function. It can develop *de novo* in so far normotensive persons as well as on the basis of already preexisting hypertension. A control of the blood pressure is an indispensable need in the other treatment of the malignant hypertension. Only through the consistent and long-term antihypertensive treatment can be reached partial feedback or even only a little relief. A Screening concerning a secondary cause of the hypertension is absolutely necessary above all with younger patients.

Auth.

**8.G.13.1.174. Etiological structure of urethritis in men detected by modern technologies of microbiological research.** /E. Kikacheishvili, M. Dzagnidze, I. Dgebuadze, E. Mirvelashvili, A. Dedabrishvili K. Apridonidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 56-58. – geo.; abs.: eng.

Microbiocenosis of urethritis is a permanently changing ecosystem. It depends on various factors, so in clinical microbiology is very important to control both quorum of causative agents and their sensitivity to new and old antimicrobial preparations. Along with theoretical purposes, that has a wide practical application. The aim of this research was to study the etiology of urethritis in men, using high quality standard bacteriological technology-‘bio-merieux’. (Api and ATB test). The study of materials taken from 80 patients with chronic recurrent disease showed that the dominant causative agents (in 32,5% of cases) in *S. epidermidis*, the second place occupies *S. aureus* (17.5%), then follow: *E. faecalis*, *Corynebacterium* spp, *C. freundii*. Monoinfections were determined in 78.5% of cases, and mixed infections - in 22,5%. *S. epidermidis*+*P. mirabilis* was

most frequently detected. The study of sensitivity spectrum showed that main causative agent - staphylococcus - revealed a high sensitivity to Gentamicine, Monocycline, Teicoplanine, Rifampicine, Nitrofurantoin and resistance against Norfloxacin, Levofloxacin, Oxacillin, Tetracycline and Penicillin.

Auth.

**8.G.13.1.175. Comparison of concomitant non-accommodated convergent strabismus treatment methods.** /M. Kikolashvili, D. Shengelia, L. Tsomaia/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 58-60. – geo.; abs.: eng.

A retrospective cohort research carried out on children (n=70), aged 1 to 10 years. The children have manifested concomitant convergent strabismus. This cohort of patients, according to their age, was divided into 2 clinical groups and subgroups. The first group included the patients who underwent surgical treatment and occlusion. In the second group, there were patients who underwent pre- and post operative pleopto-orthopto-diploptic treatment. The analysis of research showed the complete repairing of binocular vision and development of fusional reserves occurred in children who had undergone complex treatment (pre- and post operative pleopto-orthopto-diploptic). It is important to note that late surgical treatment decreases the ability to reach perfect results.

Auth.

**8.G.13.1.176. The pancreatoduodenal zone cancer.** /N. Lomidze, I. Tsereteli, O. Urushadze, G. Nemsadze, V. Kaloiani, Z. Manijashvili, I. Latsabidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 78-81. – geo.; abs.: eng.

Pancreatic cancer is the third leading neoplasm of the gastrointestinal system and has a dismal prognosis. Primary carcinoma of the duodenum is rare and uncommon neoplasm that represents less than 0.5% of all gastrointestinal malignancies. The aim of this study is to assess patients with pancreatic, duodenal and periampullary cancers. 61 patients from N. Khipshidze Central Clinic (1995-2010) were investigated. 5 of them with a duodenal cancer, 12 – with a periampullary cancer, 14 – with a cancer of distal part of choledochus and 30 - with a pancreas head cancer. Mean age of patients was 42-72. From studied population pancreatoduodenal resection were performed on 16 (57%) patients (2004-2010) and 12 (43%) received palliative treatment. From 28 patients 3 of them had duodenal cancer and Whipple procedure was done. Pathomorphological study proved adenocarcinoma in 2 of cases and neuroendocrine carcinoma – in 1 case. From 5 patients with distal cholangiocarcinoma 3 of them received Whipple procedure. Pancreatoduodenal resection and lymphodissection D2 were done in 4 patients with periampullary carcinoma. From 16 patients with pancreas head cancer 5 of them received Whipple procedure with D2 lymphodissection. The majority of patients with pancreatic head cancer are poor candidates for resection at the time of diagnosis due to early development of distant metastases and/or major infiltrations of adjacent structures; patients with cholangiocarcinomas and duodenal cancers appear to be better candidates for Whipple procedure. Duodenopancreatectomy gave a longer survival time than duodenal resection in patients with duodenal cancer.

Auth.

**8.G.13.1.177. Sexual dysfunctions in patients with ageing male syndrome: modern view of the problem.** /Z. Marshania, G. Bochorishvili, T. Ivanishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 83-85. – geo.; abs.: eng.

The objective of this article was to study the problem of sexual dysfunctions in patients with the ageing male syndrome based on modern medical scientific sources. This syndrome is very frequently accompanied with erectile dysfunction, which originates from functional and not organic reversible damage of cavernous arteries. Along with complex treatment of sexual dysfunctions (FDES-5 inhibitors, testosterone-therapy, psychotherapy, surgical interference, intracavernous injections, adaptogens, biostimulators, local decompression, physiotherapy), it is necessary to take into consideration accompanying diseases (insufficiency of penile cavernous corpus' blood vessels, diabetes, heart diseases, mental disorders) and diversification of forms of sexual pleasure of ageing couples through widening acceptance range, increase of activeness of a sexual partner and prolongation of sexual foreplay for the purpose of ensuring mutual adaptation of couples in regards to changed sexual requirements.

Auth.

**8.G.13.1.178. The effect of an extract obtained from cortex of Phellodendron lavalei introduced in the subtropical zone of Georgia on the blood glucose level and glucose tolerance test in mice.** /M. Meskheli, N. Antelava, K. Liluashvili, M. Okujava, K. Pachkoria/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 95-97. – geo.; abs.: eng.

We studied the effect of an extract obtained from the cortex of Phellodendron lavalei introduced in the subtropical zone of Georgia – Kobuleti on the blood glucose level and glucose tolerance test in mice. Measurements of glucose level in blood were provided by the glucometer Gluco Lab-auto-coding. According to the study results, the extract is characterized of hypoglycemic activity, in particular it improves glucose tolerance and reduces the blood glucose level in mice. Further investigation of the efficacy and of the mechanisms of action of different parts of Phellodendron lavalei in experimental models of diabetes is essential for solving the problem of using Phellodendron lavalei as a plant raw material for hypoglycemic drugs.

Auth.

**8.G.13.1.179. Biologically active substances of the Allium genus onion and their pharmacological action.** /L. Mskhiladze, M. Maisashvili, D. Tchintcharadze, J. Kuchukhidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 97-100. – geo.; abs.: eng.

Intensive chemical and pharmacological investigation of Allium species has been conducted by Italian, French, English, American, Indian, Chinese and Japanese scientists lately. They are characterized of anticancer, antimicrobial and anti-atherosclerosis activity. Taking into account the above, further study of the Allium species grown in Georgia is needed to receive medicinal drugs with high therapeutic effect.

Auth.

**8.G.13.1.180. Intestinal and extra-intestinal manifestations of Crohn's disease.** /S. Kemoklidze, B. Ratchvelishvili, Kh. Pachkoria, L. Dzeladze, E. Adamia, I. Tavzarashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 108-110. – geo.; abs.: eng.

The authors report the intestinal and extra-intestinal manifestations of Crohn's disease. The Intestinal manifestations, including aphthous mouth ulcers, entero-enteral, entero-vesical, entero-cutaneous and perianal fistulas, bleeding, obstruction and malignant transformation. The extraintestinal manifestations include: pyoderma gangrenosum, the Sjogren's syndrome polyarthritis, spondylarthritis, lupus eruthematose and the Melkersson-Rosenthal syndrome.

Auth.

**8.G.13.1.181. The hepatoprotective effect of PV-88 during hemorrhagic shock in experiment.** /M. Gvaladze, Gr. Sulaberidze, G. Didava, M. Chkhaidze, I. Tavzarashvili, T. Gegeshidze, T. Buachidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 112-114. – geo.; abs.: eng.

During hypoxic state, especially for the period of hemorrhagic shock, lyses of liver parenchymal cell membranes occur due to calcium ion excess. Membrane protection from such a pathologic process is theoretically possible through blockage of the calcium L channels, namely – by Verapamil and PV-88. The latter was utilized to study its hepatoprotective effect. Modelling of the hemorrhagic shock was performed by Wiggers-Feine method. Blood was exfused from sedated male cats (nembutal 40mg/kg, intravenous blood exfusion 40ml/kg) till arterial blood flow drops to 40mm/Hg (HS60). During artificial ventilation - 130-150 ml/min/kg in the period of 1 hour, Ph in the arterial blood was 7.35-7.45, P02 – 90mm/Hg, airflow measurement was controlled by the *Corning* device. The animals were put to sleep by blood exfusion. On the 80<sup>th</sup>-90<sup>th</sup> minute after the blood exfusion liver edge were taken and rinsed with 2% osmium acid and 0.1 ml phosphatic buffer and glutar aldehyde. Contrasting was carried out by uranyl acetate and lead. Extracted material was examined by electronic microscope JEM-100B (Japan). 3 series of experiments were done on male cats (15 animals in total) – hemorrhagic shock model (n=5 animals), hemorrhagic shock model and throughout the effect of verapamil (dose 0,250mg/kg i/v), which together with the

physiologic solution did not exceed 1/20 of the exfusion volume (n=5 animals), hemorrhagic shock model and throughout the effect of PV-88 (dose 3mg/kg i/v) (n=5 animals). According to our experimental data, in hemorrhagic shock model on the 80<sup>th</sup> min after the blood exfusion, the hepatoprotective effect of calcium L channel blocker – PV-88 is significantly higher than of Verapamil.

Auth.

**8.G.13.1.182. The role of scleral weakness and thinness in progressive myopia.** /D. Shengelia, A. Bakuridze, V. Beliashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 120-121. – geo.; abs.: eng.

Scleral biomechanical weakness and thinness are known to be one of the main factors in the pathogenesis of progressive myopia. We tested changes in axial length of the eyes, in far and near distance, in patients with low, middle and high grades myopia. Statistically significant differences were considered when  $p < 0.05$ . The study shows the widest variation in the axial length in the middle grade of myopic patients. The analysis of biomechanical considerations in the axial length presented here is a very helpful to choose the adequate method for treatment of myopia.

Auth.

**8.G.13.1.183. Using the active points of the feet, pulse current, as well as phonophoresis of the lumbar region in non-drug treatment regimen for itching.** /N. Tsiskarishvili, A. Katsitadze, N. Tsiskarishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 128-130. – geo.; abs.: eng.

It is known that in number of pathogenic factors that cause itchy skin, psycho-emotional, stressful situations play an important role; they can provoke the development of neurosis, asthenia, and chronic fatigue syndrome. That is why the proposed method of drug-free deliverance from itching using individual the mind-body workout exercises to affect the active points of the feet, therapeutic electronarcosis, phonophoresis of lumbar region, appears exclusively relevant. The study followed 27 patients aged from 18 to 65 years with the following nosology: prurigo (10), diffuse neurodermatitis (7); limited neurodermatitis (5); pregnant itching (5). Disease duration ranged from several months to 5 years. The comparison group was homogeneous in the number of patients, nosological units and duration of the disease. The degree of pruritus was assessed on 4-point scale. Patients' control group received a sedative therapy, desensitization means, corticosteroids. Patients were observed during treatment (21-28 days) and for 1 month after therapy. In the test group compared with control group skin itching subsided considerably faster (on average 4 days) and, accordingly, at an earlier date could renounce the use of antihistamines, sedatives. 87% of patients from the study group pointed to the improvement of the general emotional state, reducing severity of depression related to the skin condition, which unconditionally indicates an improvement in quality of their life. The findings generally indicate a high clinical efficacy of the proposed psychophysical exercises, therapeutic electronarcosis and phonophoresis in the treatment of itchy skin dermatoses.

Auth.

**8.G.13.1.184. Contemporary methods of exudative otitis media treatment.** /Sh. Japaridze, L. Lomidze, I. Kekelidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 136-137. – geo.; abs.: eng.

The research was conducted in Otorinolaringology Department of TSMU during 2009-2010 years. Altogether 132 patients (age – 3-59 years) with exudative otitis media were investigated. Diagnosis was estimated with help of otoscopy, tympanometry and audiometry. The patients were divided into 4 groups: In I group were 23 patients; in II group – 59 patients; in III group – 20 and in IV group – 30 patients. Duration of the disease was from 1 month to 7 years. Treatment of exudative otitis in tested patients was conducted in three stages. Surgical intervention, shunting of tympani, has been done only in 30 patients from investigated 132 patients.

Auth.

**8.G.13.1.185. Some Issues of diagnostics and treatment of chronic maxillary sinusitis.** /Sh. Japaridze, T. Khechinashvili, I. Kekelidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 137-139. – geo.; abs.: eng.

Chronic paranasal sinusitis, including maxillary sinusitis, nowadays is marked with the tendency of high incidence rate and severe complications. 52 from 14 to 75-year old subjects with different duration periods (from 1 to 10 years) of the disease have been studied for the development of rational methods of treatment and of differential diagnostic strategy. The patients under observation underwent routine and modern (CT) roentgenographic investigation, cytological, bacteriological, both local and general immunity tests. On the basis of the performed studies in case of chronic presence of allergic component, close interrelation between those parameters and imbalance of immune status was revealed. The obtained results suggest the necessity to develop more rational and effective curative methods, namely the complex use of immunomodulatory preparations along with other medicinal remedies both before and after conservative and radical treatment.

Auth.

**8.G.13.1.186. Investigation of cardiac autoantibodies for detection of cardiovascular system damage in children with recurrent respiratory tract diseases.** /K. Barabadze, A. Tsabutashvili, N. Adamia/, Second International Congress of Respiratory Association of Georgia. – 2010. - geo.; abs.: geo., eng.

According to statistical data, the frequency of cardiac diseases increases in the world, including Georgia. Obviously the disease becomes younger; children who often ail with nonspecific diseases of respiratory system belong to the high risk group of development of damages of cardio-vascular system. Aim of the study was to investigate cardiac autoantibodies as a diagnostic marker for detection of cardiovascular system impairments in children with recurrent respiratory system pathologies. The research was carried out at I. Paghava Scientific-Research Institute of Pediatrics. 84 patients aged 3-15 years were examined. The study revealed that cardiac autoantibody test was positive in 44%, which indicates on the autoimmune feature of the disease. The study allows using investigated marker as the diagnostic criteria of cardiovascular damage, which supports timely reveal of the high risk group of children with recurrent respiratory tract diseases; the study allows managing disease, conducting timely and adequate treatment and preventing from disabilities.

N. Chkhaidze

**8.G.13.1.187. Clinical forms and treatment of intrathoracic sarcoidosis.** /T. Lobzhanidze/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.;\_abs.: geo., eng.

Sarcoidosis is a multisystem disorder of unknown aetiology characterized histologically by non-caseating granulomatous inflammation in the affected organs. In 90% of cases damage of lungs was revealed. In approximately 1/3 of cases, the disease starts gradually (chronic form), in other cases – acutely or without symptoms. Two clinical forms of acute sarcoidosis are singled out. Chronic form of the disease shows itself gradually, with episodic relapses and remissions. As a result of progress of the disease gradually develop expressed, sometimes dangerous for life, changes of lung function. The paper provides data on the classification, clinical manifestations, course, treatment, and follow-up of intrathoracic sarcoidosis.

N. Chkhaidze

**8.G.13.1.188. Anti-leukotrienes in treatment of patients with seasonal allergic rhinitis.** /M. Kherkheulidze, N. Khavlashvili, E. Kandelaki, N. Adamia/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.; abs.: geo., eng.

The aim of the study was to assess the effectiveness of anti-leukotrienes preventive treatment on the course of seasonal allergic rhinitis. Observational study included 48 patients aged 6-12 years, who were divided into 2 groups. I (main group) comprised 28 patients with the already diagnosed seasonal allergic rhinitis, who received the montelukast once per day starting 10-14 days earlier before onset of allergic season and II group - 20 patients with clinical picture of seasonal rhinitis without any previous treatment. Quality of life (PRQLQ, published by E. Juniper) nasal symptom severity scores and total nasal symptom score and correlation of symptom severity scores to quality of life questioner in both groups was evaluated. The study shows that the most frequent symptom in both groups was nasal secretion, but most serious or disturbing symptom that affects quality of life was nasal obstruction. The result showed correlation between severity of rhinitis,



nasal symptom scoring and quality of life. The study highlights effectiveness of using anti-leukotrienes in treatment for improvement of nasal symptom scores as well as quality of life of patients with seasonal rhinitis.

N. Chkhaidze

**8.G.13.1.189. Analysis of a dynamic cardiac rate system on the basis of computer imaging methods.** /I. Chkheidze, M. Berishvili, L. Tokhadze/. Transactions of Technical University of Georgia. - 2011. - #1(479). – pp. 51-54. – geo.; abs.: geo., eng., rus.

Graphic methods of research of a dynamic cardiac rate system, which demonstrate a difference in change of indicators for healthy and sick patients are considered. A research of cardiac rate dynamics has shown that application of the presented methods allows to carry out an analysis of properties of the medical and biologic system and the imaging character of the algorithms realized in the MathCad program package, considerably simplifies understanding of features of dynamic behavior of the system, its perception and assists doctors in the establishment of the objective diagnosis.

Auth.

**8.G.13.1.190. The effect of calcium antagonists on the products obtained through lipid peroxidation in different brain structures of white rats under emergency conditions.** /A. Baghirov, A. Mirzayeva, G. Ganiyeva, V. Asmatov, M.Ganiyev/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 14-17. – eng.

For formation of free radical processes in the body, emergency conditions and different widely applied medicines are given a more important role. Stress factors and permanent drug therapy cause an increase in MSS through lipid peroxidation. Based on the above, the authors investigated pro- or antioxidant features of frequently applied drugs. Neurochemical tests have found that under emergency conditions, both in acute and chronic experiments, an increase in the amount of lipid peroxidation products in the brain structures is observed. According to the conducted study, the calcium channel antagonists, such as verapamil, amlodipin, flunarizin, have a slight effect on the formation of the lipid peroxidation products in different structures of brain and display an antioxidant effect.

Auth.

**8.G.13.1.191. Depression in hemodialysis-dependent patients.** /T. Gegenava, M. Gegenava, G. Kavtaradze, M. Sutidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 22-24. – geo.; abs.: eng.

Depression plays a crucial role in the progression of chronic medical illnesses. Amongst all psychiatric disorders, depression is the most important and common in patients with ESRD. Depression in dialysis-dependent patients effects mortality and rate of hospitalizations. It has been suggested that approximately 20- 30% of the ESRD population suffer from depression. The somatic characteristic of depression is similar to symptoms of uremia like anorexia, sleep disturbance, fatigue, gastrointestinal disorders and pain. Due to this overlap of symptoms of uremia with depression it is usually neglected, under diagnosed and remain untreated. This study was conducted in hemodialysis units of N. Khipshidze Central Clinic in a period between March 1 and May 1, 2009. The number of patients made 40 (14 women and 26 men). The average age was 35, the duration of hemodialysis - 2-8 years. The diagnosis of the patients and the cause of hospitalization was ESRD. The Beck Depression Inventory, (BDI-II) comprising 21 items, which is considered to be the most valid test for assessment of depression, was filled out by the patients. Depression was revealed in the majority of patients n=30 (75%). Moderate and severe depression was revealed in 22.5% of the patients, while the majority had mild depression n=21 (52.5%). Anemia, hyponatremia, hypopospatemia were also revealed in our study. It is known that these symptoms have statistically significant relationship with depression. Findings offer that depression is the most spread psychosomatic disorder among renal dialysis patients. Treatment options should entail psychological treatment.

Auth.

**8.G.13.1.192. The importance of rectoscopy and colonoscopy during ulcerative colitis.** /G. Tatishvili, B. Chakvetadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 138-140. – geo.; abs.: eng.

All scientific data and own experience in specialized hospital is indicative of too late and insufficient diagnostics of ulcerative colitis in its ambulatory stage. That is why endoscopy at different stages of disease has very important practical meaning. The diagnostic importance of rectoscopy grows without preliminary preparation of the intestine, together with biopsy. Colonoscopy makes it possible to speak about the process localization and spread, its activity and the intestine wall involvement in the process.

Auth.

**8.G.13.1.193. The tactics of treating stress ulcers in the pulmonary ventilation-dependent patients.** /Z. Kheladze, S. Jaiani, Zv. Kheladze, D. Chakhunashvili, G. Chakhunashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 169-170. – eng.

851 patients' histories that were in a critical condition and on mechanical ventilation have been analyzed. The bleeding from stress ulcers was detected in 48 patients (5.6%). The urgent endoscopical service was created in our clinic, which gives us the opportunity to make treating-diagnostic endoscopy 24 hours a day. Together with standard methods, plasma ray therapy was also used in the treatment course. As a result, the treatment efficiency has significantly increased.

Auth.

**8.G.13.1.194. Clinical-hemodynamic and anti-ischemic effects Ivabradine and Nebivolol Ischemic Heart Disease with Left Ventricular Dysfunction.** /G. Abuladze, A. Kvirkvelia, M. Nebieridze, T. Chachua, G.Dundua/. Georgian Medical News. - 2010. - #10 (187). – pp. 24-27. – rus.; abs.: geo., eng., rus.

The aim of this study was to examine the effectiveness of Ivabradine (available under the brandnames of Procoralan, Coralan, Corlentor, Coraxan, "Servier", France) and Nebivolol (Nebilet, "Berlin-Chemie", Germany) with combination of standard therapy in patients with coronary artery disease and left ventricular dysfunction. A total of 72 patients (mean age 57,3±4,5 years) have been observed during 6 months. Patients were divided into 3 groups (standard therapy; standard therapy and Nebilet; standard therapy and Coraxan). The results showed that Coraxan with combination therapy optimally reduced heart rate and ensured the proper anti-ischemic effect expressed as reduced left ventricular dysfunction, also improved the degree of congestive heart failure compared with the group Nebilet.

Auth.

**8.G.13.1.195. "Comet tail" artefact in diagnosis of pulmonary congestion in patients with diastolic heart failure.** /M. Tsverava, D.Tsverava/. Georgian Medical News. - 2010. - #10 (187). – pp. 28-35. – eng.; abs.: geo., eng., rus.

The aim of this study was to evaluate the importance of thoracic ultrasound examination in diagnosis of DHF. Total of 380 patients with HF were evaluated. 86 patients had diastolic HF (group 1) and 294 patients had systolic HF (group 2). The control, group 3, consisted of 155 patients with left ventricular diastolic dysfunction but without HF. HF patients did not take any medication before ultrasound examination. All patients underwent thoracic X-ray and ultrasound examination. Sonographic examination of the lung was done with 3,0-4,0 MHz convex or sector probe, from 10 points on thoracic wall (cross points of mid-clavicular line II, IV and V intercostal spaces and anterior axilar line with IV and V spaces), which corresponded to the projection of lower, middle and upper lobes of the right lung and upper and lower lobes of the left lung. During pulmonary ultrasound examination, 95.5% of patients with HF had the "comet tail phenomenon", which was registered only in 35.5% patients without HF ( $p > 0,001$ ). In DHF group, the "comet tail phenomenon" was registered in 91.9% and in systolic HF group in 96.6% patients. In 81.4% of patients with DHF the "comet tail phenomenon" was registered from 3 and more registration points. In the control group, the "comet tail" was registered from more than 3 points only in 2 (1.3%) patients. The best results in diagnosis of DHF can be achieved if we take "3 and more registration points" as a reference point for diagnosis of pulmonary congestion (sensitivity - 0,911, specificity - 0,942, positive predictive value 0,975). In patients with diastolic HF during pulmonary ultrasound examination significantly often was registered the "comet tail phenomenon". The count of

registration points from the thoracic wall of the "comet tail phenomenon" 3 and > is sensitive and specific sign of HF. We think that lung sonography offers a new method for the diagnosis of decompensated diastolic HF at bedside and may provide important information.

Auth.

**8.G.13.1.196. Results of conservative treatment of achillodynia with application of micro-current therapy.** /R. Aliyev, G. Muslimov, G. Gaiger/. Georgian Medical News. - 2010. - #10 (187). – pp. 35-42. – eng.; abs.: geo., eng., rus.

Achillodynia is described as expression of chronic pain in the Achilles tendon. Pain in the Achilles tendon can be the cause of wear and tear in the tendon tissue or as a result of inflammation of the peritendineum, the underlying bursa and/or the tendon insertion at the heel bone. It often occurs after sporting unusual stress and is healed after a complex conservative treatment by rest, (partial) relief and physical exercise within several weeks to months. The aim was to turn knowledge on the effectiveness of complex conservative treatment measures, in particular to gain by additional stimulation in the treatment of Achilles tendon. 20 patients with a diagnosis of achillodynia were treated 05-2009 to 12-2009 in the orthopedic outpatient therapy center with the help of the extra, micro-current therapy (CellVAS® device) and a complex conservative treatment measures. The analysis was conducted using a questionnaire, clinical examinations, magnetic resonance imaging (MRI) and a radiological examination of the Achilles tendon with the ankle joint. At the beginning and end of the intervention to the Board of subjective symptoms scores (NRS scale) and assessment of treatment results by the doctor for 4-step rating scale were collected. The study compares the treatment response in Achillodynia from a control group. The average age of patients was 46.3 years at the time of treatment. Of these patients: 14 (70%) were females and 6 (30%) male. Of 20 patients were 8 (40%) patients with very good, 7 (35%) patients with good, two (10%) patients with satisfactory and three (15%) patients with poor results. In addition, 17 of 20 patients (85%) with conservative treatment measures were satisfied, 3 patients (15%) were dissatisfied. The subjective assessment of the complaints numerical rating scale (NRS scale) improved significantly ( $p < 0.001$ ) from 8.9 to 2.3 points after treatment. An objective evaluation by the attending physician based on various clinical parameters was assessed in 75% of the cases as good or very good. The study shows that the described complex conservative therapy is the integration of a micro-current treatment is a very good method for the treatment of Achillodynia/Achilles tendon disorders in athletes. The primary goal of treatment is to achieve freedom from pain and was achieved consistently, as the subjective assessment of the complaints was proved using the NRS scale. The high patient satisfaction with the treatment suggests in addition, any therapy must keep in action the long-term development of athletes in mind. In individual must be questioned what treatment method for long-term sports development but also the health history (this is not inevitably always the same) is an advantage. The conservative treatment seems to be advantageous because it leaves open for therapy-resistant complaints, the option of surgical treatment, and has generally very good chance of recovery.

Auth.

**8.G.13.1.197. Effects of Oxytocin on behaviour and memory in rats subjected to chronic restrained stress.** /M. Kunchulia, T. Bolkvadze, M. Zhvania, N. Kotaria, M. Kiladze/. Georgian Medical News. - 2010. - #10 (187). – pp. 56-60. – eng.; abs.: geo., eng., rus.

We studied whether 21 days of restraint chronic stress would affect the contextual fear conditioning, a memory task with hippocampal-dependent components and anxiety-like behavior in the open field, and to determine whether oxytocin treatment could prevent the chronic stress induced memory and emotional disturbances. Restraint-stressed rats were injected daily (21 days) with oxytocin (1 mg/kg) or saline then tested in open field (day 22) and contextual fear conditioning task (days 23-24). Our data demonstrate that chronic restraint stress induces some behavioral changes in both saline-treated and oxytocin-treated animals. Particularly, in the open field the animals both groups were characterized by hyper-locomotion. However, oxytocin-treated animals spent more time in the inner area of the open field, which indicates to decreased anxiety-related behaviour in oxytocin-treated animals versus the saline-treated ones. In additional restraint stress decreased freezing reaction to context, irrespective of whether oxytocin was given or not. Our findings indicate that during stress OT may be involved in the regulation of emotional behavior and memory via different ways. The elucidation of corresponding mechanisms is of great importance.

Auth.

**8.G.13.1.198. The influence of Fluoxetine on noradrenergic neurotransmitters of brain cortex.** /D. Zurabashvili, I. Giorgobiani, M. Arveladze, I. Gamkhrelidze, E. Kavsadze/. Georgian Medical News. - 2010. - #10 (187). – pp. 65-68. – rus.; abs.: geo., eng., rus.

The aim of this work was to evaluate the hypothesis that the second-generation antidepressant might play a role in controlling the activity of noradrenergic neurotransmitters. The paper details the pharmacological profile of antidepressant drug Fluoxetine with high affinity for 5-HT receptor, and explains how the antidepressant activity changes noradrenalin reuptake inhibitor-medications. Brain cortexes of 20 rabbits were analyzed by high-performance liquid chromatography. The conducted quantitative and qualitative analyzes show that antidepressant activity of Fluoxetine could be mediated by the synergistic effects on the serotonergic and noradrenergic receptor pathways. Major depressive disorders are heterogeneous monoamine condition. Our studies have demonstrated fluoxetine efficacy and safety for treatment of major depressive disorders.

Auth.

**8.G.13.1.199. Increased lipid peroxidation inhibits regulation of erythropoiesis in patients with pancreatic diabetes.** /M.Feyzullayev/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 27-29. – rus.; abs.: eng.

23 insulin-dependent patients with pancreatic diabetes and 20 healthy donors (13 men and 10 women aged 16 to 60) were observed. The illness duration varied from 1 month to 20 years. The investigation results showed that during hyperglycemia (20.5mmol/l) an increase of the quantity of lipid peroxidation (POL) was marked in the patients with ID PD in comparison with the control (0.19/0.49st.unit). The results of the analysis showed some increase in the POL concentration which caused damage to the structure of the erythrocytes, and the decrease in the haemoglobin quantity from 140g/l to 128g/l ( $p < 0.05$ ). Blood diffluence resulted in the impairment of erythrocyte differentiation and in the further maturation of the peripheral blood elements. Due to this unusual method of therapy, the compensation of carbohydrate metabolism and normalization of erythropoiesis have been achieved in the patients with ID PD.

Auth.

**8.G.13.1.200. The efficacy of treatment for chronic nonspecific lung diseases by the methods of non-drug therapy according to follow-up studies.** /N. Faradjeva/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 38-40. - rus.; abs.: eng.

131 patients have been examined: 69 patients with infection-dependent bronchial asthma (IDBA); 37 – with moderately severe, 32 - with severe and persistent illness; 63 patients – with chronic bronchitis (CB); 31 patients with chronic purulent non-obstructive bronchitis (CPNOB), and 32 - with chronic purulent obstructive bronchitis (CPOB). 67 patients of the basic group (35 with IDBA and 32 with CB) received the combination of drug therapy (DT), halotherapy (HT) and endobronchial exposure (EBE) with sessions of various durations, and a general course of treatment depending on the form and severity of the clinical course of the disease. The control consisted of 65 patients receiving only MT. The analysis of follow-up studies has shown a considerable clinical effect in both nosological groups under the combination of MT and HT/EBE.

Auth.

**8.G.13.1.201. A comparative analysis of the main risk factors of coronary heart disease in the Baku male population aged 15-18 and 20-59.** /A. Zeynalov, U. Mekhtiyev, J. Masimov, A. Humbatova/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 41-44. – rus.; abs.: eng.

Data concerning the prevalence of the main factors of coronary heart disease (CHD) among the Baku males aged 20 to 59 (1996) and 15 to 18 (2008-2009) were obtained. There were applied strictly standardized methods of examination and criteria of their evaluation recommended by the WHO for epidemiological researches. Statistical treatment was conducted in accordance with the current requirements for analyzing parametric and non-parametric data. It was established that CHD risk factors promoting formation of the metabolic syndrome prevail among the Baku male population aged 20 to 59. Metabolic syndrome risk factors were also observed among the males aged 15 to 18. We can consider as positive the fact that more than half of males in Baku aged 15 to 18 go in for sports and have low-rate smoking behavior. Every tenth of 15-18 year-old examined

males had hypertrophy of one or both ventricles. The latter pathology was registered 10 and more times as often as compared with its isolated forms. A conclusion was drawn about the necessity of development of a national program aiming at CHD risk factors prevention, starting from school-age persons.

Auth.

**8.G.13.1.202. Prevalence of CHD risk factors separately and in various combinations among the Baku population aged over 20.** /A. Safaraliyeva/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 45-49. - rus.; abs.: eng.

A representative sampling of unorganized male and female inhabitants of Baku aged over 20 has been studied. Strict standardized methods of investigation and evaluation were applied when coronary disease and its main risk factors were detected. The studied risk factors were hypertension, body-weight index, strenuous physical activity, smoking, alcohol drinking, hypercholesterolemia, hypertriglyceridemia or hypo-cholesterin of high-density lipoproteins. Statistic handling of the received results has been conducted taking into consideration modern requirements. The received results indicated that the number of males and females aged over 20 being studied upon the risk factors was approximately 100% in the absence and presence of coronary disease. In the absence and presence of coronary disease risk factors were assigned as a reason for the metabolic syndrome formation. This is a negative prognostic indicator, which may cause a subsequent development of the disease and mortality for the reason of cardiovascular pathology. As a negative result, we can state the fact that the majority of both genders had combined four risk factors. The conclusion was drawn that the most acceptable strategy for the population over 20 is mass prophylaxis.

Auth.

**8.G.13.1.203. Spread of the risk factors of coronary heart disease among the patients with rheumatoid arthritis.** /N. Zamanov/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 49-53. – rus.; res.:eng.

125 patients with rheumatoid arthritis (RA) were involved in the investigation. Among the classical risk factors of coronary heart disease (CHD) smoking was not marked among the woman, and among the men has made 90%. Arterial hypertension was found in 44.4% of the patients with RA. Serious changes were determined in the lipid-protein blood spectrum. The risk factors of CHD are marked basically in patients with seropositive form of RA. A positive correlative communication was detected between such CHD risk factors as anemia, arterial hypertension, C-reactive protein level. CHD risk factors in a greater degree were increased in the patients whose RA continued more than 5 years. The level of fibrinogen depends more on the duration of the disease, and the level of C-reactive protein – on the degree of RA activity.

Auth.

**8.G.13.1.204. Correction of psycho-emotional frustration in patients with bronchial asthma during halotherapy.** /N. Farajeva/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 50-53. – rus.; abs.: eng.

The research objective was to define the antidepressant effect of halotherapy (HT) in the complex treatment of bronchial asthma. 73 patients with heavy persisting infectious-dependent bronchial asthma (IDBA) have been examined and treated. The basic group patients received also HT in combination with drug therapy (DT). The patients receiving only DT comprised the control group. The results of the research carried out showed that only 42.2 % of the patients receiving only DT recovered from psychoemotional frustration by the end of a 25-day course of treatment, whereas a complex treatment including HT completely corrected the condition of 90.9 % of the patients in 12 days of treatment.

Auth.

**8.G.13.1.205. Structural characteristics of endotheliocytes in practically healthy people.** /N. Khvitia, N. Lobzhanidze, T. Lobzhanidze/. Experimental and Clinical Medicine. - 2010. - #2(57). - pp. 63-66. – rus.; abs.: eng.

The endothelium of healthy people has been studied by light and electron microscopy. The endothelial structure can be described as endocrine tissue.

Auth.

**8.G.13.1.206. Pilot study of primary prevention and screening on environmental factors in pathogenesis of Sjogren's syndrome associated salivary and lacrimal gland lesions.** /T. Chachibaia, E. Aptsiauri, I. Bulia, A. Aleksidze, I. Aleksidze, T. Gabashvili/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 45-50. – geo; abs.: eng.

Sjogren's syndrome is chronic autoimmune inflammatory rheumatic disease that attacks exocrine, i.e. salivary and lachrymal glands, causing such complication such as dryness of mouth and eye in affected individuals. Mainly is diagnosed among women population in 90% of cases. Sjogren's syndrome affects mainly women in their 40-50s, though younger age onset is also characteristic. Later disease is progressed and other organs are involved as well. There is substantial risk of development of malignant lymphomas and characterised by 44-fold increased risk compared to general population. Environmental factors are thought to trigger inflammation in individuals with a genetic predisposition for the disease. Primary prevention of Sjogren's syndrome is directed to increase awareness of harmful environmental conditions, which may be avoidable, also to educate recognition of early warning symptoms of this condition. Timely diagnosed lesion is better treatable and late onset complications are also preventable. The aim of "Georgian Sjogren Association" is to perform screening and provide prevention of Sjogren's syndrome in Georgia. In co-operation with the "Alliance for Rare Diseases of Georgia" we apply our joint efforts in the prevention of this disease among women population in Georgia. With the support and assistance from the specialised ophthalmologic clinics we plan to perform primary prevention and screening (pilot study) of susceptible individuals on 12 June 2010 during Rustavi Women's Health Fair - Celebrating Healthy Women. Event was organised by Peace Corps Georgia Volunteers and Rustavi NGO Young Initiators. Objectives. The goal of primary prevention is to avoid the development of cancer by reducing or eliminating exposure to cancer-causing factors. Primary (1o) prevention at the population, as well at individual i.e. patient-doctor communication level is to avoid initiation of pSS by means of declining impact of harmful environmental factors, such as smoking, air conditioning, etc. Activities for primary prevention were undertaken, particularly: I. Short presentation on the following topics: Age related hormonal changes, environmental factors and genetic predisposition in triggering primary Sjogren's syndrome. Environmental factors in pathogenesis of Sjogren 's syndrome associated salivary and lachrymal gland lesions, primary prevention. Recommendations and measures on primary prevention. Role of stress in the development of autoimmune diseases. Stress management techniques. What is the benefit of prevention of autoimmune diseases for the women in their peri/post menopausal periods of life. II. Training - Primary prevention for Sjogren's syndrome – recognition of the causes and outcomes of dry eye and mouth symptoms. III. Health consulting - Examination of dry eye and dry mouth complaints in susceptible population. Individual and population level primary prevention and screening (pilot study). Conclusion: Based on the results of pilot study for the further study was chosen individual-level, i.e. secondary screening and prevention at the patient-physician level versus population-level approach.

Auth.

**8.G.13.1.207. The dynamics of incidence of salmonellosis in Georgia.** /T. Mchedlishvili, D. Gelovani, P. Imnadze, I. Mchedlishvili/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 24-28. – geo.; abs.: eng., rus.

We have studied the dynamics of incidence of salmonellosis in Georgia for years 1960-2009. Before 1973, the incidence rate was relatively low which subsequently had a significant increase and it continued until 1988. Afterwards, increase turned into decrease and in the 21th century the incidence rate was determined as  $6.2 \pm 1.05$  per 100 thousand population. The changes in the dynamics of incidence rate of salmonellosis is characterized by the changes of ethiological structure of the disease. Earlier the disease was almost always caused by *S. typhimurium*, although currently the cause of the infection is *S. enteritidis*. As a result, chicken meat, eggs and products made from them have a bigger role in the distribution of the disease.

Auth.

**8.G.13.1.208. Suitable usage of camelyn in treatment of osteoarthritis and osteochondrosis by means of ultraphonophoresis and electrophoresis.** /N. Saakashvili, T. Chilingarishvili, N.

Jakobia, K. Maghlakelidze, G. Chikovani, I. Malazonia, M. Lomidze, M. Natsvlshvili, I. Kvinikadze, N. Kvinikadze/. *Experimental and Clinical Medicine*. – 2010. - #4(59). - pp. 59-61. –geo.; abs.: eng., rus.

Camelyn is a biologically active preparation produced by the Georgian famous surgeon Benedikte Maghlakelidze in the mid-20th century from special, ecologically safe Kolkhis honey. After a lot of clinical and experimental trials, it was determined that Camelyn had immunomodulate, antioxidant and antiinflammatory action. Osteoarthritis and osteochondrosis are the most common medical problems in the world. It's the number one cause of disability in America. Nearly 40 million Americans have some forms of arthritis. We decided to consider the need of usage of the ultraphonophoresis of "Camelyn M3" (20 patients) and electrophoresis of "Camelyn M1" (20 patients), for treatment of some forms of osteoarthritis and osteochondrosis. As we have managed to achieve a high therapeutic effect and improving of the quality of life in both groups, we recommend these new effective methods for wide use in clinical and physical treatment and rehabilitation.

Auth.

**8.G.13.1.209. "Dualler-G" - new approach to the treatment of allergy.** /T. Tchumburidze, Z. Bendeliani, N. Nemsitsveridze, A. Isakadze, T. Zarkua/. *Experimental and Clinical Medicine*. - 2010. - #4(59). - pp. 62-63. – geo.; abs.: eng., rus.

Epidemiological data reflect a significantly increased percentage of population suffering from allergic diseases. Especially it concerns allergic reactions influenced by industrial and biological factors. Allergic reaction plays the leading role in pathogenesis of dermatitis, and mechanisms of such reactions are based on release of histamine and serotonin. The development of a drug with both antihistaminic and antiserotoninic activity was the goal of this study. Drugs with close chemical structure and pharmacological activity were selected from derivatives of quinuclidin carbinols. This differences in pharmacological activity of different compounds make Dualler-G a new antiallergic drug with antihistamine and antiserotonine activity. The goal of the study was clinical trail of Dualler-G in patients with dermatitis. The obtained data suggest that Dualler-G shows high effectiveness in the treatment of different types of dermatosis. The effect of Dualler-G, an original antiallergic drug, was evaluated in patients displaying different kinds of dermatosis (urticaria, neurodermatitis, lichen rubber planus, eczema). A total of 22 patients diagnosed with dermatitis were randomized to receive in an open fashion 60 mg of Dualler-G per day, for 2 weeks. Efficacy was assessed according to the global improvement rating of elements on skin or itching as symptoms or signs. Patients treatment with Dualler-G (cases of urticaria, neurodermitis and lichen rubber planus) had superior improvements in their symptoms (elements on skin and itching) compared to controls along the 2-week trial, but not in the cases of eczema. However, cases of eczema level of eosinophils were reduced as well as the severity of symptoms. The clinical course of the patients treated with Dualler-G tended to be significantly better than that of the patients treated with other antiallergic preparations, and the symptoms were significantly correlated in the Dualler-G treated group. These data suggest that Dualler-G positively effects the symptoms (skin elements and itching) in patients with different kinds of dermatosis, and its efficacy is much higher against other drugs.

Auth.

**8.G.13.1.210. Metabolic effects of Nebivolol in patients with type II diabetes.** /G. Tabidze, T. Tsibadze, N. Kobaladze, N. Tchkuaseli/. *Experimental and Clinical Medicine*. - 2010. - #4(59). - pp. 64-67. – geo.; abs.: eng., rus.

A novel super selective  $\alpha$ -blocker with NO-modulating activity Nebivolol used as an antihypertensive drug in patients with non-insulin-dependent diabetes exerted good hypotensive effect which was not associated with negative changes of the lipid spectrum.

Auth.

**8.G.13.1.211. Specifications of community acquired pneumonia based on the findings of the Therapy Clinic of Georgian Patriarchate.** /R. Tabukashvili, V. Kapetivadze, N. Gegeshidze, Kh. Tsaava/. *Experimental and Clinical Medicine*. - 2010. - #4(59). - pp. 68-70. – geo.; abs.: eng., rus.

The purpose of the research was to reveal peculiarities of the course of community acquired pneumonia. During 2007-2010, 427 patients were studied. The main group of the patients was

dated from III class of PORT-scale. We found that the number of community acquired pneumonia cases tended to increase by years. In 2008, 15.98% from all admitted patients was diagnosed; the number of patients with bilateral pneumonia made 17.36%. In 2009, the figure amounted to 25.82% and 40.76%; in 2010, during three months – to 40.34% and 55.20%. An increase in complications of the community acquired pneumonia was also detected, especially in the form of pleurisy. Bacteriological investigations showed that the spectrum of pathogenic organisms had not changed in the last ten years. These findings are corroborated by statistically trustworthy studies as well.

Auth.

**8.G.13.1.212. Arterial hypertension in women.** /N. Katamadze, S. Beridze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 73-76. – geo.; abs.: eng., rus.

Arterial hypertension, as one of the important cardiovascular risk-factors, still remains one of the most important medical subjects, including women. Only a small percentage of patients know that they have hypertension, and even less number of people are treated appropriately. The healthy lifestyle is the most important for primary and secondary prevention of cardiovascular diseases. The desired effect is often reached with a complex medical treatment. Despite of women's systematic involvement in clinical trials, it still remains difficult to formulate specialized recommendations, because the percentage of woman is still not representational. A better knowledge of the pathological mechanisms leading the postmenopausal women to hypertension will assist in elaborating more proper and rational treatment.

Auth.

**8.G.13.1.213. Dislipoidemia in a family physician practice.** /A. Isakadze, Sh. Shurghaia, N. Burkadze, M. Noniashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 77-79. – geo.; abs.: eng., rus.

Dislipoidemia is one of the most important risk factors of cardiovascular diseases. The priority of prevention of cardiovascular diseases is to reduce the number of patients with high cholesterol levels. A way of solving this task is to enhance the patients' awareness of the target levels of lipid metabolic parameters and the necessity of their regular monitoring. The awareness of the level of cholesterol and its atherogenic fractions was assessed in a group of 222 patients who considered themselves apparently healthy. In these patients, the parameters of lipid and carbohydrate metabolism were determined and blood pressures and anthropometric indices were measured. The study group demonstrated high prevalence of dyslipoidemia and metabolic syndrome and low awareness of the values of the lipid spectrum, which generates the necessity of performing further studies to develop goal-oriented preventive programs, including educational ones.

Auth.

**8.G.13.1.214. Fe-askangel and its application for treatment of iron-deficiency anemia.** /T. Gabelia, L. Japaridze, N. Beridze E. Salukvadze, T. Kvernadze, N. Burkiashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 89-91. – geo.; abs.: eng., rus.

A physico-chemical method of adsorption modification of superfine askangel (Askana, Ozurgeti, Georgia) with the coordination compound Fe (II)-fructose has been developed. The results of the investigation show that the adsorption of Fe (II)-fructose on the superfine askangel has a physical character. On the basis of the clinical tests, the possibility of application of Fe-askangel as an effective blood restorative agent for treatment of iron-deficiency anemia has been shown.

Auth.

**8.G.13.1.215. The effects of Berberin obtained from *Phellodendron Lavalei* introduced in sub-tropical areas of Georgia on blood glucose level and glucose tolerance in experiment.**

/M. Meskheli, N. Antelava, A. Bakuridze, K. Bakuridze, D. Berashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 98-100. – rus.; abs.: eng., rus.

The effects of Berberin were studied on blood glucose level and on glucose tolerance in an experiment with mice. Berberin is obtained from *Phellodendron Lavalei*, the plant introduced in the subtropical areas of Georgia – Kobuleti region. The measurement of blood glucose level was carried out on fasting animals using the glucose meter Gluco Lab – auto-coding. The study revealed that the preparation has a hypoglycemic activity, especially improves the glucose



tolerance in mice and lowers the blood glucose level in normoglycemic mice. In conclusion, the possible use of *Phellodendron Lavalei* as a plant raw material for obtaining Berberin hydrochloride for its hypoglycemic activity needs to be decided after a further study of the efficacy, mechanism of action of the extracts and active components of *Phellodendron Lavalei* on experimental models of diabetes mellitus.

Auth.

**8.G.13.1.216. Microbiological investigation of suppurative skin infections.** /D. Chikviladze, Kh. Gachechiladze, D. Metreveli, M. Mikeladze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 101-103. – rus.; abs.: eng., geo.

The article represents the results of investigations of feasible agents of suppurative skin infections (furunculosis, carbunculosis) and their sensibleness/resistance to various groups of antibiotics. During investigation were studied 95 strains of *S. aureus*, obtained from patients (age ranged from 25 to 60 years) which suffered from furunculosis and carbunculosis and were treated in 2005-2008. Sensibleness and resistance of obtained strains to antibiotics of different groups were studied using the method of serial dilutions in agar. High frequency of sensibleness of the obtained *S. aureus* strains was found to vancomycin (98.8%), linezolid (96.4%), netilmicin (94.4%), trimetoprim/sulphamethoxazol (93.8%) and also to antibiotics for local use - fusidic acid (97.9%) and mupirocin (98.5%). High frequency of resistance of the obtained strains was found to ciprofloxacin (42.1%), tetracycline (51.8%), chloramphenicol (38.5%), clindamicine (28.2%), erythromycin (53.8%), gentamicin (60.3%), oxacillin (46.3%), levofloxacin (43.6%), lincomycin (53.8%), rifampicin (40.1%). 55.5% were methicillin-resistance staphylococcus (MRSA). Polyresistant were only 47.3% of the obtained *S. aureus* strains. The effectiveness of empiric antibiotic therapy of skin infections depends on local data about antibiotic resistance.

Auth.

**8.G.13.1.217. Etiology role of some viruses in prevalence of bronchial asthma.** /N. Barnabishvili, P. Gamtsemlidze, M. Mirtskhulava, Z. Barbakadze, Z. Phkhaladze, N. Mirtskhulava, K. Zaridze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 143-145. – geo.; abs.: eng., rus.

160 children aged 2-16 diseased with bronchial asthma were observed in Georgia. The data analysis showed that contact viral infections contained a risk for asthma development. The most risky were adenovirus - 1.4286 (risk ratio) and RS viruses 1.5714 (risk ratio); but in the case of parainfluenza, the correlation is less expressed – 1.25. Where some viral infections are concurrently present, the risk is nearly the same as in an individual – 1.55. It must be mentioned that 6.25% of the investigated children with acute RS viral infection had previously suffered from parainfluenza and adenoviral infection. The registered viral diseases contacted at the early age makes possible to calculate the risks of spreading the disease with other viral diseases in the child age with asthma and present risks of viral infections contacted at the early age, which have great concern in spreading of asthma.

Auth.

**8.G.13.1.218. Balneo-extension therapy in rehabilitation of patients with osteoarthritis.** /G. Shavianidze, M. Shavianidze, G. Lomidze, N. Lomidze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 146-148. – geo.; abs.: eng., rus.

Osteoarthritis is a degenerate-dystrophic disease of the joints, one of major factors of its generation are loadings. The researches carried out by us have allowed developing a new method - extension of joints, with inclusion in a complex balneotherapy, including resort balneotherapy in Tskhaltubo. The extension of joints has demanded the working out of treatment techniques and the adaptation to the patented atmospheric and underwater applications. The obtained direct and remote results have revealed that a rehabilitation course of bottom finiteness sick of underwater horizontal extension in the conditions of a resort, authentically exceeded results of other complexes; at "dry" extension of the expressed anti-inflammatory effect at patients with sinovite is noted. The received results have allowed to prove scientifically expediency of application extension at is degenerate-dystrophic diseases of joints and to create the new rehabilitation complexes including extension of joints, balneotherapy and resort treatment.

Auth.

**8.G.13.1.219. The automated control system of laboratory research for transmissible diseases.** /Sh. Tsanava, M. Chokheli, G. Mgeladze, A. Egoyan, M. Mirtskhulava, P. Imnadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 149-151. – geo.; abs.: eng., rus.

The work discusses the structure and basic principles of an automated control system for laboratory research (ACSLR) developed in the Georgian National Center for Disease Control and Public Health (NCDC&PH). The computer network database software developed by means of modern information technologies will improve coordination between the research laboratories of NCDC and regional laboratories and facilitate their management and administration, and will provide patients and doctors with reliable and timely information on the research results and statistical forms.

Auth.

**8.G.13.1.220. Study of antimicrobial properties of iron polyphosphate and perspective of its usage.** /I. Karalashvili, N. Klarjeishvili, N. Jabishvili, S. Urotadze, I. Javashvili/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 44-46. – geo.; abs.: eng., rus.

Antimicrobial and viral properties of inorganic polymer compounds of iron polyphosphate have been studied. In order to detect bactericidal and viral properties, the effect of different concentration of iron polyphosphate solution on viruses and microorganisms was studied. According to the results, it was determined that a solution of iron polyphosphate is characterized of antimicrobial property and deodorization ability. Iron polyphosphate is ecologically harmless, contains iron and phosphate ions and represents a pink solution with no smell.

Auth.

**8.G.13.1.221. Parafunction of masseters, diagnosis and treatment.** /S. Mhgebrishvili, I. Barbakadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 158-160. – geo.; abs.: eng., rus.

Under observation were 87 4-year students aged 21-25 of the stomatology faculty. All the students were examined and their case histories were obtained. In the specially made cards, complaints of the students regarding the rising of tonus of masseters, toothache, gum scratching, headache and aches in the area of temple-lower jaw joint were entered. As a result of the research, it was revealed that 7 (8%) out of 87 students complained of scraping teeth, especially at night, followed with toothache and headache, bleeding gums, stretching of muscles in the morning. Objectively, the myotonic research revealed the rising of tonus of chewing and temple muscles. Roentgen logically the symptoms of teeth overloading were observed. Based on model studies of the mentioned 7 students 4(6%), it was revealed that on the upper and lower jaw the grinding teeth were mentioned as cone wearing. They were provided with physiotherapeutic, psychological, drug and orthopedic therapy. In 3-4 months after the treatment, as a result of repeated researches, it was revealed that the chewing and temple muscle tonus was in norm. Roentgen logically, the symptoms of functional overload were not mentioned. The students no longer complained of headaches and toothaches, scraping teeth, overload of muscles. Thus, parafunction of masseters – bruxism – treatment has to be complex. Particularly, it has to include the psychotherapeutic, physiotherapeutic and orthopedic methods.

Auth.

**8.G.13.1.222. Depression and diabetes.** /Sh. Vashadze, M. Kekenadze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 22-24. – geo.; abs.: eng.

Depression is not generally listed as a complication of diabetes. However, it can be one of the most common and dangerous complications. The rate of depression in diabetics is much higher than in general population. Diabetics with major depression have a high rate of recurrent depressive episodes within the following five years. A depressed person may not have the energy or motivation to maintain good diabetic management. Depression is frequently associated with unhealthy appetite changes. Suicidal diabetic adolescents have constant access to potentially lethal doses of insulin. Symptoms of Depression: These are based on the Diagnostic and Statistical Manual of the American Psychiatric Association, 4th Edition (DSM-4): a) Depressed mood for most of the day; b) Decreased pleasure in normal activities; c) Sleeping difficulties or significantly increased demand of sleep; d) Gaining or losing weight; e) Feelings of guilt or

worthlessness; f) Low energy level; g) Difficulties in concentrating and making decisions; h) Suicidal thoughts. We have observed 100 people aged 13-70 (50 women and 50 men). The rate of depression and reactive anxiety are registered with the help of psychometric tests according to the scale of depression (BDI). The average period of the illness is 6-5 years. The age of the illness debut is 15 years. The presented diagnosis has been determined according to MKGB (2003) criteria. We have asserted that 52% of the patients observed are depressed, among them 45.2% has light form, 26.8% - medium form, and 21% - severe form. We should note here that this indicator among unmarried people is very low, especially among women. 10% expose the suicide ideas, among them 7% is categorical, which, we think, is very dangerous. The majority of the depressed people do not work. There have been major advances in the treatment of depression. There are specific medications and specific psychotherapy techniques that have been shown to help depression. Often individuals do well with a combination of antidepressant treatment and psychotherapy. Be sure that your clinician is willing to take the time to communicate with your diabetes team. Ideally, the mental health clinician should be familiar with your type of diabetes.

Auth.

**8.G.13.1.223. Distribution of Rh-Hr blood group antigens, alleles and haplotypes in the mountain district of Adjara (Georgia).** /M. Nagervadze, R. Khukhunaishvili, A. Diasamidze, L. Akhvlediani, G. Dumbadze, M. Koridze, S. Tskvitinidze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 26-30. – eng.; abs.: eng.

Rh-Hr blood group antigens represent a genetically stably determined trait being of many-sided biological and clinical significance. Blood group antigens are either sugars or proteins, and they are attached to various components in the red blood cell membrane. The indigenous Adjarian population (105 subjects) was investigated for Rh-Hr red blood group markers. Five erythrocytic group antigens (C, c, D, E, e) were studied by immunoserological methods. The obtained results were statistically processed. Maximum frequency distribution of the e antigen was found (100%), being followed in frequency by the c antigen (89%). The frequency of the D antigen made up 82%, and that of the d antigen - 18%. The frequency of the c antigen made up 61%, that of the E antigen - 23%. Six Rh-phenotypic groups of various frequencies were fixed. The CcDee phenotype is the most characteristic of the said district population. Its distribution frequency amounts to 38%.

Auth.

**8.G.13.1.224. Depression and dorsalgia.** /Sh. Vashadze, M. Kekenadze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 30-33. – rus.; abs.: eng.

Depression is a state of low mood and aversion to activity. A depressed person experiences or displays these symptoms. In the course of supervision and antidepressant treatment, 30 patients with chronic dorsalgia estimated the contribution of depression to the overall picture of the disease. Along with the complaints about lasting back pains, a high level of depression and alarm was marked in the patients. Sleep disturbances, vegetative dysfunction and the expressed decrease in quality of life came to light as well. Psychometric tests allowed revealing the symptoms of depression in 90 % of the patients. All patients received a course of antidepressant treatment two times a day for 6 weeks. Along with a considerable reduction of depression symptoms and alarm, therapy reduced the expression of muscular dysfunction and pain syndrome authentically. At the initial stages of treatment, positive dynamics concerning vegetative dysfunctions, sleep disorders and low quality of life was marked. The research results confirmed the fact of depression prevalence among the patients with chronic dorsalgia and its negative influence on the course of pain syndrome. Antidepressants of high efficiency and safety are shown during treatment associated with chronic back pains along with depression, for they positively influence the basic syndrome.

Auth.

**8.G.13.1.225. Prognostic and developed scenarios of H1N1 flu pandemic.** /R. Khakhnelidze, T. Iakobadze, Kh. Katamadze, N. Gugushvili/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 33-36. – geo.; abs.: eng.

A realistic picture of the H1N1 flu 2009 pandemic was developed according to a moderate scenario. The highest intensity of the flu pandemic cases was reported in places with population diversity. The epidemic wave provoked by the flu pandemic lasted 6 weeks. The peak of the

epidemic wave lasted about 2 weeks. The incidence rate was higher in adolescents under 15 years of age than in other age groups. In the age groups under 1 year and 1-4 years, the numbers of cases were accordingly 8789 and 7167. Compared with seasonal influenza, the highest incidence rate was in age group 20-29 (the number of cases was 1954). The incidence rate was lower in the people of and over 60 years old, as it was predicted, taking into consideration the circulation period of A (H1N1) virus subgroups. Early influenza-associated hospitalizations and good management reduced the complications and death rate. Intensive therapy and artificial lung ventilation were used for hospitalized patients - accordingly 5% and 1.1%. Mortality rate was high among 20-59 years old patients. Other somatic diseases or chronic infections accompanied the flu.

Auth.

**8.G.13.1.226. Correlation of Kell and Mn erythrocyte blood group antigens and alleles with uterine and breast cancer.** /I. Nakashidze, L. Akhvlediani, M. Nagervadze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 36-40. – geo.; abs.: eng.

Our investigation shows a certain correlation between concentrations of M and K alleles of blood minor group antigens and uterine and breast cancer. As is well known, blood group antigens have peculiarities in genitography, which need to be considered along with the other risk factors. The given quantity of investigated samples is not enough; therefore, the investigation is to be continued.

Auth.

**8.G.13.1.227. Structural and quantitative disorders of chromosomes during endemic, sporadic and multinodular goitre.** /N. Zosidze, K. Jibladze, Sh. Photskhishvili/. Experimental and Clinical Medicine. – 2010. - #5(60). – pp. 40-43. – geo.; res.:eng.

In the development of thyroid gland diseases, a certain role is performed by genetic factors. We have studied the spectrum of structural and quantitative disorders during endemic, sporadic, and multinodular goitre. During the above-stated forms of the thyroid gland disease, the instability of chromosomes is revealed through the structural disorders expressed by high frequency chromosomes.

Auth.

**8.G.13.1.228. Features of female contracted pelvis.** /I. Sikharulidze, M. Kordzaia, N. Kapanadze/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 38-41. – geo.; abs.: eng.

We have investigated features of the pelvis of Georgian females. In our study we used the pelvis classification of W.Caldwell and H.Moloy (1933) (they selected four types of the pelvis: gynecoid, android, platipeloid and anthropoid). The characteristics of women's physical development were estimated by the indices of body length (by R.Martin, 1928) and weight, and women's constitutional type was determined by the classification of I.Galant (1927). Characteristics of the physical development of newborn children were also investigated. 450 practically healthy women at the age of 17-44 were investigated according to the method known as external pelviometry, adopted in obstetric practice. 218 women had the gynecoid type pelvis, 232 women's pelvis were contracted to different extents. According to the constitutional type: gynecoid pelvis were mostly typical of the mesosomic women, and contracted pelvis were typical of the women having leptosomic constitution.

Auth.

**8.G.13.1.229. Primary oligodendroglial intracranial tumors: some epidemiologic considerations.** /T. Mermanishvili, T. Jorbenadze, I. Chelishvili, G. Chachia/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 22-25. – geo.; abs.: eng.

The aim of our study was to perform a hospital-based epidemiological analysis of primary oligodendroglial intracranial tumors in Georgia: the frequency of distribution of this neoplasm and its gender and age aspects. Our data suggest that biological "behavior" of primary oligodendroglial intracranial tumors has evident relationship with patients' gender and age.

Auth.

## **8.G.13.2. Surgery**

**8.G.13.2.1. Differential characteristics of open and laparoscopic adrenalectomy.** /S. Hovhannisyanyan/. Georgian Medical News. – 2010. – #2(179). – pp. 11-14. – rus.; abs.: geo., eng., rus.

Clinical studies are based on an analysis of the results of a survey and surgical treatment of 147 patients with adrenal tumors who were treated from 1994 to 2009 in the RMC "Armenia" (Yerevan) and the Hospital "Tsentrosojuz", Russia (Moscow). Comparison groups were formed: I (main) - 75 patients who had undergone laparoscopic adrenalectomy, and II (control) - 72 patients operated through a "traditional" surgical approach. Laparoscopic adrenalectomy is methodologically based and effective for surgical treatment of benign adrenal tumors up to 50 mm in diameter, as well as provides a high degree of clinical efficacy of laparoscopic adrenalectomy in comparison with the operations conducted by laparotomic approach.

Auth.

**8.G.13.2.2. Rectal foreign bodies.** /T. Abuladze, T. Ivanishvili, K. Shapatava/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 7-9. – geo.; abs.: eng.

An algorithm of trans-anal extraction of rectal foreign bodies and proctologic aid characteristics are analyzed. The algorithm and its related in-hospital manipulations are discussed in detail. The application of the algorithm in 17 cases has yielded positive results.

Auth.

**8.G.13.2.3. Therapeutic approach during upper gastrointestinal tract bleeding.** /L. Akhmeteli, L. Saghinashvili, N. Khotenashvili, G. Merabishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 10-11. – eng.

305 cases of upper gastrointestinal bleeding from 2005 till 2008 in Surgery department of Khipshidze University Clinic of Tbilisi State Medical University are discussed. The number of endoscopies made 09.36%, electrocoagulation – 56.7%, repeated endoscopy - 3.66%, re-coagulation - 4.04%. The number of surgical interventions made 5.25%, lethality – 1.31%. Thus, despite of significantly increased cases of upper gastro-intestinal bleeding, the number of surgical interventions was low. This can be explained by a wide application of the therapeutic endoscopy technique and modern effective drugs.

Auth.

**8.G.13.2.4. Hernioplasty by Ramirez technique.** /I. Gelashvili, N. Lomidze, I. Tsereteli/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 30-33. – geo.; abs.: eng.

Postoperative ventral hernia has always been one of the most complex options in herniology. In the USA, more than 100 000 operations are performed for postoperative and ventral hernias. Ramirez O.M., Ruas E., Dellon A.L. concluded that mechanical strengthening of the hernial hiatus with modern alopastic materials, without considering the biomechanics of abdominal muscles, does not prevent recurrence. The reason is an increased activity of lateral muscles, due to which the fibers of rectal muscle move in the lateral direction. In 1990, American surgeons created a new method of anterior abdominal wall reconstruction – the Components Separation Technique. In our clinic, 10 patients were operated for postoperative gigantic ventral hernia by the Ramirez technique. We agree with other authors and consider that postoperative ventral hernioplasty by this technique at the expense of own tissue is indicative in able-bodied patients where full functional rehabilitation is principally necessary.

Auth.

**8.G.13.2.5. The role of endogenic toxemia in the pathogenesis of a traumatic disease.** /G. Gvasalia, L. Saghinashvili, Z. Dzneldze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 33-35. – geo.; abs.: eng.

In the current study, 271 cases of trauma fixed at Acad. N. Khipshidze University Central Clinic in 2004 – 2008 were considered and main markers of endogenic toxemia syndrome were studied. The obtained results show endogenic intoxication to be the main cause of pathogenesis and thanatogenesis of a traumatic disease. The article deals with different manifestations of intoxication

during the first hours of the injury, at the early shock stage and in the post-shock stage. From the aspect of clinical practice, it should be emphasized that formal compensation of hemodynamic data not only stop disturbances of homeostasis caused at shock but deepens them at a definite stage of the post-aggressive period. The severity index of operational intervention is more increased after performing a simultaneous surgery on two or more zones than in the case of a stage-by-stage delay of these surgeries.

Auth.

**8.G.13.2.6. Traumatic disease.** /G. Gvasalia, L. Saghinashvili, Z. Dzneladze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 35-37. – geo.; abs.: eng.

The aim of the study was to determine specifics of a trauma structure under a big city conditions. For this purpose, 271 cases of traumatic diseases were analyzed given the posttraumatic shock and hypotension duration. The obtained results prove the shock and surgical infection problems to be the priority ones during bodily injuries, which determine in general the early or late lethality during an injury.

Auth.

**8.G.13.2.7. Acute injury of testicular appendages in children.** /G. Davitaia, R. Kutubidze, I. Davitaia/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 46-49. – geo.; abs.: eng.

The aim of the study was early identification of acute injury of testicular appendages and elaboration of its effective surgical and main pathogenic therapeutic principles. 63 boys aged 0-15 with nonspecific orchiepididymitis were investigated during 2005-2008 years in the surgical department of TSSU. An acute injury of testicular appendages was confirmed in 82.5% of patients (52 cases) on the basis of clinical investigation and surgical intervention. An analysis of performed clinical-laboratory, radiological and morphological investigations revealed that the nature of the injury depended on the stage of the disease and a degree of the organ's involvement in the pathological process. Timely diagnostics of acute injury of testicular appendages is the basis for differential, complex treatment, which consists of urgent surgical intervention and postoperative pathogenic therapy (prevention of inflammation and ischemia), prophylaxis of hormonal and spermatogenesis dysfunction. A conservative treatment of the acute injury of testicular appendages is ineffective. The indications of surgical intervention are: (1) acute clinical symptomatology with ultrasound confirmation or without it; (2) minimal clinical manifestation, when ultrasound reveals the signs of inflammation and fluid accumulation in testicles; (3) the bigger is the size of testicular appendages, the more urgent is surgical intervention; (4) minimum clinical signs cannot serve as contraindication of a surgical intervention.

Auth.

**8.G.13.2.8. Pancreatoduodenectomy.** /N. Lomidze, I. Tsereteli/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 77-79. – geo.; abs.: eng.

Pancreatic cancer is the third leading neoplasm of the gastrointestinal system and has a dismal prognosis. Primary carcinoma of the duodenum is the rare and uncommon neoplasm that represents less than 0.5% of all gastrointestinal malignancies. The aim of this study is to access patients with pancreatic, duodenal and periampullary cancers. The majority of patients with pancreatic head cancer are poor candidates for resection at the time of diagnosis due to early development of distant metastases and/or major infiltrations of adjacent structures; patients with cholangiocarcinomas and duodenal cancers appear to be better candidates for Whipple procedure. Duodenopancreatectomy gave a longer survival time than duodenal resection in patients with duodenal cancer.

Auth.

**8.G.13.2.9. Intra-abdominal hernioplasty using Proceed mesh.** /N. Lomidze, I. Gelashvili, G. Nemsadze /. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 80-82. – geo.; abs.: eng.

Ventral hernia is most prevalent among surgical pathologies. Its surgical management is still very topical. In recent years, the Proceed composite mesh has been created for intra-abdominal ventral hernia recovery. It is biologically tolerable, inert, is resistant to infections, characterized with

elasticity, molecular penetration and mechanical resistance. Compared to Prolene mesh, it has minimal risk of seroma development, infection and abortion of the mesh.

Auth.

**8.G.13.2.10. Long-term catheterization of lung abscess under conditions of fiber-optic bronchoscopy and contrast study.** /N. Lomidze, D. Maghalashvili, N. Khotenashvili, G. Shanshiashvili, G. Merabishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 83-84. – geo.; abs.: eng.

The successful treatment of a lung abscess requires a technique that should be atraumatic, exclude the bond of the abscess cavity with the pleural cavity and soft tissues, ensure a reusable approach to the abscess cavity with the frequency necessary for effective influence of the microflora and adequate debridement and drainage of the purulent cavity contents. The closest to the said requirements is bronchoscopy performed under local anesthesia. The technique was used to treat 20 patients with acute (18) and chronic (2) lung abscess. The authors conclude that the prolonged transnasal drainage of the lung abscess saves patients from the repeated and frequent bronchoscopy examinations, reduces the period of recovery and treatment expenses.

Auth.

**8.G.13.2.11. Main development stages in inguinal hernia treatment.** /N. Mzareulishvili, T. Akhmeteli., R. Khetsuriani, E. Khipiani, D. Tophuria/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 104-107. – geo.; abs.: eng.

First steps in radical treatment of inguinal hernias were taken by Risel in 1877, who started the treatment of inguinal hernias by opening the inguinal canal. The pioneer of radical herniology is Lucas-Championniere 1885; his method consists in the following: after herniotomy and forming inguinal canal walls by muscle-aponeurotocal linings, a radical treatment of inguinal hernias begins. Inguinal hernias pathogenetical treatment was presented by Baxter in (1893) and Ferguson in (1899); the method consists of the treatment of oblique hernias by performing inguinal, deep circle narrowing. Lotheissen was the first, who used Cooper's ligament during hernioplasty. The whole principle of posterior wall of inguinal canal reconstruction was made by McVay in 1954. The Shouldice technique named "gold standard" is based on this principle. This idea is also realized in the Mzareulishvili's technique. In herniology, an important level is connected to the idea about treatment of hernias by tension-free techniques. This idea developed in two directions: 1. Endoscopic hernioplasty. 2. Lichtenstein's method. None of them is perfect. Distant results of the treatment in both directions show that they are characterized of complications: infiltrates, festers, hematomas, lymphomas, fistulas, neuralgias and common recurrences.

Auth.

**8.G.13.2.12. Percutaneous transhepatic biliary stenting – topical technical aspects.** /M. Mizandari, G. Spanderashvili, A. Mtvaradze, L. Baindurashvili, G. Nemsadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 114-116. – geo.; abs.: eng.

Our purpose was to present the percutaneous transhepatic biliary stenting (PTBS) technique. PTBS procedure was successfully performed in 14 (73.7%) cases; in the rest 5 (26.3%) cases we failed conducting the guidewire through the obstruction and so procedure was not fulfilled. In 3 (75.0%) of 4 self-expandable stents the complete expansion needed balloon inflation; In 4 to 8 weeks period after the PTBS in 4 (28.6%) cases of successfully fulfilled 14 PTBS stent potency loss was documented and PTBD was performed to those patients. PTBS after preliminarily performed PTBD is safe and effective technique and should be widely used in patients with inoperable malignant biliary obstruction. PTBS might be performed using cholecystostomy fistula also; in the cases of benign biliary obstruction, indications for PTBS are limited.

Auth.

**8.G.13.2.13. Percutaneous imaging-guided mediastinal lymph node core biopsy – technique, advantages and complications.** /M. Mizandari, D. Maghalashvili, A. Mtvaradze, G. Nemsadze, G. Spanderashvili, L. Baindurashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 117-119. – geo.; abs.: eng.

Our purpose was guidance techniques, approaches, possible complications of percutaneous imaging guided mediastinal lymph node core biopsy (PIGMLNCB) are outlined PIGMLNCB is effective and

minimally invasive; other techniques for mediastinal lymph node core biopsy should be used only in PIGMLNCB failure cases. The advantages of ultrasound guidance are possibility of real-time imaging, non-invasiveness and cost-effectiveness; this technique cannot be used in posterior mediastinum. The advantage of CT guidance is the possibility of visualization of all thoracic structures. When the adequate guidance technique is used, PIGMLNCB is a safe procedure and should be recommended for wide use if appropriate indications are determined. Ultrasound should be used for procedure guidance if the "target" can be adequately imaged by this technique.

Auth.

**8.G.13.2.14. New trend in endoscopic surgery: transvaginal appendectomy.** /T. Tabutsadze, N. Khipshidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 134-135. – eng.

Natural Orifice Transluminal Endoscopic Surgery (NOTES) is a new method of mini-invasive surgery, which involves passing surgical instruments and a tiny camera through a natural orifice, such as the mouth, vagina, urethra or rectum, which provides an access to the desired organ. The method is approved due to its benefits – less pain, quicker recoveries, fewer complications, and no scar. Here are discussed 3 operations of transvaginal appendectomy. The operations were made without any technical difficulties or complications. No gynecological or surgical problems or any complications were detected during the observation period. NOTES – non-scar surgery is a new trend and takes endoscopic surgery one step further. The procedure is safe, physiological and precise. We think that in case of suitable technical support in the near future NOTES will replace not only conventional medicine but laparoscopic surgery technology as well.

Auth.

**8.G.13.2.15. "Chess" mini-laparotomy in the surgical treatment of purulent peritonitis and retroperitoneal space pyo-necrotic damage.** /G. Tatishvili, B. Chakvetadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 135-137. – geo.; abs.: eng.

The problem of standardization of acute peritonitis and pancreonecrosis is the oldest and widespread problem of contaminated surgery. Post-operational lethality is up to 5 to 50%. In the past years, to resolve this problem a lot of methods were used. We used "chess" mini-laparotomy and lumbotomy for treating purulent peritonitis and retroperitoneal space pyo-necrotic damage on our 5 patients. These methods, despite on few observations, are seemed to be promising and need additional observations and study.

Auth.

**8.G.13.2.16. Modern methods of chronic rhinitis treatment.** /Sh. Japaridze, L. Lomidze, M. Jashi, T. Khetchinashvili, I. Kekelidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 173-176. – geo.; abs.: eng.

180 patients with chronic rhinitis were treated at the ENT department of TSMU during 2006-2007; out of them 100 were treated with ultrasound disintegration, 70 patients – with radiofrequency disintegration and 10 patients - with sub-mucosul resection of the lower conch. According to the research results, the disintegration methods of ultrasound as radiofrequency types are less traumatic, less bloody and most effective. Furthermore, radiofrequency influence is more preferential between the two types of disintegration methods.

Auth.

**8.G.13.2.17. Incidence and risk factors of nosocomial infections in the post-operative period in Georgian population with congenital heart diseases.** /M. Lomtadze, M. Chkhaidze, E. Mgeladze, I. Metreveli, A. Tsintsadze/. Georgian Medical News. – 2010. – # 1(178). – pp. 7-11. – rus.; abs.: geo., eng., rus.

Nosocomial infections still remain a serious problem in patients undergoing open heart surgery. The aim of the study was to determine the incidence, etiology and main risk factors of nosocomial infections (NI) following cardiac surgery in the population with congenital heart diseases. A retrospective case study was conducted. 387 patients with congenital heart disease (CHD), who underwent cardiac surgery from January 2007 to December 2008, were studied. The age of the most patients was up to 15 years; 73 patients (18.8%) were older than 15. All 387 patients underwent a cardiac surgery. The rate of NI was 16%. The most common infections were



bloodstream infections (BSI) (7.75%) and respiratory tract infections (7%), respectively. The rate of NI was higher in patients under 1 year of age, after urgent surgery and urgent re-operation, long cardiopulmonary bypass (CPB) and aortic cross-clamp time, also in patients with prolonged mechanical ventilation, massive haemotransfusion, with open heart bone after surgery, reintubation, hospitalization in another hospital during last three month. It was concluded that the most common nosocomial infection after cardiac surgery congenital heart diseases in Georgian population was blood stream infection. The main risk factors of NI in the same setting were age under 1 year, urgent surgery, urgent re-operation, long CPB and aortic cross-clamp time, long duration of mechanical ventilation, massive haemotransfusion, open heart bone after surgery, reintubation, hospitalization in another hospital during last three month.

Auth.

**8.G.13.2.18. Treatment of postoperative esophageal leak by active drainage procedure (case report).** /M. Kiladze, H. Vasadze, N. Chkhetia, E. Nadiradze, E. Phkhakadze/. Georgian Medical News. – 2010. – # 1(178). – pp. 11-14. – rus.; abs.: geo., eng., rus.

Postoperative esophageal leak is still a very serious and complex problem associated with poor results because of considerable morbidity and mortality rate. We described the case of successful treatment of suture line leak of a 53-year-old patient after resection of a big size epiphrenic diverticulum. Traditional right-sided transthoracic approach in 7<sup>th</sup> intercostal space with dissection, exposure and resection of diverticulum by stapler with 40F bougie within the esophagus was performed with reinforcement of suture line. On 6<sup>th</sup> postoperative day the control water-soluble contrast X-ray examination was done and pleural effusion and suture line disruption was found. Immediately under X-ray control the large diameter chest tube (Ch24) was inserted and periesophageal mediastinum as well as pleural cavity was drained and active aspiration with simultaneously irrigation/lavage procedures was started. Parallel fasting, systemic antibiotic therapy was started and feeding balloon catheter gastrostomy by Stamm was created. The healing process of the leak was controlled every week by water-soluble contrast swallow and the chest drain tubes were twice changed (Ch20 and Ch14) during the treatment. The complete healing and closure of the leak was achieved after 2,5 month of starting the treatment by using this method. Our case have demonstrated, that aggressive conservative treatment approach with combination of: active and adequate drainage of the leak site, systemic antibiotic therapy, nutritional support by feeding gastrostomy with frequent radiologic examinations for monitoring of healing process is the effective and safe treatment of esophageal leaks.

Auth.

**8.G.13.2.19. Cases of strangulated obturator hernia.** /B. Chakhvadze, D. Nakashidze, K. Kashibadze, A. Beridze/. Georgian Medical News. – 2010. – #2(179). – pp. 7-11. – rus.; abs.: geo., eng., rus.

Obturator hernias are extremely rare in surgical practice. Only about 600 cases are described in the world medical literature. To diagnose obturator hernia is very complicated. Hernial protrusion is not often observed. The strangulation of obturator hernia is accompanied by rapidly developing symptoms of intestinal obstruction, which is usually an indication for emergency surgery. The article analyzes two clinical cases of strangulated obturator hernia and one traumatic eventration and strangulation of small intestine in the obturator ring ruined by trauma. In all cases the indication of surgery was clinical picture of a growing intestinal obstruction or acute abdomen. Only in one case, despite the prevailing clinical picture of acute intestinal obstruction in the light of anamnesis and the accompanying neurological symptoms before the operation could be suspected strangulated obturator hernia, which was confirmed during surgery. As it was mentioned above, in doubtful cases to clarify the diagnosis should be applied other methods of examination of patients, including computed tomography.

Auth.

**8.G.13.2.20. Endoscopic treatment in critical patients with upper gastrointestinal bleeding.** /Z. Kheladze, S. Jaiani, B. Tsutskiridze, Zv. Kheladze, G. Chakhunashvili, D. Chakhunashvili/. Georgian Medical News. – 2010. – #3(180). – pp. 7-13. – rus.; abs.: geo., eng., rus.

The goal of the current research was to ascertain the optimal methods of an endoscopic haemostasis in critical care patients with GDB. The research was conducted on critically ill

patients. The different endoscopic methods of treatment: injectional hemostasis, irrigation with local hemostatics, thermo coagulation, and combined method were used. Treatment with injectional hemostasis resulted in hemostasis in 75% of patients. Irrigation with local hemostatics was conducted using the local hemostatic agent caprofer and (or) 10% solution of epsylonaminocaprional acid. The final hemostasis was achieved in the 90% of the cases; bleeding was stopped in 85% of the cases when the hemorrhages occurred from chronic ulcers. The effect of thermo coagulation method was 80-85%. Combined method of treatment (combination of the irrigation with caprofer and thermo coagulation) helped to achieve 95% of the final hemostasis in critically ill patients. The achieved results certify that the combined use of caprofer and method of electro coagulation in critical care patients with GDB is very perspective. Simultaneously with this, it is also recommended to use anti-segregation therapy with blockers of proton pump and boosting the defense of the mucous tissue with high doses of mucogen.

Auth.

**8.G.13.2.21. Determining factors of effectiveness of extracorporeal shock wave lithotripsy in ureteral stones: Results of own Investigation.** /M. Manukyan/. Georgian Medical News. – 2010. – #4(181). – pp. 7-13. – rus.; abs.: geo., eng., rus.

The purpose of the present study is to investigate main determining factors of effectiveness of extracorporeal shock wave lithotripsy (ESWL) in urethral stones and the influence of these factors on the number of necessary sessions of ESWL procedure. The problem presents a special interest for insurance medicine, as the number of sessions has a direct impact on the cost and length of treatment. The present investigation included 162 patients with urolithiasis having stones in urethra. To find out determining factors of effectiveness of ESWL in urethral stones the following factors were considered: size, localization, radio-opacity of stone, its duration of stay in urethra, the degree of dilation of upper urinary tract. The influence of mentioned factors on the number of necessary ESWL sessions was investigated. On the basis of the present study a conclusion can be made that the principal factors determining the clinical efficacy of ESWL in urethral stones are the stone size, condition of upper urinary tract and stone radio-opacity. The level of localization of the stone in urethra has no influence on ESWL efficacy. Therefore in case of large size stones, their long stay in urethra and significant disorders of urodynamics in upper urinary tract, in marked radioopacity of stones more than one session of ESWL is required. In such cases, we recommend to consider other less invasive methods of treatment of urethral stones (ureterorenoscopy or percutaneous urethra lithotripsy).

Auth.

**8.G.13.2.22. Probability of development of "Steinstrasse" (stone street) depending on the number of extracorporeal shock-wave lithotripsy in ureteral stones.** /M. Manukyan/. Georgian Medical News. – 2010. – #4(181). – pp. 13-17. – rus.; abs.: geo., eng., rus.

One of the complications of extracorporeal shock wave lithotripsy (ESWL) is the urethral obstruction by large stone fragments and formation of "Steinstrasse". The present study aims at the investigation of the probability of development of "Steinstrasse" depending on the number of ESWL sessions in urethral stone treatment. 162 patients with urinary tract stone disease having urethral stones were included in the present study. Based on the results of the present study it is stated, that the probability of formation of "Steinstrasse" increases along with the number of ESWL sessions. Therefore, in such cases more intensive follow-up is necessary after ESWL for prompt detection of "Steinstrasse" formation and prevention of possible complications.

Auth.

**8.G.13.2.23. Influence of stone size, location and impaction on the success of ureteroscopic pneumolithotripsy.** /H. Ciftci, M. Savas, A. Altunkol, E. Yeni, A. Verit, B. Chelepkolu/. Georgian Medical News. – 2010. – #6(183). – pp. 7-12. – rus.; abs.: geo., eng., rus.

This study was conducted on 336 patients that had undergone ureteroscopic pneumolithotripsy for ureteric stones between August 2005 and June 2008. Patient data were analyzed with respect to stone localization, size and impaction. All ureterorenoscopic procedures were performed under general anesthesia using a 9.5F rigid ureteroscope. A plain film of the kidney ureteral bladder was performed on the first postoperative day and week 4 to evaluate treatment efficacy. Patient age was 42, 63±15 (14-77) yr. Mean stone size for all groups was 9.77±4mm (5-20 mm). A total of 336

patients were treated with ureteroscopic pneumolithotripsy, 129 female and 207 male. The overall initial success rate was 85.71%. The success rate of ureteroscopic pneumolithotripsy, proximal, middle and distal urethra, for stone location, 76.54%, 85.48%, 90.74%, for Stone size (>10 mm) 54%, 77%, 88 % and for Stone impaction; 50%, 75,6%, 85,4% respectively. There was a statistically significant difference between stone free rates with respect to the proximal ureter stone, increasing stone size (>10 mm) and stone impaction ( $p<0.05$ ) and a positive correlation with the operative complication rate. It is concluded that it is possible to achieve high success and low complication rates in pneumolithotripsy for distal ureteral stones. Nevertheless, the success rate decreases and complication rate increases with stone locations close to the proximal urethra. Complication rate increases with increasing stone size and/or impacted ureteral stones.

Auth.

**8.G.13.2.24. Familial adenomatous polyposis of colon.** /N. Grigolia, G. Giorgobiani, G. Chkhaidze, Sh. Bolatashvili, G. Grigolia/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 21-26 – rus.; abs.: geo., eng., rus.

At present the only treatment of familial diffuse polyposis is total colectomy and ileorectal anastomosis. Two cases of familial diffuse polyposis are analyzed. The first case: 18 year old man with diffuse polyposis of colon. The second case: 41 year old man with diffuse familial polyposis of colon, liver abscess in segment V, and fistula between the abscess and the colon. In the both cases a radical proctocolectomy with the good, newest results was performed. The patient underwent proctocolectomy with the ileoanal anastomosis with S-shaped ileal reservoir with ileostoma.

Auth.

**8.G.13.2.25. Characteristic of cytopathological changes in urine after extracorporeal shock-wave lithotripsy.** /A. Grabsky, A. Muradyan, M. Aghayan, S. Fanarjian, M. Manukyan, R. Hovhanissyan/. Georgian Medical News. – 2010. – #9(186). – pp. 14-18. – eng.; abs.: geo., eng., rus.

The aim of the study is to assess the damage to the urothelium caused by shock waves through cytological examination of the urinary sediment in patients who had ESWL. Study included 100 otherwise healthy first-time stone-formers aged 20 to 50, who underwent ESWL on Modulit SLK machine. Urinary samples were taken before and immediately after ESWL, in two days and on the fourth day after ESWL. Control group included 20 healthy individuals. The urine was centrifuged, smears fixed by conventional MGG method and stained by azure-eosine using Pappenheim's method. Cytoqram data analysis was performed using morphometric methods, allowing for qualitative and quantitative cell characteristics be translated into digital form. Student t-criterion was used for statistical evaluation of the difference of derived figure parameters. The authors put the stress on destructives processes. In order to rule out biased assessment of the cytoqrams, morphometric examination of urinary sediment was performed. Averaged value of the total cell index was calculated with one of the forms of cytopathology and deduced heterogeneity of cytological indices within a particular group  $\bar{\Sigma}_{ep}$  (where is the average value of the total cell index with one of the forms of cytopathology within the whole sampling,  $\Sigma_{ep}$  is the total number epithelial cells). The sum of absolute indices of cytological changes is considered as "destruction index" (DI), which reflects accumulated pathological changes in epithelial cells:  $DI = \bar{\Sigma}_{ep} + \Sigma_{ep}$ . Immediately after ESWL a statistically valid ( $p \pm 0.01$ ) significant increase in DI is registered. In two hours after the session DI is decreased, but remains rather high, and almost normalizes by the fourth day. We also explored the specificity particular for each term of examination, expressed by cytological changes. Examination of indices of heterogeneity within a group with moderately expressed destructive changes ( $\bar{\Sigma}_{ep}$ ) revealed that these digital values even in healthy men are slightly above zero ( $0.15 \pm 0.03$ ). Just after ESWL values rise to  $0.6 \pm 0.1$ , then slowly decrease to  $0.4 \pm 0.1$  (2 hours after) and  $0.25 \pm 0.07$  (four days after). As to parameters specific to deep cellular changes ( $\Sigma_{ep}$ ), it is equal to zero healthy men, rises after ESWL, then decreases in two hours and almost normalizes by fourth day. Digital values for this parameter are several orders lower than for parameters of cells with moderate changes. Study results indicate that epithelial lining of the upper urinary tract undergoes cytopathological changes of different degrees, still they are of transitory and reversible nature, which is proven by urinary sediment cytoqram performed on the fourth post-procedure day.

Auth.

**8.G.13.2.26. Roentgenoendoscopic surgery of the complicated forms of urolithiasis with accompanying diabetes mellitus.** /M. Aghayan, S. Fanarjian, A. Muradyan, A. Grabsky/. Georgian Medical News. – 2010. – #9(186). – pp. 19-22. rus.; abs.: geo., eng., rus.

Contact lithotripsy and nephrolithoextraction allows saving the patients from staghorn stones without having recourse to traumatic open surgical modalities. Percutaneous removal of staghorn stones with the use of rigid-lens nephroscopes presents as an effective and less-invasive treatment option with minimal amount of intra- and postoperative complications, which is particularly important in case of presence of accompanying diabetes mellitus.

Auth.

**8.G.13.2.27. GF-6 - novel protective agent for skin wounds.** /K. Mulkijanyan, J. Novikova, M. Sulakvelidze/. Georgian Medical News. – 2010. – #9(186). – pp. 67-72. – eng.; abs.: geo., eng., rus.

The aim of present investigation was the determination of specific pharmacological (wound healing) properties and the evaluation of possible irritant, allergenic and toxic effects of GF-6 – a novel protective agent for skin mechanical and burn wounds. In mouse excisional wound model GF-6 (topically 0.1 ml per wound) exhibited the ability to accelerate scab rejection and full re-epithelization in test wounds with no signs of bacterial contamination. GF-6 caused no irritation responses such as erythema, oedema, dotted hemorrhage, hyperkeratosis, hyperplasia, alopecia and scaling in 14-day acute dermal irritation test. As well no signs of skin hypersensitivity (itch, erythema, oedema), and histological alteration (ulceration, dotted hemorrhage, changed capillary lumen, damaged hair follicle) were observed in skin application test at all time points during the 14-day observation period, evidencing that GF-6 is non-allergenic. In subchronic dermal toxicity 90-day study of five-fold concentrated GF-6 no statistically significant changes in respiratory, circulatory, autonomic and central nervous system, somatomotor activity and behavior patterns were detected. The results of hematological study testified to no influence of the GF-6 90-day application on blood formed elements. Thus, GF-6 should be considered non-toxic, non-irritant, non-allergenic wound healing and wound protecting agent.

Auth.

**8.G.13.2.28. Surgical management of patients with complicated peptic ulcer disease.** /A.Ghirdaladze, B.Mosidze, G.Elisabedashvili, T.Jorbenadze/. Georgian Medical News. – 2010. – #11(188).. – pp. 7-15. – rus.; abs.: geo., eng., rus.

The article presents the results of medical treatment after peptic ulcer surgery. I group - 59 patients with late complications after peptic ulcer surgery and II group - 16 patients with complications of peptic ulcer disease, operated in presence of absolute indications. 13C-UBT and RUT of biopsy material were used to diagnose Hp infection. HP positive patients received antibacterial treatment. After 1 month from the end of therapy and 1 year after HP eradication control investigations by 13C-UBT and endoscopy were performed. 77.3% of all and 84,4% of early non treated patients were Hp positive. All patients (of I and II gr.), who followed control testing after antibacterial treatment were finally detected as Hp negative. In I group, control endoscopy revealed epithelization or scarring of ulcer and reduction of inflammatory changes in gastric and duodenal mucosa in all 44 cases of eradication of HP infection (in 2 patients with peptic ulcer of GEA ulcer relapsed in later). In II group, in 8 patients, who received antibacterial treatment additionally to surgical method, any late complications after surgery were not revealed. In other 6 HP positive patients: 2 – ulcer recurrence and 2 – development of chronic gastritis of operated stomach were noted, which required the treatment of HP infection in future. It is concluded that 1) surgery does not change HP-status of patients and HP infection retains in more than 80% of cases; 2) ulcer recurrence, chronic gastritis of operated stomach or its stump are associated with Hp and regress after Hp eradication; 3) progression of gastritis into atrophic remain after surgery, which increases risk of cancer development and there is possibility of its regression after antibacterial treatment of Hp infection. The recommendations were worked out: 1) perforated, bleeding or stenosing ulcer must be treated only by ulceroraphy, suturing or pyloroplasty respectively, added with subsequent Hp eradication therapy for the prevention of late complications after peptic ulcer surgery; 2) vagotomy or partial gastrectomy must be a forced intervention in cases of decompensate pylorostenosis,

resistant to treatment ulcers, as ulcers non-healing or recurring after adequate conservative treatment. Subsequent verification and eradication of HP infection are necessary.

Auth.

**8.G.13.2.29. Original method of Cesarean section operation and its role in the prevention of obstetric complications.** /Sh. Koridze, N. Kintraia, D. Jintcharadze, A. Koridze, I. Mukhadze/. Georgian Medical News. – 2010. – #11(188). – pp. 20-26. – rus.; abs.: geo., eng., rus.

The authors made an analysis of archival material of 1577 case histories of the patients who were subjected to Cesarean section operation at Tbilisi Experimental Maternity Hospital and at "The House of Health" during 1999-2000. The case histories were divided into two groups: 1474 patients made main group I which was subjected to the Cesarean section according to a modified method proposed by Professor A. Koridze, while 103 patients operated according to the traditional currently accepted method made the control group II. The authors made a clinical-laboratory analysis of the investigated case histories and came to a conclusion that the use of the proposed method of Cesarean section operation in obstetric practice will give the possibility to decrease post-operation complications and, correspondingly, the introduction of the given method is completely justified.

Auth.

**8.G.13.2.30. Some aspects of classification and treatment strategy of iatrogenic bile duct injury.** /B. Agayev, Q. Muslimov, G. Aliyeva, T. Ibrahimov, V. Alizade/. Georgian Medical News. – 2010. – #11(188). – pp. 65-74. – rus.; abs.: geo., eng., rus.

Iatrogenic bile duct injury continues to be an important clinical problem, resulting in serious morbidity and occasional mortality. None of the classification system is universally accepted and worldwide used, as each has its own limitation. The article reviews various classification systems of bile duct injury. Traditionally, biliary injuries have been classified using the Bismuth's classification. This classification does not encompass the whole spectrum of injuries during laparoscopic cholecystectomy. Strasberg's classification made Bismuth's classification much more comprehensive by including various other types of extrahepatic bile duct injuries. Our own classification is simple enough, embraces the majority possible variants of bile duct injuries and is convenient in clinical use.

Auth.

**8.G.13.2.31. Articaine – the best choice among local dental anesthetics.** /N. Nizharadze, M. Mamaladze, N. Tchipashvili, D. Vadachkoria/. Georgian Medical News. – 2011. – #1(190). – pp. 15-23. – eng.; abs.: geo., eng., rus.

Local anesthesia enjoys priority among pain control techniques in clinical dentistry. Among a wide choice of local anesthetic drugs available in dentistry for the prevention and management of pain 4% articaine solutions achieve highest level of the anesthetic potency and lowest systemic toxicity in all clinical situations, conditioned by its superlative physicochemical characteristics and the pharmacological profile. These are - low lipid solubility, high plasma protein binding rate, fast metabolism, fast elimination half time; low blood level. Articaine inactivates in both ways: in the liver and the blood serum. It has good spreading through tissues. Thus, articaine seems to be the local anesthetic of first choice in tissues with suppurative inflammation, for adults, children (over 4), elderly, pregnant women, breastfeeding women, patients suffering from hepatic disorders and renal function impairment. In Articaine solutions (1:200 000) epinephrine is in low concentration, thus in patients at high risk adverse responses are maximally decreased. In these patients articaine should be used with careful consideration of risk/benefit ratio. Articaine solutions must not be used in persons who are allergic or hypersensitive to sulphite, due to content of sodium metabisulfite as vasoconstrictor's antioxidant in it. Incidence of serious adverse effects related to dental anesthesia with articaine is very low. Toxic reactions are usually due to an inadvertent intravascular injection or use of excessive dose. To avoid overdoses maximum recommendation dose (MRD) must not be exceeded and aspiration test always performed prior all LA injections. In these article we introduce new graphs providing a quick and effect way to determine maximum LA dose. Where side-effects are developed, an adherence to adequate medical aid will ensure complete rehabilitation of the patient in all cases.

Auth.

**8.G.13.2.32. The characteristics of various forms of complicated surgery infections of the diabetic foot syndrome and their antibacterial treatment.** /A. Kistauri, G. Devidze, M. Jibladze/. Georgian Medical News. – 2011. - #1(190). – pp. 28-32. – rus.; abs.: geo., eng., rus.

In case of neuropathic forms, infection is the cause of tissue necrosis, while in the case of neuroischemic forms it is critical ischemia. Antibacterial therapy is desirable in all cases of the neuroischemic form, independently of the signs of infection. However, in the case of neuropathic forms, a course of antibiotics is prescribed only in case of the associated infection. The infected neuroischemic ulcer is characterized of acute development (infection+ischemia), unlike the infected neuropathic, ulcer. The researches showed that 42 patients (40%) suffered from neuropathic form and 63(60%) – from neuroischemic form. In purulent zones, anaerobic flora was revealed in 77.3%, aerobic flora – 17.7%; the rise of microflora was not indicated in 5% of cases. Most often, with 43.6% *St. aureus* was found out, and from the association of microbes – *St. aureus* + *Str. pyogenes* – 8.7%. The level of bacterial pollution was high, varying within  $10^5$  to  $10^{12}$ . The highest sensibility was shown towards Tienam (98.9%). The most acceptable and productive form of treatment turned out to be the combination phtorchinolyns+aminoglycosides. Out of 105 patients, 34 amputations were performed + 6 tall, 10 large (more than a half) and 18 small (up to the middle of the foot). In 71 cases, we successfully managed to stop infectious processes and avoid amputation.

Auth.

**8.G.13.2.33. Original technique for left hemicolectomy.** /B. Archvadze, I. Tchanukvadze, A. Balakishiyev, T. Mgelishvili/. Experimental and Clinical Medicine. – 2010. - #2(57) . - pp. 14 -17. – rus.; abs.: eng., geo.

An original technique for left hemicolectomy is proposed in this article. The originality of the technique lies in the fact that the anastomosis between the afferent or oral portion of the bowel and the efferent limb provides, through the retained mucosa, protection of all layers of the anastomosis from faecal masses for 6-7 days after the surgery. During this period, the tract is emptied via a drained colostomy. Necrosis of the retained mucosa within the anastomosis and functioning of the anastomosis occur on the 5-7th days after the surgery. We performed left hemicolectomy on 75 patients using the above-described technique. There were no cases of suture failure of the anastomosis in the post-operative period.

Auth.

**8.G.13.2.34. Protective treatment of peptic ulcer complicated with erosive hemorrhage.** /A. Gugutsidze, M. Kheladze, D. Gugutsidze, G. Gogiberidze/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 244-247. - geo.; abs.: geo., eng.

The peptic ulcer complicated with erosive hemorrhage is met in 15% of the disease. Early and active treatment of hemorrhage guarantees hemorrhage stop in 95%. Treatment foresees special regime, diet, sedative and antimicrobial treatment. In the rest 5%, the disease is coped with surgically.

Auth.

**8.G.13.2.35. The modern tenets of talipes valgus X-ray diagnosis and surgery treatment.** /Z. Avazashvili, I. Avazashvili G. Jalalishvili, T. Tchighladze, K. Diasamidze/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 57-61. - geo.; abs.: eng.

It is stated than none of the methods used in the treatment of talipes valgus is universal. The operational method shall be selected in consideration of all elements. The article covers main etiologic, intrinsic and extrinsic factors of talipes valgus and minor influence of pes planus (flat feet) on its formation. All the talipes valgus causative elements, such as medial bursa, proximal phalanx valgus, angle increase between first and second metatarsal bones, first metatarsal interphalangeal joint congruence, sesamoid bones inferior dislocation, hallux pronation should be surgically treated. The article describes X-ray examination and roentgenometry methods, strain levels, surgery treatment selection criterion according to the deformity type. Nowadays the following surgery treatment methods are being used: reconstruction of the first metatarsal interphalangeal joint soft tissues; proximal and distal parts osteotomy of the first metatarsal bone; sphenoid bone osteotomy; sphenoid metatarsal joint arthrodesis; first metatarsal interphalangeal joint arthrodesis;

excision arthroplasty; endoprosthesis replacement. Summarizing the article, the authors conclude that talipes valgus surgery mode should be chosen taking into consideration all elements (talipes valgus and first and second metatarsal bones angle, hallux pronation, first metatarsal bone distal metaphysic angle, medial bursa, inferior dislocation, age of the patient and etc.).

Auth.

**8.G.13.2.36. The essential meaning of toracoscopic sympatectomy during the reaction of peripheral arteritis diseases.** /K. Kashibadze, A. Beridze, E. Diasamidze/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.;\_abs.: geo., eng.

In the 60s peripheral arteritis occlusion disease was widely cured with waist and thoracic sympatectomy, although in the 80s, due to non grade state of curing and the high traumatic operations, the above-mentioned amount of operations was notably reduced. In spite of pharmacological improvement, in a case of peripheral artery disease the results are not believable. The object of author's research included toracoscopic sympatectomy in parallel with drug-curing. In 2003-2009, 44 patients with the Reino's syndrome disease were treated by vazoprostan in the of surgery department of Shota Rustaveli State University. Among them 14 were also treated by toracoscopic sympatectomy (group 1), and the rest 30 patients only with vazoprostan (group 2). A comparison was made between the subjective and objective parameters in both groups: (1) The operation by its duration and traumatism is minimal and does not affect the process of treatment of the disease; (2) by toracoscopic sympatectomy in combination with vazoprostan intravenous infusion an early effect of decreasing the subjective complaints as well as the probability of decreasing of recurrence in the later period are obtained.

N. Chkhaidze

**8.G.13.2.37. Analysis of results obtained by means of modern surgical methods in the treatment of bilateral bullous emphysema.** /L. Katsarava, V. Katsarava, B. Oniani/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). –pp. 123-126. - geo.; abs.: rus., eng.

Our study was devoted to the improvement of the tactics of surgical treatment of the patients with bilateral bullous pulmonary emphysema (pneumonectasis). We analyzed the results of surgical treatment, obtained on 32 patients with bilateral bullous pulmonary emphysema, which had been performed in the thoracoabdominal surgery clinic in 1998-2008. The age of the patients varied from 16 to 64 years. X-ray and CT examinations were carried out to all patients. The single-stage operations with the transsternal approach were performed in 18 cases, while not single-stage bilateral operations with minimally invasive methods were performed in 20 cases. Considering the results, the following should be noted: a bilateral operation with the transsternal approach is the method of choice in case of large (more than 10 cm) and giant pulmonary cysts, in other cases the best method of choice is single-stage bilateral operations using the minimally invasive methods.

Auth.

**8.G.13.2.38. Modified method of cesarean section operation and its role in the prevention of obstetric complications.** /Sh. Koridze, T. Kanchaveli, D. Jintcharadze , A. Koridze, I. Mukhadze/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). – pp. 127-134. - rus.; abs.: geo., eng.

The authors made an analysis of archival material of 1577 case histories of the patients who were subjected to cesarean section operation at Tbilisi Experimental Maternal Hospital and at "The House of Health" during 1999-2000. The case histories were divided into two groups: 1474 patients made I - main group which were subjected to the operation of cesarean section according to modified method offered by Professor A. Koridze, while 103 patients operated according to traditional method accepted at present time made the II - control group. The authors made clinical-laboratory analysis of the investigated case histories and came to a conclusion that the use of the offered method of cesarean section operation in obstetric practice will give the possibility to decrease post-operation complications and, correspondingly, the introduction of the given method is completely justified.

Auth.

**8.G.13.2.39. Contemporary methods of hernioplasty and their efficiency.** /G. Tukhareli, G. Lomsadze/. Scientific Works of Sukhishvili University. – 2009. - # 6. – pp. 200-203. - geo.; abs.: eng., geo.

Nowadays non-stretching hernioplasty with flat polymeric net are successfully used in practice. We have studied the treatment of 17 patients in the Medical Center Imedi in 2008. It was settled that the method of Lichtenstein is preferential and it reduces in-hospital treatment by 3-5 days.

Auth.

**8.G.13.2.40. Hemorrhoidal disease: pathogenesis, clinical aspects and treatment principles.** /T. Abuladze, G. Korkelia, K. Shapatava, T. Ivanishvili, B. Berishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 5-7. – geo.; abs.: eng.

Hemorrhoidal disease is the most frequent pathology of anorectal region. It develops as a result of vascular abnormality or a stretch and rupture of hemorrhoids fixating tendon. Principles of treatment depend on accurate collection of the illness history, physical and endoscopic procedures. Pharmacotherapy with phlebotropic drugs is efficient in acute and chronic forms of I, II and partially III stages of the disease. Ligation with latex rings, infrared photocoagulation and doplerometric desarterisation are minimally invasive and less radical methods of the disease correction. The choice of treatment depends on the stage and clinical manifestation of a disease. Sclerotherapy becomes a less approved method of treatment nowadays. The classic Miligan-Morgan hemorrhoidectomy and Parks operation are the radical methods of choice. The Whitehead modification is a surgery for IV stage of the disease. The Longos surgery is an efficient outcome of modern technologies and needs some further modifications.

Auth.

**8.G.13.2.41. Non-traumatic splenic rupture: report of three cases.** /G. Azmaipharashvili, G. Tomadze, A. Megreladze, Z. Demetrashvili, S. Kemoklidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 11-13. – geo.; abs.: eng.

First case of non-traumatic spleen rupture was described by Rokitansky in 1861. The most common reason of splenic rupture is trauma. The aim of this article is to present three cases of non-traumatic splenic rupture, which is a rare abdominal emergency that requires immediate diagnosis and prompt surgical treatment. Main reasons of non-traumatic rupture of spleen are: malaria, leukaemia, sepsis, hemodialysis etc. Since 2006 year three cases of non-traumatic splenic were described including anamnesis, symptoms, aetiology, method of diagnosis and laparotomy findings. There were two males and one female with mean age 48 years (47-49 years). We report two cases of septic spleen due to peritonitis (one was on peritoneal dialysis) and one case of peritoneal dialysis and splenomegaly. Splenectomy has been performed in all cases. Two patients died because of progression of main disease, one discharged without complication on peritoneal dialysis. Non-traumatic spleen rupture is rare and dangerous for life surgical condition, which needs immediate diagnosis and emergency operation. In two of our cases rupture of septic spleen was provoked probably due to intra-abdominal hypertension.

Auth.

**8.G.13.2.42. Pseudophakic presbyopia: intraocular options.** /M. Dvali, N. Tsintsadze, B. Sirbiladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 40-41. – geo.; abs.: eng.

The 3 groups of cataract patients (58 eyes), who were undergone implantation of different types of IOLs to correct presbyopia were compared in a prospective study. The first group (24 eyes) was formed of patients who underwent cataract extraction bilaterally and had aspheric IOL implants with 2 D anisocorrection to achieve pseudophakic monovision. The second group (21 eyes) comprised patients with multifocal (Acrysof ReSTOR, Alcon) and the third group (13 eyes) was formed of Pseudoaccomodative IOLs (Crystalens HD, B+L and Tetraflex, Lenstec) accordingly. Visual function and visual disturbances were evaluated in each group during 6 months period. Mean distance UCVA was 20/35 or better in all groups; in the group 1 and 3 mean UCVA for near was J2 and 20/35 - for intermediate distance, group 2 achieved mean UCVA for near – J1; UCVA intermediate was J5. Patients in all 3 groups could read and work on intermediate distance without glasses but subjectively had different types of visual disturbances: in the first group that was mainly neuroadaptation problems resulting of altered binocularity, in the second group it was increased



disphotopsias, in the third group 3% of patients did not achieve good near visual acuity. In all groups was achieved subjectively satisfactory UCVA for all distances. Each group presented different types of visual disturbances in postop follow up period and had various limitations in patient selection process. Patients' activity demands specification of optimal method of presbyopia correction in every particular case.

Auth.

**8.G.13.2.43. Wunderlich's syndrome, as rare reason of acute abdomen (case report).** /G.

Tomadze, S. Kemoklidze, A. Megreladze, L. Gophodze, G. Azmaipharashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 50-52. – geo.; abs.: eng.

Wunderlich's syndrome refers to spontaneous non-traumatic renal bleeding into the subcapsular and/or perirenal space, first described by the German doctor Reinhold August Wunderlich (1815-1877), known also because of implementation of clinical thermometry. Most common reasons of the Wunderlich's syndrome are polycystic kidney, angiomyolipoma, adenocarcinoma and simple cyst of kidney. Extremely rare manifestation of Wunderlich's syndrome is hemoperitoneum, which is very rare condition in emergency surgery that needs a high index of suspicion for diagnosis. Absence of a history of trauma can make it difficult to make a diagnosis, which causes delay in treatment. Using ultrasonography or CT, and peritoneal aspiration of fresh blood may assist in the diagnosis. Rapid diagnosis and surgical intervention can lead to a successful outcome. A 60 year-old man was admitted to the emergency department of our clinic in August 9th, 2008 complaining of acute abdominal pain (Chart N 5335). The patient had 6 hours history of sudden pain in right abdomen, nausea and vomiting. Pain occurred while driving the car, without trauma. Isolated cyst of right kidney was diagnosed several months before admission. Physical examination revealed diffuse tenderness in the right upper quadrant of the abdomen, signs of peritoneal irritation. On laboratory investigation, white blood count was 11900, Hb – 70 units, ESR - 51 mm/h. Urinalysis: WBC – 3+, Protein – 1, RBC – 4+. Serum creatinine and liver tests - in normal range. Preoperative ultrasound revealed fluid in the abdominal cavity. The diagnosis of peritonitis was suspected and the patient underwent a laparotomy exploration. We found about 300 ml of blood and right paranephral hematoma. Bleeding "per diapedezim". We opened retroperitoneal space, right paranephrium and found out ruptured cyst of lower edge of right kidney with no farther signs of bleeding. Residual blood has been removed. We proceeded to a peritoneal lavage and drainage of right paranephrium and abdominal cavity after debridement. Postoperative ultrasound revealed remains of right kidney cyst without content. The postoperative course was uneventful, and the patient was discharged from hospital on day 10th after operation. Presented case is interesting because of its rarity

Auth.

**8.G.13.2.44. Component separation and triple-mesh combined method in the treatment of ventral hernias.** /N. Lomidze, I. Gelashvili, G. Giorgobiani, K. Butskhrikidze, G. Kopadze, A. Abuladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 76-78. – geo.; abs.: eng.

Postoperative incisional hernia has always been one of the most complex options in herniology. Incisional hernias develop in up to 5-14% of laparotomy incisions: the most difficult to repair are giant, complex, multiply recurrent hernias. Giant incisional hernias should be considered as an independent complex disease, which causes dysfunction of respiratory organs, the tissue covering hernia, the muscles and the organs of abdominal cavity. Retrospective analysis by standard proforma was carried out of a series of 17 patients operated on in according to Ramirez with onlay mesh and Ramirez with so called triple mesh technique between 2008 and 2010. First abdominoplasty by Ramirez with so called triple mesh technique In Georgia was done by famous English Surgeon, Prof. Andrew Kingsnorth on 14.04.2009. Ramirez with onlay mesh abdominoplasty was applied in 11 patients and Ramirez with so called triple mesh technique in 6 patients. We regard Ramirez with triple mesh technique as an effective mean in maintaining anterior abdominal wall functional status revealing in flexibility rather than using one massive mesh covering the whole anterior wall and so drastically reducing physiologic functions of the muscles.

Auth.

**8.G.13.2.45. Laparoscopic cholecystectomy as "golden standard" (11-year experience in a single clinic).** /A. Megreladze, G. Tomadze, L. Gophodze, G. Azmaipharashvili, Z. Demetrashvili,

S. Kemoklidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 90-93. – geo.; abs.: eng.

The aim of the article is to present 11-year experience of a single surgical clinic since 2000. In total, 1821 cholecystectomies have been performed. Out of them, 240 (13.2%) with open laparotomy and 1581 (86.8%) with laparoscopy. Among them 1071 (58.8%) were with chronic and 750 (41.2%) with acute cholecystitis. In the case of chronic cholecystitis, an open method was used in 9.6% and the laparoscopic approach – in 90.4% of cases. In the case of acute Cholecystitis, an open was used in 18.3% and the laparoscopic approach – in 67.7% of cases. During first two years, the laparoscopic approach was used in 58%, and in last two years it made 98%. The conversion rate in the case of chronic cholecystitis in 2000-2001 was within 10-20% range and in 2009-2010 it became 1.05-0.76%. The same parameters in the case of acute cholecystitis were 13-35% and 1.15-1.92%. The reasons for conversion were: massive postoperative adhesions, different type of anatomical anomalies, bleeding due to portal hypertension, acute destructive cholecystitis (perivesical abscesses). Based on our experience, we can conclude that laparoscopic cholecystectomy is definitely a method of choice. It has much less complications than the open laparotomy approach; we recommend all cholecystectomies to begin with the laparoscopic approach and to make decision about further steps intraoperatively. The main conversion inducing factors, like perivesical infiltration or abscess, can be met not earlier than 5-6 days after onset of acute pain; therefore it is better to perform the laparoscopic cholecystectomy during the first 2-3 days. Upon availability of skilled surgeons and modern laparoscopic technique, the conversion rate is very low even in the case of acute destructive cholecystitis. The subtotal resection of gallbladder on Hartman's level with laparoscopic approach, including demucozation and clipping can be used in case of acute destructive cholecystitis, when identification of main elements of bladder is impossible due to perivesical infiltration or suppuration.

Auth.

**8.G.13.2.46. The role of greater omentum in the development of post-laparotomic adhesions.** /S. Kemoklidze, G. Tomadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 106-108. – geo.; abs.: eng.

586 cases of subsequent laparotomies were analyzed. They were performed in a period from 7 days to 46 years after the first laparotomy. The authors have found adhesions in 492 patients (84%). Two case histories are discussed. One patient developed acute intestinal obstruction 32 years after appendectomy. Another patient was operated for canceromatous obstruction of colon cancer, but the reason of obstructions was the adhesions after appendectomy performed 46 years earlier. Other patients were operated for peptic ulcer, cholecystitis hernia and gynecology diseases. The main reasons of adhesion development are incomplete clearing of abdominal cavity and intestinal peristalsis disturbance. Authors recommend placement of great omentum in the sub-diaphragmatic space and drug stimulation of peristalsis during the early postoperative period. The authors observed that bleeding is minimal after division of omentum adhesions. They conclude that usage of great omentum for revascularization is not scientifically justified.

Auth.

**8.G.13.2.47. On post-cholecystectomy bile stenosis therapy (case description).** /G. Chikobava, R. Eliger, L. Gophodze, M. Chubinidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 126-128. – geo.; abs.: eng.

The following anabasis of cholecystectomy in spite of using spread of the new technologies in the last millennium (among them endovideoscopy surgery) is one of the difficult and attentive problems in surgery. According to the data of the world literature the next events of 0.2-0.5% cholecystectomy develops the damage of common bile (stenos, structure) which maybe would be followed duodenostasy, pancreatic, high intussusceptions. For the liquidation of duodenostasy the production of resection of 2/3 of the stomach (because it was not made correctly) would not seem to be the correct choice. Damaged common bile (structure, stenosis) advantages are choledochoduodenostomy formation of entero-entero anastomosis by the rule of stream.

Auth.

**8.G.13.2.48. Surgical solutions to esophageal atresia.** /P. Gvetadze, D. Tsibadze, K. Khetsuriani, T. Michitashvili, I. Nadirashvili/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.;\_abs.: geo., eng.

In M. Iashvili Children's Central Hospital, during the last 2.5 years, reconstructive surgeries were performed on 14 neonates diagnosed with esophageal atresia. Gestational data shows that 12 were carried to term and 2 were born prematurely. 7 out of 14 neonates were first-time pregnancies, 7 – repeated pregnancies. During pregnancy the majority of the women experienced various severe and chronic diseases of mostly viral etiology. 4 out of 14 neonates were low-birth-weight infants, 2 – very-low-birth-weight. 10 neonates were found to have concomitant anomalies of various forms and combinations. The period between the hospitalization and surgery did not exceed several hours. During this period, in preparation for the surgery, the necessary tests were conducted. Lethal outcome was observed in 2 neonates (14.3%) who, besides the aspiration pneumonia, were experiencing a whole range of aggravating factors: very low weight, late hospitalization (3<sup>rd</sup> and 4<sup>th</sup> days), severe heart disease (Fallot's tetralogy and ventricular septal defect). In one neonate, who was also diagnosed with the Down syndrome, the gastric fragment of the esophagus was comprised of a string of connective tissue – a circumstance which did not allow for reconstructive surgery. In 12 other cases (85.7%) full esophageal patency was achieved. According to the catamnestic data of these patients (from 2 months up to 2.5 years) they are healthy. The paper describes general aspects of diagnostics and treatment of esophageal atresia. Pictures showing forms of severe heart disease, surgery schemes, x-ray grams are included.

N. Chkhaidze

**8.G.13.2.49. Complications of percutaneous nephrolithotripsy in staghorn nephrolithiasis.**

/S. Fanarjian/. Georgian Medical News. - 2010. - #10 (187). – pp. 7-12. – rus.; abs.: geo., eng., rus. The aim of the study was to analyze the complications of percutaneous nephrolithotripsy (PCNL) in staghorn nephrolithiasis. The analysis revealed that in case of "full" staghorn stone risk of complications of percutaneous nephrolithotripsy raises twice in comparison with cases of "incomplete" staghorn stones. The choice of least invasive method at treatment of patients with staghorn nephrolithiasis is one of challenges in urological practice. Superiority began to belong to so-called, least invasive interventions – percutaneous nephrolithotripsy, extracorporeal shock-wave lithotripsy and also combined ("sandwich" - therapy) methods. In connection with development of modern methods of visualization, complication of percutaneous treatment methods of staghorn nephrolithiasis decrease, and efficiency and possibilities of their use raise. The analysis revealed that in aspect of development of complications after percutaneous nephrolithotripsy presence of "full" staghorn stone plays defining role, raises risk of development of complications twice in comparison with patients with presence "incomplete" staghorn stones.

.Auth.

**8.G.13.2.50. Using bone cement for surgical treatment of bilateral osseous temporomandibular joint ankylosis.** /Z. Gvenetadze, T. Danelia, G. Gvenetadze/. Georgian Medical News. - 2010. - #10 (187). – pp. 13-18. – eng.; abs.: geo., eng., rus.

Temporomandibular joint (TMJ) ankylosis with complete immobility of the lower jaw represents a maximal functional impairment and causes malocclusion and impaired function of mastication. The main goal of surgical treatment of patients with TMJ ankylosis is the regaining of organ function and good cosmetic results. The authors modified the implant of articular head by bone cement for surgical treatment of TMJ ankylosis (five cases). The mandibular arch osteotomy on both sides was performed under nasotracheal anesthesia. 1.5-2 cm bone conglomerate was removed and articular fossa was formed in remaining part. Titan mini plate was formed so that it was possible to hang it on osteotomized surface of the arch. Free surface of plate was faced towards the artificial articular fossa, on which the articular head was formed using bone cement. The plate on the other side was fixed on mandibular arch with screws. All cases were followed by good cosmetic and functional effect (period of observation 5 month-4 years). The method, despite of small material size is advantageous due to its good outcome, low cost and relatively simple surgical technique.

Auth.

**8.G.13.2.51. Lymphatic drainage of tissues and blood and lymph coagulability during mandible fractures.** /E. Aliyev/. Experimental and Clinical Medicine. – 2010. #1(56). - pp. 32-36. – rus.; abs.: eng.

The purpose of the present research was to study blood and lymph coagulability, also lymphatic drainage of tissues during mandible fracture in rabbits. Experiments were carried out on 17 "Chinchilla" rabbits under narcosis. The research results have shown that modelling of a mandible fracture in rabbits leads to the activation of intravascular coagulation not only in the blood, but also in the lymph. The received data comparison has shown that between the activation of blood and lymph coagulability there is an accurate interrelation to what testify unidirectional changes of coagulation indicators (the system of coagulation, anticoagulation and fibrinolysis) both in blood and lymph. Moreover, it is revealed that intravascular activation of blood and lymph coagulability is accompanied by rather expressed oppression of lymphatic drainage of tissues. It all testifies to the necessity of taking into account the lymphatic link of microcirculation in treatment and prophylactic actions for a mandible fracture.

Auth.

**8.G.13.2.52. Influence of coronary bypass surgery on autonomic regulatory mechanisms of heart rhythm.** /A. Tsibadze, L. Basiladze, T. Kavtaradze, T. Gotsiridze, L. Khutsishvili/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 71-73. –geo.; abs.: eng., rus.

It has been concluded that a decrease of heart rhythm variability in patients with chronic heart failure is conditioned by raised activity of the highest vegetative regulation centers. In the early post-CABG period, this activity, owing to increased parasympathetic stimulation, is getting raised. Such alteration indicates postoperative cardiac rhythm balance changes and possibility of complications. Monitoring of the patients by the above-mentioned values is advisable to avoid postoperative complications.

Auth.

**8.G.13.2.53. Treatment by long catheterization of lung abscess.** /D. Maghalashvili, N. Lomidze, N. Khotenashvili, G. Shanshiashvili, L. Saghinashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 104-106. – geo.; abs.: eng., rus.

It must be mentioned that one patient had antibiotic idiosyncrasy. In spite of this, his abscess cavity was closed later against the background of corticosteroid involvement. Out of 23 patients of the given group, 3 were taken to the ambulatory regimen, 7-8 days after the treatment had been started. One of them continued treatment in another hospital and two - at home. During the process of treatment, two catheters were transferred from the abscess cavity and because of that it became necessary to carry out the reposition of the catheters. Prolonged transnasal drainage of the lung abscess saves patients from repeated and frequent bronchoscopy examinations, reduces the period of recovery and treatment expenses.

Auth.

### **8.G.13.3. Pediatrics. Obstetrics and Gynecology**

**8.G.13.3.1. Systemic inflammatory response syndrome during acute respiratory infection in children.** /N. Manjavidze, T. Barbakadze, I. Mamuchishvili, I. Ubiria/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 96-99. – geo.; abs.: eng.

A comprehensive assessment of three key links of the systemic inflammatory response syndrome in children with acute respiratory infections (ARVI) allows specialists to be well aware of manifestations, to timely diagnose complications, to early predict patients' worse health, and to choose the optimum treatment protocols. A significant correlation has been found in the level of medium-weight molecules in plasma and red blood cells with the severity of a pathological process and the degree of major clinical syndromes. The results of the studies provide a deeper insight into the pathogenesis of viral and viral-and-bacterial infections and make it possible to consider the plasma and erythrocytic levels of medium-weight molecules, the value of the redox-potential of the energy supply system and the activity of anti-oxidative defense enzymes to be a diagnostic and predictive *criterion and a full recovery index in children with ARVI.* : systemic inflammatory

response syndrome, acute respiratory infections, medium-weight molecules, tissue hypoxia, the body's detoxifying systems.

Auth.

**8.G.13.3.2. Digestive disorders in the population of adolescents.** /I. Phavlenishvili, M. Chikava/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 141-143. – geo.; abs.: eng.

One-stage epidemiological research was conducted in the accidental and representative groups of 14-21 years aged 430 adolescents (50% boys and 50% girls). There was used the primary questionnaire for digestive disorders pre-morbid and morbid forms screening. The selected contingent was interviewed, underwent a deep medical examination, clinical laboratory and instrumental tests were carried out. For diagnosis of the functional gastroenterologic disorders, the "Rome II criteria" was used. According to the obtained results, the prevalence of digestive disorders in the adolescent population was ( $p<0.05$ ) –  $19.5\pm 1.9\%$ ; among girls –  $20.9\pm 2.8\%$ , among boys –  $18.1\pm 2.6\%$ ; among 14-16 year-aged adolescents –  $17.7\pm 2.6\%$ , among 17-21-year aged ones –  $21.4\pm 2.8\%$ . The pre-morbid status was defined –  $23.5\pm 2.0\%$  ( $p<0.05$ ). Digestive disorders are mostly represented by means of functional disorders. Cholelithiasis and esophageal disorders are most frequently distributed. It's necessary to inform adolescents about their digestive disorders to increase appealability and timely perform adequate treatment-preventive measures.

Auth.

**8.G.13.3.3. Biflorac in the treatment of intestinal dysbiosis.** /I. Shalamberidze, M. Khochava, T. Jokhtaberidze, L. Nebieridze, M. Kherkheulidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 155-159. – geo.; abs.: eng.

During the recent years in pediatrics the problem of micro-ecology is given special attention. The normal microflora is the quantity and quality equivalence of different microorganisms which guarantees the biochemical, metabolic and immune balance. This is essential to preserve human health. There exist different reasons for emerged dysfunction of intestine's microflora. Infectious pathologies, antibacterial therapy provided for different reasons and defective meals are among them. We have studied the microflora of the gut in small group of patients (30 children). The study was conducted in the clinic of Children Infectious Diseases. The main symptom of patients was diarrhea (40%) or constipation (60%) that occurred after either infectious disease or antibiotic therapy. The results were statistically processed using computerized program SPSS 11.0. Patients were assessed using a special questionnaire (collecting information about microflora); 32 wards were treated with a pre-probiotic Biflorac (manufactured in Georgia). Biflorac was given according to the drug regimen. Before treatment, the deficit of *E. coli* and *B. Bifidum* was revealed in the patients; this imbalance was corrected after the treatment in both cases of diarrhea as well as constipation. Hence, we conclude that Biflorac is a pre-probiotic complex that consists of antibiotic resistant strains of normal human gut microflora that determines Biflorac's resistance to different antibiotics. The results of our study confirmed that *E. coli* - one of the compound of Biflorac, makes this probiotic very unique.

Auth.

**8.G.13.3.4. Physiological development of blind adolescents.** /E. Paghava, K. Paghava/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 143-145. – geo.; abs.: eng.

The goal of the study was to compare spatial orientation in early and late blind adolescents. Orientation in locomotor space was studied in a restricted territory of the room by means of changing location of the poles with toys. Orientation in the manipulatory space was studied by means of changing location of 4 objects on the square table with casters. Participants had to make a guess from different positions. 8 early and 8 late blind adolescents participated in the experiment. The experiments in the manipulatory space were repeated 4 times every 2 weeks and the locomotor ones were performed 3 times also every 2 weeks. Performance as well as strategy of participants was studied and compared. Late blind adolescents showed higher frequency of correct answers in both – locomotor and manipulatory tasks. The average latency of correct response was

also shorter in the late blinds, especially in boys. Thus it was concluded that late blind adolescents show better spatial orientation in both, locomotor and manipulatory spaces.

Auth.

**8.G.13.3.5. Prevalence of wheezing in children of 12-18-month age.** /E. Kandelaki, M. Kherkheulidze, N. Khavlashvili, N. Adamia/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 65-67. – geo.; abs.: eng.

The aim of the study was to identify the prevalence of wheezing in infants in Tbilisi. Methods: A cross-sectional study was carried out by means of administering questionnaires to the parents of infants aged 12 to 18 month. For this aim, 5 primary health centers were selected. In total, 427 parents were interviewed. Results: A total 286 infants from 427 reported the episodes of wheezing. From this number in 84.4% were revealed nocturnal symptoms. Visits to emergency departments were reported in 15% of cases, even during recurrent wheezing. Nocturnal symptoms, visits to emergency were both common among those who had suffered three and more episodes. Most parents had no information about treatment conducted in emergency departments. Conclusion: There is high prevalence of wheezing among the studied population. It is possible that these infants represent a large contingent of asthmatics in future. There is lack of knowledge about the linkage of wheezing in infancy and development of asthma in early ages.

Auth.

**8.G.13.3.6. The parameters of physical growth in 5-6-year-old children in Tbilisi.** /M. Kherkheulidze, K. Nemsadze, N. Khavlashvili, E. Kandelaki, N. Adamia/. Georgian Medical News. – 2010. – # 1(178). – pp. 52-56. – rus.; abs.: geo., eng., rus.

The aim of the study was to assess the nutritional status and anthropometric parameters in children aged 5-6 and to identify possible factors influencing the growth pattern of Georgian children. The cross-sectional study was performed on a sample of 754 children - boys and girls aged 5-6 attending pre-school facilities and their main caregivers in the study sites. The study covered the children population from 16 kindergartens of 2 districts (Gldani-Nadzaladevi and Vake-Saburtalo) of Tbilisi, with different socio-economic status. The following anthropometric parameters were studied: body weight, height, head and mid-arm circumferences and body mass index (BMI). Physical parameters were assessed using WHO/NIH standardized growth charts (percentile and Z scores). The collected data were analyzed using the computer program EPI INFO. High weight and height (>95 percentile/2 Z score) was found more frequently than low (< 5 percentile/-2 Z score) parameters. Most children's weight according to their stature was within normal 5-95 percentile range. At the same time, in girls low weight for their stature was often met then in boys. The imbalance between the weight and height is more evident than between weight and age or height and age. The results of the study emphasize that in Tbilisi 5-6-year-old child population the problem of overweight and obesity is more frequent than underweight.

Auth.

**8.G.13.3.7. The effect of iodine deficiency in the prenatal period on the learning ability in the postnatal period.** /N. Rustamov, I. Kvatchadze, G. Bekaia, Z. Sakhvarelidze, N. Mitagvaria/. Georgian Medical News. – 2010. – # 1(178). – pp. 65-68. – rus.; abs.: geo., eng., rus.

The present study analyzes the changes in the learning ability of the progeny of rats suffered from iodine deficiency. Reduction of serum thyroxin in the mothers' blood during three months before mating and whole period of gestation to an average level of  $4.7 \pm 0.6$  ng/ml, significantly worsened the learning ability in the progeny, and the reduction to  $1.1 \pm 0.4$  ng/ml completely deprived the progeny's learning ability. Passage of the maze for these animals was purely probabilistic in nature without any signs of learning. We can conclude that the diet with very low iodine content results in a low level of thyroxin in maternal serum and neurological deficiency in the progeny manifested by learning disability during maze testing. Addition of the iodine to the diet prevents development of the mentioned neurological deficiency.

Auth.

**8.G.13.3.8. Significance of neurospecific enolase determination in estimating severity of the hypoxic-ischemic injury of newborn brain.** /S. Mukhtarova/. Georgian Medical News. – 2010. – #4(181). – pp. 49-54. – rus.; abs.: geo., eng., rus.

The purpose of our research was the study of diagnostic possibility of neurospecific enolase (NSE) as a marker of hematoencephalic barrier (HEB) dysfunction in newborn infants of different gestational age with perinatal injury of the central nervous system (CNS). The concentration of NSE in blood serum was determined by the immunoenzyme method in 98 newborns of different gestation age with hypoxic-ischemic injury of CNS in dynamics of the neonatal period (0-1, 5-7, 12-14, 20-21, 28-30 days). It was found that the concentration of NSE changed depending on the character of the CNS injury (intraventricular hemorrhage, periventricular leucomalacia). This change had a wavy character with maximum concentration at the 1<sup>st</sup> and 3<sup>rd</sup> weeks of life.

Auth.

**8.G.13.3.9. The role of permanent invasive monitoring of intracranial pressure in the treatment of infants with post-haemorrhagic ventricular dilatation after intraventricular haemorrhage (case report).** /I. Tsirkvadze, M. Chkhaidze, D. Phruidze, G. Nizharadze, D. Kanjaradze/. Georgian Medical News. – 2010. – #4(181). – pp. 55-58. – eng.; abs.: geo., eng., rus. Post-haemorrhagic ventricular dilatation (PHVD) is a major complication of intraventricular haemorrhages in very preterm infants. The post-haemorrhagic ventricular dilatation is associated with a high rate of disability, multiple impairments and adverse effects of shunt surgery for hydrocephalus. It may lead to an impaired neurological prognosis caused by a raised intracranial pressure (ICP) and concomitant decreased cerebral blood perfusion. Therefore, early intervention to decrease the ICP may improve the long-term outcome. Different treatment modalities have been studied, of which repetitive removal of cerebrospinal fluid (CSF) seems to be the only effective one. Studies performed in several institutions showed that intermittent CSF drainage in very preterm infants with PHVD is an effective way to treat increased ICP and its negative effect on cerebral blood perfusion. The cut off point for CSF drainage is about 6.0 cm H<sub>2</sub>O ICP, as drainage below that level no longer results in improvement in perfusion. From this single case study it can be concluded that in preterm infants with PHVD repetitive CSF tapping from a ventricular access device guided by ICP measurements and ICP targeted treatment strategy is a useful technique for determining the frequency and volume of CSF removal. In neonatal intensive care units with poor capabilities and resources this is possible even by placing the simple intravenous single lumen catheter.

Auth.

**8.G.13.3.10. Morphological peculiarities of endometrium in chronic endometritis associated with bacterial vaginosis.** /M. Beruchashvili, L. Gogiashvili, E. Datunashvili, Z. Tophuria, Z. Tsagareli/. Georgian Medical News. – 2010. – #4(181). – pp. 59-63. – eng.; abs.: geo., eng., rus. Most cervical cancers begin where the endocervix and ectocervix meet. Pap tests (also called Pap smears) are vital in the early detection of cervical cancer. Ecto-endocervical Pap-tests from 230 patients with verified bacterial vaginosis (BV) were studied. Endometrial biopsy was also used in the evaluation of 95 patients (47 with primary diagnosis BV and 48 relapsing BV). Control specimens were obtained from physically and gynecologically healthy females. Biopsy samples were collected from endometrium of the uterine body. Morphological and morphometrical analysis of data and Pap-test criteria indicate that chronic endometritis (100%) as well as spontaneous abortion syndrome (20-25%) can be reasonably considered as primary and relapsing bacterial vaginosis (BV) associated pathologic processes. The chief morphological phenomena of chronic endometritis involve the severe dystrophic – atrophic alterations in lining and glandular epithelium, simultaneously with the polymorphic cellular infiltration and stromal transformation of the different intensity. Progressive atrophy of epithelium and fibroplastic transformation of stroma evidently contributes to the evolution of the condition preventing the implantation and development of the concept.

Auth.

**8.G.13.3.11. Ways of optimization of pregnancy gingivitis treatment.** /M. Mdivani, M. Betaneli, V. Margvelashvili, M. Kharabadze/. Georgian Medical News. – 2011. – #1(190). – pp. 24-27. – eng.; abs.: geo., eng., rus.

Pregnancy gingivitis is developed in 30-75% of cases and is a result of complicated hormonal and immunological changes in the organism. 100 pregnant women with various degree of severity of

gingivitis have been observed. Acute generalized gingivitis, gingival edema with bleeding hyperplasia has been observed in all patients, while in bad cases – with ulcers' formation at gingival. A decrease in hemoreological index of gingival tissue (down to 0.15-0.19 Ohm) has been observed too. Complete clinical and laboratory studies, as well as the screening of obtained data have been carried out before the treatment, in its process and after the course. Pregnant women have been under the supervision and subjected to curative discrete plasmapheresis according to various indications (rhesus-incompatibility, antiphospholipidic syndrome, early interruption of pregnancy with disorder of the system of hemostasis basically towards hypercoagulation). All pregnant women have been diagnosed with the gingivitis of varying severity. After completion of the treatment course of plasmapheresis evaluation of the patients' condition was carried out. The improvement of the subjective and objective data, regulation of hemoreological data in gingival tissue (0.21-0.23 Ohm) was achieved. Respectively, the period of recurrence-free course of disease has been increased and the quality of patients' life has been improved.

Auth.

**8.G.13.3.12. Quantitative electroencephalography coherence and dipole source index during various cognitive tasks in children with attention deficit hyperactivity disorder.** /S. Bakhtadze, M. Janelidze, N. Khachapuridze/. Georgian Medical News. – 2011. - #1(190). – pp. 42-49. – eng.; abs.: geo., eng., rus.

The attention deficit hyperactivity disorder (ADHD) is one of the most important disorders of childhood and adolescence. Debates about diagnostic approaches requiring precise assessment of ADHD remains topical until nowadays. The role of neurophysiologic methods for this purpose is controversial. Thus, the aim of our study was to observe QEEG changes by means of the most modern software analysis systems - coherence and brainwave activity dipole source localization. We have assessed 39 children - 18 of them from control group (age range 9-12 years). QEEG was registered during the Raven test and adding of one digit numbers. The results were analyzed by means of coherence measures and brainwave bilateral synchronous activity dipole source generator localization detection system (Brain Loc. 6). As a result, we observed high coherence measures for ADHD compared to controls. As for dipole source generator, we have detected a higher dipole equivalent index in the control group compared with ADHD children. Thus, according to our results, it is obvious that QEEG can serve as a valid neurometric tool in diagnosis of the attention deficit hyperactivity disorder.

Auth.

**8.G.13.3.13. Nutrition for children of puberty age in Tbilisi boarding houses.** /Sh. Tukvadze, R. Kverenchkhiladze/. Georgian Medical News. – 2011. - #1(190). – pp. 61-65. – rus.; abs.: geo., eng., rus.

Micronutrients are nutrients required by humans throughout life in small quantities to orchestrate a whole range of physiological functions, but which the human body itself cannot produce. The most important micronutrients are iron, zinc and iodine. Micro-elements are an essential part of nutrition. Among them particular importance is attached to those microelements that are comparatively in low quantity in the food (such as iron, iodine). Accordingly, occurrence of the iodine deficiency, iron deficiency in adolescents requires particular attention so that they are duly prevented. Monitoring of the nutrition of adolescents in the present unstable economic conditions is absolutely necessary. We have studied the diet of adolescents and conducted its analysis. The research was conducted in the boarding house among the adolescents (aged 11 and 13) with the participation of 36 adolescents (22 girls and 14 boys). The results are compared to the norms of physiological requirements of adolescents, taking into account the major substances and energy. Besides that, biochemical monitoring of the Zn requirement in the adolescents has been conducted. The research on the quality and quantity of the diet displayed an imbalance of certain substances among them Zn, which may have a negative effect on the growth and development of adolescents as well as on the puberty.

Auth.

**8.G.13.3.14. The possible role of nitric oxide in newborns' weight gain disorder caused by prolonged dexamethasone therapy (experimental study).** /O. Sinauridze, N. Gongadze, L.



Kvatchadze, G. Bekaia/. Georgian Medical News. – 2011. - #2(191). - pp. 49-53. – rus.; abs.: geo., eng., rus.

Experimental studies on rats revealed that the newborns; growth retardation caused by a long-term treatment with Dexamethasone in the neonatal period can be prevented by the simultaneous with dexamethasone administration of the nitric oxide donor - L-arginine. This indicates that the mentioned Dexamethasone-induced growth disorder is caused by inhibition of the nitric oxide synthase activity.

Auth.

**8.G.13.3.15. A study of factual nutrition of children's home residents.** /Sh. Tukvadze/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 35-39. – geo.; abs.: rus., eng.

We studied the factual nutrition of children living in a children's home. The proper nutrition in childhood can reinforce lifelong eating habits that contribute to children's overall wellbeing and help them to grow up to their full potential and healthy life. Good nutrition means the body is getting all the nutrients, vitamins, and minerals it needs to work at its best level. Energy (calories) should be adequate to support the growth and development and to reach or maintain the desirable body weight. Nutritional requirements rise as children attain puberty in order to support sexual development. A diet that provided sufficient calories and nutrients during childhood may no longer be sufficient for the child in puberty. The dietary guidelines for Americans state: "Different foods contain different nutrients and other healthful substances. No single food can supply all the nutrients in the amount you need". The qualitative and quantitative analysis of children's diet revealed some irrelevances: imbalance between carbohydrate, lipid and protein composition and imbalance in micronutrients (iodine, iron, zinc). Such an imbalance of micronutrients in the diet can eventually lead to iodine, iron and/or zinc deficiency.

Auth.

**8.G.13.3.16. EPR study of gallstones in menopausal women.** /M. Shengelia, E. Chikvaidze, M. Kiladze, T. Sanikidze, N. Gogebashvili/. Experimental and Clinical Medicine. - 2010. - #3(58). - pp. 24-27. – geo.; abs.: rus., eng.

The aim of the study was to establish the gallstones content in menopausal women by EPR method. The gallstones of 30 women aged 52.4±9.7 were studied (2 women with surgical menopause (33-35 year); 19 women with menopause (39-56 year); 9 women in postmenopause (59-79 years). The stone EPR spectrum was registered on the EPR spectrometer ESR-V. In EPR spectrum of the stones, the intensive signal of oxidized bilirubin ( $g=2.003$ ,  $DH=1.0\text{mmTI}$ ) was revealed; the statistically important difference between the intensity of this signals in the stones of the patients of different age groups was not revealed. In the EPR spectrum of some gallstones, the 6-component EPR signal of  $\text{Mn}^{2+}$  ions was registered. It was concluded that the deficiency of estrogens in menopausal women induces a decrease in the antioxidant defense mechanism of the patient's body and thus, in the condition of oxidative stress (connected with different endogenous and exogenous factors), promotes the oxidation of bilirubin and gallstone formation.

Auth.

**8.G.13.3.17. The effects of hyperglycemia on placental trophoblast functionality in rats in vitro.** /M. Gongadze, A. Sephashvili, N. Gogia, M. Esaiashvili, Ts. Atamashvili, I. Mesropyan, M. Iobadze/. Experimental and Clinical Medicine. – 2011. - #1(1). - pp. 8-13. – eng.; abs.: geo., eng.

The maternal diabetic environment alters the embryo and the fetoplacental development. The results of these alterations are: increased embryo resorption and malformation rates, placental dysfunction. Cellular and molecular events in the uterine environment that lead to successful blastocyst implantation require the endometrium to be ready for being implanted. They include modified functions and populations of leukocytes, cytokine activities, and growth factors. The trophoblast invasion is a temporally and locally restricted process which regulates implantation and oxygen arrival to the embryo through the dialog with spiral artery endothelium. There are data which suggest that IL-10 and TNF-alpha are crucial cytokines in implantation processes. We performed in vitro study influence of hyperglycemia on trophoblast functionality and cytokines capacities to modulate proliferation, migration, and invasion of trophoblastic cells in diabetic environment. Summarizing of the experimental results, we can conclude that possibly IL-10 defends uterus and mediates successful implantation by inhibiting TNF- $\alpha$ .

Auth.

**8.G.13.3.18. The effects of phosphate slag on the skeleton formation.** /R. Mzhavanadze, N. Menagharishvili, R. Datunashvili, M.Tchedia, M. Grigolashvili, N. Goderdzishvili/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 73-76. – geo.; abs.: geo.; eng., rus.

Since the phosphate slag consists of calcium by 47%, it was of special interest to study its effects on the skeleton formation processes. For this purpose, the embryos of white rats have been processed by means of the Duson method. The bone-growing points of the breast, posterior and extremity bones have been examined. It was ascertained that within the range between the threshold and inactivity doses, in particular, at 10, 20, 50 mg/kg, phosphate slag has not affected the processes of skeleton formation, compared to the control group.

Auth.

**8.G.13.3.19. The age dynamics of a partial pressure of oxygen and its peculiarities during intrauterine period.** /D. Kobeshavidze, N. Sharashenidze, L. Berulava, D. Gabunia, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 77-84. – geo.; abs.: geo.; eng., rus.

Tissue cells of the fetus are evolutionally adapted to existence under conditions of a low partial pressure of oxygen. Changing of the placental membrane thickness may become a risk factor and endanger the fetus viability. A high compatibility of the fetus hemoglobin toward oxygen promotes the effective supply of the tissues with oxygen. Compensational-adaptive reactions of the maternal-fetus system provide the adequate oxygen pressure in the blood of the mother and the fetus.

Auth.

**8.G.13.3.20. Radiological types of pulmonary tuberculosis in infants.** /N. Tskhakaia, D. Sturua, T. Kotchlamazashvili, I. Nizharadze, G. Tukhashvili, M. Chikovani/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 46-51. - geo.; abs.: eng.

As complications of tuberculosis are frequent in infancy, a correct diagnosis of tuberculosis in infants is important. The purposes of this study are to summarize the radiographic and CT findings of pulmonary tuberculosis and to determine the radiologic features frequently seen in infants with this disease.

Auth.

**8.G.13.3.21. Parvovirus infection or the fifth disease in pregnant women and newborns.** /B. Zenaishvili, E. Uberi/. Georgian Pediatrician. - 2009. - # 1-4. – pp. 3-6. – geo.

Epidemiology, pathophysiology, clinical manifestations, diagnostics, treatment and prevention of the disease caused by parvovirus have been described in the present article.

N. Chkaidze

**8.G.13.3.22. Main principles of management and diagnostics of certain perinatal infections.** /E. Uberi, N. Uberi, T. Gotua, B. Zenaishvili/. Georgian Pediatrician. - 2009. - # 1-4. – pp. 45-52. – geo.

Perinatal infection implies infection of the fetus and newborn from mother. Diagnostics of infection in pregnant women, fetus and newborn, echogenic signs of inherited infections are given. Citomegalovirus infection, its results, diagnostics, treatment and prevention are considered.

N. Chkaidze

**8.G.13.3.23. Postnatal management of antenatal hydronephrosis.** /N. Kvirkvelia, G. Chitaia/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 18-21. – geo.

Diagnostics of foetus hydronephrosis is carried out by antenatal ultrasonography. If an anomaly is revealed, a postnatal research, which starts with ultrasonography, is needful. Algorithm of children with antenatal hydronephrosis during the postnatal period, which is based only on the application of necessary methods of research in order to obtain maximum information, is presented. According to the study results, optimum treatment is administered with consideration of seriousness of hydronephrosis in order to avoid significant disturbance of kidney function and danger of generalization of the disease

N. Chkaidze

**8.G.13.3.24. Neonatal pneumonia.** /T. Gotua, I. Phavlenishvili, Ts. Pharulava, M. Chkhaidze/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 22-26. – geo.

Neonatal pneumonia makes 10% of global child mortality. Risk factors of neonatal pneumonia, ways of distribution, clinical manifestations and treatment are considered in the article.

N. Chkhaidze

**8.G.13.3.25. Recommendations for management of pediatric gastroesophageic reflux.** /Ts. Pharulava/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 48-56. – geo.

The present material was developed by the joint commission of North America and Europe societies of pediatrician-gastroenterologists, hepatologists and nutritionists in accordance with a guideline developed in 2009. The essence, diagnostics and management of the disease are described.

N. Chkhaidze

**8.G.13.3.26. Sustainable development and child security.** /G. Chakhunashvili, I. Phavlenishvili /. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 25-46. – geo.; abs.: geo., eng.

Development of sciences and monitoring on them appear to be a main task, which takes into account creation of safe environment for human health, improvement of life conditions. At the same time, it is necessary to carry out possible ecopathological preventive measures, which should be considered as a principal strategy of the 21st century. To sum up, the foundation of regions' sustainable development is children's security, which is based on united scientific governing of medicine, sports and education which is itself based on new technologies, with consideration of the socio-economic environment and essential healthcare determinants.

Auth.

**8.G.13.3.27. The role of bone marrow aspirate tests in hematological and non-hematological conditions in children.** /Z.Mtvarelidze, A.Kvezereli-Kopadze, M.Kvezereli-Kopadze/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 47-49. – geo.; abs.: geo., eng.

Bone marrow aspiration represents one of the most valuable diagnostic procedures for malignant and non-malignant hematological, systemic, certain parasitic and other diseases in children. The work aimed at investigation of clinical-lab indications for bone marrow aspirate test and analysis of data obtained as a result of bone marrow puncture. 220 patients from 4 months to 15 years underwent sternal puncture observing relevant rules in hematological department of G. Zhvania Pediatric Clinic. Morphological examination of the bone marrow punctate proved diagnosis of such rare conditions as blackfan diamond anemia, sideroblastic anemia, chronic granulocytopenia, Evans', Wiskott-Aldrich Syndromes, Di Guglielmo's disease, Langerhans cell histiocytosis. Early diagnosis of visceral leishmaniasis should be specially mentioned. Research data analysis demonstrates that the manipulation should be done in case of manifested bone marrow disorder symptoms: fever of unexplained origin, pallor, weakness, enlargement of lymph nodes, liver, spleen, weight loss, bone and joint, hemorrhage and hematomas, frequent infections. Peripheral blood count reveals atypical cells or blasts, pancytopenia or excess blood cells, unexplained anemia, leucopenia or thrombocytopenia.

Auth.

**8.G.13.3.28. The pediatric clinical pharmacology and rational pharmacotherapy.** /R. Jashi/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 49-55. – geo.; abs.: geo., eng.

The pediatric population is a dynamic group with major changes in pharmacokinetics and pharmacodynamics taking place throughout infancy and childhood. Therefore, the need for the evolution and establishment of medication dosing regimens in children of different ages is great. Special consideration must be taken into account when dosing medications in pediatric patients. This review was developed with intent to serve as a compilation of recommended pediatric doses found in the literature and to provide relevant clinical information regarding the use of drugs in children.

Auth.

**8.G.13.3.29. Marfan syndrom in children.** /T.Ghonghadze, M.Lekiashvili, T.Gogatishvili/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 68-71. – geo.; abs.: geo., eng.

Marfan syndrome (MFS) is a spectrum disorder caused by a heritable genetic defect of connective tissue that has an autosomal dominant mode of transmission. The defect itself has been isolated to the FBN1 gene on chromosome 15, which codes for the connective tissue protein fibrillin. Abnormalities in this protein cause a myriad of distinct clinical problems, including musculoskeletal ones. Although there are some unique signs or symptoms of Marfan syndrome, the constellation of long limbs, the dislocated lenses and the aortic root dilation are generally sufficient to make the diagnosis with reasonable confidence. There are more than 30 other clinical features that are variably associated with the syndrome, most involving the skeleton, skin and joints. There may be considerable, cardiac and ocular system problems predominate. We document a case of a patient - age 2 months. The patient was under treatment in the infant therapeutic department of G. Zhvania Pediatric Clinic in Tbilisi in April 2011 and was diagnosed with pneumonia. As the coexisting illnesses, there were symptoms of Marfan syndrome. The body length of the patient was 72 cm; long, slender limbs and fingers; joint hypermobility; hypermobility of finger joints; lower shoulders; pectus deformities; Highly arched palate; Hypoplastic ciliary muscle in ocular system. In cardiovascular system mitral valve prolapse, without regurgitation, tricuspidal valve prolapse, with regurgitation. Family history – tall parents, father with long slender limbs and joint hypermobility, thoracolumbar scoliosis. Our diagnosis was based on phenotypical features of the patient. The Ghent nosology cannot exclude Marfan syndrome in children, because of the age-dependent penetrance of many features.

Auth.

**8.G.13.3.30. Evolution of acute bronchiolitis in breastfed and formula-fed infants and nebulizer therapy by hypertonic solution.** /T. Ghonghadze, E. Kutsia, T. Zhorzholiani, E. Pheradze/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 72-74. – geo.; abs.: geo., eng.

Acute bronchiolitis is the most common cause of lower respiratory tract infection in infants. In 90% it is caused by respiratory syncytial virus (RSV). Impact of breast feeding on evolution of acute bronchiolitis in infants aged 1-12 month(s). Assessment of results of treatment by nebulized therapy with hypertonic (3%) saline and necessity of administration of bronchodilators and corticosteroids. Exclusive breast feeding improves health condition sooner than in formula-fed babies and hospital stay day is lower in breastfed babies.

Auth.

**8.G.13.3.31. Inherited thrombophilia and pregnancy.** /M. Abashidze, N. Phirtschelani, L. Makhdiani, E. Gaprindashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 3-5. – geo.; abs.: eng.

There is growing evidence that environmental and genetic risk factors often interact to induce clinically manifested venous thromboembolism (VTE). Thrombophilia is an inherited or acquired predisposition to thrombosis. Pregnancy is a hypercoagulable state with an increased thrombotic risk throughout gestation and the postpartum period. Women with inherited thrombophilia (factor V Leiden, prothrombin G20210A, and methylenetetrahydrofolate reductase (MTHFR) TT 677 genotype) have a further increased risk not only for pregnancy related venous thromboembolism (VTE), but also for other pregnancy complications including fetal loss, particularly recurrent early fetal loss or stillbirth, preeclampsia and intrauterine growth retardation.

Auth.

**8.G.13.3.32. Structure of congenital anomalies in regions of Georgia in 1996–2000.** /G. Gagoshidze, E. Mirvelashvili, B. Tkeshelashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 21-23. – geo.; abs.: eng.

On the assumption of the existed demographic situation in the country, children health is considered as one of the problems of great importance. According to the statistical data, 4226 cases of separate conditions revealed at prenatal period and 347 cases of congenital anomalies have been recorded. The aim of the present study was the investigation of congenital defect structure in children. After the conducted study the following results have been revealed: the rate of heart (defect) disease was significantly high within 1996 – 1997. As for the regions and cities of Georgia, most of the cases were fixed in Batumi, approximately 36% of the total rate. It appeared that defect's structure is very interesting as well and by the present study it looks as follows: most

frequent ( $P < 0.01$ ) cases – spinal cord hernia in 23% of children, most rare ( $P < 0.01$ ) cases - diaphragm hernia and omphalocele in 0.6%, respectively.

Auth.

**8.G.13.3.33. Assessment of neuropsychological and social development of early-age children with iron deficiency anemia by BINS.** /N. Manjavidze, K. Matiashvili, T. Ghonghadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 85-87. – geo.; abs.: eng.

Peculiarities of neuropsychological development of early-age Georgian healthy children and children with iron deficiency anaemia were studied. Neurological, expressive, receptive and cognitive clusters were assessed by the Nancy Beyley's Infant neurodevelopment screener. Study results from both groups revealed reliable difference of mean indices from Beyley's normal quantities. Results can be stipulated by incorrect management of social adaptation steps, which is based on maternal, as on standard persons' role in child's growth-development issues. Deviations shown in the case of iron deficiency anemia, primarily sharp depression of cognitive and expressive functions, are presumably stipulated by body iron deficiency.

Auth.

**8.G.13.3.34. Prerequisites of bacteriophage therapy in neonatology.** /G. Metskhvarishvili, I.A. Korinteli, I.G. Korinteli, K. Paghava/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 90-93. – geo.; abs.: eng.

Generally, phage therapy is the therapeutic use of bacteriophages to treat pathogenic bacterial infections. We have analyzed the literature about the therapeutic use of bacteriophage in practical medicine. The history of bacteriophage therapy is approximately one century long. The majority of papers come from Poland, Russia, USA, Georgia and UK. Double blind clinical trials are very few. Essential increasing of antibiotic resistant bacteria as an etiological factor of different diseases, incl. neonatal period as well, causes the deep interest for this type of antibacterial treatment over the world. It was shown that a) phages could be active against Proteus, Klebsiella, Escherichia, Shigella, Ploodseudomonas, Salmonella, Streptococcus, Staphylococcus; b) bacteriophage therapy has not any important adverse reactions; c) orally given phages are able to disseminate into blood, stool, urine; d) there are data about the effectiveness of bacteriophage therapy in infants. All the above-mentioned can be considered as a prerequisite of the bacteriophage therapy in neonates.

Auth.

**8.G.13.3.35. Hemodynamic, electrocardiographic and physical properties of child athletes with various degrees of mitral valve prolapse.** /T. Svanishvili, E. Tataradze, Z. Sopromadze, N. Tchabashvili, E. Tchumburidze, M. Buleishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 105-106. – geo.; abs.: eng.

The purpose of the study was to assess the impact of the degree of mitral valve prolapse on hemodynamic indicators and physical working capacity in 9-11 year-old soccer players, as well as to reveal any electrocardiographic differences. 54 children among the soccer players examined in the frames of screening program were diagnosed with various degree of mitral valve prolapse. Namely, 31 children out of 54 had mild degree of the prolapse ( $< 2$  mm, Group I) and 23 children had relatively deep prolapse ( $> 2$  mm, Group II). The children underwent anthropometric, echocardiographic and electrocardiographic investigations before and after physical exertion, as well as determination of physical working capacity. The study has revealed that 45% of the children in the Group I and 78% in the Group II had systolic murmurs. The systolic click was observed in 94% of cases in the Group I and 78% in the Group II. As for the hemodynamic signs, significant changes were observed only in regards with alterations of heart rate in response to physical exertion (mean heart rate: I Group-130; II-Group-138) and especially at 5th minute of post exercise recovery (mean heart rate: I Group- 92; II-Group-102), ( $P < 0.01$ ). The Body Mass Index was lower in the Group I but the difference was not significant. As for the electrocardiographic data, differences were mainly noted in repolarisation period. In both groups almost half of the children had irregular heart rate. The indicators of physical working capacity (PWC170) and maximal oxygen consumption ( $VO_{2max}$ ) were almost identical in both groups. Obtained data demonstrate that degree of mitral valve prolapse does not cause any significant differences in regards with

hemodynamic indicators and physical working capacity. Therefore, even relatively deep prolapse does not present a contraindication for physical exertion in children in the absence of symptoms or complains. Nevertheless, systematic medical control is required in this category of children.

Auth.

**8.G.13.3.36. Paediatric asthma management - contemporary challenges.** /R.Karseladze/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.;\_abs.: geo., eng.

Constantly increasing and alarming epidemiologic indices of wheezy disease in the young-age group during the last 15 years set before physicians and healthcare professionals an issue of international cooperation in asthma study. Various expert groups developed consensuses on pediatric asthma, which serve as guidelines for European and American clinicians. Besides, it should be mentioned that "asthma and allergy, unlike other diseases, are significantly influenced by local, regional and individual factors." Four newest international documents: 1. The PRACTALL (practicing allergology-2008), developed by European Academy of Allergy and Clinical Immunology (EAACI) and American Academy of Allergy, Asthma and Immunology (AAAAI), which provide practical recommendations for clinicians on asthma diagnostics, management and monitoring in the young age group. 2. The European Respiratory Society (ERS) Task Force Paediatric Guideline (2008). 3. The 2009 GINA Paediatric Guidelines. 4. The American Expert Panel Report "National American Education and Prevention Program (2007)" are considered in the paper.

N. Chkhaidze

**8.G.13.3.37. Antibiotic therapy during respiratory diseases in children.** /N. Uberi, E. Uberi/. Georgian Pediatrician. - 2009. - # 1-4. – pp. 30-33. – geo.

Antimicrobial therapy is one of the main components of treatment in case of bacterial nature of respiratory diseases. Expediency of selection, timeliness and correct dosage increases the effect of treatment. Directions and recommendations of a rational antibacterial treatment are given in the article.

N. Chkhaidze

**8.G.13.3.38. Diagnostics of arias syndrome and ways of correction.** /M. Kvezereli-Kopadze/. Georgian Pediatrician. - 2009. - # 1-4. – pp. 37. – geo.

A research was carried out in order to reveal yellowness caused by maternal milk and development of new approaches to its therapy. As a result preservation of breast-feeding for babies became possible by means of simple correction of the feeding process.

N. Chkhaidze

**8.G.13.3.39. Contemporary principles of management and prevention of congenital infection (toxoplasmosis, listeriosis).** /T.Gotua, I.Phavlenishvili, Ts.Pharulava, E.Uberi, N. Kintsurashvili/. Georgian Pediatrician. - 2009. - # 1-4. – pp. 41-44. – geo.

Correct diagnostics of acute infections of toxoplasmosis, listeriosis during pregnancy is extremely important for prevention of the fetus and newborn infection. The causes of infection, ways of transfer, clinical signs and treatment are discussed in the article. Besides, recommendations for prevention of inherited toxoplasmosis and listeriosis are given.

N. Chkhaidze

**8.G.13.3.40. Modern aspects of childhood idiopathic thrombocytopenic purpura.** /M. Kvezereli-Kopadze, A. Kvezereli-Kopadze, Z. Mtvarelidze/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 9-15. – geo.; res. eng.

Idiopathic thrombocytopenic purpura is an autoimmune disease, which is caused by numerical and qualitative disturbance of thrombocyte disks. Etiology of the disease has not been interpreted completely as yet. A research in children with the disease was carried out for the purpose of analysing the results of 20-year study, diagnostics and specification of unsolved problems of treatment. Obtained results were discussed and it was concluded that various methods of treatment must be studied for reveal of comparatively optimal approach with minimum side effects.

N. Chkhaidze

**8.G.13.3.41. Cardiovascular system injury during acute viral respiratory infections in children.** /N. Tsintsadze, D. Tabutsadze, M. Ghutchashvili, T. Gogilashvili, M. Topuridze, R. Ioseliani/. Cardiology and Internal Medicine. - 2010 - № 3-4(31-32). . - pp. 17-20. - geo.; abs.: eng. The purpose of our research was to investigate cardiovascular system injury with acute viral respiratory infection (AVRI) in 52 children. In 30% of patients mild form of disease was identified, 50% were suffering from moderate and 20% from severe form of the disease. The most frequent complications of the disease were: acute bronchitis, pneumonia and otitis. Control group included 20 healthy children of the same age. Besides regular medical investigation, children underwent ECG. Based on the study results we can conclude that: 1) ECG is not very informative method during AVRI; 2) Heart hypertrophy and ventricular alterations in repolarization processes is identified only during severe form of AVRI; 3) All patients with severe form of AVRI should be provided with ECG monitoring.

Auth.

**8.G.13.3.42. Comparison of radiation background and frequency of genetic abnormalities among infants of Adjara foreland.** /N. Vepkhvadze, N. Kiladze, I. Tskhovrebadze, N. Tskhovrebadze, M. Khorbaladze/. Georgian Medical News. - 2010. - #10 (187). – pp. 52-55. – rus.; abs.: geo., eng., rus.

Radioecological situation of Adjara foreland and external irradiation doses of population have been studied. A comparison of frequency of genetic abnormalities (congenital abnormalities, underweight) among infants born in 2004-2008 and magnitude of the radiation background (RB) of region was studied to establish the causal connection between genetic abnormalities and RB. It was found, that relatively high dose of external irradiation is not the determining negative factor affecting the health of the newborns. At the same time, various factors of low intensity in nature, the magnitude of the RB and total irradiation dose contribute to the development of a congenital anomaly.

Auth.

**8.G.13.3.43. Possible criteria for early diagnosis of endometrial hyperplastic processes (EHP).** /N. Guliyev, L. Makashvili, D. Kobeshavidze/. Experimental and Clinical Medicine. – 2010 . - #3(58). - pp. 15-19.- rus.; abs.: eng.

Our aim was to develop a systematic approach to early diagnosis for correction of EHP (150 women, in the early reproductive period were 64 (42.7%), in the late reproductive - 86 (57.3%)). Disease duration in 54.8% of cases ranged from 3 months to 1 year. The patients were divided into 3 groups: I group - 70 patients (46.7%) with glandular and glandular-cystic hyperplasia of the endometrium; II group - 65 (43.3%) - with endometrial polyp; III group - 15 (10%) - atypical endometrial hyperplasia (clinical, cyto- and histological techniques, ultrasound and hysteroscopy were used). Based on the results, the following algorithm of examination was made: clinical-anamnestic examination, evaluation of patients' complaints, the overall clinical and biochemical analysis of the blood (Tumor marker CA-125, CA 19-9), cytological and histological examination, pelvic echography. A systematic approach to the correction of endometrial hyperplastic processes will be developed.

Auth.

**8.G.13.3.44. Dopplerometric description of the uteroplacental-fetal circulation in pregnancies with fetoplacental dysfunction.** /K. Geydarova, I. Shamkhalova, L. Makashvili, P. Tchighladze, D. Kobeshavidze/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 27-32. – rus.; abs.: eng.

The major aim of the investigation was to study the uteroplacental circulation specificity in pregnant women with fetoplacental dysfunction and early pregnancy loss in anamnesis. Equally important was the determination of the fetoplacental circulation in pregnancy loss. Doppler velocimetry was performed in 122 pregnancies: in the basic group n=82 and in the control group n=40. The age of the women was between 22-33 years. In 51 (62,2 %) women with I-II level arterial circulation dysfunction systolic ratio was increased by 7.7% as compared to the control group, early diastolic ratio – by 17.3 % and medium reverse flow – by 6.4%. Common changes in venous circulation of the women with fetoplacental failure increased systolic flow during a decrease in the systolic period in the atriums. The highest systolic flow was determined in 21.9% of the pregnant patients without

disturbances in the arterial part of the fetoplacental system. Doppler index was lower than the control group or equal to it. During homodynamic dysfunction in the arterial part of the fetoplacental system, an index of resistance progressively increased in the venous flow and reached the maximal level in 15.7% of the women. Doppler velocimetry index of the inferior vena cava changes simultaneously with the increase in arterial flow dysfunction and severity level of fetal condition.

Auth.

**8.G.13.3.45. Up-to-date correction methods for climacteric syndrome.** /M. Ismailova, I. Shamkhalova, L. Makashvili, I. bajelidze/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 36-40. - rus.; abs.: eng.

Pathological conditions caused by the age-specific changes accompanied by hormonal reconstruction are considered in the article. The climacteric syndrome in combination with metabolic disorders requires obligatory correction not only via hormonotherapy, but using exchange processes as well. The literary data of different researches devoted to the study of the efficiency of the substitutive hormonotherapy (SHT) implementation with climacteric syndrome are described in this article. Numerous researches have proved that the use of substitutive hormonal therapy in combination with different analogues of sexual steroid hormones and medicines improves exchange processes in the basic procedure of menopause prophylaxis and treatment, thus improving living activities of women at this age-specific period. Presently, various phytotherapeutic medicines are widely introduced into practice and implemented along with SHT.

Auth.

**8.G.13.3.46. Placenta of pregnant women with urine fibromyoma.** /N. Asadova/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 17-20. – rus.; abs.: eng.

The purpose of the present research is to study features of the placenta in women with uterine fibromyoma during the third period of their pregnancy. There were 153 women under investigation: 46 of them without uterine fibromyoma – group 1 (control), group 2 – 57 women with fibromyomectomy performed before the present pregnancy, group 3 - 50 pregnant women with uterine fibromyoma. It was established that the absolute majority (95.6%) of the control group women had the placental structure without any changes. The majority of the pregnant women (89.4 %) with myomectomy in the medical history also had the placental structure unchanged, and only 80% of the women with uterine fibromyoma had the placental structure without changes ( $p < 0.05$ ).

Auth.

**8.G.13.3.47. 2006-2009 dynamics of the etiological structure of vaginites.** /E. Kikacheishvili, E. Mirvelashvili, M. Dzagnidze, A. Dedabrishvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 29-31. - geo.; abs.: eng., rus.

Aim of the study was to investigate the etiological structure of vaginitis dynamics in 2006-2009. Vaginal flora in 250 females during the inflammatory vaginitis was investigated by bacteriological analysis. By the rate of excretion, staphylococci came the first, the second was *T. vaginalis*, *C. albicans* being the third. One third of the microorganisms were detected in a form of monocultures, two-thirds - as associations, the most frequent combinations being: *S. epidermidis*+*T. vaginalis*, *T. vaginalis*+*C. albicans*, *T. vaginalis*+*E. coli*.

Auth.

**8.G.13.3.48. The role of oxidative stress in the development of atherosclerosis in postmenopausal women.** /L. Ratiani, G. Pharkosadze, T. Sanikidze, N. Intskirveli/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 175-177. – geo.; rus.: eng., rus.

The article aims at the establishment of a correlation between diagnostically important atherosclerosis markers and intensity of oxidative stress in blood of postmenopausal women. It was revealed that dyslipidemia and obesity induce the intensification of atherosclerosis in postmenopausal women. In the hyperoxidative environment, the oxidation of vasodilator nitric oxide takes place. As a result, the free nitric oxide content decreases in blood; annihilation of the vasodilating activity of blood induces the development of hypertension in postmenopausal women.

Auth.



**8.G.13.3.49. Protecting the environment from pollution by application of nitric fertilizer of a prolonged action.** /M.Gurgenishvili, I. Chitrekashvili, G. Papava, N. Khotenashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 179-182. – geo.; abs.: eng., rus.

A method has been developed to obtain nitrogenous fertilizers of prolonged action with the purpose of protection of environment from pollution. Such fertilizers are highly efficient, they contribute to efficient assimilation of nutrients by plants, impede washing out of nutrients and protect environment from pollution. The new type nitrogenous fertilizer obtained by us – structured carbamide is characterized of great advantage compared with the non-structured type. Economy by application of such fertilizer equals to 50%.

Auth.

**8.G.13.3.50. Correction of physical conditions and functional indices of different age children.** /D. Chitashvili, E. Korinteli, G. Zubitashvili, N. Berianidze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 85-89. – geo.; res.: eng., rus.

The methods of observing sport results for youth are described in the article. Part of the children who were examined, were exercising by means of general physical preparation, while the other group – with specific exercises. The dynamics of their physical and functional development is a basis for giving interesting and helpful recommendations to coaches for correction of the process of exercising.

Auth.

**8.G.13.3.51. Study of factual nutrition in children from children's house.** /Sh. Tukvadze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 128-132. – geo.; eng., rus.

We studied factual nutrition in children living in children's house. Proper nutrition in childhood can reinforce lifelong eating habits that contribute to children's overall well being and help them to grow up to their full potential and a healthy life. Good nutrition means body is getting all the nutrients, vitamins, and minerals it needs to work at its best level. Energy (calories) should be adequate to support growth and development and to reach or maintain desirable body weight. Nutritional requirements rise as children begin puberty in order to support sexual development. A diet that provided sufficient calories and nutrients during childhood may no longer be sufficient for a child beginning puberty. Qualitative and quantitative analysis of children's diet revealed some irrelevances: disbalance between carbohydrate, lipid and protein composition and disbalances in micronutrients (Iodine, iron, zinc). Such disbalance of micronutrients in the diet can eventually lead to iodine, iron and/or zinc deficiency.

Auth.

**8.G.13.3.52. EPR Study of Bile Stones in Menopausal Women.** /M. Shengelia, T. Sanikidze, E. Chikvaidze, N. Gogebashvili, N. Intskirveli/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 177-178. – geo.; res.: eng., rus.

The aim of the study was establishment of role of FSH in pathogenesis of bile stone disease in menopausal women blood. The bile stones of 30 women aged  $52,4 \pm 9,7$  year was studied (2 women with surgimenopause (33-35 year). Stone EPR spectra registered on the EPR spectrometer ESR-V. In stones EPR specter the intensive signal of oxidized bilirubine ( $g=2.003$ ,  $H=1.0\text{mmTI}$ ) was revealed. The statistical important negative correlation was revealed between content of bilirubine EPR signal intensity in the stones and content of FSH in blood of menopausal women. It was concluded, decreasing of the level of FSH in blood of postmenopausal women decreases secretion of melatonis level, which by itself induces oxidation of bilirubine, causes initiation of oxidative stress and development of bile stone disease in postmenopausal women.

Auth.

**8.G.13.3.53. Menopause and depression.** /Sh. Vashadze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 46-48. –rus.; res.:eng.

Menopause is also known as "the change of life" and for some women it can be the most challenging time in their life both physically and mentally. Often due to the psychological effects, menopause can affect the whole family. It is mainly connected with the last menstrual period. For western women the average age of its occurrence is 51 (although women between the ages of thirty and sixty experience menopause). Menopause occurs when the ovaries cease responding to

the controlling hormones that are released by the pituitary gland situated in the brain. Women experience menopause differently. Some hardly notice the change apart from irregular periods whilst others suffer from all the symptoms which can affect their life considerably. It is established the tendency to level decrease in blood serotonin (205.72; 6.74 ng/ml). The beginning of the disease is in positive correlation with depression by uneasiness and an index of instability of marriage. Menopause, in general, is not associated with an increased risk of depression. In fact, while once considered as a unique disorder, research has shown that depressive illness during menopause is not different from other ages. The women with a history of past depressive episodes are more vulnerable to the change-of-life depression.

Auth.

#### **8.G.13.4. Stomatology**

**8.G.13.4.1. Acroseal in the treatment of periodontitis.** /N. Abashidze, N. Tatishvili, Kh. Gogishvili, Q. Alania, T. Tsintsadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 5-7. – geo.; abs.: eng.

The aim of our research was to evaluate the efficiency of Acroseal during the treatment of periodontitis. 150 teeth of 106 patients were used for this study. Patients were treated and observed for a substantial period of time (1month, 3months, 6 months and 12 months). 86 (57.33±2.0%) were single-channel and 64 (42.67±2.0%) multirooted. We divided patients into two groups. In every group were 75 teeth, 25 of them had periodontitis chronic granulaus, 25 - periodontitis chronic granulomatosa and 25 – periodontitis chronic exacerbate. In the first group we used Acroseal and in the second Endometasone. We can resume that the usage of Acroseal (Septodont) during the treatment of the chronic forms of periodontitis is very effective.

Auth.

**8.G.13.4.2. Two-stage treatment method of odontogenic cysts penetrated with the maxillar sinus without soft tissue plastic.** /O. Bregadze, K. Metreveli/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 18-20. – geo.; abs.: eng.

The purpose of our research was to offer a two-step original surgical procedure to dentists, who have a successful practice in oral surgery, which helps in surgical treatment of small- and medium-size cysts, which are in or have contact with the upper maxillar. This procedure is used for treatment of odontogenic cysts, when we cannot make a resection of the root apex, because the most part of it is in cyst. So, we can successfully utilize this two-step original surgical method in the treatment of small and medium size cysts.

Auth.

**8.G.13.4.3. The effect of halothane on the number of the GAD65/67 positive cells in rat hippocampus at the background of Midazolam premedication.** /Z. Vadachkoria, L. Dzidziguri, E. Bakuradze, I. Modebadze, D. Dzidziguri/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 50-52. – geo.; abs.: eng.

The experimental results of halothane effect on GAD65/67 positive cells, number in  $\tilde{N}A1$  and  $\tilde{N}A3$  fields of white rat hippocampus are presented in the proposed work. It has been shown that the number of GAD65/67 positive cells are decreased in the CA3 field of hippocampus after 24 hours of halothane anesthesia. Simultaneously, the number of the same cells is increased in the CA1 field of hippocampus. Midazolam premedication promotes the normalization of activity of GAD65/67, which is substantiated by an increased number of GAD65/67 positive cells in the CA3 field of rat hippocampus after 24 hours.

Auth.

**8.G.13.4.4. The use of polcortolon cream in the treatment of tropical lichen.** /M. Iverieli, N. Abashize, KH. Gogishvili, Q. Alania, N. Tatishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 63-64. – geo.; abs.: eng.

The aim of our research was to determine the efficiency of 0.1% polcortolon in the treatment of tropical lichen. We studied 48 patients aged from 32 to 64. 42 of them (87.5±4.5%) were women

and 6 (12.5±4.5%) were men. The typical form of the disease was in 30 (62.5±2.6%) patients, exudative hyperemical - in 12 (25.0±2.45%), ulcerosa - in 6 (12.5±2.14%). Patients were divided into two groups, 24 in every group. 15 of them had typical form of the disease, 6 – exudative-hyperemical form, and 3 – ulcerosa form. All patients had the traditional scheme of treatment. Patients in the first group were additionally given Polcortolon. The positive results were achieved in both groups, although in the first group we needed less visits than in the second one. Also, remission in the first group took longer than in the second group. Our research proved the high effectiveness of Polcortolon in the treatment of tropical lichen.

Auth.

**8.G.13.4.5. Burning mouth syndrome (BMS), differential diagnostics and algorithm of complex treatment.** /R. Kenchadze, M. Iverieli, N. Geladze, N. Abashidze, Kh.Gogishvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 72-77. – geo.; abs.: eng.

Glossalgia, glosodinia, glossopirose - a term used by different authors to define Burning mouth syndrome (BMS) is still considered as one of most serious facial pains, etiologic factors and pathogenic mechanisms of which are not always possible to determine. 60 patients, aged 45–70, have been examined by the authors under conditions of stomatologic and neurologic clinics. The carried studies have allowed selection of 4 clinical groups according to the supposed etiologic factors and the obtained paraclinical data taking into consideration both the clinical manifestations and the presence of visceral or endocrine pathologies, mental condition and society in each separate case. The algorithm of the complex approach to BMS therapy in each of the selected groups was developed. Long-term remission (6-10 months of duration) was reached in 42% of the patients and full remission - in 18%, respectively. Temporary improvement during the treatment was seen in 12% of the cases. The authors are planning further actions for more profound studying of BMS syndrome.

Auth.

**8.G.13.4.6. Use of Trachisan in the postoperative period of dental implantation and oral surgery.** /K. Metreveli, O. Bregadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 112-113. – geo.; abs.: eng.

The purpose of our investigation is an evaluation of efficiency of TRACHISAN used in the postoperative stage of 24 dental implantations and oral surgery. Our research was carried out on 60 patients (28 females and 32 males) aged from 20 to 61 years and divided into two groups. Among them, implantation was performed in the case of 18 patients, extraction of retented wisdom teeth - in 26. and root apex resection with cystectomy due to odontogenic cysts with the various dimensions and localization – in 16 patients. In the complete treatment of both groups, we additionally, in the first group, postoperatively, for a week, were using TRACHISAN. Generally, the treatment results were positive. Only two cases of controlled patients were complicated with longer postoperative oedema. In the first group of investigated patients, sutures were removed after 7-9 days, instead of 8-12 days in the second control group. So, according to our research, it can be concluded that TRACHISAN improves the oral hygienic condition and decreases the wound healing period. It has antimicrobial and painrelieving activity and can effectively be used in the complex treatment during the postoperative period of dental implantation and oral surgery.

Auth.

**8.G.13.4.7. Clinical aspects of removable laminar dentures.** /A. Safarov/. Georgian Medical News. – 2010. – #2(179). – pp. 15-18. – rus.; abs.: geo., eng., rus.

One of the main goals of modern orthopedic dentistry is the development of high-quality removable laminar dentures. Some materials used in making removable laminar dentures consist of polymethyl methacrylate, which causes serious pathological process in the tissue of denture's zone and low adaptation ability of the organism. There is a growing interest in the production of different types of removable dentures made of thermoplastic material, which is biocompatible with the organ and tissues of the oral cavity. The interest in the manufacture of removable laminar dentures of thermoplastic materials has significantly grown lately. The aim of this study was to examine the properties of thermoplastic materials in orthopedic dentistry. The results of this investigation revealed good functional and adaptation properties of removable laminar dentures made of thermoplastic materials.

Auth.

**8.G.13.4.8. The effect of tobacco-smoke components on  $\alpha$ -ketopropionic acid concentration in teeth of tobacco smokers.** /D. Zurabashvili, I. Tchanturia, L. Kapanadze, G. Danelia/. Georgian Medical News. – 2010. – #2(179). – pp. 27-30. – rus.; abs.: geo., eng., rus.

The composition of cigarette-smoke is relatively well known in spite of its tremendous complexity. But the analysis of cigarette smoke toxicological effect on biochemical components of tooth enamel, dentine and pulpe has not been completely studied. The present study was designed to characterize the pulpe biochemical component ( $\alpha$ -ketopropionic acid) by acute serous pulpitis. The total number of 140 patients, age 35-40 (Tobacco-smokers 80, non-smokers – 60) have been investigated. The results suggested that tobacco-smokers incisor teeth and molars contain less  $\alpha$ -ketopropionic acid than those of non-smoker individuals. These studies support the hypothesis of the cigarette-smoke's important role in the tooth support mechanisms. The biochemical activity and function of tooth proteins and amino acids composition must be compared to concentration of tobacco-smoke components.

Auth.

**8.G.13.4.9. Chemiluminescence of whole saliva in antioxidant treatment of prosthetic bed tissues.** /M. Tunyan, B. Lalayan, A. Zakaryan, K. Grigoryan, G. Poghosyan, H. Yeghiazaryan/. Georgian Medical News. – 2010. – #3(180). – pp. 20-25. - rus.; abs.: geo., eng., rus.

This study aimed at determining the effectiveness of adaptogens, antioxidants in the complex treatment of diseases of tissues prosthetic field and their influence on the processes of LPO in whole mixed unstimulated saliva. The effect of antioxidants in combination with traditional treatment in 70 patients with periodontal disease and prosthetic bed was assessed by chemiluminescence analysis of the whole mixed unstimulated saliva. The level of lipid peroxidation and chemiluminescence activity exceeded the normal values by 1.5-2 times before the treatment. After the treatment with antioxidants, these parameters decreased and increased again during remission.

Auth.

**8.G.13.4.10. The need of orthopedic and dental help for aged and old persons in Georgia.** /L. Morchadze, V. Margvelashvili/. Georgian Medical News. – 2010. – #5(182). pp. 12-15. – rus.; abs.: geo., eng., rus.

According the demographic changes taking place in the world, we are experiencing the process of radical aging. It is very essential to evaluate the quality of orthopedic treatment. For this purpose, we should identify the prosthesis of different constructions in the patient's mouth cavity and assess their fitness and use terms. The necessity of orthopedic treatment in 50-59- year-age groups was equal to 54% and in 80-89-year-age groups this number increased to 84%. In the case of loosing all the teeth, only quality prostheses can guarantee normal chewing of food and avoid gastrointestinal disturbances.

Auth.

**8.G.13.4.11. Correlations between complications after cosmetic veneer treatment and initial parameters of oral cavity.** /R. Ivanishvili, V. Margvelashvili, M. Kalandadze/. Georgian Medical News. – 2010. – #5(182). – pp. 16-20. – rus.; abs.: geo., eng., rus.

The aim of the study was to define interrelations between complications after veneer treatment with initial parameters of the oral cavity, the state of the organism and social and biological factors. 65 patients with veneers treated between 2005 and 2009 at Margvelashvili Dental Clinic (Tbilisi) were investigated. Correlation analysis on Spearman was spent with application of the package statistical programs SPSS 11.5. A chip of veneers finds out significant positive correlation with the following factors: a crossbite -  $r=0.2543$ ,  $p<0.0409$ ; decompensative caries -  $r=0.3189$ ,  $p<0.0096$ ; exhibiting of a pathological microflora -  $r=0.2879$ ,  $p<0.0163$ ; discoloration - patient aged 41-60 -  $r=0.3877$ ,  $p<0.0014$ ; focal infection contamination -  $r=0.2599$ ,  $p<0.0366$ ; frequent use of coffee -  $r=0.2819$ ,  $p<0.0229$ ; ulitis up to veneer -  $r=0.2444$ ,  $p<0.0498$ ; appearance line of demarcation - with the mechanical factor -  $r=0.3479$ ,  $p<0.0045$ ; use of synthetic fluids, -  $r=0.3823$ ,  $p<0.0017$ ; recurrence caries - with gastrointestinal pathologies  $r=0.2924$ ,  $p<0.0181$ ; of a focal infection contamination -  $r=0.2756$ ,  $p<0.0263$ ; by feeding priority by carbohydrates -  $r=0.2324$ ,  $p<0.0625$ ;

decompensate caries -  $r=0.2583$ ,  $p<0.0377$ ; exhibiting of a pathological microflora – among males -  $r=0.2772$ ,  $p<0.0254$ ; by smoking -  $r=0.3227$ ,  $p<0.0087$ ; gastrointestinal pathologies -  $r=0.2365$ ,  $p<0.0579$ ; by endocrine diseases -  $r=0.2546$ ,  $p<0.0407$ ; by focal infection contamination -  $r=0.5416$ ,  $p<0.0000$ ; decompensate caries -  $r=0.2530$ ,  $p<0.0420$ ; by an ulitis –  $r=0.4551$ ,  $p<0.0001$ ; by a hygienic index -  $r=0.4611$ ;  $p<0.0001$ ; periodontal index -  $r=0.4611$ ,  $p<0.0001$ ; PMA index -  $r=0.3529$ ,  $p<0.0039$ . The correlation circuit of the factors of complications after veneers will help the practical stomatologists with realization of purposeful prophylaxis.

Auth.

**8.G.13.4.12. Assessment of prevalence and risk factors of aesthetic dental defects and identification of need of veneers in the population of Tbilisi.** /R. Ivanishvili, V. Margvelashvili, M. Kalandadze/. Georgian Medical News. – 2010. – #6(183). – pp. 13-17. – rus.; abs.: geo., eng., rus.

The work is fulfilled on the basis of investigation of 330 persons aged from 14 to 70 from the common population of Tbilisi. The patients entered the clinic in 2005-2009. Criteria of exception: general diseases, diabetes, autoimmune diseases, serious forms of parodontosis caused by somatopathies. The relative chance of need of veneers is defined by the following factors: smoking - OR=1.82 (95%CI=1.13-12.37); pathologies gastrointestinal of a path - OR=1.94 (95%CI=1.22-14.26); the focal infection contamination loci - OR=65.57 (95%CI=8.80-76.22); the mechanical factor - OR=2.23 (95%CI=1.27-58.95); drug treatment - OR=2.14 (95%CI=1.34-24.56); carbohydrates-rich food - OR=2.89 (95%CI=1.51-13.15); excessive consumption of sweet - OR=1.87 (95%CI=1.07-9.85); frequent drinking of coffee OR=1.75 (95%CI=1.10-12.51); distal occlusion - OR =2.26 (95%CI=1.09-18.68); - subcompensated caries - OR=2.04 (95%CI=1.28-23.48); pre-veneer ulitis - OR=1.62 (95%CI=1.02-19.20); post-veneer complications: partial or direct filling decomposition - OR=34.12 (95%CI=7.98-52.11); filling discoloration - OR=80.67 (95%CI=19.15-509.48); appearance of a line of demarcation - OR=95.23 (95%CI=12.86-714.61); recurrent caries - OR=25.75 (95%CI=7.69-39.87); ulitis - OR=11.22 (95%CI=3.22-68.99); pathological microflora manifestations - OR=123.16 (95%CI=16.68-726.40).

Auth.

**8.G.13.4.13. Theoretical and practical principles of dentinogenesis: hypotheses and clinically confirmed reality.** /M. Mamaladze, M. Ustiashvili/. Georgian Medical News. – 2010. – #9(186). – pp. 22-27. – rus.; abs.: geo., eng., rus.

The problem of maintaining dental vitality and stimulating reparative processes is a priority in modern odontology. Restorative processes depend not only on the type and size of tissue damage, but also on the protection capacity and integrity of the structural/functional pulp-dentin boundary. Primary dentin that is initiated in the intrauterine period has the unique structure and composition. Secondary dentin continues to form after the tooth is erupted, after the root formation is finished, and throughout life. Actually, the primary and secondary dentins have similar tissue structures developed at different stages of dentinogenesis. Primary dentinogenesis is initiated by odontoblasts located in the periphery of dental pulp. Secondary dentin as a structure already exists once root formation is complete, but at that stage is has low levels of mineralization. Formation of tertiary dentin is always reactionary to different pathologies and is initiated by so called transitional odontoblasts (odontoblast-like cells) and partially fibroblasts. Odontotropic and anti-inflammatory medications strongly change structural characteristics of the dentin. Pulpal ability to produce dentin-like matrix (tertiary dentin) is an important component of the pulp-dentin reparative capacity. Only specific characteristics of the dentin can account for indications and contraindications for using restorative liners and explain the impact of adhesive systems on these. In this context, the interest is high to the dentin and its response and change in reaction to different stimuli. Dental caries and other pathological processes (abrasion, erosion, attrition) seriously affect dentin vital activity causing it to change to the "emergency" mode. This process is viewed not as resulting from pulp medication but as reactionary, aimed for self-preservation. In such cases the major focus is not on drug composition but on pulpal response. The pulp may be said to "form tertiary dentin for self-protection". In conclusion, the tertiary dentin that forms as a result of pathological processes (express-dentin, reparatory dentin) could be identified as a perfect barrier for the pulp necessary for keeping it vital. And investigation of mechanisms causing primary stimulation of odontoblasts and triggering the reparative processes remains a pressing problem in modern odontology.

Auth.

**8.G.13.4.14. Demyelination - the problem of pulpitis.** /Kh. Davarashvili/. Experimental and Clinical Medicine. - 2010. - #2(57). - pp. 48-50. – rus.; abs.: eng., geo.

We paid great attention to the peripheral nervous system when studying pulpitis. The connection between demyelination and the cytopathogenic effect proves that this disease is of a viral etiology.

Auth.

**8.G.13.4.15. Endothelium in parodontitis against the background of cardioischemia.** /L. Phorchkhidze, N. Khvitia, S. Zurabashvili, T. Zhvitiashvili, G. Danelia, Kh. Davarashvili/. Experimental and Clinical Medicine. - 2010. - #3(58). - pp. 20-24. – geo.; abs.: eng.

A study of the endothelium against the background of ischemia showed that both diseases – parodontitis and cardioischemia are sinergetic. These diseases are widely spread pathologies. The treatment of these diseases is very difficult as it requires medicines that can cure both of them.

Auth.

**8.G.13.4.16. Clinical effects of Camelin in patients with parodontitis.** /I. Katchkatchishvili, M. Bakradze/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 8-11. – geo.; abs.: eng., rus.

The thesis highlights findings concerning the clinical application of the preparation Camelin in the treatment of inflammatory diseases of the parodontium. Produced in Georgia, Camelin is a curative-prophylactic medication made of an original, special type of honey. The medication has anti-inflammatory, anti-septic, and pain killing effects. It regulates the performance of the local immune system, stimulates regeneration processes, strengthens the functioning of the local immune barrier, and has antibacterial and antifungal effects. 40 patients were divided into 2 observation groups: a group for examination (21 patients, monotherapy) and a group for control (19, traditional treatment). We conducted a clinical assessment of the parodontal pockets and determined their depth before and 1 month after the treatment. We used 5% Camelin cream for 15-minute long applications. The observation showed a significant decrease in the depth of parodontal pockets and in the extent of teeth loosening. Therefore, we think it expedient to translate the discovery into clinical benefit and to use Camelin for the treatment of inflammatory diseases of the parodontium.

Auth.

**8.G.13.4.17. Endothelium in acute pulpitis against the background of parodontitis.** /L. Phorchkhidze/. Experimental and Clinical Medicine. – 2011. – #1(1). - pp. 31-34. – rus.; abs.: eng., geo.

The endothelium has been studied with the help of light and electron microscopy. Ten patients and three healthy persons were investigated. Both pulpitis and parodontitis destroy the epithelium, homeostatic regulation is destroyed as well. Vessel tonus in capillaries is also changed; trans-capillary permeability is weakened; the aggregation of formed elements and adhesion intensify. Endothelial destruction during pulpitis against the background of parodontitis denotes a heavy complication of the disease. Thus, endothelial destruction predicts lots of complicated diseases.

Auth.

**8.G.13.4.18. Some structural peculiarities of collagen during acute pulpitis.** /T. Zhvitiashvili, Kh. Davarashvili/. Experimental and Clinical Medicine. – 2011. – #1(1). - pp. 38-40. – rus.; abs.: eng., geo.

Collagen and its proliferation were studied in patients suffering from pulpitis (the material includes 20 clinical cases). It was shown that normally fascicles of collagen are wound up into a superspiral and are held together with the help of chelate (hydrogenous) connections. A possible interest of non-specific antigens in the destruction of collagen fascicles is considered.

Auth.

**8.G.13.4.19. Microflora of mucous membrane of upper respiratory tracts during rhinitis and pharyngitis.** /A. Dedabrishvili, M. Dzagnidze, E. Mirelashvili, E. Kikacheishvili/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 209-212. - geo.; abs.: geo., eng.

In 2007-2009, total of 327 patients with rhinitis and pharyngitis were investigated. Investigations were carried out using modern standard technology of the French firm BioMerieux. In the etiologic structure prevailed *S. epidermidis* (42.3%), *H. influenzae* (10.5%); in associations were mainly revealed *S. serogroup G+C. albicans* – 12.7%. According to the data obtained, the true picture of microecology of the upper respiratory tracts became evident.

Auth.

**8.G.13.4.20. NO – marker of denture-induced inflammation of parodont tissue.** /Z. Nakudashvili, S. Mgebrishvili, I. Datunashvili, T. Sanikidze/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 230-233. - geo.; abs.: geo., eng.

The aim of the study was the establishment of denture-induced alteration of concentration inflammatory marker, NO. 60 patients with dentures were investigated (1 group – 30 patient with dentures on the plastic basis, who used specific hygienic liquid for the denture cleaning and oral cavity washing (1a) and not (1b); 2 group – 30 patients with dentures on the metal basis, who used specific hygienic liquid for denture cleaning and oral cavity washing (2a) and not (2b)). The 3rd control group – 30 volunteers with the healthy oral cavity. Alterations of free NO content in patients' saliva was studied by the EPR method (1 - before denturing; 2 – 3 days after denturing; 3 – 1 month after denturing). The study results testify that in the patients with metal basis dentures the process is less intensive. The employing of a specific hygienic liquid for denture cleaning and oral cavity washing decreases the intensity of inflammation.

Auth.

**8.G.13.4.21. Etiopathogenesis and pathanatomy of acute periodontitis.** /G. Eliava, I. Chikobava, M. Rekhviashvili/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 55-60. – geo.; abs.: geo.; eng., rus.

Various types of periodontitis are discussed periodotypes, including the drug-induced periodontitis that may be caused by the action of biogenic amines. The pathanatomical presentation changes in the early and late stages of acute periodontitis. Microabscesses and dystrophical changes in the bone tissue are characteristic of the late stage.

Auth.

**8.G.13.4.22. Myelin fibers of dental pulp and their partial demyelination during acute pulpitis.** /T. Zhvitiashvili, Kh. Davarashvili/. Bulletin of the Georgian National Academy of Science. – 2011. – vol. 5. - #1. – pp. 130-132. – eng.; abs.: geo., eng.

One of the factors of pain is damage of nerve fiber structure. Due to the fiber damage, passive penetrability of Na<sup>+</sup>-ion is increased, leading to the change of membrane polarization and additional local currents with the pain syndrome strengthening. Thus, two moments in the occurrence of the pain syndrome play an important role: disfibering of myelin and growth of Na<sup>+</sup>-ion penetrability.

Auth.

**8.G.13.4.23. The theoretical possibility of the textile dental cords formation by untwisted yarns.** /T. Moseshvili, I. Kldiashvili/. Science and Technologies. – 2009. - #10-12. – pp. 119-122. – geo., abs.: eng., rus.

The textile materials such as flosses and retraction cords are used in stomatology for cleaning the tooth and treatment of parodontosis and gingivitis by transfer the medicines in gum furrow. They are made of 100% cotton fibers and have a high level of absorption, flexibility and resilience. There are three types of dental cords: twisted, braided and ultrapack knitted. The twistless yarn has a different structure. The twistless yarn is formed at pasting of separate fibres as a result of interaction of binding substance with fibabs. As researches have shown, they on all length are extended in parallel of an axis of a yarn and basically are located close to a product axis. Durability of twistless yarn, as well as the absorption of this yarn is higher than all types of dental cords and they can be easily placed between teeth.

Auth.

**8.G.13.4.24. Study of denture materials toxicity on the Jurkat cell model system.** /Z. Nakudashvili, S. Mgebrishvili, M. Matchavariani, M. Erukidze, T. Sanikidze/. Proceedings of the Georgian National Academy of Sciences. Biomedical Series. – 2010. - # 1-2 (36). – pp. 91-97. - geo.; abs.: rus., eng.

The main problem of modern orthopedic stomatology appears to be the restoration of teeth which is associated with the entry of a foreigner body (denture prosthetic appliance) in the patient's mouth cavity. As a result of mechanic and toxicallergic interaction between dentures and mouth mucosal tissue, the development of allergic-inflammatory, traumatic disorders is possible. Prevention and correction of these negative effects are the main task of modern stomatology. The aim of our study was the investigation of toxicity of denture materials on the model system of Jurkat cell culture. As a result of our study, it was revealed that although the studied denture materials did not manifest toxic effects, they induced an increase in the antioxidant enzymes' activity (especially in the case of joint action of the applied substances) in Jurkat cells.

Auth.

**8.G.13.4.25. Dental demyelination and its association with caries.** /N. Zhvitiashvili, N. Khvitia, T. Zhvitiashvili, G. Danelia/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 22-23. - rus.; abs.: eng.

The dental pulp has been studied during caries. Myelin fibers are damaged and morphologically changed, and Schwann cells undergo the cytopathogenic effect.

Auth.

**8.G.13.4.26. Lymphatic link of microcirculation in the pathogenesis of parodontitis.** /O. Aliyev/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 23-27. – rus.; abs.: eng.

The purpose of the present research was to study blood and lymph coagulability, and also the condition of lymphatic drainage of tissues during parodontitis in a rabbit model. Experiments were carried out on 21 "Chinchilla" rabbits of both sexes weighing 2.5-3.0 kg. Solutions of Kalipsolum (8mg/kg) and Dimedrolum (0.15ml/kg) had been introduced intravenously as narcotic agents before the experiment. The research results have shown that modelling of parodontitis in rabbits leads to a rather expressed activation of intravascular coagulation not only in the blood, but also in the lymph against the background of an appreciable oppression of lymphatic drainage of tissues. Comparing our data with the literary data, we drew the conclusion that the activation of intravascular lymph coagulation eventually promotes the impairment of lymphatic drainage of tissues (particularly of parodontium tissues) and plays an important role in the pathogenesis of parodontitis.

Auth.

**8.G.13.4.27. Biochemical investigation of orthodontic complications.** /A. Safarov/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 30-31. – rus.; abs.: eng.

The study of literature shows that pathological processes resulting from the use of orthopaedic constructions prevail in the oral cavity. The quantitative and qualitative content of the oral cavity changes because of the negative action of orthopaedic constructions.

Auth.

**8.G.13.4.28. Dental caries and its connection with demyelination.** /N. Khvitia, KH. Davarashvili, T. Zhvitiashvili, G. Danelia/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 36-38. - rus.; abs.: eng.

We used light and electron microscopy to study the dental pulp during caries. The study showed that some parts of the myelin fibers got damaged, this factor negatively influencing their conductivity. Clinically, the process is understood as pain. Changes were also found in the cylinder: a great number of small vesicles and destructed mitochondria were detected there.

Auth.

**8.G.13.4.29. On the problem of demyelination in the dental pulp.** /KH. Davarashvili, T. Zhvitiashvili, N. Khvitia, G. Danelia/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 53-55. - geo.; abs.: eng.

A great attention is paid to the peripheral nervous system when the dental pulp is studied. For this study we have used light and electron microscopy. Demyelination is connected with the cytopathogenic effect in the Schwann cells. The occurrence of myelin depolarization should also be mentioned.

Auth.



**8.G.13.4.30. The effectiveness of removable dentures fabricated from thermoplastic.** /A. Safarov/. Experimental and Clinical Medicine. - 2010. - #2(57). - pp. 39-42. - rus.; abs.: eng.

The achievements of orthopaedic dentistry in the fabrication and use of thermoplastic removable denture constructions provide patients with the prosthesis that is more bio-compatible, stronger toward attrition and lighter in weight. Acrylic resin used clinically for a long time results in serious pathologic changes. Therefore, patients have more difficulties in adapting to those orthopaedic constructions. The performed clinical investigations show the organism's high ability to adapt to flowable thermoplastic.

Auth.

**8.G.13.4.31. Collagen in periodontitis.** /N.Lobzhanidze, T.Lobzhanidze, N. Khvitia, G. Danelia/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 53-55. – rus.; abs.: eng.

Light and electron microscopy was used to study collagen in the diseased periodontium. The collagen fibres appear to be structurally changed during periodontitis: the fibroblasts are greatly changed, euchromatin is strongly expressed, and the cytopathogenic effect is clearly visible.

Auth.

**8.G.13.4.32. Endothelium in periodontitis.** /N. Lobzhanidze, N. Khvitia, T. Lobzhanidze, G. Danelia/. Experimental and Clinical Medicine. - 2010. - #2(57). - pp. 58-59. – rus., abs.: eng.

The endothelium has been studied by light and electron microscopy in the diseased periodontium. The endothelial cell contacts appear to be damaged, and the erythrocytes penetrated through the damaged contacts. Growing collagen fibres replaced the existing tissue.

Auth.

**8.G.13.4.33. Normal dental pulp.** /Kh. Avarashvili, N.Khvitia, T.Zhvitiashvili, G.Danelia/. Experimental and Clinical Medicine. – 2010. - #3(58). - pp. 43-44. – geo.; abs.: eng.

Normal dental pulp has been studied with the help of light and electron microscopy. The structure of the pulpal innervation and vascularization were investigated. A great deal of attention was also paid to the pulp structure.

Auth.

**8.G.13.4.34. Atmospheric air feature indicators and their impact on the mineralization of tooth hard tissues.** /T. Shishniashvili, N. Suladze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp.17-20. – geo.; abs.: eng., rus.

The influence of quality indicators of atmospheric air on junior children's dental status was studied by us on 3-4 years old 350 children examined by standard methods provided by Health Care Organizations (tooth caries spread, intensity and non-caries damages). According to our study high indicator of tooth caries (averagely 89.9%) was manifested in all districts of city of Tbilisi and several occasions (8 in total) of tooth non-caries damages, especially hyperplasia that to our opinion is not depended on coefficient of pollution of atmospheric air. Simultaneously, ecological indicators make important influence on intensity of tooth caries and it is higher in the districts where the level of pollution of atmospheric air exceeds by several times to the limit established by international standards than in ecologically more reasonable districts and respectively amounts to 6.0 and 3.9. As a result of data analysis we can make conclusion that high composition of ecotoxins in the atmospheric air makes significant influence not only on organs and systems of human organism, but represents serious risk-factors of dental pathologies generation and development too.

Auth.

**8.G.13.4.35. Stomatologic disease and the basic aspects of medical aid to the population of frontier regions of Georgia.** /I. Zarnadze, D. Raminashvili, Sh. Zarnadze, D. Kitovani, L. Lomtadze/. Experimental and Clinical Medicine. – 2010.- #4(59). - pp. 31-33. – geo.; abs.: eng., rus.

By means of sociological inspection and an expert estimation stomatologic disease among 3000 respondents of frontier areas of Georgia has been studied. By virtue of distinction and features risk-factors, heavy social and economic situation in country and absence of specialized

(stomatologic) social programs and the insurance, the noted population, especially in zones of the conflict, is deprived the qualitative and accessible stomatologic help. In prevention a stomatologic pathology it is important to involve various mechanisms of medical and social aid. In particular, carrying out of the primary stomatologic help within the framework of humanitarian actions for inhabitants of frontier areas can partially solve this problem.

Auth.

**8.G.13.4.36. Bow prosthesis fixation elements and problems connected to them.** /S. Mgebrishvili, I. Barbakadze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp.161-162. – geo.; abs.: eng., rus.

There were 53 patients under observation, from whom 28 people from I group were prepared bow prosthesis of NEI system with I, II and III type catcher supporter clasps, and II group 25 patients were made bow prosthesis, fixation of which were made by the help of attachments. As a result of research it was revealed that bow prosthesis fixation in I and II group patients was satisfactory and chewing efficiency was high. But from I group patients 17(60%) of patients after finishing of orthopedic treatment mentioned raising of sensitivity from the side of abutment teeth, and 8 (28%) patients who had parodontopathy in 10-14 months after finishing of treatment had abutment teeth I quality shaking. It is also considerable that for all the patients of I group, catcher supporter clasps were aesthetically unacceptable. For II group patients the aesthetic side of bow prosthesis was satisfactory. But as a result of research it has been revealed that from II group 12 (48%) patients having parodontium, shaking of abutment teeth was mentioned in 14-17 months after finishing of treatment, and in the patients having healthy parodontium, shaking of abutment teeth was mentioned in 2-3 years after treatment. So, while orthopedic treatment of partial adentia, fixation elements of bow prosthesis – as NEI system catcher supporter clasps as attachments require further improvement.

Auth.

**8.G.13.4.37. Osteoblasts and Collagen during acute pulpitis developed against the background of parodontitis.** /T. Zhvitiashvili, Kh. Davarashvili/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 13-15. – rus.; abs.: eng.

Collagen has been studied with the help of light and electron microscopy. During pulpitis developed against the background of parodontitis, collagenic fibers assist in restructuring extracellular matrix and forming scars in the damaged area. Phibroblasts synthesize collagen and its growth negatively affects the general structure of the pulp and, as a result – its functionality.

Auth.

## **8.G.13.5. Roentgenology and Radiology**

**8.G.13.5.1. Diagnostic possibilities of multilayer computer tomography in blunt abdominal trauma.** /G. Nemsadze, O. Urushadze, L. Tokhadze, N. Khipshidze/. Georgian Medical News. – 2011. - #2(191). - pp. 12-18. – rus.; abs.: geo., eng., rus.

The purpose of our study was to determine MDCT diagnostic possibility in blunt abdominal trauma. Our work was based on MDCT results of 84 blunt abdominal trauma patients with stable homodynamic status (28 (33.3%) female and 56 (66.6%) male). Age ranged from 17 up to 64 years. The CT scan showed obvious organ and system injuries in 82 poly-trauma patients. Injuries of the craniocerebral region, also of facial bones, chest and spine were detected in two patients; in one of which, however, it was not possible to differentiate subcapsular spleen hematoma accurately because of the left upper joint metallic holder artifacts. In the second patient, the liver injury was accurately diagnosed, but there were visualization problems caused by the massive retroperitoneal hematoma from the right adrenal gland injury. The investigation showed that sensitivity of CT scan data was 98%, specificity - 97% and the accuracy rate- 98%. All the above-mentioned clearly state the importance of MDCT in the emergency department. MDCT ensures precise diagnosis in maximally short period of time and thereby helps to choose proper treatment and decreases post-traumatic complications.

Auth.

**8.G.13.5.2. Modern CT parameters in polytrauma patients' research.** /G. Nemsadze, O. Urushadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 122-127. – geo.; abs.: eng.

The role of multi-detector CT is very important in diagnosis and management of patients with polytraumatic injury. During the research period, there were 168 cases of polytraumatic injury in the emergency department. Identification of injuries of organs and systems is highly important for the management of patients with polytraumatic injury. The study results showed that the developed MDCT polytrauma protocol can facilitate detection of all major or minor injuries. The results of our study are in agreement with the results of the studies by Wintermark, et al. This study may have direct influence on CT application in the emergency department. Since the completion of the study, CT has been routinely applied in our clinic in the polytraumatic mode. All the above-mentioned is aimed at accurate detection of injuries in the shortest possible time, ensuring the right choice of management and minimizing posttraumatic complications.

Auth.

**8.G.13.5.3. Hygienic assessment of the external irradiation doses of children caused by the radiation background of educational institutions in Didgory district of Georgia.** /N. Vepkhvadze, T. Kochoradze, N. Kiladze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 53-55. – geo.; abs.: eng.

The radiation background (RB) of educational institutions of the Didgori district of Georgia has been studied and the doses of external irradiation of children caused by indoor and outdoor irradiation were estimated. The RB of the studied institutions composes 99,5-134 nGy/h, the average annual doses of external irradiation of children caused by RB of day nurseries, kindergartens and schools, public dwelling-houses and open areas compose 0,15-0,16 mSv/y, 0,79-0,89 mSv/y, 0,12-0,14 mSv/y, respectively. For the purpose of reduction of irradiation dose, the recommendation for a prolonged outdoor stay of children is given.

Auth.

**8.G.13.5.4. Characteristic of clinical use of halogen and diode phototherapy.** /M. Mamaladze, N. Chipashvili, D. Vadachkoria, M. Shanidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 101-104. – geo.; abs.: eng.

Phototherapeutic lamps are the necessary devices for polymerization of composite filling materials. One part of such devices is working on halogen lamps, another - on light-emitting diodes. The article deals with relative characteristics of these two types of light-curing lamps. First of all, radial collimation and polymerization deepness in composite samplers with using Demetron 500 (Kerr) and LED 5 (Ultradent) were studied. The study results show that polymerized test composite cylinders, with light curing lamp – LED 5, after cutting in 2mm pieces were less intensively colored with "Stable Seek" than the test composite cylinders with light-curing lamp – Demetron 500. "Stable Seek's" penetration indicated on imperfect polymerization. Despite Demetron 500 better collimation, LED 5's lamp has more power. That was the reason why the composite test samplers were much deeper cured with LED 5 (Ultradent) than with Demetron 500 (Kerr). Thus, the study results show better light transmission of LED 5.

Auth.

**8.G.13.5.5. Using plasma radiations for prevention and treatment of the critically ill patients with ventilator-associated pneumonia.** /Z. Kheladze, S. Jaiani, Zv. Kheladze, G. Chakhunashvili, D. Chakhunashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 167-169. – eng.

The treatment of 50 patients in the critical condition with ventilator-associated pneumonia by using plasma radiations is analyzed and shown in this article. An improvement of the patients' condition and lowering of the duration of treatment shows the advantages of this method. The achieved result gives us the opportunity to recommend the plasma radiations in the treatment and prevention of the ventilator-associated pneumonia 34.

Auth.

**8.G.13.5.6. Importance of color Doppler analysis in diagnosis of breast diseases.** /S. Kavtaradze, T. Mosidze/. Georgian Medical News. – 2010. – # 1(178). – pp. 15-19. – rus.; abs.:

geo., eng., rus.

The breast cancer occupies one of the first places among women's malignant neoplasms. Breast cancer case rate annually increases in the majority of the countries of the world. Early diagnosis and active revealing of breast pretumor diseases are of much importance. For the purpose of determination of the value of color Doppler, 127 patients with various breast pathologies were examined. Breast ultrasonic research, color Doppler and power Doppler allowed obtaining the essential additional data for carrying out differential diagnoses. According to the results, the concentration of vessels in a zone of tumor unit with a primary locating on periphery is characteristic for malignant formations of breast. It is, accordingly, cause of rising vascularisation of tissues of breast, and also high parameters of linear speed of blood-flow –  $V_{max} - 0,34 \pm 0,05$  m/s,  $P_i$  (Pulls index) –  $1,42 \pm 0,04$ ,  $R_i$  (Resistance index) –  $0,71 \pm 0,02$ . Parameters of linear rate of blood-flow are lower for non malignant nodal formations –  $V_{max}$  from  $0,14 \pm 0,02 - 0,19 \pm 0,02$  m/s,  $P_i - 1,42 \pm 0,12 - 1,42 \pm 0,06$ ,  $R_i - 0,60 \pm 0,02 - 0,62 \pm 0,02$ . In the cases of weakly vascularised nodal formations the method of power Doppler was used. The maximal rate in circumflex vessels of the pathological formations in most cases did not exceed  $0,25$  m/s, when size of formation was up to  $1,5$  cm and  $0,7$  m/s, when the size of formations was more than  $3$  cm. Upon use of ultrasonic intervention combined with color Doppler and power Doppler, the sensitivity of diagnosis made  $93,8\%$  and specificity –  $88,6\%$ . Proceeding from the above, color Doppler, especially in a combination with other methods of research, is the effective method allowing for an increased diagnostic accuracy. Dopplerography, allowing for visualization of blood flow in fine vessels and even perfusion in the tissue of breast is to undoubtedly soon occupy one of the leading positions in diagnosis of breast diseases.

Auth.

**8.G.13.5.7. The action of electromagnetic field on movement and emotional-motivate behaviour of animals in the "open field" and stimulating effect of a *Seratonus* plant preparation.** /D. Zurabashvili, M. Nikolaishvili, N. Mindiashvili, N. Zazashvili, M.Tchitchakhua/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 60-65 – rus.; abs.: geo., eng., rus.

The aim of the work is a detailed analysis of the effect of *Seratonus* on motional and emotional-motivational behaviour of rats. The conducted quantitative and qualitative analyses show that rats fed on the plant substance *Seratonus* are characterized of low emotionality being manifested with less "urinates" and "boluses" and high "grumming" effects. The plant substance seratonus is a function activating substance, takes off the emotional responsibility and takes an active part in metabolism of biological necessary components. The obtained data are very important from the point of assessment of the environment and individual sensitivity to the components contained in seratonus substances.

Auth.

**8.G.13.5.8. Quantative EEG during baseline and various cognitive tasks in children with attention deficit/hyperactivity disorder.** /S. Bakhtadze, M. Janelidze/. Georgian Medical News. – 2010. – #9(186). – pp. 50-56. – eng.; abs.: geo., eng., rus.

It is known that attention deficit/hyperactivity disorder is a widely spread condition in school aged childhood population. Making of precise diagnosis is a serious problem of modern pediatric neurology. In spite of large amount of guidelines and questionnaires the unified consensus of diagnosis is still absent. Thus it is important to search additional diagnostic criteria which can help physicians to confirm ADHD. For this purposes we have used quantitative EEG (QEEG) parameters. There are numerous papers regarding QEEG changes of ADHD children during baseline (resting with closed eyes, resting with opened eyes, photic stimulation, hyperventilation). But information concerning QEEG evidences during cognitive tasks is insufficient. For this purposes we have used QEEG during Raven test, reading and calculation in children with ADHD and control group. QEEG was carried out according to standard 10-20 electrode placement rule from the following derivations: F3, F4, C3, C4, P3, P4, O1, O2. We have observed that in controls fulfilling of Raven test is more difficult than reading. Thus they are eulectic, but in ADHD children reading is more difficult than Raven test. Thus they are dyslexic. By means of alpha and delta bands analysis it became apparent that alpha band is inversely proportional to mental effort and delta band is directly proportional to mental activity.

Auth.

**8.G.13.5.9. Evaluation of the effectiveness of the modified method of cesarean operation with the method of ultrasonography research.** /T.Kanchaveli, N.Kintraia, D.Jintcharadze, I.Mukhadze/. Georgian Medical News. – 2010. – #10(187). – pp. 26-29. – rus.; abs.: geo., eng., rus.

On the basis of a retrospective analysis of 160 clinical cases, the effectiveness of the modified method of cesarean section with ultrasonography and immunological technique has been evaluated. The clinical-ultrasonography analysis proved that involution rate after using of traditional method of cesarean section is markedly behind in comparison with the results received in the patients of main group. At the same time, the changes in echo-parameters prevailed the clinical manifestations which allow to carry out preventive measures in proper time and correspondingly to avoid the possible complications.

Auth.

**8.G.13.5.10. Influence of electromagnetic fields and vegetable preparation *Seratonus* on the passive avoidance reaction.** /M. Nikolaishvili, G. Iordanishvili, G. Jiqia, V. Museliani, V. Beria, J.Khubutia, N. Mindiashvili, K. Archvadze, S. Zenaishvili/. Experimental and Clinical Medicine. – 2011. - #1(1). - pp. 21-25. – geo.; abs.: eng., rus.

Currently, organic medications derived from plant material make up almost one third of the register. Many of them contribute to the synthesis of biogenic amines, improve memory and behaviour in animals. It was interesting to study the effect of such composites on different stress factors, in particular, the effect of electromagnetic fields. It is known that communication frequency of EMF causes difficulties and suppresses the production of passive avoidance response in animals. The studied preparation has a protective effect hindering the development of excitation in rats, thus helping them to adopt the correct solution to a problem, i.e. to improve the acquired reflex reaction.

Auth.

**8.G.13.5.11. Pneumographic imaging of potential cleavage planes within the ventricular myocardium in histology and CT.** /K. Redmann, P. Lunkenheimer, S. Stöppeler, U. Spiegel, M. Smerup, P. Nielsen, P. Niederer, S. Weiss, R. Batista/. Bulletin of the Georgian National Academy of Science. – 2011. – vol. 5. - #1. – pp. 115-120. – eng.; abs.: geo., eng.

We distended the relaxed porcine left ventricular myocardium by inflating the coronary arteries with compressed air, using rising pressures between 1 and 3 atmospheres. Computed tomographic analysis revealed a feathered arrangement of the myocardium aggregated together within the walls, with an overall system of spatially netted lamellar structures. Histological examination in orthogonal planes revealed the lamellas themselves to be made up of endless chains of myocytes, which show the well recognised systematic change in helical angle when traced through the thickness of the walls. The pneumatic distension had opened clefts between the lamellas, with sparse and loosely aligned fibrous tissue present within the clefts. The lamellar structure itself is continuous through the walls via a system of interlamellar connections from epicardium to endocardium, and from the ventricular base to the apex. The ventricular walls, therefore, which appear compact when sectioned without pneumatic distension, are shown by distension to be composed of a system of three-dimensionally curved and nested blades, with the individual blades taking their origin from a central circular myocardial collar, Krehl's Triebwerkzeug, and then extending with opposing curvatures towards the endocardium and epicardium.

Auth.

**8.G.13.5.12. Plasma flow treatment of the acute gastro-duodenal ulceration in artificial pulmonary ventilation-dependent patients.** /Z. Kheladze, S. Jaiani, B. Tsutskiridze, Zv. Kheladze, D. Chakhunashvili, G. Chakhunashvili/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

In 48 ventilation-dependent critical patients with acute gastro-duodenal ulceration and subsequent bleeding, the plasma flow treatment efficacy was studied. The patients were divided into main and control groups. Medication treatment program was identical in both groups, but in the main group progenitor precursors' committing activate plasma flow therapy (Zv.Khelade at all. "New usage of Plasma flow" producer 2008.06.26 #4825) was also used; in particular, sternal bone marrow's plasma irradiation during 10 minutes and 2 times per day was done. The bleeding activity and

hemostasis were estimated by Forrest's classification. After a repeated endoscopy and histological analysis of biopsy material it was proved that at acute gastro-duodenal ulceration the progenitor precursors' committing activate plasma flow therapy considerably improved ulcer cicatrisation as compared to control.

Auth.

**8.G.13.5.13. Bioelectrical brain activity in chronic daily headache.** /N. Laitadze, M. Tchanturia, D. Berulava/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 25-29. - rus.; abs.: eng.

Eighty-two patients with chronic daily headache were studied. Chronic migraine was diagnosed in 34 and headache of tension – in 48 patients. EEG was registered before treatment, using evaluation by methods of visual and spectral analyses. The EEGs of all the patients were characterized by diffuse bioelectrical activity changes. In patients with chronic headache of tension – the reduction of alpha-rhythm with simultaneous increase of other frequency bands were the main EEG features, spectral analysis revealed an increase of theta-band power in frontal regions. In migraine EEGs were characterized by synchronization of alpha rhythm, increased presentation of bilaterally synchronous alpha- and theta-activity. Spectral analysis revealed a total increase of spectral power of theta-band.

Auth.

**8.G.13.5.14. Dopplerography monitoring of cerebral blood flow during spontaneous subarachnoid bleedings.** /R. Fanarjian/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 30-32. - eng.; abs.: rus.

Evolution of the AS corresponds to the dynamic degradation of patients and the deepening of neurological deficit. The increase in linear velocity of blood flow in MCA was accompanied by the development of the clinical picture of cerebral ischemia. The simultaneous significant increase in linear velocity of blood flow in the opposite MCA and the BA showed the development of diffuse AS and foreshadowed adverse outcome - death or disability of the patient. The level of impairment of consciousness directly corresponds to the state of blood flow in the vessels of vertebro-basilar basin. Normalization of blood flow preceded the clinical improvement. Permanent neurological deficit, depression of consciousness down to the level of coma, was associated with high or extremely depressed rates of blood flow leading to ischemic complications and emergence of more focal and diffuse neurological symptoms. In patients with moderate and severe AS, linear velocity of blood flow increased from the third day and remained elevated throughout the week to reduce the level of normal values by the end of the second week. The improvement of general condition of patients with SAH could occur against a background of continuing TCD signs of vasospasm. There is a certain correlation between the degree of severity of the AS and clinical manifestations of certain ischemia. Dynamic monitoring helps identify the degree of metabolic needs of the brain, indirectly judge the state of intracranial pressure, as well as the effectiveness of treatment. Distribution of the AS and the state of blood flow in the BA, determine the level and degree of impairment of consciousness, and can serve as an objective prognostic sign.

Auth.

**8.G.13.5.15. The role of multisectional CT and magnetic resonance tomography in the diagnosis of cerebellopontine angle lesions.** /S. Tchedia/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 33-41. - geo.; abs.: eng.

The aim of this study was to evaluate the importance of multisectional computed tomography (MSCT) and magnetic resonance (MR) imaging in the diagnosis of cerebellopontine angle (CPA) extra-axial lesions. From January 2006, 44 patients (16 men and 28 women, age ranged: 39-76 years) with the tumor of cerebellopontine angle were examined. All the patients underwent MR examination on a GE, Signa (1,5T) and 32 patients underwent CT examination on a Somatom Sensation Cardiac 64, (Siemens). Results: 26 (60%) out of 44 patients had vestibular schwannomas, 12 (27%) patients - meningiomas, 1 (2%) patient - epidermoid cyst, 1 (2%) patient - arachnoid cyst, 2 (5%) patients - metastasis, 1 (2%) patient - aneurysm, 1 (2%) patient - neurofibromatosis type 2. CT and MRI reliably demonstrate typical features of meningiomas or vestibular schwannomas in the vast majority mass lesions responsible for CPA syndrome. However, a large variety of unusual lesions can also be encountered in the CPA. MR diffusion- and

perfusion-weighted imaging can provide critical information on the vascularity of tumors which is useful in the preoperative differentiation between benign and malignant tumors.

Auth.

**8.G.13.5.16. Ultrasound diagnosis of plantar area pathologies.** /T. Gurgenidze, M. Mizandari, G. Gadelia/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 52-56. - geo.; abs.: eng.

150 patients (age ranges from 8 to 70 years) underwent the radiological study of the plantar area. Pathology types: inflammatory pathology - 38%, traumatic injuries - 11 %, degenerative-dystrophic diseases - 30%, soft tissue neoplasms -14%. other - 7%. Unilateral pathology was diagnosed in 80%, bilateral - in 20% of cases. The diagnostic studies include: a) Ultrasound, performed on digital ultrasound system using high frequency (7,5-12.0 MHz) linear probe with Doppler capability (all patients) b) X-ray filming in lateral projections (6 patients) and c) MRI - T1 and T2 weighted images in sagittal and transverse planes (9 patients). Ultrasound was successful in plantar area pathology diagnosis in 138 cases (92%). It was ineffective in vertebral problems (6%) and osseous pathology (2%) definition. In vertebral problem diagnosis MRI was critical, osseous pathology was diagnosed using X-ray filming. The advantage of ultrasound in diagnosis of plantar area pathologies are high spatial resolution, possibility of real-time dynamic study with simultaneous Dopplerography. It should be used as a method of choice for diagnosis of plantar area pathologies, manifested by pain. X-Ray should be used when the bony pathology is suspected and MRI should be considered if the pain cause could not be identified by ultrasound.

Auth.

**8.G.13.5.17. Magnetic resonance imaging of the brain during acute CO poisoning.** /F. Todua, M. Beraia, M. Okujava, S. Leishvili, T. Antia/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 67-71. - rus.; abs.: eng.

We examined a 28-year-old woman with CO poisoning by MRI. At the moment of the investigation, symptoms of poisoning were nausea, repeating vomiting, confusion, disorientation; verbal contact was complicated. MRI abnormalities were detected as T2-hyperintensities and T1-hypointensities in the globus pallidus bilaterally. CO poisoning should be included in the list of differential diagnosis in cases of bilateral symmetrical pallidar lesion.

Auth.

**8.G.13.5.18. Bilateral striopallidodentate calcinosis.** /D. Gigineishvili, D. Gugutsidze, R. Shakarishvili/. Georgian Journal of Radiology. - 2010. - #1-2 (34-35) – pp. 72-76. - geo.; abs.: eng.

Calcification of basal ganglia (BGC) and other subcortical nuclei has resulted in a considerable dilemma as to its significance and relationship to varieties of disorders. Current classification of clinically manifested conditions associated with the neuroradiological findings includes primarily idiopathic (Fahr's disease) and secondary (Fahr's syndrome) cases, not uncommonly caused by metabolic abnormality, especially hyperparathyroidism. We describe two patients with radiologically detectable BGC admitted to our intensive care unit with convulsive status epilepticus. Clinical and laboratory findings, however, did not completely fulfill criteria for a secondarily metabolic striopallidodentate calcinosis. We suggest that from a clinical viewpoint there is a narrow distinction between primary and secondary BGC and this should be taken into account during differential diagnostic process.

Auth.

**8.G.13.5.19. Characterization of data acquired during cardiointervalography and capillaroscopy.** /N. Jobava, G. Chakhuanshvili/. Pediatric Cardiology. - 2011 - № 5. - pp. 16-24. - geo.; abs.: geo., eng.

Capillaroscopic data in children gives us additional trustworthy information, including for getting differential diagnosis; additionally, it is a cheap bloodless method, which can be used like a treatment as well as during prognosis of diseases. Based on cardiointervalography, we revealed big differences of different vegetative nervous system's starting tonus variants (vagotonia, simpaticotony, eutony). Conclusion: after having non-rheumatoid carditis and different forms of rheumatoid arthritis, this can be risk factor of ischemic diseases of heart. Miocardiodystrophy, prolapse of mitral valve and other diseases in children need to be observed dynamically and need further analysis.

Auth.

**8.G.13.5.20. Radioecological situation in Adjara region and rate of genetic disorders in infants.** /I. Kugoti, N. Vepkhvadze, T. Gelovani, N. Kiladze, N. Tskhovrebadze, I. Tskhovrebadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 65-68. – geo.; abs.: eng.

The purpose of this study was to explore the genetic disorders rate in infants of Adjara region and manifestation of dose-response relationship between the radiation background and rate of genetic disorders. It was determined that the radiation background of the investigated territories is not the only reason of increased genetic disorders in infants. A relatively high radiation background, combined with the existing low level hazardous factors, has an adverse effect on the health status of population, including infants. Thus, it is necessary to implement measures for reduction of irradiation doses of population

Auth.

**8.G.13.5.21. Radioecological situation of Adjarian mountain region and hygienic assesment of external irradiation doses of population.** /I. Kugoti, N. Vepkhvadze, N. Tskhovrebadze, B. Zurashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 68-71. – geo.; abs.: eng.

The radio-ecological situation of the Adjarian mountain region and doses of external irradiation of population have been studied. The average annual external irradiation dose of population (without radon component) for mountain region of Adjara is 1,1 mSv/y, which is relatively high and requires the taking of preventive measures for its reduction. To reduce the external doses of irradiation of population, it is necessary to exercise strict control over radioecological investigations, usage of fertilizers according to the instructions, radionuclide identification of food products and their standardization, mandatory control of imported products, observance of radiological standards for constructive materials, restriction of radon and thoron entrance into buildings, frequent ventilation of living premises and their provision with ventilation, educational activities among population regarding the radiation safety and hygiene.

Auth.

**8.G.13.5.22. The radiation background and hygienic assesment of external irradiation doses of population in some mountainous regions of Georgia.** /I. Kugoti, N. Vepkhvadze, N. Kiladze/. Georgian Medical News. – 2010. – #10(187). – pp.61- 65. – rus.; abs.: geo., eng., rus.

The radioecological situation of Mtskheta-Mtianeti region of Georgia has been studied. Doses from external irradiation were determined and estimated. The average value of radiation background (RB) of open areas in Mtskheta-Mtianeti region accounts 84,6 nGy/h, which is nearly equal to the average values in the countries of western Europe. This shows that investigated territories have high natural radiation background, which, considering the geographical position and geophysical situation of Georgia, is normal. The average value of radiation background of buildings in the investigated territories accounts 120,4 nGy/h, which is little more than the worldwide average value. The average annual dose from external irradiation (without radon component) for population of Mtskheta-Mtianeti region accounts 0,99 mZv/y, which is slightly more than the worldwide average value. Since approximately 2/3 of effective equivalent dose comes from internal radiation and 1/3 – from external radiation, it is reasonable to suppose that the radiation load of population of Mtskheta-Mtianeti region is significant and requires implementation of radiation dose reduction measures.

Auth.

**8.G.13.5.23. X-ray methods potentialities for diagnosis of mediastinal lymphomas.** /S. Babayeva/. Georgian Medical News. - 2010. - #10 (187). – pp. 19-23. – rus.; abs.: geo., eng., rus.

The target scientific research studies the results of clinico-roentgenological examination among 100 patients with mediastinal lymphomas. The most typical X-ray and CT signs were demonstrated. The investigation proves CT to be highly informative method in diagnosis of mediastinal lymphomas. CT provides a more complete picture, making it easier to diagnose problems, determine the extent of disease, prescribe treatment, and track progress. The



mediastinal lymphomas must be diagnosed based on clinical, observation and laboratory, roentgen logical, CT and morphological diagnostic testing.

Auth.

**8.G.13.5.24. Preventive maintenance and complex therapy for tracheal cicatricial stenosis using Diprospan and infrared low-intensity laser radiation.** /S. Israfilova, Ch. Jafarov, R. Mamedov/. Experimental and Clinical Medicine. – 2010. - #1(56). - pp. 19-22.– rus.; abs.: eng.

The frequency of cicatricial stenosis of the trachea continues to grow, which can be explained by a wide application of long-term artificial ventilation of the lungs. However, the consequences of this manipulation very negatively affect the tracheal wall, which subsequently cause the formation of cicatricial stenoses. The methods offered earlier are not successful in relieving this complication. Depending on the terms of postintubation and postracheostomy stenosis, our patients have been divided into 2 groups: early complications – about 3 months (38 patients) and later complications – more than 3 months (10 patients). In both groups of the patients, diprospan along with the application of low-intensity infrared laser irradiation reduced the formation of cicatricial tissue which could lead to tracheal stenosis and to the lesion of the external breath function, and considerably reduced the number of patients requiring repeated reconstructive operations.

Auth.

**8.G.13.5.25. Review of radiation impact stipulated by potable water from some mountainous regions of Georgia.** /I. Kugoti, N. Vepkhvadze, K. Gelashvili, B. Zurashvili, T. Gelovani, M. Giorgobiani, N. Kiladze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 163-167. – geo.; abs.: eng., rus.

The specific activity of radionuclides in the waters of the studied territory in some cases is more than acceptable (in some cases – very high). Therefore, internal dose of irradiation of population will presumably be high. To reduce the internal irradiation dose of population, it is necessary to prohibit the use of high activity water for drinking and provision of the population with new sources of low activity water. To reduce the total irradiation dose of population, it is also necessary to control and minimize irradiation doses from artificial sources, including means of regulation of medical radiological procedures and rational use of fertilizers with K-40 content.

Auth.

## **8.G.13.6. Public Health Care**

**8.G.13.6.1. Some aspects associated with rational use of drugs.** /N. Kvizhinadze, D. Tophuria, N. Kiknavelidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 69-72. – geo.; abs.: eng.

The aspects of rational use and prescription of drugs in Georgia and in some countries of were studied using the qualitative and quantitative technique – with a detailed description of social reality. It is established that the use of drugs with less expenditures (by applying video-computer facilities, conduct of seminars) leads to a sharp increase in consumer services. In addition to medical and social factors, the economic factors also play a significant role in the rational use of drugs. Improvement on the supply of drugs to population and their rational use is a topical and many-sided problem. It is closely associated with not only population's morbidity, but also with the quality of adaptation to the environment, mode of life, education, interrelations, existing healthcare system, cultural, social and economic factors.

Auth.

**8.G.13.6.2. The level of awareness in cancer patients in Georgia.** /M. Shavdia, I. Bakradze, R. Ghvamichava, I. Abesadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 148-152. – geo.; abs.: eng.

The objective of our study was to determine whether the cancer incurable patients wanted to know true information concerning their state. The study was based on contracts (539) signed between the Palliative Care Unit and patients or their families in 2006–2007. The authors of this article provide advices for medical personnel how to communicate with the incurable patient/his family and make the communication of sad news to them less painful both for the patient/his family and themselves.

Auth.

**8.6.3. Epidemiology of gastroenterologic diseases in Georgia.** /M. Chikava, I. Phavlenishvili /. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 162-164. – geo.; abs.: eng.

The prevalence of gastroenterological diseases (GD) appears to be increasing in the whole world. The aim of the research was to study the dynamics of GD morbidity in Georgia according to the statistical data of the National Center of Diseases Control and Public Health of the Ministry of Health of Georgia. The epidemiological research was conducted in parallel in adolescents of Georgia aged 14-21, selected by the randomization technique. According to official statistics, the incidence of GD in Georgia sharply decreased, especially in children – from 88.9% in 1994 to 7.3% in 1997. In 2006-07, the GD prevalence increased in the Georgian population from 32.1% to 49.37%, in children – from 18.79% to 30.89%, respectively. The admission of patients with GD over 15 years in polyclinics of Tbilisi significantly decreased, but the prevalence of GD in adolescents is still quite high. The prevalence of functional disorders is relatively low. The authors recommend the reorganization of the treatment-educational work. The earlier developing of gastroenterological functional disorders, right diagnosis and purposeful complex treatment are also of great importance for preventing gastroenterological organic diseases in adults.

Auth.

**8.G.13.6.4. Composition of erythrocytic (ABO, Rh-Hr, Kell, MN) group antigens characteristic of the Ozurgeti district population.** /M. Nagervadze, A. Diasamidze, R. Khukhunaishvili, L. Akhvlediani, M. Koridze, G. Dumbadze, S. Tskvitinidze/. Georgian Medical News. – 2010. – #11(188). – pp. 51-55. – rus.; abs.: geo., eng., rus.

Erythrocytic group antigens represent a genetically stably determined trait. Investigation of antigens of the said system in different regions is of the greatest importance in terms of both the creation of demographic data of the region, as well as practical medicine, especially for transplantology and transfusiology. The peripheral or venous blood of 232 local natives (healthy donors) of Ozurgeti district of Guria region has been taken as the test subject. The test subject was taken by random methods in different villages (Bakhvi, Mshvidobauri, Ozurgeti, Likhauri, Gurianta, Bokhvauri, Dvadzu, Pampaleti) To identify the ABO, Rh-Hr, Kell, MN system antigens, an express-method, using monoclonal antibodies, has been applied. In studying the ABO system, it was fixed that the highest distribution frequency was characteristic of the 0(I) group ( $52.3\pm 3.2\%$ ), then follows the group A (II) ( $38.5\pm 3.2\%$ ). The distribution frequency of the B (III) group is ( $8.2\pm 1.8\%$ ) and that of AB (IV) – ( $0.8\pm 0.5$ ). The population's  $85.2\pm 2.32\%$  is the carrier of the Rh+ phenotypic group, while  $14.7\pm 2.3\%$  belongs to the Rh-phenotypic group. In studying the concentration of alleles, the low concentration of p (K) allele was detected that equaled 0.2; the concentration of q (K) allele made 0.8, that of p (M) – 0.65, and that of q (N) – 0.35.

Auth.

**8.G.13.6.5. Gender differences in medical activities and self-evaluation of the health status among IDPs from Abkhazia.** /T. Zukhbaia, T. Kvirtia, O. Gerzmava/. Georgian Medical News. – 2010. – #11(188). – pp. 56-60. – rus.; abs.: geo., eng., rus.

A growing scientific literature highlights concern about the influence of social bias in medical care. Differential treatment of male and female patients has been among the documented concerns. Yet, little is known about the extent to which differential treatment of male and female patients reflects the influence of social bias or of more acceptable factors, such as different patient preferences or different anticipated outcomes of care. This paper attempts to ascertain the underlying basis for an observed differential in physicians' tendency to advice activity restrictions for male and female patients. We explore the extent to which the gender-based treatment differential is attributable to: (1) patients' health profile, (2) patients' role responsibilities, (3) patients' illness behaviors, and (4) physician characteristics. These four categories of variables correspond to four prominent social science hypotheses concerning gender differences in health and health care utilization. Data are drawn from the longitudinal observational study more of the 2000 IDP patients from Abkhazia. Gender differences in illness behavior and medical activities of the patients both appear to contribute to the observed differential. Female patients exhibit more illness behavior than males,

and these behaviors increase physicians' tendency to prescribe activity restrictions.

Auth.

**8.G.13.6.6. Contamination of some food products with salmonella in Georgia.** /T. Mchedlishvili, D. Gelovani, I. Mchedlishvili, N. Barnabishvili/. Georgian Medical News. – 2011. - #2(191). - pp. 37-40. – rus.; abs.: geo., eng., rus.

Salmonella infections in Georgia are usually caused by *S. enteritidis* and *S. typhimurium*. Food products represent a leading vehicle in transmission of *S. enteritidis*, which predominates over other serotypes. The goal of our research was to study contamination of chickens and chicken eggs with *S. enteritidis* and *S. typhimurium*. Overall, 90 chicken eggs, obtained from various poultries, 100 eggs, sold by peasants, and 30 chicken and their excrements were tested. Cer Test Salmonella – immunochromatography one stage analysis were employed for detecting the salmonella microbe. Chickens and chicken eggs were contaminated with bacteria *S. enteritidis*. The microbe isolation rate from eggs was  $4.2 \pm 1.4\%$ . It was 1.1 for eggs from poultries and  $7.0 \pm 2.5$  for eggs from peasant vendors. Chicken contamination was found to be high -  $26.7 \pm 8.1\%$ . The research data showed the prevalence of *S. enteritidis* in etiology of salmonella infections in Georgia.

Auth.

**8.G.13.6.7. Supply of the Georgian pharmaceutical market with analgesic drugs.** /N. Gorgaslidze, N. Gongadze, N. Nizharadze, N. Phruidze, T. Makharadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 32-35. – geo.; abs.: eng.

The aim of our investigation was to study the quantity of analgesic drugs authorized in Georgia, including their forms and ingredients. It has been shown that related 196 medicines predominantly comprised non-steroidal anti-inflammatory drugs, drugs for musculoskeletal and joint diseases. The leader foreign countries were presented as follows: Germany, France, Bulgarian, Ukraine, USA, Australia, Belarus, Slovenia and Egypt. Among registered 196 medicines 32 refer to essential drugs. During analysis of narcotic drugs it was clarified that among 16 registered products 7 is morphine and codeine, 5-methadone, 1-promedol, 1-tramadol and 2 combine medicines produced by different countries. Most of medicines related to solid pharmaceutical forms, such as tablets, capsules and liquid substances. After our investigation we came to the conclusion about improving of rational use of analgesic drugs. It was also revealed a lack of some pharmaceutical forms on Georgian market such as plasters, drops and otorhinolaryngological drugs and drugs which are used in stomatology and for spinal anaesthesia, which must be provide in near future.

Auth.

**8.G.13.6.8. Georgian priority list for rare diseases management.** /I. Korinteli, M. Korinteli, D. Shonvadze, K. Paghava/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 63-65. – geo.; abs.: eng.

Rare diseases are of the most important public health problems of the 21st century. Early diagnosis and follow-up require expert medical competence. However, if diseases are rare, experts are rare as well. Health professionals have insufficient knowledge of the majority of rare diseases. This lack of knowledge underlies diagnostic error - a great source of suffering for patients and their families - and delayed care provision. Rare Diseases are life-threatening or chronically debilitating diseases which are of such low prevalence that special combined efforts are needed to address them (European Commission. Retrieved 19 May, 2009). A rare disease, also referred to as an orphan disease, is any disease that affects a small percentage of the population. The nosologic units with prevalence not exceeding 0.05% of general population belong to the group of the rare diseases. According to the present European regulation, a disease is classified as "rare" if it affects less than 1 in 2,000 people. Although this figure seems to be very low, between 5,000 and 7,000 distinct rare diseases have so far been described, and this number is expected to increase. It is not easy to study all these forms of rare diseases. The identification needs and priorities for rare diseases for each country are of great importance. By special questioner distributed among doctors we have performed identification of the priority list for rare diseases in Georgia. Creating new modular for medical educational programs will focus on the rare diseases that are included in

the priority list. Upgrading of physicians knowledge on rare diseases will result in early and accurate diagnosis and thus will have positive impact on the work of health care services.

Auth.

**8.G.13.6.9. The etiological structure of salmonellosis in Georgia.** /T. Mchedlishvili, D. Gelovani, P. Imnadze, I. Mchedlishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 87-88. – geo.; abs.: eng.

We have studied the etiological structure of salmonellosis in Georgia characteristic of the 70s of the 20th century as well of the current period of time. In the last century, the main cause of the disease was *S. typhimurium* serovar. For instance, in 1977, the above-mentioned serovar was isolated in 99.2% of the infected population. Due to the impact of different biological and social factors the role of *S. typhimurium* in the ethiology of salmonellosis is eventually decreasing and is replaced by *S. enteritidis* serovars, which currently causes more than 90% of the disease. The changes occurred in the etiological structure of the disease are accompanied by the changes of epidemiological features. But the most important is that has changed the role of different modes of transmission in the distribution of the infection, which raises the need of incorporating changes in the surveillance system of salmonellosis.

Auth.

**8.G.13.6.10. Epidemiology and risk factors of allergic rhinitis in schoolchildren of Tbilisi and West Georgia.** /N. Adamia, L. Zhorzholiani, M.Kherkheulidze, E.Kandelaki, N.Khavlashvili, N.Katamadze, T.Chkhenkeli/. Second International Congress of Respiratory Association of Georgia. – 2010. - geo.;\_abs.: geo., eng.

The present publication comprises a qualitative and quantitative assessment of epidemiology and development risk factors of allergic rhinitis (AR) in the schoolchildren population of Tbilisi and West Georgia in 2007-2008. The obtained data show that the share of manageable risk factors is high, providing basis for development of targeted and effective preventive measures for the children population.

N. Chkhaidze

**8.G.13.6.11. Technology of obtaining a substance used for production of Emoxipin and Mexidol drugs.** /O. Baidoshvili, J. Phutkaradze, P. Baidoshvili, T. Alavidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 20-22. – geo.

The technology for simplification of technology process and purification of the intermediate product – 3 oxo-2-ethyl 6-methyl-pyridine (Pyridinol) for production of Mexidol and Emoxipin was that the optimal conditions for production of Pyridinol need temperature – 185 °C and duration of the process – 4 hours. During passing on the temperature regime into the autoclave, the pressure rises up to 38-40 atmospheres, falling down during 4 hours to 28-30 atmospheres. Residual pressure is 7-2-3 atmospheres after cooling of the autoclave. 6.9 kg of technical pyridinol has been produced after filtration and washing of the suspension. Purification of the produced technical pyridinol is carried out through trans-crystallization from ethyl alcohol. The purification of Pyridinol by existing technologies is reached through resettling and needs additional use of potassium hydroxide and hydrochloric acid. The produced sediment is of paste-like consistence and slows down the filtration and washing processes. As a result of crystallization, the washing and drying processes yield 53% of pure Pyridinol, which significantly exceeds the results given by existing technologies (41%).

Auth.

**8.G.13.6.12. Experimental study of toxic effects of nitrogen compounds on embryos.** /Ts. Gigineishvili, I. Ghvineria, V. Berishvili, M.Tchipashvili, N. Imnadze, N.Lomtadze E. Abzianidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 37-39. – geo.; abs.: eng.

The study was devoted to the effects of the toxic dose of Paarlán (8.0 mg/kg) in animals. The substance was given to animals orally during 1-20 days of fertile period. This chemical causes alterations in the length and weight of embryo, the difference between the yellow body and embryonic cells, without influencing the mass of placenta and sex conjunction, increasing overall lethality/morbidity rates in embryonic, pre- and post-implantation periods. Based on the data

received by this study, the necessary preventive measures should be strictly followed. Otherwise, incautious spread of Paaran and pollutions with this substance can be hazardous not only for human health, but also can harm the biodiversity of organic environment.

Auth.

**8.G.13.6.13. Aflatoxins and aflatoxicoses.** /G. Gogichadze, N. Didbaridze, T. Didbaridze, L. Dolidze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 39-43. – geo.; abs.: geo., eng.

Aflatoxins are naturally occurring mycotoxins that are produced by many species of *Aspergillus*, a fungus, most notably *Aspergillus flavus* and *Aspergillus parasiticus*. Aflatoxins are toxic and among the most carcinogenic substances known. After entering the body, aflatoxins are metabolized by the liver to a reactive intermediate, aflatoxin M, an epoxide. The occurrence of aflatoxins is influenced by the weather (temperature and humidity-warm and wet is worst!); so the extent of contamination will vary with geographic location, agricultural and agronomic practices, and the susceptibility the peanuts (etc.) to fungus before they are harvested and during storage and or processing periods. Aflatoxins have received greater attention than any other mycotoxins because they clearly have a potent carcinogenic effect in laboratory rats and their poisonous effects in humans. Studies have shown that concurrent infection with the Hepatitis B virus (HBV) during aflatoxin exposure increases the risk of hepatocellular carcinoma (HCC). Aflatoxin is associated with both toxicity and carcinogenicity in human and animal populations. Acute aflatoxicosis results in death, whereas chronic aflatoxicosis results in more prolonged pathologic changes including cancer and immunosuppression.

Auth.

**8.G.13.6.14. Factors influencing drug circulation from drugstores.** /N. Gorgaslidze, N. Gongadze, N. Nizharadze, G. Gorgaslidze, D. Tabatadze/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 43-46. – geo.; abs.: eng.

The article presents materials created on the basis of a questionnaire received from 50 pharmaceutical institutions of Tbilisi. It is shown that all drugstores have the private status, which are divided by us conditionally into 3 groups: 1. Good-category drugstores, where the collaborators pay attention to the consumers questions and fully satisfy them; 2. Middle-category drugstores, where the collaborators pay attention to the consumers questions but fail to answer them adequately; 3. Bad-category drugstores, where the collaborators ignore and fail to answer the consumers questions. In the last case, we can suppose that such personnel have little competence and are oriented only to business. It is established that most people (46%) prioritize the drug manufacturing company and country and the subjective assessment of drug effectiveness. The conducted monitoring has revealed that drugs should be placed according to their social, information and visual effects, that economically facilitating measures need to be taken and introduced, that active relations with medical and preventive institutions should be maintained, that the professional level of medical staff and the doctor-patient communication culture need to be improved.

Auth.

**8.G.13.6.15. Natural silk-producing enterprise - clinical-hygienical parallels.** /R. Kverenchkhiladze, L. Bakradze, M. Tsimakuride/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 67-69 – geo.; abs.: eng.

The subject of our research was to study and to estimate an influence of natural silk industry's workplace conditions on the workers disability, the general and occupational morbidity and the health state. The main occupational injuries are industrial dust, the high temperature and high moisture of the workplace air, industrial noise, and general workplace vibration. The main diseases in the structure morbidity are respiratory, cardiovascular diseases, and cardiovascular system and allergosis (45% of general morbidity).

Auth.

**8.G.13.6.16. Morphological and anatomical study of the white flower onion (*Allium leucanthum* C. Koch).** /L. Mskhiladze, D. Tchintcharadze, K. Mchedlidze, J. Kuchukhidze/. Tbilisi

State Medical University's Collection of Scientific Works. – 2009. – #43. – pp 107-109. – geo.; abs.: eng.

*Allium leucanthum* C. Koch's morphological and anatomical structure has been investigated. The micro diagnostic signs of the plant are defined: flower cover - cells of epidermis, for flowering stem - disordered disposition of collateral intact bunches, for leaves- isolateral structure, right walled epidermis.

Auth.

**8.G.13.6.17. Estimate of risk factors of some diseases among Chiatura mining workers.** /M. Mirtskhulava, R. Javaxadze, N. Mebonia, N. Chakvetadze, M. Zhuruli, I. Ghvineria, M. Tsereteli/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 110-111. – geo.; abs.: eng.

An analytical epidemiological study to investigate occupational risk factor among the Chiatura mining workers was carried out. 330 respondents participated in the study: 165 mining workers and 165 control persons, who have never worked at the mine. All respondents were questioned through standard questionnaires. The collected data were analyzed with Epi Info. According to the results, gastritis, bronchitis and pneumonia had high prevalence among mine workers. The relative risk for developing specific diseases and symptoms was high among the mine workers as compared with the control groups. The above-mentioned diseases and symptoms include: bronchitis, pneumonia, gastritis, sexual weakness in males, giddiness, weakness in legs, weakness in hands, and difficulties in walking.

Auth.

**8.G.13.6.18. The role of *Candida* spp. in patients with otorhinolaryngology pathologies.** /N. Sharashenidze, I. Khundadze, Sh. Khetsuriani, M. Chitaladze, K. Khetsuriani/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 153-154. – geo.; abs.: eng.

An increasing tendency of candidosis has been revealed among the patients with otorhinolaryngological pathologies. The microbiological investigation of the ear, upper respiratory ways showed high percent of the candidosis among patients with recurrent inflammatory diseases. The fungus *Candida* appeared in 62 cases out of 65 patients, 22 of them being monocultures and others associated with different microorganisms.

Auth.

**8.G.13.6.19. Physical growth of children aged 5-6 in Tbilisi.** /M. Kherkheulidze, N. Khavlashvili, N. Adamia, E. Kandelaki/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 170-173. – geo.; abs.: eng.

The aim of the study was to assess the nutritional status and anthropometric parameters of children aged 5-6 in Tbilisi. The cross-sectional study was performed on a sample of 754 children - boys and girls aged 5–6 attending pre-school facilities. The study covered the children population from 16 kindergartens of Tbilisi. The following anthropometric parameters were studied - body weight, height, head and mid-arm circumferences and body mass index (BMI). Physical parameters were assessed using the WHO/NIH standardized growth charts (percentile and Z scores). The collected data were analyzed using the computer program EPI INFO. The results of the study indicate that in the Tbilisi 5-6 year-old child population the problem of overweight and obesity is more frequent than underweight.

Auth.

**8.G.13.6.20. Cytotoxic alkaloids from *Galanthus krasnovii*.** /M. Jokhadze, J. Kuchukhidze, D. Tchintcharadze, D. Berashvili, T. Murtazashvili/. Tbilisi State Medical University's Collection of Scientific Works. – 2009. – #43. – pp. 176-177. – eng.

The aerial parts of dried *Galanthus krasnovii* were extracted with a range of solvents. The advantages of this extractive method are a more complete extraction of all classes of metabolites, including acidic and basic compounds and a better fractioning of the non-polar metabolites that are obtained partially separated in three early fractions. All extracts were first assayed and only the active extracts were submitted to further fractioning. All the fractions from each step of the purification procedure were assayed for brine shrimp lethality, and the active ones were further

fractionated and purified using different methods to obtain pure active compounds. The high cytotoxic activity is characteristic of alkaloids: lycorine ( $IC_{50}$   $4.5 \pm 0.05$  mg/ml), haemantaimene ( $IC_{50}$   $9.5 \pm 0.08$  mg/ml), crinine ( $IC_{50}$   $11.3 \pm 0.1$  mg/ml), narwedine ( $IC_{50}$   $15.7 \pm 0.12$  mg/ml) and hamaine ( $IC_{50}$   $9.7 \pm 0.15$  mg/ml).

Auth.

**8.G.13.6.21. Chromatographic analysis of tobacco smoke condensate in biologic tissue.** /D. Zurabashvili, I. Tchanturia, L. Kapanadze/. Georgian Medical News. – 2010. – # 1(178). – pp. 31-34. – rus.; abs.: geo., eng., rus.

Specialized analytical instrumentation for a detailed analysis of nicotine, benzopyren, pyridine and benzene in tooth enamel and pulp of inveterate tobacco smokers is created. The Waters PPY-24 liquid chromatograph is equipped with model M660 solvent programmer and model U6K sample injector is used. The model 440 dual-wavelength detector is used to obtain absorbance ratios on dualpen recorder. Our data show that the concentration of tobacco smoke components in tooth cavity of inveterate tobacco smokers is different. The chisel tooth pulp contained considerably more nicotine and pyridine as compared with molars. The level of benzene does not change the analyzed structures. The assumption of linearity between the calculation of predicted retention times and concentration has been shown to be valid up to 8.0% for all the studied compounds.

Auth.

**8.G.13.6.22. Human rights to a better quality of life.** /P.Dzotsenidze, N.Chikhladze, M. Jorbenadze, N. Phitskhelauri/. Georgian Medical News. – 2010. – # 1(178). – pp. 68-72. – rus.; abs.: geo., eng., rus.

This article reviews problems of pain relief for incurable patients in the context of human rights and international standards in this field. In respect to international and national human and patient rights, regarding achievement of a better quality of life, the governments should identify and determine the problems and obstacles that impede the use of opioids as adequate pain relief for incurable patients. The introduction into practice of relevant new legislative documents and normative acts in Georgia will further to overcome the existing barriers and make it possible for incurable patients to live the last days under medical care and as much as possible without pain and with dignity.

Auth.

**8.G.13.6.23. Indices of immune reactivity of sportsmen organism after one-time physical load of different intensity and duration.** /G. Iashvili, M. Chkhikvishvili, D. Kobelashvili, L. Kakiashvili, M. Chkhartishvili/. Georgian Medical News. – 2010. – #2(179). – pp. 30-33. – rus.; abs.: geo., eng., rus.

The aim of this research was to determine and to compare the indices of immune reactivity of sportsmen during one time physical load of different intensity and duration. Observation was carried out on 15 wrestlers of average qualification during the annual cycle after three one time physical loadings of different intensity and duration (15 sec.-maximum intensity; 60 sec.-maximum intensity; stepped growth loading), spontaneous rosette-formation, G.A.M.- concentration of immunoglobulin, neutrophil/lymphocyte ratio were determined. Immune reactivity of organism was decreasing after one time physical load. Expressed dependence of the sportsmen organism upon the duration and intensity of one time physical loadings was not revealed.

Auth.

**8.G.13.6.24. Alcohol use in Georgian students. Pilot study rigorously following criteria of European School Project on Alcohol and other Drugs.** /L. Sturua, L. Baramidze, A. Gamkhrelidze, G. Galdava/. Georgian Medical News. – 2010. – #2(179). – pp. 52-61. – eng.; abs.: geo., eng., rus.

The main purpose of the European School Survey Project on Alcohol and Other Drugs (ESPAD) is to collect comparable data on substance use among 15–16 year-old European students in order to monitor trends within as well as between countries. In the article the results of the pilot study of Alcohol Use among Georgian Students, rigorously following Criteria of European School Project on Alcohol and Other Drug (ESPAD) are presented. The survey was conducted according to a standardized methodology and with a standardized questionnaire. Data were collected during

February 2009 and the target population was Tbilisi students in the 10-th grade (93% born in 1992), with a mean age of 16.1 years at the time of data collection. Data were collected by group-administered questionnaires. The students answered the questionnaires anonymously in the classroom with researchers. The survey revealed that alcoholic beverages, especially beer and wine are considered easily available; 73% found beer and 70% wine easy to obtain. 90% of the surveyed students have tried alcohol at least once during their lifetime. 80% have done so in the last 12 months and 40% in the past 30 days. Gender differences become apparent when frequency of use is considered: boys have used alcohol more often than girls. 7.5% of the students state that, they never drink alcohol at all. Wine and beer are the two most important types of beverage for the students. On average, 40% of students on the latest drinking day consumed wine and 38% - beer. Champagne and spirits consumed 29% and 22% of students, respectively. On average, half of the students have been intoxicated, at least once during their lifetime, to the point of staggering when walking, having slurred speech or throwing up. 40% reported intoxication in the last 12 months and 12% in the past 30 days. Another way to measure drunkenness is to ask about a specific amount of alcohol consumed within a certain period of time. The students were asked if they had had five drinks or more on one occasion during the past month; this is referred to here as "heavy episodic drinking", 40% reported this; more boys than girls did so (45% versus 33%). More than half of the questioned students had consumed at least one glass of alcohol at the age of 13 or younger, and 25% had been drunk at that age. Having been intoxicated during the past 30 days, in turn, co-varies both with anticipating more positive consequences from drinking and with having experienced more negative personal consequences when drinking. Alcohol remains the number one problem. The fact that more than 90% of respondents have had drunk alcohol at least once and that more than 43% have had their last drink at home and more than 27% at friend's home, indicates the great reflection of the cultural acceptance of alcohol within Georgian society and within Georgian families. The consumption level among adults and their attitudes towards the substance in question can be one factor that affects use among teenagers. So may the magnitude of information and preventive efforts. Availability, not only in physical terms but also in financial terms, is another factor. Other, less substance-related, factors include the general level of health awareness in a population and the social and economic structures and conditions of individual communities. The study showed the importance of knowledge of alcohol use and the necessity including the healthy lifestyle subject in school curricula.

Auth.

**8.G.13.6.25. Hydrophilic and lipophilic antioxidant capacities of Georgian spices for meat and their possible health implications.** /V. Rodov, Y. Vinokur, N. Gogia, I. Chkhikvishvili/. Georgian Medical News. – 2010. – #2(179). – pp. 61-66. – eng.; abs.: geo., eng., rus.

Georgian cuisine is famous for its spices for meat dishes. Many spices are rich in polyphenols and other antioxidants that reduce the formation of carcinogenic products during thermal processing of meat and counteract its adverse health effects. In spite of the relative popularity of meat dishes, Georgia is characterized by low incidence of the colorectal cancer. We suggest that this phenomenon may be at least partially related to antioxidant-rich spices and other products of plant origin copiously used in Georgian cuisine during preparation and consumption of meat. The present study characterized the content of phenolic compounds and antioxidant capacities of hydrophilic and lipophilic fractions from commercial samples of Georgian spices. Hydrophilic antioxidant capacity and total content of phenolic compounds in the spices were closely correlated. High values of the both parameters were found in *kviteli kvavili* (marigold, *Tagetes patula* L.), *kondari* (summer savory, *Satureja hortensis* L.) and *kotsakhuri* (barberry, *Berberis vulgaris* L.), as well as in *kvliavi* (caraway, *Carum carvi* L.) and *tsiteli tsitsaka* (red pepper, *Capsicum annum* L.). High lipophilic activity was revealed in the red pepper and especially in *kviteli kvavili* (marigold). The analysis of the active principles of the spices and their mode of action is in progress.

Auth.

**8.G.13.6.26. The effect of toxic components in tobacco smoke on the fatty acid profile of dental pulp.** /D. Zurabashvili, I. Tchanturia, B. Kikalishvili, G. Danelia/. Georgian Medical News. – 2010. – #3(180). – pp. 25-29. - rus.; abs.: geo., eng., rus.

The aim of the present study was to characterize fatty acid profile of dental pulp in non-smokers' and tobacco-smokers' with acute serous pulpitis. The fatty acid composition in the pulp of molars, pre-molars and chisel tooth in 80 tobacco-smokers and 60 non-smokers were analyzed by Gas-



Chromatography with glass capillary columns. Linoleic acid was revealed in both - tobacco-smokers and non-smokers; the concentration of linoleic acid in tooth pulp of non-smokers was significantly higher. Non-smokers' tooth pulp contained linoleic, linoleic and arachidonic acids; tobacco-smokers' – only linoleic acid. The linoleic and arachidonic acids in pulp of tobacco-smokers were not discovered.

Auth.

**8.G.13.6.27. The motoric features of the neuro-muscular apparatus and the maximum working capacity of athletes.** /G. Sulaberidze, E. Feroyan, L. Kokaia/. Georgian Medical News. – 2010. – #3(180). – pp. 33-38. - rus.; abs.: geo., eng., rus.

The purpose of the research is to study the functional reconstruction of the motoric units of the motoneuronic pool in the process of trainings of athletes. 164 athletes have been participated in the studies: the representatives of the high-speed, high-speed- power, power forms of sport and also the athletes, who develop the endurance. With the aid of stimulation of electromyography bioelectric M-reply/answer has been fixed that appears to the strictly dosed, graduated in the frequency electrical irritation of the motoric fibers of nerve. Under the effect of the directed training process occurs the differentiated combinational regrouping of the motoric units of neuron-muscular apparatus, which to a considerable degree increases the maximum development of one or another motoric quality.

Auth.

**8.G.13.6.28. Illicit drug use in Georgian students; pilot study rigorously following criteria of European School Project on Alcohol and other Drugs.** /A. Gamkhrelidze, L. Baramidze, L. Sturua, G. Galdava/. Georgian Medical News. – 2010. – #3(180). – pp. 39-46. - eng.; abs.: geo., eng., rus.

The main purpose of the European School Survey Project on Alcohol and Other Drugs (ESPAD) is to collect comparable data on substance use among 15–16 year-old European students in order to monitor trends within as well as between countries. This summary presents key results from the Alcohol Use in Georgian Students, pilot study rigorously following Criteria of European School Project on Alcohol and Other Drug (ESPAD). The survey was conducted according to a standardized methodology and with a standardized questionnaire. Data were collected during February 2009 and the target population was Tbilisi students in the 10-th grade (93% born in 1992), with a mean age of 16.1 years at the time of data collection. Data were collected by group-administered questionnaires. The students answered the questionnaires anonymously in the classroom with researchers. 22% of the surveyed students perceive cannabis to be easily available, and boys consider cannabis slightly more accessible than girls do, the gender difference is rather big (31% vs.13%). Amphetamines and ecstasy are not perceived to be as easily available as cannabis. On average, 33% of the boys and 8% of the girls have tried illicit drugs at least once during their lifetime (20% for all students). After cannabis, ecstasy is in second position, being mentioned by 7.5% of the students and the figure for amphetamines is about 2%. Lifetime use of crack was reported by fewer students (1.1%) and the rate for heroin was even lower (1%). Lifetime cocaine and heroine experiences were reported by 0.6% of the students on average. Just as few reported experience of GHB and anabolic steroids or drug use by intravenous administration. Since cannabis is the most frequently used illicit drug, it could be worthwhile to have a closer look at this substance. Use of cannabis in the past 12 months was reported by 17% of the boys and 3% of the girls (10% for all students) while use in the past 30 days was stated by 6.5% of the boys and 0.8% of the girls (3% mean). Using drugs is less problematic in Tbilisi adolescents but still needs urgent public health interventions. The consumption level among adults and their attitudes towards the substance in question can be one factor that affects use among teenagers. So may the magnitude of information and preventive efforts. Availability, not only in physical terms but also in financial terms, is another factor. Other, less substance-related, factors include the general level of health awareness in a population and the social and economic structures and conditions of individual communities. The study results show the importance of knowledge on these issues and therefore including the healthy lifestyle subject in school curricula. The need to repeat this exercise at regular intervals is important in order to be aware of newer trends and to serve as a basis for policy direction and change.

Auth.

**8.G.13.6.29. Posttraumatic stress disorder and insomnia development in IDPs from Shida Kartli, Georgia.** /L. Maisuradze, N. Lortkipanidze, M. Eliozishvili, I. Gvilia, N. Darchia/. Georgian Medical News. – 2010. – #3(180). – pp. 64-69. - eng.; abs.: geo., eng., rus.

Recent evidence suggests that posttraumatic stress disorder (PTSD) is associated with sleep disturbances following the traumatic events. However, the exact nature of the relationship between disturbed sleep and PTSD is unclear. The present study examined the development of PTSD and insomnia in the population subjected to force displacement from Shida Kartli, Georgia (Caucasus). Detailed subjective information on sleep-wake habits and demographic parameters were obtained from 45 displaced persons. Posttraumatic Stress Diagnostic Scale was administered to all participants. Complete information could only be obtained from 27 individuals categorized into PTSD (19 subjects) and non-PTSD (8 subjects) groups. Sleep complaints were presented among all PTSD individuals, also 50% of non-PTSD subjects were still suffering from insomnia. Most of the subjects were not satisfied with their current sleep. They mostly complained on sleep maintenance difficulties and the appearing of nightmares, as disturbing factors of sleep. The difference between PTSD and non-PTSD groups on nightmare frequency did not reach the significance. Our results support a view that sleep mechanisms may contribute to the pathophysiology of PTSD, but insomnia following trauma exposure may exist even in the absence of full-blown PTSD.

Auth.

**8.G.13.6.30. The influence of tobacco-smoke toxic components on glucosaminoglikans in biologic tissue.** /D. Zurabashvili, I. Tchanturia, L. Kapanadze, B. Kikalishvili, G. Danelia/. Georgian Medical News. – 2010. – #4(181). – pp. 24-27. – rus.; abs.: geo., eng., rus.

The aim of the work is detailed analysis of glucosaminoglikans and glucuronic acid in chisel tooth and molars of tobacco-smokers and non-smokers. The total number of 140 patients (tobacco-smokers – 60) by acute serous pulpitis is investigated. The conducted quantitative and qualitative analyzes show that tobacco-smokers tooth contains less glucosaminoglikans (chondroitinsulfats A and C) and more glucuronic acid than non-smokers individuals. The chisel tooth pulp contained considerably more glucuronic acid as compared with molars. These studies support the hypothesis of important role of cigarette smoke toxic components in the tooth support mechanisms. The studies are necessary to be held in different directions.

Auth.

**8.G.13.6.31. Psychophysical and physical methods in the treatment of dermatoses accompanied with skin dryness and itching.** /N. Tsiskarishvili, M. Eradze, Ts. Tsiskarishvili/. Georgian Medical News. – 2010. – #4(181). – pp. 28-32. – rus.; abs.: geo., eng., rus.

Traditionally, the exacerbation of skin diseases accompanied by itching and dryness is cutting off by using of antihistamines, indifferent ointment (sometimes together with topical corticosteroids) and antipruritic local means. For the continuous application in inter-relapsing period, patients, as a rule, are offered variety of lipid-recovery beauty creams, ointments and emulsions. At the same time, such measures do not have a significant impact on the severity of itching and the cost of these drugs is quite high. Based on the above, we propose an alternative method of treatment, including use of the variety of psychophysical method of therapy (dotted self-massage) and paravertebral UV - irradiation in combination with topical emollients for treatment of chronic dermatoses, involving dryness and itching of the skin. As the results of research in the study group of patients, compared with control group receiving traditional treatment, the main symptoms (dryness, a feeling of tightening the skin, itching) subsided considerably faster (on average 5 days), 85% patients of the study group pointed to the improvement of the general emotional state, reducing severity of depression, related to skin condition, which certainly indicates an improvement in their quality of life. After 3 weeks use of the drug "Secalia" a distinct reduction in severity of flaking skin has been revealed. By the end of the observation period (1.5 months) in patients of a main group no resumption of itching or worsening of the skin was revealed. A real advantage of this method is absolute security to the absence of contraindications (except for general contraindications for physiotherapy procedures) and unwanted side effects, excellent tolerability, simplicity and ease of use. Unlike other methods of physiotherapy the complex of psycho-physical exercises can be used in the home. Availability, simplicity, and possibility of using at home, absolute safety, effectiveness against dryness and itching relief of the proposed method, allow to

recommend it as a basic tool for continuous use in patients with dermatoses, which are accompanied by dryness and itching, both in combination with other basic drugs, and as a monotherapy.

Auth.

**8.G.13.6.32. Speech impairment predisposes to cognitive deterioration in hepatic encephalopathy.** /M. Meparidze, T. Kodua, K. Lashkhi/. Georgian Medical News. – 2010. – #4(181). – pp. 43-49. – rus.; abs.: geo., eng., rus.

Hepatic encephalopathy is a reversible neuro-psychiatric syndrome that complicates liver insufficiency. The changes are complex and disorders are detected in digestive and neural systems. Disturbed consciousness and intellectual deterioration, particularly communicative difficulties are observed: speech is slurred, voice monotonous, writing disturbances, amimic face and rigid posture. Difficulties of socialization and tendency to self-isolation are observed. Memory, attention and perception are decreased. We suppose that disorders of cognitive functions are determined by impairment of speech and other communicative abilities. According to the theories of linguistic determinism and linguistic relativity thought categories move through the mould of native language. That means that speech impairment causes misperception of the real world. To confirm this hypothesis we investigated 106 patients with following diseases: peptic ulcer – 46, fatty liver – 30, liver cirrhosis – 19, viral hepatitis – 11 and 19 controls. Brain magnetic resonance tomography was carried out and psychometric tests were performed to patients with symptoms of hepatic encephalopathy. Atrophic changes in frontal, temporal and insular area of brain cortex were revealed in most cases. Those regions are responsible for actor observation, imitation and emotion, i.e. for empathy and sociability. They are very sensitive to the increased levels of ammonia and glutamine. In case of early treatment only slight atrophic changes are presented but without treatment atrophic processes become stable and expressed by impairments of speech and entire communicative ability. Human beings are very much at the mercy of the particular language, which has become the medium of expression for their society. They do not live in the objective world alone or in the world of social activity alone. Accordingly, damage of speech in hepatic encephalopathy is primary and predisposes to cognitive dysfunction.

Auth.

**8.G.13.6.33. Mobility of the cardiorespiratory system under conditions of tiredness in cycling sprinters and stayers of identical qualification.** /M. Chkhikvishvili, G. Iashvili, D. Kobelashvili, M. Chkhartishvili, M. Patariaia/. Georgian Medical News. – 2010. – #5(182). – pp. 21-24. – rus.; abs.: geo., eng., rus.

The aim of this research work was to determine and to compare the dynamics indices of the mobility function of the cardio-respiratory system (CRS) under different conditions of functioning of the cyclist's organism. The indices of mobility of the CRS functioning at various levels of organism functioning were determined and compared on 24 cyclists- sprinters and stayers in each period of annual cycle (at the end of the transition and comparative periods and at the middle of the competition period). It has been revealed that mobility of the CRS functioning straight away after the limbering-up in the initial stage of physical loading is developed in sprinters more than in stayers. Under conditions of light tiredness especially with increasing of sporting form these differences are leveling. Mobility of the CRS functioning in the process of rehabilitation is developed in stayers in greater degree than in sprinters. After loading under conditions of light tiredness the differences in the indices characterizing mobility of the CRS functioning in the period of rehabilitation with the sporting form growth increase.

Auth.

**8.G.13.6.34. The development of bioethics as a scientific discipline and its essence.** /Archimandrite Adam – V. Akhaladze/. Georgian Medical News. – 2010. – #5(182). – pp. 25-31. – rus.; abs.: geo., eng., rus.

The author examines the patterns and predictors of newly emerging branch of science such as bioethics that originated on the background of a revolutionary situation in the history of biomedicine as the need for a new ethic that would confront the challenges brought about by scientific and technological development to humanity. Exploring many different kinds of bioethics issues, the

author concludes that the essence of bioethics is that it is not only a scientific and practical discipline, but it is also a weltanschauung. Only with such an approach the spectrum of functions inherent in bioethics is expanded.

Auth.

**8.G.13.6.35. The anatomical and morphological description of Phellodendron Lavalley Dode stem bark.** /M. Meskheli, K. Mchedlidze, Ts. Gogitidze/. Georgian Medical News. – 2010. – #5(182). – pp. 32-38. – eng.; abs.: geo., eng., rus.

Phellodendron lavalley Dode (Rutaceae) is native to Japan. It was introduced in Georgia (Adjara) in 80<sup>th</sup> of XX century. In medicine the genus of Phellodendron Rupr. has been used to treat gastric ulcers, bacterial and fungal infections, inflammations, hyperglycemia. The bark is rich of alkaloids of protoberberine type and may be used as a source of them. There are very limited data about anatomical and morphological structure of this genus. Especially least investigated is grown in Georgia. The aim of our study was to investigate anatomical and morphological structure of stem bark Phellodendron Lavalley Dode introduced in Georgia and evaluate its micro structural characteristics. The bark is collected in Kobuleti medical plants experimental station in July and November of 2009 year. There were examined longitudinal and cross sections of herbal material. The bark was studied using a light (Carl Zeiss, Jeneval) and (MBC-2) stereoscopic microscopes. During the structural study of P. lavalley it was manifested the variety of diagnostic signs: the cork is covered by small warts. It's characteristic to corks to peel off the dead tissues. Its cellular structure is rich in chloroplasts. Both in primary, and in secondary structure of a stem bark it is developed many of the sclerenchymal (fibres, mechanical cages) sites. The cork's cambium (phellogen) is characterized by small regions of cork's parenchyma, in which the idioblasts are arranged. In the bark there is massive size monarchic type radial rays, intensively stretched from the central cylinder till the primary cork's parenchymal tissue, they transport and preserve the substances received as a result of physiological processes. A variety of the tissues of Phellodendron lavalley stem bark indicates on high quality of medical raw materials and activity of the physiological processes in a plant.

Auth.

**8.G.13.6.36. Deformability of red blood cells and human aging.** /R. Khetsuriani, G. Lomsadze, M. Arabuli, T. Sanikidze/. Georgian Medical News. – 2010. – #5(182). – pp. 42-46. – eng.; abs.: geo., eng., rus.

The goal of the research was to study the mechanisms of the regulation of deformability of RBCs in various aged people. Morphological, biophysical and biochemical parameters of RBCs were studied in 50 practically healthy men – volunteers (divided in two age groups: adults (22-30 years old), and old people (75-89 years old)). It was concluded that excess number of large-sized matured (aged) erythrocytes is revealed in the blood of old people. RBC ageing is closely related to a progressive decrease in ADP/ATP ratio, which provides decrease in activity of Na<sup>+</sup>/K<sup>+</sup>-, Ca<sup>2+</sup>-ATP-ases and accumulation of intracellular Na<sup>+</sup> and Ca<sup>2+</sup> ions, which determine series of events as disorders of osmotic balance, cells' swelling, activating signal transduction system, which affects properties regulating RBC deformability and finally leads to the removal of old cells from the circulation by macrophages at spleen level. Received results show different rheological characteristics of RBCs in various aged volunteers.

Auth.

**8.G.13.6.37. Investigation of the use of phytodrugs by Azeri population.** /N. Zulfugarova/. Georgian Medical News. – 2010. – #5(182). – pp. 50-55. – rus.; abs.: geo., eng., rus.

The study showed that the majority of people between 14-25 years have information about 5-20 names of phytodrugs. People in active age (between 26-50 years) have got information about 21-40 phytodrugs. Out-patients are interested about all additional information about phyto-medicines. Needs to the phytomedicines are varied between two different section of people. People prefer to use ready to use drugs produced at the pharmaceutical plants, because instructions for the preparations of phitodrugs are not informative enough to make phytoforms at home conditions.

Auth.

**8.G.13.6.38. Science and conscience.** /G. Javashvili, G. Kiknadze, T. Kurtanidze/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 7-20 – eng.; abs.: geo., eng., rus.

Many historical facts, describing exploitation and discrimination of research subjects which have been justified by the importance of research aims, are known. Today the protection of the rights and safety of persons involved in biomedical research (research subjects) is the necessary precondition for contemporary biomedical researches and correspondingly, development of the science. An integral responsibility of researchers working in the field of biomedicine is to ensure the protection of safety and rights of research subjects. In Europe, as well as other countries of developed and partly in developing world, there is a relevant legislative basis of international agreements and national legislation which aims at protecting the research subject. Georgia possesses considerable legislative basis in this field which includes two obligatory instruments of Council of Europe and two national laws. Relevant legislation and ethical evaluation of biomedical research protocols involving human subjects by research ethics committees is an effective mechanism for protection of a research subject's safety and rights. In Georgia there already exist biomedical research ethics committees. Further, their amalgamation is necessary to increase their competence and regularity of activities through increasing the number of submitted research protocols as well as re-distribution of expertise (3-5 committees instead of existing 15-20 or more committees). All the researchers participating in biomedical research shall be educated on the issues of protection of rights of research subjects and contemporary principles of bioethics. The latter shall become an inseparable part of professional competence of researchers for which it is necessary to prepare and put into practice special training programmes (mural as well as distant courses).

Auth.

**8.G.13.6.39. Hypoglycemic activity of Berberin and extract obtained from the bark of Phellodendron Lavalei introduced in subtropical areas of Georgia.** /M. Meskheli, N. Antelava, A. Bakuridze, M. Okujava, D. Berashvili/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 65-69 – rus.; abs.: geo., eng., rus.

The goal of this study was to evaluate hypoglycemic activity of Berberin and extract obtained from the bark of Phellodendron Lavalei, which is introduced in sub tropic areas of Georgia – Kobuleti. The study was carried out to reveal comparative hypoglycemic activity and acute toxicity of alkaloid Berberin and bark extract of Phellodendron Lavalei. Effects of Berberin hydrochloride and bark extract on blood glucose level was studied on mice. Measurement of blood glucose level was carried out on fasting animals using glucose meter GlucoLab – auto-coding. The study showed that Berberin hydrochloride dose 150 mg/kg, extract (obtained from the bark of Phellodendron Lavalei) dose 400 mg/kg and glybenclamid dose 0.25 mg/kg practically decreased blood glucose level of mice in a same pattern. Received data allows us to suggest that Phellodendron Lavalei, introduced in sub tropic areas of Georgia contains active hypoglycemic components. In conclusion the possible use of Phellodendron Lavalei as a plant raw material for obtaining hypoglycemic substances needs to be decided after further study of efficacy, mechanism of action of extracts and active components of Phellodendron Lavalei on experimental models of diabetes mellitus.

Auth.

**8.G.13.6.40. Peculiarities of the circulatory system response to the effect of modern tantalum manufacture factors in workers.** /D. Omarova, A. Ismailova, Z. Sultanbekov/. Georgian Medical News. – 2010. – #7-8(184-185). – pp. 70-76 – eng.; abs.: geo., eng., rus.

Objective of this study was to examine functional condition of cardiovascular system among workers at "Ulba Metallurgical Plant" JSC (located in Ust-Kamenogorsk, Eastern Kazakhstan) - one of the world largest enterprises with the full production cycle from processing of tantalum containing raw materials to finished products. All workers that participated in the examination were divided into three groups: (I) - up to 5 years of occupation; (II) - from 5 to 9.9 years of occupation; and (III) - more than 10 years of occupation experience in the tantalum industry. The cardiovascular system, health concern and their contributing factors were assessed. In group I the factor of profitability of blood circulation was up to 3000 conventional units, which corresponds to the optimal fatigue; In group II the factor of profitability of blood circulation was increased up to 3525±327,3 conv. units - critical values zone. In group III the factor of profitability of blood circulation was up to 3000 conv. units. A relative improvement in the central hemodynamic indices

compared with those in group II may be due to the development of adaptation. The assessments of functional condition of cardiovascular system among the workers specialize in different stages of tantalum production revealed the necessity of paying special attention at the cycle of tantalum processing and the years of work experience in an occupation.

Auth.

**8.G.13.6.41. The possible mechanism of behavioral disorders in rats under long-term treatment with Dexamethasone in the neonatal period.** /O. Sinauridze, N. Gongadze, B. Tkeshelashvili, G. Bekaia/. Georgian Medical News. – 2010. – #9(186). – pp. 56-61. – rus.; res.:eng., rus., geo.

Despite the fact that the side effects of prolonged treatment with dexamethasone are well known, information about its effects on the central nervous system is very limited. Experimental study of long-term effects of dexamethasone administration in the neonatal period on behavioral activity of rats in the open field was conducted. Four groups of newborn males were selected from the offspring of pregnant rats. The first group was left intact, the animals of second group were injected saline solution, the third group – with the dexamethasone and the fourth group - along with dexamethasone received L-arginine. Tests in an open field for all groups of animals were carried out on the 45th (first test) and 60th (second test) days after birth. The results showed that the decrease in motor activity of animals and in the number of sectors crossed in the open field with a high statistical significance was observed only in the group of animals, which for four days in the neonatal period underwent dexamethasone treatment. At the same time, another group of animals, which was also injected dexamethasone in the same doses, but additionally was injected L-arginine, the behavior in the open field did not differ from the intact animals or animals which were injected (as a control) saline solution. It was concluded that it is the lack of nitric oxide in the early neonatal period, which occurs as a result of dexamethasone treatment that causes observed changes in animals' behavior.

Auth.

**8.G.13.6.42. Modulating effects of androgens on the development of adaptive-compensatory processes in the organism of experimental animals - males.** /N. Didebulidze, Ts. Sumbadze, E. Melikadze, S. Gvidani, M. Kakabadze/. Georgian Medical News. – 2010. – #9(186). – pp. 62-67. – rus.; abs.: geo., eng., rus.

The purpose of research is the definition of androgens role and myocardial androgen receptors and sex steroids in males under metabolic and hormonal "stress" induced by the experimental diabetes. Research was carried out on 60 rats-males, mass 180,0-200,0 g. The diabetes reproduced by single injection of alloxan (200mg/kg). Androgen receptors were revealed by the radiometric and radioautography methods. The content of glucose, immunoreactive insulin, testosterone, estradiol, corticosteron and somatotropin were defined in animals' blood plasma. On the early terms of alloxan diabetes estradiol concentration increase against a background of testosterone decrease which causes the "feminization" of the sexual hormonal balance. On the other side the increase of androgen receptors expression by cardiomyocytes causes the intensification of myocardium tissue physiologic ability to androgens perception positively influencing on the metabolism. Consequently, androgens provoke stimulating effect on the myocardium metabolism in males at early stages of the experimental diabetes.

Auth.

**8.G.13.6.43. The radiation background and hygienic assessment of external irradiation doses of population in some mountainous regions of Georgia.** /I. Kugoti, N. Vepkhvadze, N. Kiladze/. Georgian Medical News. - 2010. - #11 (188). – pp. 61-65 – rus.; abs.: geo., eng., rus.

The radioecological situation of Mtskheta-Mtianeti region of Georgia has been studied. Doses from external irradiation were determined and estimated. The average value of radiation background (RB) of open areas in Mtskheta-Mtianeti region accounts 84,6 nGy/h, which is nearly equal to the average values in the countries of Western Europe. This shows that investigated territories have high natural radiation background, which considering the geographical position and geophysical situation of Georgia is normal. The average value of radiation background of buildings in investigated territories accounts 120,4 nGy/h, which is little more than worldwide average value. The average annual dose from external irradiation (without radon component) for population of

Mtskheta-Mtianeti region accounts 0,99 mZv/y, which is slightly more than worldwide average value. Since approximately 2/3 of effective equivalent dose comes from internal radiation and 1/3 – from external radiation, it's reasonable to suppose that the radiation load of population of Mtskheta-Mtianeti region is significant and requires implementation of radiation dose reduction measures.

Auth.

**8.G.13.6.44. Peculiarity of consumer-preference shaping in the pharmaceutical market in Azerbaijan.** /L. Mansurova/. Georgian Medical News. – 2011. - #1(190). – pp. 56-60. – rus.; abs.: geo., eng., rus.

Pharmaceutical market researches in terms of consumer behavior are topical in current social-economical conditions. Thereby the goal of these researches is studying of particular properties of consumer behavior on the drug market and identifying of factors affect on its formation. The method of questioning was used. The questionnaire has been completed from the point of view of possibilities and interests of common consumer. One part of questions was concerned to demographical and personal characteristics of customers. For the analysis of consumer behavior have been used parameters such as frequency of visits to definite pharmacy, attraction of pharmacy, types of purchases. The survey had been determined the basic factors of pharmacy visitors' consumer behavior. According to the consumers opinion the main criteria of choice of pharmacy were professional knowledge and experience of pharmacy's workers. Some of economical factors, such as affordability and etc. have been analyzed.

Auth.

**8.G.13.6.45. Radioecological situation of Racha-Lechkhumi region of Georgia and hygienic assessment of external irradiation doses of population.** /I. Kugoti, N. Vepkhvadze/. Georgian Medical News. – 2011. - #2(191). - pp. 40-43. – rus.; abs.: geo., eng., rus.

Radioecological situation in Racha-Lechkhumi region of Georgia (Ambrolauri, Oni, Lentekhi, Tsageri districts) and annual effective doses of external irradiation of population have been studied. It was found that outdoor radiation background in Racha-Lechkhumi region is 58.0-169.0 nGy/h; average index is 108.9 nGy/h. Indoor radiation background is 68,0-192,0 nGy/h; average index is 137,4 nGy/h. The average annual effective dose of external irradiation of population in Racha-Lechkhumi region is 0.81 mSv/y, which exceeds the dose of similar type registered in most of countries. The implementation of adequate preventive measures for its reduction is required.

Auth.

**8.G.13.6.46. Working out of technology and rationing quality of "glysocial" granules.** /S. Mekhralieva/. Georgian Medical News. – 2011. - #2(191). - pp. 68-72. – rus.; abs.: geo., eng., rus.

The technology of "Glysocial" granules on the basis of biologically active substances extracted from plants having wound healing, regenerative and antioxidant properties has been developed for treatment of gastroenteric diseases. Quality rationing of Glycyrrhiza, Sophora, and Calendula granules (condition and period of storage, pharmacological activity and microbiological cleanliness) has been defined.

Auth.

**8.G.13.6.47. The fatty acid composition of Rkatsiteli grape seed oil and its effect as a food supplement.** /B. Kikalishvili, D. Zurabashvili, M. Nikolaishvili, Z. Zurabashvili, I. Giorgobiani/. Georgian Medical News. – 2011. - #2(191). - pp. 73-76. – rus.; abs.: geo., eng., rus.

In this paper high fatty acids in the Rkatsiteli grape seed oil were qualitatively and quantitatively identified. In the Rkatsiteli grape seed oil linoleic, oleic, palmitic, stearic, palmito-oleic, linoleic and arachidonic acids were identified. The impact of Rkatsiteli grape seed oil as a dietary supplement on the contents of fatty acid synthase and lipids in the livers of mice were determined. Investigations were carried out on 120 inbred mice: for 15 days to a standard diet grape seed oil was added as a food additive. The investigation showed that the optimal use of food additives in the form of oil from Rkatsiteli grape seed plays an important role in maintaining the physiological needs of the human organism.

Auth.

**8.G.13.6.48. The age-related structure and dynamics of some diseases of the elderly in Georgia.** /S. Dalakishvili, N. Bakuradze, M. Ghughunishvili, R. Jojua, E. Areshidze/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 24-29. – geo.; abs.: eng.

Georgia belongs to the demographically aged countries and is one of the first among the developing countries. It reflects on the age structure and dynamics of diseases. This conclusion is based on the archive data of The Republic Hospital of Tbilisi, The Ministry of Economic development of Georgia and The Department of statistics of the Ministry of Labour, Health and Social Affairs of Georgia. It's important that the number of old patients with several chronic diseases has increased in hospitals and ambulatories. Especially frequent among them are cardiovascular and respiratory patients. For the perfection of health maintenance and treatment of elderly population the social, palliative care and geriatric service system improvement is needed.

Auth.

**8.G.13.6.49. Hygienic estimation of air pollution in the industrial environment of Tbilisi underground.** /N. Khunashvili/. Experimental and Clinical Medicine. – 2010. - #2(57). - pp. 42-48. – geo.; abs.: eng., rus.

Among the adverse occupational factors in the industrial environment of the Tbilisi underground the leading one is air pollution by industrial aerosols of dust and toxic substances. The concentration of dust and toxic substances in most cases exceeds (1.3-3.4 and 1.2-5.2 times accordingly) the corresponding MPF (job hazard class 3.1-3.2). An admissible concentration (hazard class 2) of dust and toxic substances is observed rather seldom. Higher hazardous classes (3.3-3.4) have not been revealed. The adverse condition of air of the industrial environment at the studied object is determined by the character of industrial operations carried out and the kind of processed material, also by the structure of exhaust ventilation and its efficiency. The established adverse conditions in the working environment represent a potential danger of the occurrence of certain shifts in workers' state of health. The basic directions have been developed for the improvement of the working conditions in the Tbilisi underground.

Auth.

**8.G.13.6.50. The influence of natural zeolites on the intestinal and lymphoid systems of white mice.** /B. Korsantia, S. Kupradze, V. Malatsidze, L. Dzotsenidze, J. Mkervalishvili, L. Kajaya/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 11-13. – rus.; abs.: eng.

Our previous studies revealed antiviral and antitoxic effects of zeolite dietary supplements in the modeling of influenza infection in white mice. "Zeolite diet" enhances immune-competence of the organism, especially of the interferon system. The results of these experiments showed that the particles of clinoptilolite (in forage) are able to induce a more active immune morphogenesis in the intestinal tissues, regional lymph nodes, spleen and thymus.

Auth.

**8.G.13.6.51. The quantitative evaluation of pesticides in water, riverside soil and bottom sediment of the Alazani River.** /T. Mchedluri, M. Metreveli, M. Nikolaishvili/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 34-38. – geo.; abs.: eng., rus.

The use of pesticides is one of the most important methods for harvest protection, but they also can bring negative consequences. Remnants of the pesticides Karate, Decis and DDT were found in the riverside soil, bottom sediment and water of rivers. A chemical research has shown a certain amount of pesticides only in Tsnori and Gurjaani, but there was no DDT in the water of Alazani. In the riverside soil, the quantity of pesticides is high, which can be explained by hot summers and a high content of copper in the soil. Pesticides are abundant in the villages: Artana, Shakriani, and Tsnori. As for bottom sediment, a certain quantity of pesticides is found near Shakriani, Tsnori, and Gurjaani. In the riverside soil and bottom sediment of Alazani are also found some remnants of DDT.

Auth.

**8.G.13.6.52. The influence of a biologically active compound – grapes oil - on the metabolism of biogenic amines in rat blood.** /M. Nikolaishvili, T. Mchedluri, D. Margalitashvili, M. Ghagholishvili, Z. Zurabashvili/. Experimental and Clinical Medicine. – 2010. - #6(61).- pp. 28-31. – geo.; abs.: eng.



Feeding on grapes oil – a biologically active compound - induces such quantitative distribution of amino acids in rat blood that removes emotional strain in animals, decreases sense of fear, develops and increases attention, memory and cognition, activates the process detoxication, ceases formation of free radicals, supports fat destruction and transfers it in the muscular energy. It stops balding process, takes part in regeneration; in case of contamination reinforces thymus function, also promotes protein formation and procreation.

Auth.

**8.G.13.6.53. From the history of public health service in Adjara.** /O. Gogorishvili, G. Tsetskhladze/. Experimental and Clinical Medicine. – 2011. – #1(1). - pp. 27-31. – geo.; abs.: eng.

On August 25, 1878, Russian troops entered the town of Batumi; a military medical-sanitary unit followed the troops: their tents were situated at the territory now occupied by the church of Saint Barbara. Soon it was decided to build a hospital at the same place and the military medical-sanitary unit was transformed into the military hospital #64 - the first medical institution in Adjara. It was decided to organize a public health service canals were built to drain the swamps (for example, so called Jilinsky Canal). In 1887 was built the first civil medical institution for 25 persons. On October 3, 1902, the first civil hospital in Adjara was established by the decision of the self – governing body of Batumi. On October 12, 1913, a medical station for malaria treatment (the first one in the Russian Empire) was established in Batumi - medical service was free for the local population. In the same 1913 year the Tropical Institute began functioning with the aim to study scientifically the causes of epidemic diseases. The doctors of Batumi organized a medical society in 1897: its first president was M.Fencer. This society played a great role in the medical life of the entire Adjara. The society of the doctors of Batumi established a library - one of the richest in the Russian Empire.

Auth.

**8.G.13.6.54. Production of amino acids for using microorganisms and previous substances.** /M. Kuridze, N. Mamardashvili/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 216-218. - geo.; abs.: geo., eng.

Biotechnological methods give an opportunity to produce amino acids for using in different spheres. The present study deals with some biosynthetic previous substances and ferments which are used in the syntheses of some amino acids as well.

Auth.

**8.G.13.6.55. The medico-biological importance of vitamins and their content in berry plants.** /Q. Goginashvili/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 219-222. - geo.; abs.: geo., eng.

The content of vitamins in berry plants (*Rosa canina* L., *Fragaria vesca* L., *Vaccinium vitis-idaea* L., *Rubus idaeus* L., *Hippophae rhamnoides* L., *Ribes nigrum* L., *Ribes vulgare* Lam., *Grossularia reclinata* (L.) Mill.) is considered. This content is rather dynamic and varies according to the kind of plants. *Hippophae rhamnoides* L. is noted for its maximum accumulation of carotene, while the content of vitamin C in *Ribes nigrum* L. takes the first place among the above-mentioned berry plants.

Auth.

**8.G.13.6.56. Biocide properties of phenol compounds.** /M. Nadirashvili/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 248-249. - geo.; abs.: geo., eng.

Several phenylacetylenic alkylphenols, keto phenols and corresponding organometallic compounds have been synthesized. Some of these products possess the biocide activity.

Auth.

**8.G.13.6.57. The halogenated preparation in medicine.** /E. Tskrialashvili/. Materials of Sukhishvili University International Scientific Conference. – 2010. – pp. 250-252. - geo.; abs.: geo., eng.

The following halogenated preparations used in medicine are discussed and characterized – hydrochloric acid; sodium and potassium chlorides bromides, iodides, and iodine.

Auth.

**8.G.13.6.58. Study of efficiency of medical poultices on living organismus.** /E. Buadze, N. Phailodze, R. Sakandelidze, O. Metreveli/. Georgian Scientific News. – 2010. - #1(5). – pp. 31-34. – rus., abs.: geo., eng., rus.

The article discusses the results of toxicological and antimicrobial studies on the efficiency of medical poultices with specific properties. The study of efficacy of the obtained poultice action in healing wounds (of different size and kind) on white Wistar rats demonstrated: the medical poultice is nontoxic and does not have any influence on the internal organism and the weight of rats; in the place of the substance injection no allergic signs are noticed; the best results in terms of wound healing and antimicrobial status are obtained when using the recipe No. 3; the ingredients of the medical composition are as follows: methyluracil – 18%, chloramphenicol – 24%, aktovegil –0.6%, filling agent -57.4%.

Auth.

**8.G.13.6.59. The green world around us.** /Z. Vadachkoria, E. Buadze, S. Zhorzholiani/. Georgian Scientific News. – 2010. - #1(5). – pp. 56-59. – rus., abs.: geo., eng., rus.

The questions of herbal medicine are considered in the article. It has a survey character. The value of herbal medicine for treatment of various diseases is specified. The sources and questions of treatment by plants of different countries and peoples in various time, since prehistoric times, including the modernity are surveyed. Based on the study results it is concluded that prospects of phytotherapy are great.

Auth.

**8.G.13.6.60. Living organism as a single functional system and hesitant character of its function.** /A. Isakadze, G. Eliava/. Gaenati Herald. – 2010. – vol. 3, #4. – pp. 62-68. – geo.; abs.: geo.; eng., rus.

Definition of various stages in processes of temporary adaptation promotes adequate estimation of functional condition of a human organism in the time of influence of physical loadings. Breathing of various types promotes to increase of activation of breathing and heart-blood-vessels functional system – actualization and "broadening of structures" - increasing of labilization.

Auth.

**8.G.13.6.61. Bioethical questions of interrelation with the patient.** /G. Eliava, I. Khintibidze, D. Gabunia, K. Gugeshashvili, M. Jashi/. Gaenati Herald. – 2010. – vol. 3, #3. – pp. 47-54. – geo.; abs.: geo.; eng., rus.

In interrelation between doctor and patient must be foreseen age of the patient, it is necessary densely interrelation with near relations of the patient, in the age of childhood it is necessary to interrelation with parents of a child patient, and it is especially foreseen that a word of the doctor "medicinal influence" has a big meaning on course and outlet of illness except conservative and surgical treatment.

Auth.

**8.G.13.6.62. Public healthcare trends in Georgia.** /T. Inasaridze/. Caucasus International University Herald. – 2010. - #2. – pp. 207-212. – geo.; abs.: geo, eng., rus.

The reforms aimed at transformation of the financial and institutional settings of the healthcare and social sectors have lasted over ten years in Georgia. However the reforms are still on the agenda. The absence of the market stimulation and the competition became the core for the healthcare reform, which, based on the principles of the market economy, foresees the regulations. The main trend of the public healthcare is to be focused on the issues of the health and respective human rights protection of the socially vulnerable (disadvantaged) people. In this regard, for protection the interests of this group, it is possible to involve the civil society in the planning of the public health care policy and in assessment/monitoring of quality of the public health care service provision. This involvement of the civil society would contribute to the transparency of the State's activities and would increase its accountability to the society.

Auth.

**8.G.13.6.63. Influence of the environment, lifestyle and gender on the health status of long-lived persons.** /N. Khipshidze, T. Zubiashvili/. Bulletin of the Georgian National Academy of Science. – 2011. – vol. 5. - #1. – pp. 133-138. – eng.; abs.: geo., eng.

Since 2004, the nationwide Georgian Longevity Study has been undertaken by Department of gerontology and geriatrics at the National Center of Therapy. Interesting features have emerged regarding gender, geography and diet. The female-to-male longevity ratio is more than six to one and it is not uniform throughout Georgia, varying according to the proximity of inhabitants to the seashore or mountains. Significant dietary groups were noted. Although fewer in number, men are better off functionally and medically. Long-lived people in the mountainous regions have better state of health than those living near the sea. Similar findings have also been noted in Korea and Italy. It can be concluded that habitation might influence gender differences in longevity, particularly via the influence of diet and physical activity.

Auth.

**8.G.13.6.64. Aggressiveness of sportsmen and its biological background.** /Z. Zurabashvili, G. Pharulava, Kh. Lasareishvili, M. Kldiashvili/. Bulletin of the Georgian National Academy of Science. – 2010. – vol. 4. - #2. – pp. 155-157. – eng.; abs.: geo., eng.

Blood corpuscles of junior sportsmen while training have been studied by means of the method of light and electron microscopy. Different structural interest of blood corpuscles before and after training was shown. Structural indices from the side of blood corpuscles were examined from the position of functional indices of an organism. Different behaviour of a- and dense granules of thrombocytes was noted.

Auth.

**8.G.13.6.65. Biodefender™ - new generation of nanotechnology-based biological warfare means** /M. Danielov, A. Sepper/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

Based on scientific advancements in Nanotechnology MD Science, Inc. in collaboration with BIONOVA researches developed a new generation of biological warfare protective agents. BioDefender™ represents an entirely new nanotechnological approach to enhance Skin Barrier System. It naturally increases skin's resistance to microorganisms due to exclusively balanced 'Antimicrobial - Antioxidant - Self-Healing Nano-Complexes™' with synergistic effects on multiple microorganisms and recognized to be more powerful when acting in concert. BioDefender™ is a comprehensive formula that helps to fight germs and other microscopic invaders. It is designed to work on first contact with the skin, where it comes in touch with microbe-laden surface or air.

Auth.

**8.G.13.6.66. Progenitor precursors' committing during a post-resuscitation disease.** /Z. Kheladze, K. Mumladze, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

In the Critical Care Medicine Institute during last years the numbers of patients with post-resuscitation disease have increased. Mortality and disability have high rates as well as the treatment costs. The total number of treated patients with post-resuscitation disease constituted 49, mortality has reached 68.7%, survivors – 31.3% and patient-days have reached 323. Most of the patients with post-resuscitation disease had heart dysfunction and myocardium infarction. Men were more than women; the first 48 hours were the most difficult to survive during the critical condition. Invalidity reached 6.7%; the number of discharged from hospital without disability made 93.3%. The average number of the patient-days was 6.7, whereas the costs made USD 3.500 per patient on average. The use of the therapy of progenitor precursors' committing, patented by the author, was the reason for low rates of mortality and cost effectiveness in the management method.

Auth.

**8.G.13.6.67. Critical care medicine resources' program design.** /Z. Kheladze, N. Ramishvili, Kh. Phruidze, D. Tabaghua, Zv. Kheladze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

The Critical Care Medicine Institute's long-term experience that makes critical care medicine service operation more effective. For activating a critical care medicine service work it is necessary to ascertain disposable reserve and to create a cost-effective resources' program based on the data of the patients loading, mortality and maintenance charges. Currently, admission rate amounts to 5939 patients (100%) and mortality rate is equal to 35.6 %. Maximum admission occurs per season in spring - 27%, per month in May - 10%, per week in the first week of the month - 27% and per hour during 18-24 hrs – 35%. Maximum mortality takes place per season in spring - 28%, per month - in April and December - 12%. Among critical patients, nervous system pathology is leading - 24%; rate of polytrauma is also high - 22%. Maximum mortality (36%) occurs during the nervous system pathology. Mortality during polytrauma is about 20%.

Auth.

**8.G.13.6.68. Staffing of intensive care units and outcomes – national and New York City experience.** /V. Kvetan/. Critical Care & Catastrophe Medicine. – 2010. - #6. –eng.; abs.: eng., geo.

Staffing of intensive care units varies in quality and quantity of personnel. It is adjusted to the dynamics of the major delivery systems of patients which may be the emergency room burn and trauma bays, operating room or hospital ward. Most manpower studies in the United States have focused on supply of physicians in the combined Pulmonary and Critical Care Medicine subspecialty track who make up the majority of intensivists in the USA.

Auth.

**8.G.13.6.69. Protection of child rights in the process of medical care.** /I. Manjavidze/. Georgian Pediatrician. - 2010. - # 1-2. – pp. 3-8. – geo.; res. eng.

It is important to support protection of the child's rights in many world countries. On April 21, 1994, Georgia joined the Convention on the Rights of the Child, adopted by General Assembly of the United Nations, undertaking the liability to protect and to take care of children below 18. Protection of child rights implies first of all healthcare and is based on the four main components: life, development, protection and participation. Each component is considered in the article within social and individual context.

N. Chkaidze

**8.G.13.6.70. Assessment of anthropological, physical and functional indices in sportsmen receiving amino acid rich beverage "Iveriuli Phyto" during training.** /G. Chakhunashvili, N. Jobava, N. Topuridze, N. Badriashvili, Z. Shakarashvili, G. Tskhvedishvili, I. Kalandia, Z. Pkhaladze, K. Chakhunashvili/. Pediatric Cardiology. - 2011 - № 5. - pp. 24-32. - geo.; abs.: geo., eng.

Objective of the work: amino acid, mineral and vitamin rich natural energetic beverage "Iveriuli-phyto" and study its role in sportsmen rehabilitation considering the initial health indices. Conclusion: 1. Medical examination and comparison of heart cycle parameters before and after physical load identified low physical adaptation ability in the both study groups of the sportsmen. 2. Medical examination identified that in sportsmen drinking beverage "Iveriuli Phyto" had better physical parameters than in control group sportsmen. 3. Use of beverage "Iveriuli Phyto" in sportsmen was found to improve work ability, adaptation mechanisms for trainings and contest by helping restoring processes during intensive physical load.

Auth.

**8.G.13.6.71. Polyvitamins and polyvitamin-mineral complexes and their prophylactic utilization.** /K. Beridze/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 60-62. – geo.; abs.: geo., eng.

Vitamins and microelements are of vital importance for organism which synthesis is not produced in organism, but some vitamins production is less significant. Food products are the main source for organism. According to spread idea, food products can not fully satisfy organism's demands on vitamins and micro elements, that's the reason why it is considered advisable to supplement with polyvitamin-microelements. It is necessary to point out that, contemporary food industry enriches food products with vitamins and microelements, farm industry uses cattle and bird that are full of vitamins that, in case of valuable nourish conditions must fully ensure human demands for these

substances. Despite of polyvitamin-microelement complexes high technological quality that exists in the market, given preparations do not foresee synergistic-antagonist dependency, vitamins and microelements mutual influence, population's different necessities on separate vitamins and microelements, etc. That's why it is considered to conduct laboratory and clinical researches before conducting hypovitaminosis prophylaxis and vitamin therapy. After analyzing individual daily nutrition time-keeping it is necessary to define the inevitability to prescribe polivitamin and vitamin-mineral complexes, select them individually in order to prevent the contravention of physiological processes in organism.

Auth.

**8.G.13.6.72. Telegony.** /M. Tchipashvili, E. Imnaidze, C. Gigineishvili/. Social, Ecological and Clinical Pediatrics. – 2011. - #13-8-7. - pp. 63-64. – geo.; abs.: geo., eng.

The first description of the telegony, as a concept, explained the correlation and interdependency between the spiritual purity/virginity and the ability of having healthy future generation. The telegony is based on the one unique feature of DNA called teleportation which explains the transit of information through the electromagnetic fields. This can be used in the modern medicine as an innovative direction in treating the patients with various dangerous diseases, like HIV/AIDS, cancer, mental and genetic disorders.

Auth.

**8.G.13.6.73. Subutex and its analysis methods (literature review).** /L. Adeishvili-Andguladze, N. Mzhavia/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 7-11. – geo.; abs.: eng.

Subutex is the prolonged form of buprenorphin (Norphin). Which is produced as tablets in 0.4,2 and 8 mg of buprenorphin hydrochloride by France. It's created specially for replace therapy. Subutex is a narcotic and has side effect on the organism, which is common for narcotic. To use it without prescription is punished as using Heroin. Subutex isn't registered in Georgia, which means, that it's imported legally and spread on the "black" market. USA State Department in Georgia thinks that increasing of the number of narcotic users is caused from the amount of Subutex in the market. From that point of view Subutex and its analyzing methods is the area of great interest. In the article we described the pharmacological activity, use, side effects, treatment of Subutex, connection with other medical remedies, pharmacokinetics, methods of analyze. There are discussed the liquid chromatography, mass spectrometry, gas chromatography, tandem mass spectrometry as in pharmaceutical preparations, as in biological materials – In urine, blood, organs, hears. It's important, that Subutex is used in replace therapy, especially in France. According to the data from the 100000 number of drug addicts, which are involved in the programs in France, Portuguese and Luxemburg, 80 000 are users of subutex, and 15 000 are users of methadone and others used to the various preparations.

Auth.

**8.G.13.6.74. Some features of working conditions of the Chemical Industry workers of in Georgia.** /L. Bakradze, G. Kverenchkhiladze, M. Tsimakuridze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 15-17. – geo.; abs.: eng.

The factors of the industrial environment and labor processes at Rustavi chemical enterprise "Azoti" (that produces cyanic sodium and ammonium nitrate) have been investigated. The study has been conducted in order to establish the basic laws of formation of the working process conditions of chemical industry in Georgia. The studied enterprises are characterized with high degree of danger that is connected specifically with technological processes involving highly toxic substances. It should be outlined that the air of a working zone contains high concentration of toxic chemical substances (their concentrations exceed TLW 1.2-5.2 times). High levels of the industrial noise and general vibration, irrational level of industrial illumination are also present in the area. As a result of the complex research, series of measures for improving the working conditions have been developed. The guidelines for the improvements have been handled to the administration for further implementation.

Auth.

**8.G.13.6.75. For improving the pharmacognostic analysis of *Chelidonium majus* L.** /A. Bozhadze, K. Mchedlidze, J. Kuchukhidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 17-19 – geo.; abs.: eng.

*Chelidonium majus* L. (greater celandine) is a medicinal plant and is the one of species of the tribe Chelidoneae of Papaveraceae family. *Ch. majus* contains various isoquinoline alkaloids: protoberberine, tetrahydro and quaternary benzo (c) phenanthrene structure. The commercial drug (herb of *Chelidonium*) consists of the dried aerial parts harvested during flowering time and is described in several European, Russian and Georgian pharmacopoeias. Major constituents of the drug are the alkaloids chelidoneine, chelerythrine, sanguinarine, coptisine, protopine, desstylophine and similar. The cytotoxic activity of these compounds on human and animal tumour cell cultures in vitro are considered with great interest and can be considered promising in cancer therapy. For raw material (herba) of celandine was elaborated methodological description of the microscopic system. Plants, organs, micro diagnostic signs are defined: for leaf, flower, stem and fruit.

Auth.

**8.G.13.6.76. Botanical-geographical review of the genus *Galanthus* L.** /R. Gagnidze, Ts. Ghviniashvili, J. Kushukhidze, M. Jokhadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 19-20 – geo.; abs.: eng.

The variation in climate in different regions of Georgia has resulted in a very rich flora and a long history of many beautiful bulbous plants. Some of them have been cultivated in European and American gardens as an ornamental plant for centuries. A number of them have also some importance for their biological activities. The bulbs of *Galanthus*, *Narcissus* and *Leucojum* have an interest because of their content of galanthamine in order to be used in the treatment of poliomyelitis. Georgia exports geophytes for horticultural purposes mainly collected from the wild. The amount of material exported from Georgia has increased each year. Saving, studying and using are the three basic elements of the conservation of bio-resources. There are 10 species of genus *Galanthus* L. spread in Georgia, which are merged into two sections. Among them Georgian endemic species are *G. shaoricus* Kem.-Nath., *G. ketzkhovellii* Kem.- Nath., *G. kemulariae* Kurhatheladze; Caucasian endemic species are *G. angustifolius* Koss., *G. platyphyllus* Taub et Moldenko., *G. lagodechianus* Kem.- Nath.; remaining 4 species are widespread in Asia Minor.

Auth.

**8.G.13.6.77. Age-related changes of ISOL-positive hepatocytes.** /S. Giorgadze, N. Tevzadze, N. Gujabidze, R. Rukhadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 24-26. – geo.; abs.: eng.

Being the main organ of the metabolic system, the liver, whose function undergoes numerous changes in the course of life, is an important object of investigation. This organ is constantly exposed to a variety of potentially apoptogenic, immune, inflammatory and metabolic stimuli. Apoptosis and its modulation are crucial factors for the maintenance of liver health. A deficiency in apoptosis is one of the key events in pathophysiology. On the other hand, overefficient apoptosis, as observed in fulminant liver failure, may be equally harmful for the organism indicating that a tight regulation of the apoptotic machinery is essential for survival. Quantitation of hepatocyte apoptosis is an emerging and evolving research area that will require evaluations as thoroughly as those performed with cell proliferation in order to understand all the variables that might influence its occurrence, measurement, and interpretations. Due to the rapid clearance of apoptotic cells, detection and quantification of apoptotic cells is prone to underestimation. A review of the different methods used for detecting apoptotic cells demonstrates that most of these techniques are not entirely specific. According to above-mentioned, we decided to study the changes of apoptotic hepatocytes in white mice during ageing. 30 white mice were distributed in four – newborn, juvenile, adult and senescent - age groups. Apoptosis was detected in liver sections by the in situ oligo ligation (ISOL) assay, using an ApopTag ISOL assay kit (Serologicals, Norcross, GA). This assay relies on the selective binding of biotin-labelled hairpin oligonucleotide probes to the types of genomic DNA ends that are characteristic of the double-strand breaks in apoptotic cells. Received data indicate that the number of ISOL-positive hepatocytes increases in juveniles, decreases in adults and increases in senescent mice. The rate of apoptosis is most intensive in senescents.

Auth.

**8.G.13.6.78. Problems involving self-medications with antibacterial agents.** /N. Gorgaslidze, N. Gongadze, N. Nizharadze, N. Phruidze, L. Makhatadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 29-32. – geo.; abs.: eng.

Our investigations were carried out on citizens from different towns of Georgia. Inquiry of respondents has been made by telephone conversations with the help of preliminary questionnaire for fill in the special cards. Each of this form includes questions about their age, sex, profession, constitution and medical or pharmaceutical education. After collection of demographic information on the second stage we checked up informative level of respondents concerning antibiotics. The questions included their knowledge about proper using of antibacterial drugs, the routes of their administration, possible adverse effects, complication, indication and interaction with other drugs. During our study it was revealed that half of respondents have a lack of information about proper use of antibiotics. A part of them thinks that antibiotics are usual drugs of choice against fever, influenza and mycotic diseases. More than 40% of them consider that antibiotics refer to OTC drugs and they can be used for self-medication in different conditions. After our investigation we came to the conclusion that improving the present condition needs introduction of essential drug list for physicians and pharmacists, as well as minimisation of self-medication and increase delivery of medical information among population.

Auth.

**8.G.13.6.79. Hygienic estimation of pollution with heavy metals of surface waters and sediments connected with mining and processing industry in Chiatura.** /M. Grdzlishvili, M. Mirtskhulava, N. Chakvetadze, M. Giorgobiani, M. Lashkhauri/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 35-36. – geo.; abs.: eng.

Pollution degrees of the river Kvirila, connected with mining and processing production, of its tributary streams and their bottom sediments have been examined in Chiatura town. According to the obtained results, the Kvirila water before and after the central processing factory, and also the stream Darkveti, due to exceeding Mn content, belong to the objects of "extremely high degree" of pollution, while the streams Rgani and Shukruti belong to the objects of "temperate degree" of pollution. "Severe pollution" of the Kvirila sediments was fixed in all places with "extremely high degree" of water pollution. It was found out that polluted sewage waters of central processing factories affect the degree of the Kvirila bottom sediments.

Auth.

**8.G.13.6.80. Implementation of principles of GPP in Georgia.** /V. Eriashvili, T. Tchanturia, T.Tchumburidze, N. Nemsitsveridze, N. Dughashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 41-43. – geo.; abs.: eng.

The International Pharmaceutical Federation (FIP) in adopting international guidelines for Good Pharmacy Practice (GPP) at its Council Meeting in Tokyo on September 5, 1993 believes that standards based on these guidelines should be used by national pharmaceutical organizations, governments, and international pharmaceutical organizations for nationally accepted standards of Good Pharmacy Practice. This revised version of the statement was endorsed at the thirty-fifth meeting of the WHO Expert Committee on Specifications for Pharmaceutical Preparations in April 1997 and approved by the FIP Congress in September 1997. The Good Pharmacy Practice guidelines are based on the pharmaceutical care given by pharmacists. The guidelines recommend that national standards are set for: the promotion of health, the supply of medicines, medical devices, patient self care, and improving prescribing and medicine use by pharmacists' activities. FIP urges pharmaceutical organizations and governments to work together to introduce appropriate standards or, where national standards already exist, to review these standards in the light of the guidelines set out in the Good Pharmacy Practice document. Many developing countries lack an effective drug regulatory system, which puts the main responsibility for the quality of pharmaceutical products on the pharmacists. These then have to rely on their own, or their pharmacists' association's, quality assessment and must make sure that they procure medicines only from reliable sources. FIP has developed special guidelines for drug procurement. There are numerous reports of an unacceptable prevalence of substandard and counterfeit pharmaceutical products in international trade. Developing countries are the ones most frequently exposed to such products which may be inefficacious or toxic products, and which threaten to erode confidence in the health care system. It was for this reason that in May 1994 the Forty-seventh World Health Assembly, in adopting resolution WHA47.12 on the role of the pharmacist in support of the WHO revised drug strategy, drew attention to pharmacists' responsibilities in assuring the quality of the products they dispense.

Auth.

**8.G.13.6.81. Spread of food-borne diseases in Georgia and ways of their prevention.** /N. Vepkhvadze, M. Khorbaladze, T. Gelovani, T. Kochoradze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 45-47. – geo.; abs.: eng.

Morbidity by food-borne diseases of the population of Georgia in last period and ways of their prevention has been studied. During the period from 2004 till 2009 the frequency of food poisoning among the population increased from 383 to 2050 cases. At the same time number of people with salmonellosis decreased from 326 (2007) to 166 (2009), and morbidity from botulism decreased from 43 (2008) to 12 (2009) cases. To prevent food poisoning among population it is necessary to ensure food-stuff safety, solve the problem concerning carrying of adequate control over locally produced and imported products with the aim of preventing uncertified products from getting of the consumers' market. It is also necessary to carry out the permanent control of microbe pollution, toxic substances, pesticides and chemical fertilisers' levels in food products.

Auth.

**8.G.13.6.82. Eating behavior in different age groups of Georgian population.** /Sh. Zarnadze, T. Darsania, I. Zarnadze, D. Kitovani, L. Lomtadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 48-50. – geo.; abs.: eng.

The type of person's nutrition is determined by his eating behavior. The last one must provide all necessary nutrients/food substances' consumption to maintain energetic and plastic balance and health preservation. Several factors have influence on people's eating behavior. Among them are demographic, social- domestic, climatic, welfare position, awareness, products' accessibility, stress, etc. Moreover, eating behavior is defined by some medical-biological features of a body and its health state. The main objective of this investigation is scrutinizing any violations of eating behavior among population in Georgia. Based on an example of the big city and on the ground of received data the goal of the research is to create a conception of health promotion. The relevance of the research is grounded on the fact that at the moment nutrition optimization is the one of the most significant direction in processes of health improvement, extension of population lifespan and reduction of morbidity and disability.

Auth.

**8.G.13.6.83. Problems in prevention of arterial hypertension in the primary healthcare system.** /A. Isakadze, Sh. Shurghaia, M. Noniashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 52-54. – geo.; abs.: eng.

Assessment of the quality of follow-up of patients with arterial hypertension (AH) within the framework of primary health care system. A retrospective analysis of outpatient case histories of 927 patients with AH at 6 health centers in the city of Tbilisi in 2007-2009 was carried out. A special table was created in order to assess the quality of follow up. This table included all data on the follow-up. The study revealed an insufficient volume of examinations of target organs over the latest two years: total analysis of the urine was carried out in only 572 patients, total cholesterol measured in 228, the fundus oculi examined in 384, and ECG performed in 615 patients, echoCG of the heart and major vessels was carried out in only 111 patients and loading tests in 24. Antihypertensive therapy was administered to 759 patients; only 216 of these took drugs regularly, 163 used none at all, and 543 patients took drugs only during exacerbations of disease. Very often they used ineffective drugs longer used now and caused numerous side effects: clonidine, adelphan, rawolphine, dibasole, papaverine, magnestum, sulfate. The quality of follow-up of patients with AH does not meet the modern requirements to follow-up due to various causes: 1. Social neglect of patients; 2. physicians neglect modern recommendations on the diagnosis and treatment of AH; 3. physicians efforts are not aimed at the prevention of disease complications, prolongation of the life span of patients, and improvement of the quality of their life; 4. patients are not ready to active treatment

Auth.

**8.G.13.6.84. Evaluation of demographic development of the Georgian population.** /D. Kitovani, L. Lomtadze, I. Zarnadze, M. Khajrishvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 61-63. – geo.; abs.: eng.



Based on the 2002 census data, de jure population was 4371.5 thousand, while de facto population was 4355.7 thousand; thus, the difference between them made 15.8 thousand; negative net migration was 930 thousand and the majority of migrants went to labor migration in order to improve their economic conditions and, at the same time, their 81.1% retained Georgian citizenship, then the difference between de jure and de facto population should have been greater than 15.8 thousand. It is evident that based on both Department of Statistics data and our estimations, total fertility rate reflects similar trends. The only difference is that total fertility rate by our estimate (1.7) is higher than that of the Department of Statistics (1.4). Such a discrepancy is mainly caused by incomplete registration of live birth and over-representation of fertility rate is less than replacement level fertility (2.1).

Auth.

**8.G.13.6.85. Quality control of Georgian propolis according to flavonon–pinostrobin.** /L. Kunchulia, T. Chikviladze, N. Shengelidze, A. Bozhadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 71-73. – geo.; abs.: eng.

The great interest concerning propolis results from its content of a large amount of biologically active substances, especially bioflavonoids. Propolis is characterized of the antimicrobial, analgesic, antioxidative and anticancer properties. Georgian propolis is known for its high content of flavonoids, especially flavon–pinostrobin. It has the antioxidative activity, which is correlated to anticancer effect. The Georgian propolis is rich in flavonon-pinoströbin with antioxidative effect, which is used for manufacturing of medicines containing biologically active substances.

Auth.

**8.G.13.6.86. Peculiarities of the working conditions of modern cement industry workers in Georgia.** /R. Kverenchkhiladze, V. Rokva, A. Chikovani, M. Kvatadze, M. Rizhinashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 74-76. – geo.; abs.: eng.

Harmful occupational factors were studied at the Kaspi Cement Plant» Georgia ZEMENT". Degree of danger was estimated. Technological process of the modern cement industry characterized by high level of mechanization and automatization which makes operation work more convenience. However, during processing, complex of harmful factors impacts on workers including dust, microclimate, noise, chemicals, vibration and non-rational lightning. High concentration of dust is considered as a work place priority pollutant. Among 330 air samples 210 (63.6%) exceeded the maximum allowable concentration (MAC). In some cases, concentration of Mn, NO<sub>x</sub>, oil and Cr+6 exceeded the MAC, either. As well, parameters of noise, vibration and lightning are not desirable. Work condition by the air dust belongs to the Class 3.4. (IV degree of danger). Fitness measures for workers were elaborated under results of the study.

Auth.

**8.G.13.6.87. Estimation of the manganese effect on the population in Chiatura.** /N. Mebonia, M. Mirxulava, N. Chakvetadze, G. Katsitadze, R. Javaxadze, M. Zhuruli, I. Ghvineria, T. Chachava, Q. Kiknadze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 88-90. – geo.; abs.: eng.

The most common health problems in population exposed to high levels of manganese involve the nervous and respiratory system. Exposure to excess levels of manganese may occur from breathing air, particularly where manganese is used in manufacturing, and from drinking water and eating food. The population descriptive study was conducted in Chiatura in 2009. The main goal of the study was to estimate the exposition of manganese on the population. Cluster sampling method was used to select population under study, 30 clusters were selected and 30 respondents were interviewed in each cluster. All respondents were questioned by using the standard questionnaires. Collected data were analyzed with Epi Info. In Chiatura and other villages in Chiatura district in which prevalence of manganese is different the distribution of different diseases and symptoms was estimated. Study results show that, in Chiatura, where manganese mines are mostly distributed, and the prevalence of respiratory and neurological diseases is high. In Chiatura district the early detection of disease symptoms by using regular examination of the population is essential for prevention of respiratory and neurological disorders.

Auth.

**8.G.13.6.88. Treatment of gastroduodenitis by means of new mineral water "Zanavi".** /N. Saakashvili, I. Tchabashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 100-102. – geo.; abs.: eng.

50% of able-bodied population of the developed countries is disturbed by chronic gastroduodenitis. There is a real danger that this disease may turn into ulcerous disease. Stable chemical composition is an indispensable condition for the organism's normal functioning. There are natural sources of microelements in kind of mineral waters. "Zanavi" mineral water is of low salinity (3,6 g/l), sodium hydrocarbonate water with F, B, Ba, Fe microelements and rich in boric acid, location – region of Borjomi. Study of therapeutic effect of "Zanavi" mineral water was carried out by us over 48 patients, who suffer from chronic gastroduodenitis. Monotherapy by means of "Zanavi" mineral water in patients, suffering from chronic gastroduodenitis, has given a beneficial effect not only upon dynamics of clinical signs of the disease, but it significantly improved structure of mucous coat of stomach and duodenum, provoked normalization of hormonal background and restoration of acid-forming function. "Zanavi" mineral water provokes increase of metabolism and reparation processes that is showed by enlargement of superficial epithelium of stomach's mucous coat. High efficiency, availability, economy, ecological purity gives us a right to use actively "Zanavi" new mineral water in treatment of the patients, who suffer from chronic gastroduodenitis.

Auth.

**8.G.13.6.89. Peculiarities of sanatorium-and-spa treatment of chronic acalculous cholecystitis patients under conditions of Nabeghlavi spa resort.** /N. Saakashvili, I. Tchabashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 102-103. – geo.; abs.: eng.

Nowadays chronic diseases of biliary system are considered as "century diseases" and are the main social problem. The grounds of the work are observations carried out over 60 patients, who suffer from chronic acalculous cholecystitis (in the phase of remission) in the conditions of Nabeghlavi Spa Resort. Against the background of dietary nutrition the patients were treated by means of monotherapy with "Nabeghlavi" mineral water. Mineral water "Nabeghlavi" (spring No 2) (Chokhatauri region), average salinity (6.6 g/ dm<sup>3</sup>), silicium carbonic acid, sodium hydrocarbonate water, which contains microelements: Mn, Ti, As, Ni. To achieve a long-term therapeutic effect in patients, who suffer from chronic acalculous cholecystitis, it is enough to use "Nabeghlavi" drinking mineral water of spring No 2 as a main therapeutic factor, high efficiency of which is conditioned by obvious stimulating effect upon blood circulation of liver, by improvement of hepatocyte trophism, by elimination of damming processes in gallbladder, and improvement of gall composition is concurrent with reduction of reflex effect from gallbladder on heart and other organs, which are involved in the pathologic processes.

Auth.

**8.G.13.6.90. The effectiveness of mineral water "Khareshi" in the treatment of co-existent diseases; duodenal ulcer and osteochondrosis of the spine.** /N. Saakashvili, I. Tchabashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 103-105. – geo.; abs.: eng.

Reflexive reaction in functioning block of vertebral column often appears at exacerbation of ulcerous diseases of duodenum that conditions rehabilitation slowing-down. 40 patients at the age of 30-60 were under observation. Their medical complex was the following: Table No1, with low salinity (1.28 g/l) carbon acid hydrocarbonate sodium-calcium-magnesium mineral water "Khareshi" and procedures of sparing manual therapy. All the patients had favorable improvement as a result of multimodality therapy. According to endoscopic findings, complete healing of ulcer by epithelization was observed in 35% of patients. Pains and paravertebral tension has decreased in 76.2%. Complete restoration of vertebral column's function was observed in 39.4 patients. Stimulation of tropism processes of mucous coat of gastroduodenal zone was notable during compounding diseases as a result of rehabilitation, relying on gastroscopic findings (that was invoked by ions of Ca<sup>2+</sup> containing in mineral water), reduction of gastrostasis and reduction of gastric indigestion occurrence was also notable. Functional recovery of gastrointestinal tract invoked reduction of pathological impulse transfer from visceral organs to vertebral column that was expressed in improvement of function of neuromuscular segments. That's why we should give advantages to ecologically pure mineral water "Khareshi", which provokes restoration of disturbed

functions in organism by means of microelements balance correction, at treatment of ulcerous diseases in compound with vertebral osteochondrosis.

Auth.

**8.G.13.6.91. Peculiarities of the working conditions of classical ballet dancers.** /M. Kvartskhava, L. Bakradze, M. Tsimakuridze, N. Khachapuridze, D. Zurashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 110-112. – geo.; abs.: eng. Our research was aimed at studying classical ballet dancers and choreographic school students working conditions and organism functional state peculiarities, followed by working out measures for labor optimisation. The research was conducted on the basis of Zakaria Paliashvili Tbilisi Opera and Ballet State Theatre and Vakhtang Chabukiani Choreographic School. It has been stated that dancing is a form of significant physical and psycho-emotional labor, characterised by various combinations of body motion and state, significant relocation in the space, mandatory poses and bending of the body, extensive energy consumption, etc. Strained and acute attention, as well as emotional tension is also very important. During the classical ballet dancer professional activities, following the physical load, production dust holds the leading position among other professional factors. Chemical analysis revealed that content of silicon dioxide, the leading component of dust from the classical medicine point of view, in the precipitated dust varies in the range of 4.2% - 8.6%. Stemmed from this, dust concentration in the rehearsal halls represents certain professional risk factor due to its chemical composition.

Auth.

**8.G.13.6.92. Principles of risk assessment of the occupational impact of chemical factors on the reproductive health.** /I. Ghvineria, V. Saakadze, M. Zhuruli, N. Khatiashvili, M. Tsimakuridze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 114-118. – geo.; abs.: eng.

According to international demands and taking into consideration national legislative basis there were collaborated guidelines on estimation of correlations between chemical factors occupational exposure on reproductive health damage for possible risk assessment. These include the hygienic criteria, the getting rules of epidemiologic testimonies, and the analysis of received information. On the bias of these principles, there were carried out "Caspicement" LTD and Joint Stock Company "Chiatura Manganese" women workers epidemiological studies.

Auth.

**8.G.13.6.93. Foodstuffs as health risk factor and problems of its mitigation in Georgia.** /B. Khurashvili, K. Sokhadze, G. Kverenchkhiladze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 118-120. – geo.; abs.: eng.

We have analyzed a situation in the sphere of safety of foodstuffs in Georgia and revealed the reasons of its development. Based on critical analysis we suggest the main trends of solving of this problem. According to sanitary regulation, it is obligatory to inspect all agencies producing foodstuffs; the enterprise should be monitored on the following: whether all sanitary norms are followed and whether the technological process is adequate; one etalon state lab should exist where the foodstuffs will undergo chemical and bacteriological analyze. Setting up of such a lab is absolutely valuable as it will economize additional costs. Restoration of quality control of foodstuffs in the whole country is the only condition of mitigation of food associated illnesses and, as the result, it will help strengthening of general health of the population. Real positive outcome in the sphere of safe foodstuffs can be achieved only through adequate coordination between different agencies and services.

Auth.

**8.G.13.6.94. Comparison of conventional and rapid test methods of honey analysis to determine rapid test reliability probability.** /T. Chikviladze, A. Vartanov, D. Tchintcharadze, T. Otashvili, M. Jorjikia, H. Ioramashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 121-123. – geo.; abs.: eng.

Honey is a sweet food made by honey bees using nectar from flowers. High quality honey can be distinguished by fragrance, taste, and consistency. For at least 2700 years, honey has been used by humans to treat a variety of ailments through topical application, but only recently have the

antiseptic and antibacterial properties of honey been chemically explained. Besides the high sugar content (41.0% fructose; glucose 35%; sucrose 1.9%) honey also contains other components, such as pollen and other digestive enzymes, vitamins - A, B1, B2, minerals such as calcium, sodium, potassium, magnesium, iron. Honey is a food that contains various nutrients, such as carbohydrates, proteins, amino and organic acids, pigments and other. Honey adulteration is a complex problem which currently has a significant economic impact and undeniable nutritional and organoleptic consequences. This paper describes the development of rapid, effective methods for honey analysis and adulteration detection, comparison of conventional and rapid test methods of honey analysis to determine rapid test reliability probability. The principle of different methods is given and the advantages and the shortcomings of each method are discussed. Ten different honey samples, belonging to the following floral origin: acacia, tilia, chestnut and wildflower were purchased from different Georgian regions. The following organoleptic, physical and chemical determinations were carried out on honey samples: Moisture was determined measuring the refractive indices by refractometer; ash was indirectly determined using the measured electrical conductivity; free acids and pH were measured by titration, according to official method (AINO 17792-2001), reduced sugars, diastase activity and hydroxymethylfurfural content were determined by spectrophotometric and photoelectrocolorimetric methods. The research established the following: for the screening of honey samples, it is reasonable to employ rapid methods; the rapid method for determining quality of honey is characterized by average sensitivity; its reliability is 75%. After determining quality of honey, samples must be re-tested using standard methods. The rapid methods developed by us can be applied for tentative determination of honey quality.

Auth.

**8.G.13.6.95. HPLC analysis of cannabinoids for determining hashish abuse time.** /T. Chikviladze, B. Tchumburidze, L. Kunchulia, M. Jorjikia, H. Ioramashvili, T. Otarashvili/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 123-126. – geo.; abs.: eng.

Ascertaining the fact of hashish abuse is mainly based on defining D9THC COOH – the main metabolite of D9 THC, in the urine of suspected users. Revealing this metabolite in the urine is not always indicative of narcotic intoxication; ascertaining this is sometimes very important in forensic practice or in doping control procedures for athletes. The aim of the investigation was quantisation of D9 THC and its metabolites in the urine of a hashish user in order to determine the time of drug abuse. Research methods included immunoenzyme screening method and HPLC method. As a result of the study, the following has been established: The presence of D9 THC and its primary metabolite D9 THC-OH in the urine is indicative of the state of narcotic intoxication, as these substances are detected in the urine during 2-6 hours after the last abuse; Presence of the ultimate metabolite of D9 THC–D9 THC COOH in the urine, if simultaneously presence of D9 THC and D9 THC-OH is not detected, is not indicative of the state of narcotic intoxication and only confirms the fact of hashish abuse during the last one month; Over 50 ng/ml concentration of D9 THC COOH in the urine indicates narcotic abuse within the last 3-4 weeks; Less than 50 ng/ml concentration of D9 THC COOH is not considered a positive result, for it is possible that there was a passive consumption of hashish (cannabis).

Auth.

**8.G.13.6.96. State of meteorological conditions of Tbilisi subway.** /N. Khunashvili, R. Kverenchkhiladze, M. Tsimakuridze, L. Bakradze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 130-132. – geo.; abs.: eng.

Based on complex investigations there are established the unfavourable state of meteorological conditions of Tbilisi subway. On formation of microclimate the local climatic conditions (dry subtropical climate) and season exert influence. The air temperature in warm season in 5.2% of cases exceeds the acceptable level, and in cold season - in 5.9% of cases is lower than acceptable one (in limits of subnormal values). The air temperature in warm season in certain cases reaches up to 33.4<sup>0</sup>C. The relative humidity, basically, heightened (up to 89% in the warm period, and up to 86% - in cold period of the year) at very low velocity of its movement (less than 0.1 m/sec). The identified unfavourable combination of parameters of microclimatic conditions exerts unfavourable influence on the functional state of health of workers. Investigations conducted

became the basis of elaboration of complex sanitary measurements on regulation of the meteorological conditions in premises of Tbilisi subway.

Auth.

**8.G.13.6.97. Peculiarities of health and working conditions of Georgian tobacco industry employees.** /R. Javakhadze, R. Kverenchkhiladze, M. Arabidze, N. Rukhadze, Kh. Chigogidze/. Collection of Scientific Works of Tbilisi State Medical University. - 2010. - # 44. – pp. 134-136. – geo.; abs.: eng.

We have studied working and health conditions of Georgian modern tobacco industry employees. In the process of technical operations workers are influenced by complex of harmful risk factors, such as tobacco dust, methyl spirit, microclimate, industry noise. The tobacco dust concentration in the air of working zone is in 1,6-4,7 higher than threshold limit values, which corresponds to the harmful working hygienic condition as 3.1-3.2 class. Harmful noise level fits to 3.1-3.2 class. Different somatic diseases are diagnosed in the case of 25% workers. We attracted our attention to cardiovascular, dermal, gastrointestinal, lung, neurologic and skeleton-muscular diseases. The revealed structure of diseases is in correlation with common working conditions. Nowadays we have got slightly changes of work and health conditions in comparison with last years, which could be the result of implementation of new technologies as well as the prevalence of employees with short length of service. On the basis of carried out research there were elaborated the complex of sanitation measures.

Auth.

**8.G.13.6.98. Textile bandage materials in the treatment of diabetic foot.** /E. Buadze, N. Abuladze, L. Chkhaidze/. Georgian Scientific News. – 2010. - #1(5). – pp. 22-30. – rus., abs.: geo., eng., rus.

The materials for using the textile bandages in treatment of diabetic foot are searched. It is revealed that among the applied treatment methods are bondage materials made of textile and that in pharmaceuticals market there are not materials meeting all requirements essential in the treatment of diabetic foot

Auth.

**8.G.13.6.99. Plasma flow treatment of the diabetic foot.** /Z. Kheladze, A. Kistauri, S. Jaiani, B. Tsutskiridze, Zv. Kheladze, G. Devidze/. Critical Care & Catastrophe Medicine. – 2009. - #5. – eng.; abs.: eng., geo.

Combined use of plasma flow (Zv. Kheladze et al. "New usage of Plasma flow" producer 2008.06.26 #4825) and the traditional methods gave the opportunity to achieve the high effectiveness of the treatment: decreased dryness of the skin, paleness of the skin and cyanosis, and warming up of the extremity if the ischemic form takes place; decreased pain in the damaged extremities, and total vanishing of the pain in 7 cases; decreased swollenness in 11 patients, and total liquidation in 6 cases; it lowered demarcation zone in 15 patients; in 12 cases the size of ulcers was decreased, and in 5 cases – they were completely treated; recovered pulsation of the art. tibialis post. and art. dorsalis pedis in 17 patients. The use of given method in the patients with DM and DFS allows the stabilization of the level of glycemia and lowers the dose of hypoglycemic drugs, or lowers the level of sugar in the blood when using the previous doses of the hypoglycemic drugs. The combined treatment improves hemodynamics, increases the level of energy shift in the nervous tissue, widens the contracted blood vessels, gives anti-inflammatory effect and improves the subjective self-appraisal of the patient.

Auth.

**8.G.13.6.100. Prevalence and factors influencing cigarette smoking among medical and non-medical university students in Tbilisi, Georgia: a cross-Sectional study.** /N. Maghlakelidze, I. Chkhaidze, T. Maglakelidze/. II International Congress of Respiratory Association of Georgia. – 2010. – geo.; abs. geo., eng.

This study shows that smoking prevalence in medical and non-medical students of Georgia is extremely high. The gap in smoking related education among medical students was evident and this highlights the need to identify factors to be included for improving anti-smoking education in the universities and planning effective anti-smoking programs.

Auth.

**8.G.13.6.101. The prevalence of the chronic obstructive pulmonary disease in the town of Telavi, Georgia: a cross-sectional study.** /M.Maghlakelidze, I.Chkhaidze, T.Maghlakelidze/. II International Congress of Respiratory Association of Georgia. – 2010. – geo.; abs. geo., eng.

The results of the study can serve as the good baseline data for broader studies on COPD prevalence, which should focus on the impact of various risk factors. Specific public policy issues need to be re-examined from the angle of environmental contribution to the burden of COPD. Introduction of spirometric examination for diagnosing COPD should be ensured at all relevant health facilities. Anti-tobacco policies need to be reinforced. Definition of COPD has to be included in Georgian State Medical Standards list. Awareness needs to be raised on COPD among healthcare personnel.

Auth.

**8.G.13.6.102. Pain perception among depressed heroin addict patients.** /V. Kenchadze, E. Tchkonია, Z. Beria, N. Okribelashvili, G. Naneishvili, G. Sikharulidze/. Georgian Medical News. - 2010. - #10 (187). – pp. 43-47. – eng.; abs.: geo., eng., rus.

Investigation of heroin addict patients in post-abstinent state revealed that low mood, anxiety, tension and guilt feeling increased sensitivity toward pain, which mostly experienced as algetic, coenestetick and hypochondria sensations. Algetic symptoms highly correlated with psychopathology. Efficient treatment of psychopathological symptoms decreased pain. It is concluded that atypical antipsychotic quetiapin monotherapy could be used for treating such conditions.

Auth.

**8.G.13.6.103. Treatment characteristics in elderly.** /S. Dalakishvili, N. Bakuradze, M. Ghughunishvili, R. Jojua, E. Areshidze/. Georgian Medical News. - 2010. - #10 (187). – pp. 48-51. – eng.; abs.: geo., eng., rus.

The pharmacodynamics and pharmacokinetics of medications, their therapeutic and toxic effects are age dependant. In the treatment of old people polypharmacy is widely used. The most common results of polypharmacy are increased adverse drug reactions, drug-drug interactions. In this study the use of different medications at the Departments of General Medicine and Cardiology (Tbilisi Republic Hospital) was analyzed. The case histories (1995, 2000 and 2005) of 1708 patients were studied. It was found that in 2005 the number of 60 years and older patients has doubled comparably with 1995, but the number of 24-44 years old patients remained almost the same. The complication rate was higher in elderly as compared with younger patients. It was found that in treatment of elderly population hypotensive drugs, diuretics and cardiac glycosides are used excessively. In the case of excess use of anti-hypertension medications there is a big risk of developing arterial hypotension. In old people it may lead to orthostatic hypotension, in youth - to dizziness. The frequent use of diuretics in old people may be accompanied with dehydration and risk of developing thrombus formation. Hyponatraemia, hypokalaemia, hypomagnesemia lead to heart rhythm disturbances and risk of glycoside intoxication. In old people the therapeutical doses of diuretics depend not only on their biological activity, but also on the ability of their absorption from the gastrointestinal tract, on the organism's resistance and in the case of repeated intake on their accumulation quality and extraction.

Auth.

**8.G.13.6.104. Ecological problems caused by global warming and population health risks.** /B. Zurashvili, M. Giorgobiani/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 14-16. – geo.; abs.: eng.

Climate change is a change in the statistical distribution of weather over periods of time that range from decades to millions of years. The Earth's climate has changed throughout history. From glacial periods (or "ice ages") where ice covered significant portions of the Earth to interglacial periods where ice retreated to the poles or melted entirely – the climate has continuously changed. Factors that can shape climate are climate forcing. These include such processes as variations in solar radiation, deviations in the Earth's orbit, mountain-building and continental drift, and changes in greenhouse gas concentrations. Levels of carbon dioxide, methane and nitrous oxide gases are

rising, mainly as a result of human activities. Carbon dioxide is being dumped in the atmosphere at an alarming rate. Since the Industrial Revolution, humans have been pumping out huge quantities of carbon dioxide, raising carbon dioxide concentrations by 30% and average global temperature appears to have risen between 1<sup>0</sup>C and 2<sup>0</sup>C. Obviously, climate has a big influence on plants and animals in the natural environment, on oceans, and on human activities, such as agriculture, water supplies, and heating and cooling. The effects of climate change depend upon how much change there is, how fast it occurs, and how easily the world can adapt to the new conditions. These problems are mortified and needs them to be solved. This needs different specified professional relations, for example the scientists which are working in this medical sphere. G. Natadze Scientific-Research Institute of Sanitary and Hygiene created on its base a scientific practice center for global warming and for the health of the population. The target is to avoid the changing of the climate and the risks, treatment and rehabilitation of the deceases which can be created.

Auth.

**8.G.13.6.105. Biodegradation of egsogenous phenol in the organism of rat.** /B. Arziani, G. Lekishvili, Ts. Chikhladze, M. Nadirashvili/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 21-24. – geo.; abs.: eng., rus.

Biodegradation process of 1-6-14C-phenol in organism of rat has been studied. It was established that metabolism of its molecule proceeds at high rates at intraperitoneal injection of the aforementioned xenobiotic. Extent of degradation of the aromatic ring was also high. Major contribution to radioactivity has to be attributed to the conjugation product of phenol with glucuronic acid. Phenol sulfate as an outcome of biotransformation was not found among conversion products. Part of the injected phenol is excreted untransformed.

Auth.

**8.G.13.6.106. Toxicological issues connected with lead-containing substances.** /N. Lobzhanidze, N. Tchavchanidze, T. Giorgobiani, L. Rusieshvili, E. Kourdadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 24-27. – geo.; eng., rus.

The harmful effects of lead intoxication were well-known as early as in the 1940 years. Nowadays, lead is still the leading substance among those causing industrial poisoning. This article reveals and discusses a clinical case of intoxication by lead. Several recommendations for prevention and treatment of such cases are also provided.

Auth.

**8.G.13.6.107. Supercritical Co<sup>2</sup> extraction of food colorants from vegetable matrices.** /M. Tsitsagi, G. Kvartskhava, M. Chkhaidze, I. Jinikashvili, M. Khachidze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 34-38. – eng.; abs.: eng., geo.

Natural food colorants are favored over the synthetics in recent years. Production of synthetic dyes is cheaper; their products have bright, vivid color and are stable, but natural ones considered as healthy products. The most abundant natural food colorants are anthocyanins, □□carotene and lycopene. Grape skin, mandarine, orange and persimmon peels, tomato paste waste are good source of natural colorants in Georgia. Supercritical fluid extraction is advanced separation technique for receiving food colorants.

Auth.

**8.G.13.6.108. Rational use of plant raw materials for obtaining medical means.** /N. Kavtaradze, T. Alavidze, I. Mikadze, R. Uridia, A. Dolidze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 38-41. – geo.; abs.: eng., rus.

Getting compounds on the basis of plant metabolites and their derivatives isolated from local plant raw materials (groundsel, coniferous plants, alpine sorrel, grape stones) makes it possible to obtain and use new natural hydrocarbon, anthraquinone and alkaloid block-syntones. It gives an opportunity to receive variety of interesting biologically active substances. Obtaining of new medical preparations on the basis of them is possible.

Auth.

**8.G.13.6.109. Use of natural resources of Georgia for medical and cosmetic purposes.** /N. Bokuchava, D. Bibileishvili, I. Berdzenishvili, L. Ebanoidze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 41-44. – geo.; abs.: eng., rus.

The aim of this work is the use of natural resources of Georgia - mud (pelloidy), bentonite clay, mineral water, alcoholic and oil extracts of medicinal plants for cosmetic purposes. Based on these ingredients for the first time to obtain new formulations of cosmetics - cream-mask, toothpastes and shampoos.

Auth.

**8.G.13.6.110. Biologic activity of grape products.** /N. Antelava, M. Okujava, K. Pachkoria, M. Ghonghadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 47-50. – geo.; res.:eng., rus.

The article deals with the antioxidant role of grape polyphenolic compounds in prevention of free radical related diseases. The review of the literary data of red wine polyphenols protector activity on molecular, sub-molecular levels and whole human body depending on wine brand, preparation technology and volume of consumption was performed. According to the reviewed literature, polyphenolic extracts and separate compounds of wines are used as medicines in clinical practice for prevention of free radical diseases, as well as in cosmetology and spa therapy. A further investigation of the biological activity of different brands of wines, wine extracts, grape compounds and alcohol free beverages is desirable.

Auth.

**8.G.13.6.111. Zeolite medical preparations.** /V. Tsitsishvili, N. Dolaberidze, M. Alelishvili, G. Tsintskaladze, N. Mirdzveli, M. Nizharadze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 50-53. – rus.; abs.: eng., geo.

Natural and synthetic zeolites are used in medicine as sorbents and ion exchangers in different forms, in the US, Japan and several other countries "liquid zeolites" are marketed mainly, Megamin – "tribomechanically activated" clinoptilolite-containing preparation is popular in Europe, China prefers traditional powders, in Russia original Litovit in many modifications has been developed. Georgia is rich by natural zeolites (clinoptilolite, phillipsite, etc.), their physical and chemical properties are well studied, showing possibility of application for medical uses.

Auth.

**8.G.13.6.112. New zeolitic materials for increasing the reduction process of damaged bone tissue.** /G. Tsintskaladze, M. Gersamia, V. Tsitsishvili, K. Ebralidze, M. Burjanadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 53-56. – geo.; abs.: eng., rus.

Clinoptilolite, natural zeolites located in Georgia, enriched by phosphorus and calcium was studied. Investigations on the rabbits show the possibility of using these materials in clinical practice for treatment of osteomelite, odontogenic cist, for completion of defects of jaw bones.

Auth.

**8.G.13.6.113. Minerals and glutaminic acid containing a biologically active food additive.** /I. Beshkenadze, M. Gogaladze, N. Zhorzholiani, N. Osipova, I. Lomtadze/. Experimental and Clinical Medicine. – 2010.- #4(59). - pp. 56-59. – geo.; abs.: eng., rus.

We synthesized the chelate type compounds which contain glutaminic acid and minerals. The synthesized compounds were identified and a series of physical and chemical properties (melting, solubility in various solvents, and nature of metal-ligand bond) were defined. Powder form biologically active additive was prepared on the basis of the synthesized compounds. It can be used as a dietary supplement and can provide for: nutrition rationalization (compensation of mineral deficit); psycho-stimulation effect and heightening of capacity for work, improvement of mood and sleep; decrease of ration caloric content, decrease of body weight; satisfaction of physiological demands of a man for food; and restoration of reduced immune system in men.

Auth.

**8.G.13.6.114. The role of rehabilitation and valeology in the health management system.** /I. Dolidze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 80-83. – geo.; abs.: eng., rus.



The development of health management system requires integrated collaboration of scientists from various fields, including of resuscitators, valeologists, with participation of pathologists and sanologists. The First problem is organization of the collaboration between the scientists from deferent fields, who are working on the problematic issues of healthy and ill people. Secondly, with integrated method of approach have to be worked out criterions of scientific knowledge systems, and on the bases of these, should be determined the special purpose and development strategy of field.

Auth.

**8.G.13.6.115. Correction of non-modifiable risk factors in adults.** /N. Burkadze, A. Isakadze, SH. Shurghaia/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 83-85. – geo.; abs.: eng., rus.

1. Identification of arterial hypertension, overweight, low physical activity, smoking, alcohol and salt over usage, psycho-emotional stress and drug addiction in the same populations. 2. Stratification of examined populations to risk-groups (low, middle and high risk groups). 3. Development and implementation of differentiated preventive intervention programs for middle and high risk groups. 4. Development of measures for healthy lifestyle principles promotion (development and distribution of educational literature taking into consideration specific features of the population, trainings with active participation of adults, information and involvement of mass media). 5. Dynamic supervision of the whole population (with examination of focus groups) and implementing preventive activities. 6. Assessment of regular dynamic supervision and active intervention significance for risk-factor correction (repetitive testing of population, examination to detect risk factor frequency). 7. Development of the model for youth education on healthy lifestyle principles and its recommendation for implementation in public health

Auth.

**8.G.13.6.116. State of physical factors of environment of Tbilisi subway.** /N. Khunashvili, R. Kverenchkhiladze, M. Tsimakuridze, L. Bakradze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp. 92-98. – geo.; abs.: eng., rus.

Based on complex investigations there are established the unfavorable state of environment physical factors of Tbilisi subway – noise, vibration, and lighting. Parameters of noise and common vibration in most of cases exceed the acceptable levels. The noise is broadband, exceeding the level, basically, on middle and high frequencies of the spectra. The degree of exceeding the noise level depends on noise regime of premise - at movement of rolling-stock the noise level reaches up to 108 dB, exceeding the limit acceptable level by 28 dB. The parameters of common vibration at movement of rolling-stock exceed the limit acceptable level by 9 – 20 dB. State of lightening is characterized by unfavorable parameters that require the significant effort of visual analyzer function. The level of satisfaction of the lightening standards in average consists 88-95%. Investigations conducted became the basis of elaboration of complex sanitary measurements on regulation of the noise, vibration and lightening in premises of Tbilisi subway.

Auth.

**8.G.13.6.117. Bottom sediments in the downstream sections of the Black Sea Basin rivers of Georgia.** /N. Benashvili, V. Gvakharia, N. Machitadze, N. Gelashvili, L. Khomeriki, Ts. Khukhunia/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 107-112. – geo.; abs.: eng., rus.

Bottom sediments of the rivers of the Georgian Black Sea basin have been studied. The grain size parameters, the content of metals (Fe, Mn, Cu, Zn, As, Ni, Cr), organic carbon and total petroleum hydrocarbons have been determined. On the basis of a comparison with previous studies, tendencies in the alteration of the content of metals have been established; a linkage between the lithology and the chemical composition of the bottom sediments has been established.

Auth.

**8.G.13.6.118. Modern dynamics of the eastern coastal zone of the Black Sea at the town of Poti.** /B. Lebanidze, I. Papashvili, V. Gvakharia/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 112-117. – rus.; abs.: eng., geo.

The Black Sea coastal zone character near Poti-city varies strongly, which is caused by significant amounts of sediments brought in by the river and by frequent changes of riverbed locations during

certain historical periods. Especially notable changes took place during the 20th century, as the hedging breakwaters of Poti port had been constructed and Poti city began to develop. After 1939 the main branch of the river was removed from the underwater canyon source and directed to the north of the port. As a result, the south coast of the port began to suffer under washing erosion, and the sea covered 300 ha of the land. North to the port a new delta was created and the total growth of seashore territory, up to the river Khobi tributary, reached 1 100ha. Comparable lifting of sea level, considering the land descending (39cm) and the Black Sea eustatic elevation, reached in the mentioned period 53cm. Nevertheless, accumulation at the whole territory of Poti seacoasts is predominant, which indicates at the strong positive influence of the river brought sediments.

Auth.

**8.G.13.6.119. Determination of petroleum hydrocarbons in the Georgian sector of the Black Sea.** /N. Gelashvili, G. Maisuradze, V. Gvakharia/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 117-121. – geo.; abs.: eng., rus.

The article delivers materials which may be useful for people involved in surveys of oil and oil products in the environmental elements and assessment of their ecological role. It also delivers findings of our researches relating to oil pollution level within the Georgian sector of the Black Sea, as well as pollution sources and nature (technogenic, natural).

Auth.

**8.G.13.6.120. Peculiarities of cytogenetic disorders from the impact of the ecological chemical mutagens on the human organism.** /A. Zedginidze, M. Antelava, Kh. Gvimradze, M. Gagoshidze, N. Manjavidze/. Experimental and Clinical Medicine. - 2010. – #4(59). - pp. 121-123. – geo.; abs.: eng., rus.

The investigation of the chemical mutagens' impact on the organism of children and adolescents living in the arsenic-polluted environment gave us the opportunity to detect that the character of the cytogenetic disorders differed from the earlier detected disorders upon the impact of the physical mutagens. The level of acrocentric chromosomal associations did not give us the chance to ascertain the fact of the mutagen impact. Chromosomal aberrations are presented mainly as exchange disorders, and as micronuclei only detect the fact of the mutagen impacts, not giving the chance to judge their quantitative parameters.

Auth.

**8.G.13.6.121. Estimation of risk factors at children's age under conditions of arsenic action.** /M. Gagoshidze, N. Manjavidze, L. Aladashvili, K. Gogberashvili, V. Shanidze/. Experimental and Clinical Medicine. – 2010. - #4(59). - pp.124-127. – geo.; abs.: eng., rus.

The work purpose is: studying the influence of the environment polluted by arsenic on indicators of health and disease of children and teenagers and an estimation of risk factors. Research of children and teenagers has been carried out a current of 10 years for the purpose of studying of influence of the environment polluted by arsenic living in Lukhuni gorge in the territory adjoining to a point of production factory of mountain-chemical arsenic, and a children's cohort of the same age and with the same social and economic conditions living on rather remote territory, in the conditions of the weakened action of arsenic (Randomization control) - In total 878 children. The assessment of a risk factor with use of a quality monitoring has been given; relative and attribute sizes of risk of conditions of the environment polluted by arsenic and an authentic interval on their groups for each factor are estimated. An assessment of a difference between groups spent criterion  $\chi^2$  (Pearson). For quality indicators and for quantitative criteria t, the difference was considered authentic if  $\chi^2 > 3,84$ ,  $p < 0,05$  and  $t > 1,96$ ,  $p < 0,05$ . The Software is carried out with use of package SPSS of 11,5 programs. On our researches in conditions environment polluted by arsenic in Luhuni gorge, in comparison with Ambrolauri and near location villages, marked increase in risk of pathological pregnancy, in particular premature birth; the average data of the basic indicators of physical development specifies on statistically authentic left; at children of school age considerable deviations in health, authentic growth of disease by acute respiratory and other infections are marked.

Auth.

**8.G.13.6.122. The effect of pollution of Kvemo Kartli region's rivers on the health of population and ways of its prevention.** /D. Ioseliani, N. Kalabegashvili, G. Balarjishvili, L. Samkharadze, T. Alavidze, K. Ebraldidze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 132-135. – geo.; abs.: eng., rus.

The work considers indices of hydrosphere and soil pollution as the result of activity of JSC Madneuli Mining Company (ore mining and processing enterprise), the largest enterprise in the one of the most important agricultural regions of Georgia, and results of its effect on the health of the region's population. The new technological method of purification of quarry sour waters is offered that secures selective separation of heavy metals and improvement of ecological situation in the region and, respectively, of the health of population.

Auth.

**8.G.13.6.123. Self-medication with antibiotics and related problems.** /N. Gorgaslidze, K. Bakuridze, N. Gongadze, N. Nizharadze, N. Shengelidze, N. Surmava, T. Makharadze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp.135-139. – geo.; abs.: eng., rus.

Our investigations were carried out on citizens from different towns of Georgia. Inquiry of respondents has been made by telephone conversations with the help of preliminary questionnaire to be filled in the special cards. Each of these forms includes questions about the age, sex, profession, constitution and medical or pharmaceutical education. After collection of demographic information on the second stage, we checked up the informative level of respondents concerning antibiotics. The questions included their knowledge about proper use of antibacterial drugs, the routes of their administration, possible adverse effects, complications, indication and interaction with other drugs. During our study it was revealed that half of the respondents lacked information about the proper use of antibiotics. A part of them thinks that antibiotics are usual drugs against fever, influenza and mycotic diseases. More than 40% of them consider that antibiotics refer to OTC drugs and they can use them for self-medication under different conditions. As a result of our investigation, we came to the conclusion that for improving the present condition the introduction of a list of essential drugs for physicians and pharmacists as well as the minimization of self-medication and increased delivery of medical information among population needs to be carried out.

Auth.

**8.G.13.6.124. The influence of the product of 3-(2'-P-methoxyphenylvinil)-ih-pyrrolo[2,3]-quinoline on the morphological pictures, functional parameters (Alt, Ast) of liver, on the coagulation system of rats.** /B. Arziani, M. Tsitsagi, N. Gongadze, L. Gabunia, Sh. Petriashvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp.139-142. – geo.; res.: eng., rus.

Since derivate of 3-(2'-p-methoxyphenylvinil)-IH-pyrrolo[2,3]-quinoline by its chemical structure is similar to indirect anticoagulants such as warfarine, we have studied the action of this substance on the coagulation system and on the liver of rats. It was shown that using of 3 -(2'-p-methoxyphenylvinil)-IH-pyrrolo[2,3]-quinoline in a dose 0,06 mg./kg. manifested anticoagulative effect without toxo-morphological and functional parameters in rats. It was shown that using of 3-(2'-p-methoxyphenylvinil)-H-pyrrolo [2,3]-quinoline in a dose 0,06 mg./kg. manifested anti-coagulative effect without toxic changes of liver morphological picture and functional parameters, which was correlated to its chemical structure. It was suggested that the new substance with closely relationship by chemical structure to warfarin revealed the similar anticoagulative effect without any pronounced changes of liver morphological picture and functional parameters.

Auth.

**8.G.13.6.125. Peculiarities of health state of the chemical industry workers in Georgia.** /M. Tsimakuridze, G. Kverenchkhiladze, R. Zabakhidze, D. Zurashvili, E. Maisuradze/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 152-154. – geo.; abs.: eng., rus.

A study has been conducted regarding the influence of working conditions on workers' state of health at an enterprise "AZOT" in Rustavi, which produces ammonia nitrate and sodium cyanide. It was determined that during the production process workers were afflicted with hazardous chemical compounds, high temperature and industrial noise. It was distinguished that labor conditions of the industry in question were in unfavorable state. The clinical examination of the workers with basic professions in the field of the chemical industry shows the frequent cases of the diseases that can

be divided into three groups: occupational (chronic toxic bronchitis, radiculoneuropathy, osteochondrosis), industrial (cardiovascular diseases) and general. This confirms the major role of occupational and production factors in the etiology of those pathological conditions. On the basis of carefully performed study a list of recreation measures has been carried out in order to improve the working conditions of the employees.

Auth.

**8.G.13.6.126. Peculiarities of the immunological state of occupational diseases caused by manganese.** /N. Khachapuridze, D. Zurashvili, M. Tsimakuridze, M. Kvartskhava, P. Tsimakuridze, M. Khajrshvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 155-157. – geo.; abs.: eng., rus.

The aim of the research is to find immunologic indicators in patients suffering from occupational pathology caused by manganese. Peculiarities of immunological shifts have been determined, such as the diminishing quantity of T-lymphocytes, violation of the ratio of helper and suppressive sub-population, while the quantity of B-lymphocytes stays the same; disimmunoglobulinemia, characterized with decreasing IgG and IgA and increasing IgE levels, while IgM remains the same in the case of workers with bronchial asthma. Patients suffering from manganese are characterized of decreasing numbers of T-lymphocytes, helpers and suppressors; increasing number of B-lymphocytes, decreasing IgG and IgA, while IgM being the same. The obtained information allowed us to determine the immunologic background of the examined patients. It gave a start to subsequent research towards preventive pathogenetic measures of an occupational pathology caused by manganese.

Auth.

**8.G.13.6.127. Hygienic estimation of pollution of drinking and surface waters with heavy metals connected with mining and processing industry in Chiatura.** /M. Grdzlishvili, M. Mirtskhulava, N. Chakvetadze, M. Giorgobiani, M. Lashkhauri/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 167-169. – geo.; rus.: eng., rus.

The study of pollution of basic environmental objects - water, soil and free air with toxic heavy metals, has become very important lately,. The purpose of this work was to study the pollution degrees of environmental objects (water, bottom sediments, air) connected with the mining and processing production in Chiatura, to estimate risks, and to introduce innovative technologies. As a result of this work, it was found out that pipeline drinking water in Chiatura is polluted and it is not safe from the epidemiological standpoint. High content of dissolved manganese is noted in the well water of general use. An increased alkaline content of surface water, increased electric conduction and temperature of water point to an intensive growth of pollution of the river Kvirila by sewage from central processing factories and by ore remainders, the so-called "tails", located on the banks of the rivers and streams Shukruti and Darkveti.

Auth.

**8.G.13.6.128. Nutrition survey of primary school students in some selected vulnerable schools of Georgia.** /G. Dvali, M. Lezhava, D. Phophkhadze, M. Chedia, N. Menagharishvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 169-171. – geo.; abs.: eng., rus.

The rapid non-representative nutrition survey was carried out in 2005 by the State Research Institute of Hygiene and Sanitary of Georgia (SRIHS) with the financial and technical support of the United Nations World Food Programme (WFP). The survey aimed at obtaining data and information on the nutrition status, iron and iodine deficiencies, short-term hunger, concentration and learning capacity, the enrolment and attendance rate of primary school children in ten schools located in the most disadvantaged communities of the six most vulnerable regions of Georgia.

Auth.

**8.G.13.6.129. Influence of magnetic field and plant preparation on passive avoidance reaction and its neurochemical correlates in the brain of rat.** /M. Nikolaishvili, T. Mchedluri, N. Mindiashvili, M. Tchitchakhua, G. Iordanishvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 172-174. – rus.; abs.: eng., geo.

Influence of power frequency electro-magnetic field (EMF) in rats induces some deviations in the formation and retention of passive avoidance reaction. In particular, during actions of power frequency EMFs animals behavioral act's implementation is hindered and affects the passive

avoidance reaction in rats. The animal's nervous tension, amazement and disability to solve the given task are clearly evident. As to the impact of a plant composite, the influence of this elixir is obvious. In animals, it inhibits emotion and increases the probability of right decision-making as compared to the control.

Auth.

**8.G.13.6.130. The rare case of acute intravenous intoxication by copper sulfate.** /G. Katsitadze, S. Kutubidze, M. Tandilashvili, S. Kharatishvili/. Experimental and Clinical Medicine. - 2010. - #4(59). - pp. 182-185. – geo.; abs.: eng., rus.

The cases of intoxication by copper sulfate (CuSO<sub>4</sub>) are known in the countries where viticulture is developed and copper sulfate is used as a pesticide. There are also the cases of poisoning by copper sulfate through traditional (injective) way of intoxication. Poisonings usually are accidental or suicidal in nature. Our case is absolutely unique because the copper sulfate was administered intravenously in a suicidal attempt. The case is about a 21 year-old man, who took with suicidal intentions 5 ml concentrate solution of copper sulfate by means of a syringe. In this case all the symptoms of acute intoxication by copper sulfate were obvious. The only indication which is not typical for the acute per oral intoxication by copper sulfate was the fast developing of respiratory distress-syndrome. The patient was subjected to a complex treatment and left the hospital in a good condition of health.

Auth.

**8.G.13.6.131. Coordinated admixtures of some metals with hydrazines and their products: research and application prospects.** /N. Didmanidze, R. Machkhoshvili/. Experimental and Clinical Medicine. – 2010. - #5(60). - pp. 43-46. – geo.; abs.: eng.

The increased interest toward the research of coordinated admixtures of metals with hydrazines and their products is preconditioned by the specific physical and chemical properties of hydrazines, hydrazones and their relevant coordinated admixtures, as well as their application prospects in medicine, agriculture and industry. Hydrazines and hydrazones contain biologically active peptide groups and are more interesting for the research as medial models of biological fixation of azote. Hydrazines and their products in coordinated admixtures with biometals are medically proven as anti-tuberculosis, psychotropic and anti-cancerogenic medications. The recent discoveries have also pointed out their anti-anemic, bactericidal, bacteriastatic and cardio therapeutic activity, with a wider spectrum of both treatment and prophylactic impact. Acilhydrazone compounds are used in medicine and agriculture as herbicides, insecticides and regulators of vegetation growth. The researches in this direction are apparently interesting and prospective. Prior to the research we carried out a study of hydrazine and hydrazone compounds of some metals (formyl-, acetyl-, phenylacetyl -, benzoil-, nitrobenzoil-, and other products). We have synthesized the compounds at different conditions of pH: Coordination compounds: of Cu (II) with formyl-, acetyl- and benzoilhydrazones of salicylic aldehyde; of metals- Cu (II), Zn, Co(II) with formyl-, and benzoilhydrazones of acetone; of metals- Cu (II), Zn, Co(II) with colchicine; of metals- Cu (II), Zn, Co(II) with brombenzoilhydrazone of benzaldehyde; of metals- Cu (II), Zn, Co(II) with brombenzoilhydrazone of salicylic aldehyde; of Cu, Zn, Cd, Co, Ni, with acetone brombenzoilhydrazone; of Cu (II) with ortho-hydroxibenzoilhydrazone of benzaldehyde and other compounds. The synthesized coordinated compounds are studied with the use of physical, chemical, magnetic-chemical, thermo-gravimetric, spectroscopic and roentgen-structural methods. The studies ascertained the nature of chemical valency and chemical structure of the realized metallacycles. The study drew conclusions to the specific part of the synthesized bio-metal compounds as relevant for application with medical, prophylactic and herbicide purposes.

Auth.

**8.G.13.6.132. Study of antioxidant properties of Saperavi grape oil on rats.** /M. Nikolaishvili, T. Mchedluri, D. Margalitashvili, M. Gagolishvili/. Experimental and Clinical Medicine. – 2010. - #6(61). - pp. 17-22. geo.; abs.: eng.

Our researches have shown that oil extracted from the seeds of *Saperavi* grapes administered to Vistar rats daily for a week (3 ml of 25% elixir intraperitoneally) increased their survival, and the factor of dose alteration was equal to 1,23.

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