



**SOUTHEAST EUROPEAN MEDICAL FORUM
GEORGIAN MEDICAL ASSOCIATION
IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY**



**PROGRAM & ABSTRACT BOOK
SEVENTH INTERNATIONAL
MEDICAL CONGRESS
7-10 September 2016**





EACCME

**The Seventh International Medical Congress of the Southeast European
Medical Forum**

Batumi, Georgia (8–10.09.2016)

has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME) and is designated for a maximum of, or up to 15 European CME credits (ECMEC).



Dear Colleagues, Dear Friends,

It is my great honor and privilege to welcome you to the VII International Medical Congress in Batumi, Georgia, organized in cooperation with the Georgian Medical Association.

Following a series of successful congresses, previous years and the First International Medical Conference held in Thessaloniki, Greece in June 2016, in Batumi SEEMF is availing of the opportunity to share again the professional knowledge and achievements in medical practice, to present the new findings in scientific medicine and exchange experiences. This annual event is bringing together specialists from different countries and many disciplines.

More than ever today we are going through a dramatic increase of political, economic and armed conflicts that challenge SEEMF medical community to associate and commit to the mission of being the peacemaker of the future. The Georgian Medical Association, as a co-organizer of the event is making all efforts the VII Congress to be a successful continuation of SEEMF traditions and an excellent opportunity to promote medical science, practice and ethics together for institutional cooperation and personal friendship between the SEEMF community members.

I am convinced that we have the ability and means for improving health policies, the welfare of medicine, and contribute to the development of scientific medicine in all aspects of the medical profession.

I want to thank all of you, dear colleagues and friends for being part of our SEEMF society.

Our success is due to having all of you through the years, showing results of your excellent daily work as physicians, sharing your experiences and learning as scientists.

I wish you productive and meaningful work and enjoyable stay in the sunny city of Batumi.

*Dr. Andrey Kehayov, MD, PhD
SEEMF President*



Dear colleagues and friends,

it is a great pleasure and honour for me to invite you to the 7th SEEMF Congress which will be held in beautiful city of Batumi, Georgia. South East European Medical Forum represents a very important association which is growing and includes more and more South and East European countries. SEEMF is one of the most outstanding medical societies in Europe. It is multidisciplinary and includes not only different branches of medicine but is also dealing with the organisation of health care systems in different countries and is searching, how to find the best solution for our patients. The creation of our society and improvement of its visibility is a result of a hard work of our president dr. Kehayov and his co-workers.

Scientific programme, which was organised by president of SEEMF-dr. Andrey Kehayov and prof. Gia Lobzhanidze, president of Georgian Medical Association, is promising, it is interdisciplinary and includes topics which are interesting and important for this part of Europe. I believe it will be one of the most outstanding medical meetings this year in Europe.

t will be a podium where new findings will be presented, it will provide opportunity to discuss controversies, to search for the best solutions for our patients, to listen and to learn. Speakers will be well recognised scientists and clinicians. Therefore, I have no worries about the success of the meeting.

Obviously, there are many reasons to reserve your time in the first part of September to attend the 7th SEEMF Congress and to join us with your contribution.

*Vice president of SEEMF
Prof. dr. Pavel Poredoš*



Dear Colleagues

It is a great honor for me as Secretary General to participate to the activities and the works of SEEMF and from this position is also a great pleasure to express by all SEEMF Board Members a WELCOME and a pleasant stay in Batumi.

The Seventh International Medical Congress is organized by Southeast European Medical Forum in 7-10 September in Batumi Georgia in cooperation with national Medical Association of Georgia.

There is a very important and huge satisfaction to all of us because we make an enormous effort and so every year we observe to growing our forum more and more and many countries from Europe and Asia to became members organizations and join with SEEMF. That is an exceptional opportunity to collect best and new Medical knowledge and organizational topics by the new National Associations from Europe and Asia. All the SEEMF Scientific Congress and Conferences ought to be organized to retake very important Missions that is to develop more the Medical Science and Experience of Public Health and also on Health Care System. That merit on the participation on the high quality of Scientific Lectures and excellent Health Specialists and selected topics from Europe and Asia.

Another very important target refers that our SEEMF members to make all the effort according of the spirit of unanimity, solidarity, friendship and peace.

Also us SEEMF Forum during our activities we express and present at the meeting on many International European and Asian organizations important proposal and indications, as for example to WMA the propose to support the renovation of Agreement of CLIMATE CHANGES and REDUCTION OF GREENHOUSE GAS EMISSIONS. ON CP/ME the extraordinary propose to responsible International Authorities globally to STOP FUNCTIONING the NUCLEAR REACTORS. Also other more important indications and interventions we propose to.

At last we wish to all the participants a successful medical presentation and this Congress offer a high development on Medical Science.

*Dr Antypas Stylianos-Ioannis
SEEMF Secretary General*



Dear Colleagues,

It is my great honor to welcome the SEEMF 7th International Medical Congress participants in Georgia, particularly in Adjara region, in Batumi.

I am glad that 2016 gives to Georgian Medical Association the opportunity once more to demonstrate the Georgia, as one of the best countries, rich with the modern medical and educational, historical values and tourism potential.

In my thoughts, I went back to the past, in great history of XIV-XII centuries BC, when the myth about Golden Fleece in Colchis was created. According to the myth, the King Aeetes ruled Colchis, the richest kingdom in west Georgia. He had fantastic treasures. The most important from them was the famous Golden Fleece. According to many scientists, it was the symbol of divine wisdom on which the king had written some mysteries. Great part of these mysteries was “medical wisdoms”. May be this is the start of the mythos of classical medical development, Colchis-Iberian Medicine - Cura Mediana... According to some investigators of the history of Medicine, the term “Medicine” comes from the Aeetes’ daughter Medea who was skilled master in medicine.

I want to point out that the section chairman’s and the scientific committee members, first time in SEEMF Congress history, will select best reports and their authors will be allowed to publish the articles in the magazine “Translational and Clinical Medicine – Georgian Medical Journal” for free.

I would like to wish you once more success in this historic land for Medicine.

With the best wishes,

Prof. Gia Lobzhanidze MD. PhD. ScD.

Chairman of the Board

Georgian Medical Association,

SEEMF Board Member,

WHO/EFMA LC Member



Dear Colleagues,

It is my great pleasure and privilege to welcome participants of 7th Congress of the Southeast European Medical Forum in the beautiful city of Batumi. I am especially honored that the Faculty of Medicine of Ivane Javakhishvili Tbilisi State University is one of the main organizers of this outstanding scientific-practical event together with Southeast European Medical Forum and Georgian Medical Association.

The organizing committee of the congress created a comprehensive series of lectures and symposia, covering almost entire field of clinical and translational medicine, where the congress participants will learn about the latest scientific and practical developments in the field in a stimulating environment. It will be also a unique opportunity to network with colleagues from the Southern and Eastern Europe as well as South Caucasus region. These interactions undoubtedly will enhance research and career development.

And at last, Batumi, a real pearl of the Black Sea region, with its eclectic mix of old and new, where historic houses and modern buildings co-exist beautifully side by, with its developed infrastructure for organizing different kind of social and cultural events, was an excellent choice for the venue of the congress.

Welcome to Batumi, dear colleagues!

*Prof. Alexander Tsiskaridze MD, PhD, ScD.
Dean
Faculty of Medicine
Ivane Javakhishvili Tbilisi State University*

ORGANISING COMMITTEE

Co-Chairs:

Dr. Andrey Kehayov - President of SEEMF (Bulgaria)

Prof. Gia Lobzhanidze MD, PhD, ScD - Chairman of Georgian Medical Association, Iv. Javakhishvili Tbilisi State University (Georgia)

Secretary

Dr. Zaza Khachiperadze - Georgian Medical Association, Iv. Javakhishvili Tbilisi State University (Georgia)

Members:

Wladimir Ovcharov (Bulgaria)

Stylianos Antypas (Hellas)

Pavel Poredos (Slovenia)

Aizhan Sadykova (Kazakhstan)

Siniša Miljković (Republic of Srpska)

Dusko Vasic (Republic of Srpska)

Jaroslav Blahos (Czech Republic)

Goce Spasovski (Macedonia)

Goran Dimitrov (Macedonia)

Gligor Tofoski (Macedonia)

Tatsiana Tserakhovich (Republic of Belarus)

Sviataslau Shnitko (Republic of Belarus)

Alexander Tsiskaridze (Georgia)

Memed Jintcharadze (Georgia)

SCIENTIFIC COMMITTEE

Co-Chairs:

Acad. Wladimir Ovcharov, MD, PhD, ScD - President of the Bulgarian National Medical Academy (Bulgaria)

Prof. Dimitri Kordzaia MD, PhD, ScD - Alexandre Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)

Secretary

Prof. Goce Spasovski – University Clinic of Nephrology, University “ Ss Cyril and Methodius” Skopje, Macedonia

Members

Pavel Poredos (Slovenia)

Andrey Kehayov (Bulgaria)

Stylianos Antypas (Hellas)

Gia Lobzhanidze (Georgia)

Fridon Todua (Georgia)

Ketevan Nemsadze (Georgia)

Alexander Tsiskaridze (Georgia)

Rezo Gagua (Georgia)

Merab Kiladze (Georgia)

Ramaz Kurashvili (Georgia)

Memed Djinchradze (Georgia)

Sotir Stavridis (Macedonia)

Daniela Miladinova (Macedonia)

Goran Dimitrov (Macedonia)

Gligor Tofoski (Macedonia)

Sonja Stavrikj (Macedonia)

Ognyan Hadzhiyski (Bulgaria)

Sviataslau Shnitko (Republic of Belarus)

Prof. Vasili Bohdan (Republic of Belarus)

Tatsiana Tserakhovich (Republic of Belarus)

Todor Cherkezov (Bulgaria)

Dzhevdet Chakarov (Bulgaria)

George Tsaryanski (Bulgaria)

AGENDA

SEVENTH INTERNATIONAL MEDICAL CONGRESS

7-10 September, 2016

Hotel Hilton Batumi

Batumi, Adjara AR, Georgia

Wednesday, 07 September 2016

Arrival of participants

15:00-18:00 Registration

19:00-22:00 **Opening Ceremony, Welcome Reception** – Batumi State Musical Center

Thursday, 8 September 2016

09:00-16:00 Registration

Plenary Scientific Meeting

Rustaveli Hall

Chairmen:

Acad. Fridon Todua, MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University*

Acad. Vladimer Ovcharov MD, PhD, ScD, *President of the Bulgarian National Medical Academy, Medical University of Sofia (Bulgaria)*

10:30-11:00 **Cell Therapy in liver diseases** - Prof. J. Padillo, University Hospital Virgen del Rocío, Seville (Spain)

11:00-11:30 **Neutrophil extracellular traps** - Prof. S. Gusev, Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow (Russia)

- 11:30-12:00 **Interaction between Nervous and Immune system** – Acad. V. Ovcharov, President of the Bulgarian National Medical Academy, Medical University of Sofia (Bulgaria)
- 12:00-12:30 **Prevalence of cardiovascular diseases and risk factors in Europe – differences between East and West European countries** – Pavel Poredos MD, PhD, *SEEMF Vice President, University Medical Centre (Ljubljana, Slovenia)*

Discussion

- 12:30-13:30 **Lunch Break**

Surgery 1

Rustaveli Hall 1

Chairmen:

Prof. Merab Kiladze, MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*

Prof. G Tsaryanski MD, PhD, ScD, *Univercity Hospital “Saint Ekaterina” (Sofia, Bulgaria)*

- 13:30-13:45 **Spectrum of imaging guided percutaneous interventions on the main pancreatic duct - the new paradigm?** - M. Mizandari, *Tbilisi State Medical University (Georgia)*
- 13:45-14:00 **The role of endoscopic surgery in reproductive medicine** – G. Tofoski, *University Clinic of Gynecology and Obstetrics, Medical Faculty, (Skopje, Macedonia)*
- 14:00-14:15 **Heart transplantation in Bulgaria 2003-2016: early and late results** - G. Tsaryanski, D. Petkov, N. Tchilingirova, G. Natchev, *University Hospital “Saint Ekaterina”, (Sofia, Bulgaria)*
- 14:15-14:30 **Pylorus-preserving pancreatoduodenectomy: principles and standardization of procedure** - M. Kiladze, *Iv. Javakhishvili Tbilisi State University (Georgia)*
- 14:30-14:45 **Pancreatoduodenectomy with portal vein resection and reconstruction** - D. Chakirov, A. Kehajov, R. Dimov, G.

- Kostov, D. Argirov, *University Hospital "Kaspela" Medical University (Plovdiv, Bulgaria)*
- 14:45-15:00 **Reconstructive uncut Roux-en-Y operation after distal gastrectomy for gastric cancer** - O. Gibradze, *Ak. Tsereteli Kutaisi State University (Georgia)*;
- 15:00-15:15 **One stage surgical treatment of giant nevocellular nevus** - I. Nadiradze, *Vienna University (Austria), Georgian-Israel Clinic "GIDMED" (Tbilisi, Georgia)*
- 15:15-15:30 **Our 2 years of experience in living donor liver transplantation** - K. Kashibadze, *Shota Rustaveli Batumi State University, (Georgia)*
- 15:30-16:00 **Coffee Break**
- 16:00-16:15 **Perspectives of using new "aseptic" bio-composite meshes in herniology** - M. Gogoladze, *New Vision Hospital (Tbilisi, Georgia)*
- 16:15-16:30 **Pain management principles at vertebral column and joints pathology** - Sh. Gabadadze, *Georgian-Israel Clinic "GIDMED" (Tbilisi, Georgia)*
- 16:30-16:45 **Our experience of spleen preserving operations** - A. Beridze *Shota Rustaveli Batumi State University (Georgia)*
- 16:45-17:00 **Sleeve gastrectomy in patients with GERD (our - experience)** - D. Abuladze, D. Kapanadze, G. Katsitadze, *David Abuladze Georgian-Italian Clinic Ltd (Tbilisi, Georgia)*
- 17:00-17:15 **Percutaneous laser disc decompression (PLDD) - Indications and complications (our experience)** – N. Gurgenidze, B. Gorgiladze, K. Gogitidze, *AdJara Republic Cancer Center, (Batumi, Georgia)*
- 17:15-17:30 **Application of computer surgical navigation** – S. Uyrchenko *(Minsk, Rep. of Belarus)*
- 17:30-17:45 **Classification of errors and complications in surgery of gunshot chest wound** - S. Shnitko, *Belarusian State Medical University (Minsk, Rep. of Belarus)*

- 17:45-18:00 **Postoperative abdominal wall defects vast dimensions: modern aspects of treatment** - V. Bohdan, *Belarusian State Medical University (Minsk, Rep. of Belarus)*
- 18:00-18:15 **The role of esophageal and gastric stenting in treatment of fistulas** - T. Sulikashvili, *Aversi Clinic (Tbilisi, Georgia)*

Discussion

Endocrinology

Rustaveli Hall 2

Chairmen:

- Prof. Ramaz Kurashvili**, MD, PhD, *National Center for Diabetes Research (Tbilisi, Georgia)*
- Pavel Poredos** MD, PhD, *SEEMF Vice President, University Medical Centre (Ljubljana, Slovenia)*

- 13:30-14:15 **Diabetes Mellitus - the 21-st century healthcare problem: from risk factors to global epidemics** - R. Kurashvili, *National Center for Diabetes Research (Tbilisi, Georgia)*
- 14:15-14:30 **Diabetes and depression – les liaisons dangerousness** – L. Tsutskiridze, *National Center for Diabetes Research (Tbilisi, Georgia)*
- 14:30-14:45 **The role and principles of self-monitoring of blood glucose in ype 2 Diabetes Mellitus** - E. Shelestova, *National Center for Diabetes Research (Tbilisi, Georgia)*
- 14:45-15:00 **Health economic consequences if diabetes foot complications: review of international studies** - S. Gabritchidze, *Welfare Foundation, University of Georgia (Tbilisi, Georgia)*
- 15:00-15:15 **Vesico-Abdominal obesity as one of the main risk factors for type 2 diabetes and its late complications** - I. Abesadze *Batumi Endocrinological Center (Georgia)*
- 15:15-15:30 **Diabetes foot syndrome - clinical case** - T. Mukhashavria, *Navy Hospital, Batumi (Georgia)*

Discussion

15:30-16:00 Coffee Break

Varia 1

Rustaveli Hall 2

Chairmen:

Prof. Alexander Tsiskaridze MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*

Acad. Vladimer Ovcharov MD, PhD, ScD, *President of the Bulgarian National Medical Academy, Medical University of Sofia (Bulgaria)*

16:00-16:45 **Stroke in a developing country – Eastern European perspective** - A. Tsiskaridze, *Iv. Javakhishvili Tbilisi State University, Tbilisi (Georgia)*

16:45-17:00 **Etiology and patogenesis of the coronary sinus expansion** - M. Zharykhina, E. Vertynsky S. Chyzh, *Belarusian Medical Academy of Post-Graduate Education (Minsk, Rep. of Belarus)*

17:00-17:15 **Spect/ct- principles and clinical indications** - D. Miladinova, *University Clinic of Pathophysiology (Skopje, Macedonia)*

17:15-17:30 **Continuity of soft skeleton of the liver throughout intrahepatic porta-cava fibrous connections** - I. Chanukvadze, G. Koberidze, *Tbilisi State Medical University (Georgia)*

17:30-17:45 **APCRG activities overview** - I. Margvelashvili, *Association of Pharmaceutical Companies Representatives in Georgia (Tbilisi, Georgia)*

17:45-18:00 **Hemodynamic profile of the new mechanical prosthetic heart valves produced in Belarus in the aortic position** - A. Shket, I Andraloith, V. Shumovec, Y. Ostrovski, A. Moskalenko, *State Institution "Republican Scientific and Practical Center "Cardiology", JSC "Plant" ELECTRONMASH " (Minsk, Rep. of Belarus)*

Discussion

Innovations in Fundamental Sciences

(Satellite Conference)

Armazi Hall

Chairmen:

Prof. Zurab Tsagareli, MD, PhD, ScD, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*

Prof. Sergey Gusev, MD, PhD, ScD, *Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow (Russia)*

- 13:30-13:45 **Influence of exogenous androgen on metabolism in liver of male rats with alloxan diabetes** - M. Kakabadze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 13:45-14:00 **The peculiarities of myocardial microcirculatory bed and endothelial permeability under remodeling condition** – Z. Tsagareli, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 14:00-14:15 **Morphological-functional changes developed in placenta during some pathologies of pregnancy** - M. Tsilosani, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 14:15-14:30 **Response of hypothalamo – hypophysial hormones and renin – angiotensin system on the postaggressive reaction of an organism** - S. Gvidani, Ts. Sumbadze, N. Chichinadze, M. Amiranidze, E. Melikadze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 14:30-14:45 **Potential donor as an outcome of failed extracorporeal resuscitation** – N. Khodeli, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 14:45-15:00 **Decellularized human placenta as a three-dimensional scaffold for tissue engineering** - Z. Kakabadze, *Tbilisi State Medical University (Georgia)*
- 15:00-15:15 **The role of research units in the training of medical students for developing of surgical skills** - Z. Chkhaidze, *Iv. Javakhishvili Tbilisi State University (Georgia)*

- 15:15-15:30 **Pancreas islet endothelial cells during alloxan diabetes and after action of Plaforon LB** – T. Machavariani, E. Janberidze T. Gvamichava, I. Latsabidze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University, “EnMedic” clinic, Georgian National Association for Palliative care (Tbilisi, Georgia)*
- 15:30-16:00 **Coffee Break**
- 16:00-16:15 **The breast cancer clinical features** - N. Gordadze I. Kirvalidze N. Didebulidze L. Metreveli I. Sikhsrulidze M. Kor-dzaia, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 16:15-16:30 **Rare type of benign melanocytic tumor of the brain** - N. Goishvili, M. Jangavadze, I. Khakhutaishvili, I. Kirvalidze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 16:30-16:45 **Characteristic of the microcirculation in the colon and pancreatic adenoma (severe dysplasia)** - T. Gvamichava, E. Janberidze Elene, T. Machavariani, I. Latsabidze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 16:45-17:00 **Features of the aortic wall morphology and immunohistochemistry under aneurysm** - M. Dgebuadze, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 17:00-17:15 **Immuno-cytological assessment of spleen cells in postoperative period of spleen preserving surgery** - M. Amiranidze, Ts. Sumbadze, S. Gvidani, I. Sikharulidze, T. Kobidze, S. Markaryan, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 17:15-17:30 **Parafunction of adenohipophysis in women with non-insulin dependent diabetic retinopathy** - Ts.Sumbadze, T. Dundua, S. Gvidani, I.Sikharulidze, M. Amiranidze, S. Markaryan, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 17:30-17:45 **Local ischemia of the heart on the background of compensatory myocardial hypertrophy** - L. Metreveli, *Al. Natishvili Insti-*

tute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)

17:45-18:00 **Nanoparticles and Nanotechnologies in Medicine: Condition and Prospects** - G. Pichkhaia, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*

Discussion

Friday, 9 September 2016

Oncology

Rustaveli Hall 1

Chairmen:

Prof. Rezo Gagua, MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University (Georgia)*

Goran Dimitrov, MD, PhD, *President of Macedonian Medical Association, University Clinic of Gynecology and Obstetrics, Medical Faculty, (Skopje , R. Macedonia)*

09:00-09:30 **Spread of Cancer worldwide and future prospects** - R. Gagua, F. Todua, M. Maglakelidze, *Iv. Javakhishvili, Tbilisi State University, Research Institute of Clinical Medicine (Tbilisi, Georgia)*

09:30-09:45 **Diagnostic accuracy of risk of malignancy alforitam in women with pelvic masses** - G. Dimitrov, *University Clinic of Gynecology and Obstetrics, Medical Faculty, (Skopje, R. Macedonia)*

09:45-10:00 **Pelvic exenteration for advanced pelvic malignancy - 5-year experience** – S. Stavridis, *University Clinic of Urology, Medical Faculty, Skopje (R. Macedonia)*

10:00-10:15 **Transabdominal and lumbar tumour nephrectomy clinical analysis** - G. Kochiashvili, D. Kochishvili, A. Khuskivadze, V.Kvakhajelidze, *Georgian-Israel Clinic “Gidmedi”, Tbilisi State Medical University (Tbilisi, Georgia)*

10:15-10:30	Renal cell carcinoma – global and regional epidemiology - O. Stankov, <i>University Clinic of Urology, Medical Faculty, Skopje (R. Macedonia)</i>
10:30-11:00	Coffee Break
11:00-11:15	Allogenic hematopoietic stem cell transplantation and Hodgkin's lymphoma - S. Genadieva Stavrik, <i>University Hematology Clinic, Medical Faculty, Skopje (R. Macedonia)</i>
11:15-11:30	Epidemiology of Lung Cancer in Autonomous Republic of Adjara – M. Djintcharadze, M. Artmeladze, R. Gagua - AdJara Republic Cancer Center, Iv. Javakhishvili Tbilisi State University (Georgia)
11:30-11:45	Collaborative surgical procedures in oncogynecology: clinical efficacy and proposals - Ts. Gatenadze, <i>Batumi Maritime Hospital (Georgia)</i>
11:45-12:00	Miniinvasive surgery in diagnostics of mediastinum and lung pathologies - D.Giorgadze, G. Ubiria, <i>Consilium Medula” (Tbilisi, Georgia)</i>
12:00-12:15	Modern approaches in surgical treatment of colo-rectal cancer - I. Gotsadze, <i>Research Institute of Clinical Medicine, (Tbilisi, Georgia);</i>
12:15-12:30	Rare variant of embryonal rhabdomyosarcoma of unusual loction - M. Jangavadze N. Goishvili I. Khakhutaishvili I. Kirvalidze, <i>Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)</i>
12:30:13:30	Lunch Break
13:30-13:45	Metastatic breast cancer, the modern approaches in treatment - D. Nemsadze, V. Kuchava, A. Gachechiladze, G. Nemsadze, <i>Institute of Clinical Oncology (Tbilisi, Georgia)</i>
13:45:14:00	Cancer of proximal jejunum (case report) - G. Menteshashvili, G. Metivishvili, G. Nemsadze, <i>Institute of Clinical Oncology (Tbilisi, Georgia)</i>

- 14:00-14:15 **Non-standard operative surgery in Oncology** - V. Kuchava - A. Gachechiladze, D. Nemsadze, M. Vashakidze, G. Nemsadze *Institute of Clinical Oncology (Tbilisi, Georgia)*
- 14:15-14:30 **Cancer Control in Georgia** - F. Todua, R. Gagua, M. Maglakelidze, *Research Institute of Clinical Medicine, Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 14:30-14:45 **Genetics and Oncology – modern approaches** - D. Agladze, *Research Institute of Clinical Medicine (Tbilisi, Georgia)*
- 14:45-15:00 **Modern methods of treatment bladder cancer** - M. Jintcharadze, *Batumi Shota Rustaveli State University, Adjara oncology center (Batumi, Georgia)*
- 15:00-15:15 **Panic attacks and cancer** - Sh. Vashadze, *Batumi Shota Rustaveli State University, (Georgia);*
- 15:15-15:30 **The best option treatment of malignant cervical polyps** - O. Chakhoian, *Batumi city oncology center, (Batumi , Georgia)*
- 15:30-16:00 Coffee Break**
- 16:00-16:15 **Depression in palliative cancer care** - Sh. Vashadze, *Batumi Shota Rustaveli State University (Batumi, Georgia)*
- 16:15-16:30 **Treatment of hepatocellular carcinoma in patients with chronic hepatitis C** – I. Omanadze, *Saroveli" LTD (Kutaisi, Georgia)*
- 16:30-16:45 **Decellularized and lyophilized human amnion/chorion membrane grafts for closing post-laryngectomy pharyngocutaneous fistulas** - L. Karalashvili, A. Kakabadze, Z. Kakabadze, *Iv. Javakhishvili Tbilisi State Medical University, (Tbilisi, Georgia)*
- 16:45-17:00 **Surgical tactics in early cancer pathology genital organs** - O. Chakhoian, *Batumi city oncology center, (Batumi , Georgia)*
- 17:00-17:15 **Case Report** - T. Mukhashavria, *Maritime Hospital (Batumi, Georgia)*
- 17:15-17:30 **Case Report** - I. Abesadze, *Oncology and Endocrinology Centre, (Batumi, Georgia)*

Pediatrics

Rustaveli Hall 2

Chairmen:

Acad. Ketevan Nemsadze MD., PhD., ScD, *David Tvildiani Medical University, (Tbilisi, Georgia)*

Dr. Stylianos Antypas MD, PhD, SEEMF *Secretary General, Vice Mayor, Mellisia Municipality, (Athens, Hellas)*

- 09:00-09:15 **Fetal and labor stress and breastfeeding-** K. Nemsadze, *David Tvildiani Medical University „Aiety” (Tbilisi, Georgia)*
- 09:15-09:30 **Application of probiotics in pediatrics: analysis of their therapeutic and preventive effect from the point of view of evidence-based medicine** - N. Uberi, *Tbilisi State Medical University (Tbilisi, Georgia)*
- 09:30-09:45 **Recurrent wheezing in preschool children: treatment challenges** - I. Chkhaidze, *Tbilisi State Medical University (Tbilisi, Georgia)*
- 09:45-10:00 **Bronchial asthma: age-specific practice essentials** - L. Jorjoliani, *Iv. Javakhishvili Tbilisi State University, (Tbilisi, Georgia)*
- 10:00-10:15 **Fetal stress and wheezing in children** - T. Bakhtadze, *David Tvildiani Medical University „Aiety” (Tbilisi, Georgia)*
- 10:15-10:30 **Impact of Fetal Stress and C-section on ADHD** - K. Nemsadze, T., Kacharava, *David Tvildiani Medical University „Aiety” (Tbilisi, Georgia)*
- 10:30-11:00 Coffee Break**

Surgery 2

Rustaveli Hall 2

Chairmen:

Prof. Merab Kiladze MD., PhD., ScD, *Iv. Javakhishvili Tbilisi State University, (Tbilisi, Georgia)*

Dr. Memed Jintcharadze MD, PhD, *Shota Rustaveli Batumi State University (Batumi, Georgia)*

- 11:00-11:15 **Surgical Treatment of Type 2 Diabetes Mellitus** - V. Gonjilashvili, *Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 11:15-11:30 **Surgical Method Selection in Metabolic Surgery** - M. Gogol, N. Gvakharia, M. Kvirikashvili, N. Chumburidze, V. Gonjilashvili, *Iv. Javakhishvili Tbilisi State University, Tbilisi Central Hospital (Tbilisi, Georgia)*
- 11:30-11:45 **Mini Gastric Bypass as universal surgical procedure for treatment of metabolic syndrome on patients with BMI >32 Kg/M2** - N. Gvakharia. M. Kvirikashvili. G. Kosman. V. Edisherashvili. A. Agaian, *Health House, International Center Of Endosurgery (Tbilisi, Georgia)*
- 11:45-12:00 **Technical aspects at endoscopic surgical procedures of GI tract polyps and neoplasms** – M. Kiladze, I. Iashkhi - *Clinic “Mediclub Georgia”, Clinic “GIDMEDI”, (Tbilisi, Georgia)*
- 12:00-12:15 **Fibro-vascular architect of the portal complexes within liver** - I. Chanukvadze, T. Mgeliashvili, L. Patarashvili, *Tbilisi State Medical University, Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 12:15-12:30 **Burns and trauma wounds- treatment with acticoat dressing** - O. Hadzhiyski - *University Medical Hospital N I Pirogov (Sofia, Bulgaria)*
- 12:30-13:30 **Lunch Break**

Varia 2

Rustaveli Hall 2

Chairmen:

Acad. Vladimer Ovcharov MD, PhD, ScD, *President of the Bulgarian National Medical Academy, Medical University of Sofia (Bulgaria)*

Prof. Gia Lobzhanidze MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*

- 13:30-13:45 **Children's food security levels in Georgia** - K. Dadiani , N. Meliqidze, T. Naroushvili, L. Loria, *G. Natadze Scientific-Research Institute of Sanitary, Hygiene and Medical Ecology, (Tbilisi, Georgia)*
- 14:00-14:15 **Implementation of the guidelines in low and middle income countries** - G. Spasovski, *University Clinic of Nephrology, Medical Faculty (Skopje, R. Macedonia)*
- 14:15-14:30 **21-st century, exaggerated medicine healthy people and a cult of health** - P. Apinis, *Latvian Medical Association (Riga, Latvia)*
- 14:30-14:45 **Refugee crisis** - S. Antypas, *SEEMF, Vice Mayor, Mellisia Municipality, (Athens, Hellas)*
- 14:45-15:00 **Component approach to mortality analysis and gender supermortality** - A. Romanova, N. Gvozd, T. Terehovich, *Belarusian Medical Academy of Postgraduate Education (Minsk, Rep. of Belarus)*
- 15:00-15:15 **Cognitive aging management and workability** - B. Tzenova, J. Staykova, J. Yordanov *(Sofia, Bulgaria)*
- 15:15-15:30 **The need of education in palliative care and communication skills in critical and intensive care settings in Georgia** - N. Chikhladze, *Iv. Javakhishvili Tbilisi State University, New Vision University Hospital, Georgian National Association for Palliative care (Tbilisi, Georgia)*
- 15:30-16:00 Coffee Break**
- 16:00-16:15 **The risks associated with high quality of drinking water supply in Georgia** - M. Grdzelishvi, M. Lashkhauri, K. Dadiani, R. Kobakhidze, *G.Natadze Scientific-Research Institute of Sanitary, Hygiene and Medical Ecology, (Tbilisi, Georgia)*
- 16:15-16:30 **The second pillar of health insurance in the republic of Bulgaria. Opportunities. Objectives. Functions** - V. Grozev, *Bulgarian Medical Association (Sofia, Bulgaria)*
- 16:30-17:00 **Medical malpractice insurance in Georgia - Current situation and its perspectives** - Z. Khachiperadze, L. Loria, G.

- Lobzhanidze, *Georgian Medical Association, Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 17:00-17:15 **Georgian Insurance Medic's Agency – first steps in medical malpractice insurance and its development** - G. Lobzhanidze, L. Loria, Z. Khachiperadze, *Georgian Medical Association, Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 17:15-17:30 **The growing role of the Faculty of Public Health - MU Sofia in the formation of a new generation of health policy makers, managers and experts in health care** - T. Cherkezov, A. Kehayov, *Faculty of Public Health - MU Sofia, (Bulgaria)*
- 17:30-17:45 **Examination of the quality of medical activity in the framework of SEEMF** – A. Sadykova, *National Medical Association of Kazakhstan (Almaty, Kazakhstan)*

Discussion

Students Section

Armazi Hall

Chairmen:

- Prof. S. Gusev**, MD, PhD, ScD, *Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow (Russia)*
- Prof. Dimitri Kordzaia**, MD, PhD, ScD, *Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)*
- 09:00-09:45 **Bile Pathway Reconstruction and Ductular Reaction Following Common Bile Duct Occlusion (Experimental Study)** - I. Kirvalidze, V. Goderdzishvili, S. Kandelaki, D. Makaridze, M. Kordzaia, D. Kordzaia, *Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)*
- 09:45-10:00 **Problems faces by PhD students in publishing their research papers** - K. Tsomaia, *Iv. Javakhishvili Tbilisi State University (Georgia)*
- 10:00-10:15 **Revisiting liver regeneration – unresolved questions emerged during organ regeneration** - N. Inauri, M. Kordzaia,

	M. Kakabadze, N. Jalabadze, D. Kordzaia, <i>Al. Natishvili Institute of Morphology, Iv. Javakhishvili Tbilisi State University (Georgia)</i>
10:15-10:30	Peculiarities of spermatogenesis regulation and spatial organization in seminiferous tubules of rat testis - Al. Kordzadze, M. Mikava, N. Chaduneli, I. Modebadze, E. Cherkezia, D. Dzidziguri, <i>Iv.Javakhishvili Tbilisi State University (Georgia)</i>
10:30-11:00	Coffee Break
11:00-11:15	Preimplantation genetic diagnosis - A. Boichenko, <i>Iv. Javakhishvili Tbilisi State University (Georgia)</i>
10:15-10:30	Common bile duct reconstruction using three dimensional scaffold from decellularized human umbilical cord and placental arteries - K Chakhunashvili, D. Kordzaia, Z. Kakabadze, <i>Tbilisi State Medical University, Iv.Javakhishvili Tbilisi State University, Tbilisi (Georgia)</i>
Discussion	
12:30-13:30	Lunch Break
13:30-15:30	SEEMF Board Meeting
15:30-16:00	Coffee Break
16:00-18:00	Meetings
19:00	Gala Dinner

Saturday, 10 September 2016

Social Program

Departure of delegates

ABSTRACT BOOK

CELL THERAPY IN LIVER DISEASES

J. Padillo

University Hospital Virgen del Rocío. Seville. Spain

The growing incidence of liver diseases worldwide requires increased numbers of liver transplant and leads to an ongoing shortage of donor livers. To meet the huge demand, various alternative approaches are being investigated including, hepatic cell transplantation, artificial devices and bioprinting of the organ itself. On the other hand, immunomodulatory effects of mesenchymal stem cells derived from adipose tissues in liver transplantation has been proposed.

Moreover liver transplantation, stem cells have been used in the treatment of liver cirrhosis as regeneration treatment. Differentiation of human stem cells to hepatocytes has become a major interest in the field of stem cell research and has progressed greatly.

Other application of stem cells as regeneration approach has been after extended liver resection in order to avoid the “small for size” damage in the remaining liver tissue.

Finally, at the same time, use of decellularized organ matrices and 3D printing are emerging cutting-edge technologies for tissue engineering, opening up new paths for liver regenerative medicine. There have been big efforts trying to find the best type of cells used in these approach. Adult hepatocytes are the preferred cell sources, but they have limited availability, are difficult to isolate, propagate poor and undergo rapid functional deterioration in vitro. Thus, there are many studies investigating how to improve culture condition for hepatocytes, providing adequate extracellular matrix as well as identifying new and different cell sources.

NEUTROPHIL EXTRACELLULAR TRAPS

S.A.Gusev

Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency (Moscow, Russia)

The polymorphonuclear (PMN) leukocyte, or neutrophil, has long been recognized as the infantry of the innate immune system, rapidly deploying to sights of injury and infection. Considerable knowledge has accumulated demonstrating how these cells contribute to inflammation and host-defense. In particular, the mech-

anisms of neutrophil recruitment, phagocytosis, NADPH oxidative burst and toxic granule dependent microbial killing have been elucidated in great detail. However, this conventional paradigm dramatically shifted with the observation that stimulated PMN could release extracellular nucleic acids decorated with histones and granular proteins (neutrophil extracellular traps) capable of entrapping exogenous bacteria. Within the bloodstream, the capture of the pathogens, for the most part, remains a function of Kupffer cells within the liver vasculature. These cells express a specialized pathogen receptor, the Complement Receptor of the Immunoglobulin superfamily (CRIg), which has evolved to catch circulating pathogens under shear conditions. By contrast, neutrophils are not capable of directly catching circulating pathogens but by producing NETs, they can increase the catching capacity of the liver. The enzymes, peptidyl arginine deiminase type IV (PAD4) and neutrophil elastase (NE), have been implicated in the initial decondensation of DNA and the proteolytic degradation of the nuclear envelope. The DNA is then released through lysis, vesicular transport and degranulation or by some as yet unresolved catapulting mechanism. These additional NET components include nuclear proteins (histones), cytoskeletal proteins and granular proteins, including proteases and myeloperoxidase (MPO). Because of the cytotoxic mix of proteins and enzymes bound to NETs, these structures have been described as a double-edged sword, not only facilitating pathogen elimination, but also eliciting damage to bystander cells. Although histones have a potent antimicrobial action, they can also damage and kill endothelial and epithelial cells. Pathogenicity of NETs has also been implicated in the promotion of thrombosis as NETs serve as scaffolds for fibrin, von Willebrand factor (VWF) and thrombus formation. In addition, NETs may also have lasting effects by modulating tissue healing and even shaping the late (adaptive) immune response.

In the bloodstream DNase could simply breakdown the NETs. However, even this latter point, that is, are all NET components removed with DNase, is really not known.

NET release during acute infection may have unintended, long-term side effects that must be considered. Here we consider the evidence that NET release may incite both autoimmune and vasculitic diseases.

Systemic lupus erythematosus (SLE, lupus) is a complex autoimmune disease, comprising a constellation of clinical manifestations of unknown cause. A review of the historical diagnostic tests for lupus provides intriguing, although inconclusive evidence that NETosis may play a pathophysiologic role in SLE. Rheumatoid

arthritis (RA) is an autoimmune disease that targets joints, but it can also cause severe systemic and solid organ complications. PMN from RA patients were found to be more prone to produce NETs and RA serum was a strong inducer of NETosis. Moreover, NETosis resulted in the externalization of citrullinated autoantigens, thereby linking NET formation to rheumatoid arthritis.

There is reason to believe that better understanding of both mechanisms of NET release, and the NETs effects on the host immune system, could support the development of new potential therapeutic strategies for various diseases.

INTERACTION BETWEEN NERVOUS AND IMMUNE SYSTEM

W.Ovtscharoff

Medical University of Sofia (Sofia, Bulgaria)

Between nervous and immune system exists extensive bidirectional communications in both health and disease. In the nervous system there are over 200 neurotransmitters and neuromodulators. In the immune system T cells by means of cytokines activate the other immune cells as B cells, NK cells, macrophages and dendritic cells. On the other hand numerous transmitters regulate the immunity – T cells response at the innate immunity. The nervous system via mediators like dopamine, serotonin, glutamate, acetylcholine and neuropeptides regulates the immune system. The immune cells possess membrane receptors for these transmitters. The sympathetic nerve terminals secrete neuropeptides – NPY, substance P, VIP, CGRP, endorphins, somatostatins and others. The immune cells have receptors for these neuropeptides as well. The sensory fibers contain CGRP, which activate the macrophages, mast cells and other immune cells. The nervous system modulates the activity of the immune system also via the Hypothalamo-Pituitary-Adrenal axis ruling the stress homeostasis. The Corticotropin-Releasing Hormone effects directly upon immune system – stimulates antibody production, modulate the activity of NK cells and stimulates the proliferation of the lymphocytes. The chronic stress shapes the activity of the immune system. The cytokines secreted from the immune cells – cytokines, chemokines and growth factors are able to modulate the function of the nervous system – synaptic plasticity, changes in the aging brain, learning and memory. The neurons in some brain areas possess cytokine receptors. The cytokines could modulate the behavior. The therapy with cytokines leads to mood disorders, depression, fear, sleep problems, cognitive dysfunction, fatigue and others. The immune cells synthe-

size and secrete neurotransmitters – dopamine, serotonin, glutamate, norepinephrine, which can modulate the brain activity. The immune system plays important role in the autoimmune disorders affecting the nervous system.

SPECTRUM OF IMAGING GUIDED PERCUTANEOUS INTERVENTIONS ON THE MAIN PANCREATIC DUCT - THE NEW PARADIGM?

M.Mizandari

Tbilisi State Medical University (Tbilisi, Georgia)

Purpose: Percutaneous image-guided pancreatic duct (PD) drainage and subsequent second-line procedures for duct recanalization and/or endoluminal biopsy are presented.

Materials and Methods: 35 image-guided percutaneous pancreatic duct (PD) drainage has been performed to 33 patients (pancreatic cancer- 20, calculous pancreatitis – 6, pancreatitis – 5, papilla of Vater neoplasm -1, GB cancer – 1) with PD dilation related symptoms of pancreatitis, recently revealed hyperglycemia and pancreatic fluid leakage with fistula formation. Ultrasound-Fluoroscopy guidance for drainage procedure was used in 15 cases, CT-Fluoroscopy – 13 cases, CT – 5 cases, CT-Ultrasound-Fluoroscopy – 1 and Fluoroscopy – 1 case. PD puncture was performed either by 18 or 22G needles -17 patients in each group (in one case PD drainage was performed via PTBD fistula with no puncture). PD neck segment was accessed in 6 cases, body segment - in 25 and the tail segment - in 4 cases. Transgastric and tranhepatic puncture route was used in 6 and 3 cases respectively. In order to avoid the critical structures (spleen, kidney or vessels) retroperitoneal hydrodissection was used to create the safe needle route in 2 cases and puncture needle extraaxial approach - in 1 case of CT-Fluoroscopy guidance. 6 to 8.5 Fr diameter locking-loop ("Pig-Tail") drainage catheters were placed in PD.

21 second-line procedures were performed to 19 patients; among them – endoluminal RFA with metal stent placement - 7 patients, PD stone evacuation by Balloon Assisted Percutaneous Descending Litholapaxy (BAPDL) – 6, balloon dilatation – 2, external-internal drain placement – 2, metal placement – 1, endoluminal biopsy – 3. All second-line procedures were performed under fluoroscopy guidance using the PD drainage fistula. Endoluminal RFA was performed using a novel 5 Fr diameter RF device, 5 or 6 mm diameter self-expanding or balloon-mounted metal

stent placement was achieved using a conventional guidewire technique. Endoluminal biopsy was performed using endobiliary forceps biopsy set. After PD recanalization drainage catheters were repositioned and kept closed for a week prior to removal.

Results: PD was drained at the first procedure in 29 cases; second attempt was needed in 4 and the third – in 2 cases. In one case of post-biopsy pancreatic fistula non-dilated PD was accessed.

Clinical improvement was documented by the gradual reduction in clinical symptoms and improved blood test results, receiving 300 to 900 ml pancreatic fluid per day. Seven cases of diabetes recent onset showed a dramatic improvement in hyperglycemic control with complete cessation of medication in 3 cases and a significant dose reduction in 4 cases.

20 (90.0%) of 21 attempted procedures were successfully completed; 1 case of PD recanalisation in pancreatic cancer patient could not be fulfilled because of wire conduction failure. Endoluminal biopsy enabled to get tissue material. All patients tolerated the procedures well, there was no 30-day or hospital mortality. There were no observed technique specific complications, such as hemorrhage, duct of vessel perforation or infection, including transgastric route cases.

Conclusion: PD drainage, endoluminal RFA&stenting, stenting, BAPDL, balloon dilatation, endoluminal biopsy appear to be safe and effective; drainage might be considered for symptomatic PD occlusion as an alternative to retrograde stent placement and endoscopic US guided antegrade intervention, being the only possible option after previous GI tract surgery or retrograde access failure. PD drainage and all post-drainage second-line procedures might be implemented in the centers with well-established IR services and should be routinely suggested as the possible treatment options in the management of any pancreatic pathologies with pancreatic duct obstruction and integrity interruption related problems.

HEART TRANSPLANTATION IN BULGARIA 2003-2016: EARLY AND LATE RESULTS

G. Tsaryanski, D Petkov, N Tchilingirova, G Natchev
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Heart transplantation is the treatment of choice for end stage heart disease when drug therapy and interventional therapy are no longer effective. The charac-

teristics of the donor and the recipient such as the donor's heart itself, the anthropometrics, the presence of infection, the ischemic time, as well as the compatibility between donor and recipient are all important for the success of transplantation. Usually the result of the cross-match test is ready after the transplantation. Problems immediately postoperatively are usually related to early dysfunction of the transplanted heart. This is due to an immunologic conflict between the donor's heart and the recipient (other than rejection) and/or to increased right ventricular preload because of increased pulmonary vascular resistance. In both cases circulatory abnormalities are present that lead to tissue hypoperfusion and multiple organ failure. Immunosuppression comprising of calcineurin inhibitors, antimetabolites and glucocorticoids is the standard therapy. Rejection of the transplanted heart, either humoral or cellular, is with a highest rate during the first year after the transplantation. Anti-rejection therapy includes cortisone pulse therapy, polyclonal/monoclonal antibodies, and plasmapheresis. Staging of the rejection reaction is based on the currently used histological scale. Delayed complications include increased atherosclerosis of the coronary arteries, lymphoproliferative disease and infections. Despite the problems and difficulties presented, in more remote stages patients had good functional capacity and many have returned to normal social environment and even more, to their occupational activity.

PYLORUS-PRESERVING PANCREATODUODENECTOMY: PRINCIPLES AND STANDARTIZATION OF PROCEDURE

M.Kiladze A.Antadze G.Chiqobava G.Kherodinashvili

*Georgian-Israeli Clinic "Gidmedi" Iv. Javakhishvili Tbilisi State University
(Tbilisi, Georgia)*

Background: Pancreatoduodenectomy (PD) is the most invasive and complex operative procedure of GI tract surgery with morbidity rate 40-50% and mortality on average 5%. PD remains to be the treatment of choice and the best chance for management and survival in patients with resectable periampullary and pancreatic head tumors. Adequate perioperative management, including early enteral nutrition (EEN) is essential for patients undergoing PD to reduce morbidity and better response to rehabilitation process.

Methods: Our data from 2012 to 2015 include the last series of 11 cases of

PD for 5 pancreatic and 6 ampullary tumors. There were 5 females and 6 males (average age 55, range 50-71 years). The standard “classic” Whipple procedure was performed three times and “modified” pylorus-preserving variant (ppPD) – in 8 cases. 10 cases of pancreaticojejunostomy and 1 pancreaticogastrostomy were created. The main principles of perioperative management after PD were as follows: Decompression of GI tract and HPB system (NG/NE tubes, cholangiostomy, pancreatic stents); EEN/PN; Sandostatin; Peridural anesthesia/Epidural analgesia; Enzymes/Hepatoprotectives; Adjuvant therapy; Fat-restricted diet.

Results: There was no operative mortality in our small series of PD. One patient developed surgical site infection and dehiscence of abdominal wound closure, 2 patients experienced pancreatic leak and abscess, which required interventional radiologic and intensive care management and 1 case of necrohaemorrhagic pancreatitis required reinterventional surgical procedure, 2 patients died at follow up period (6 months – 3 years). The main operative time was 5 hours and the median length of stay was 12 days overall.

Conclusion: Improved surgical technique and advanced management by using standardized principles of perioperative care can significantly decrease the mortality and morbidity after PD. EEN seems to be optimal, safe and less expensive short-term enteral feeding method.

PANCREATODUODENECTOMY WITH PORTAL VEIN RESECTION AND RECONSTRUCTION

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University Hospital “Kaspela” (Plovdiv, Bulgaria)

Medical University (Plovdiv, Bulgaria)

The invasion of major peripancreatic vessels by the tumors of the head of the pancreas occurs in almost half of the cases, and so far these findings have transformed the tumor into inoperable. In hepatobiliary centers in studies of large series found that the incidence of perioperative mortality was the same in patients with pancreatoduodenectomy and those with pancreatoduodenectomy with portal vein resection and vascular reconstruction. Technical possibilities for portal vein resection and reconstruction includes.

The use of a patch during storage of 30% of the circumference of the vein,

as a patch can be used saphenous vein, or synthetic graft .

- Ligature of splenic vein and primary end to end anastomosis between PV and SMV.

- Ligature of splenic vein and interposition of the graft from Internal Jugular Vein.

- Interposition of vein graft from internal jugular vein and anastomosis with splenic vein.

- Interposition of graft from the left renal vein and ligature of the splenic vein.

- Interposition of synthetic graft with or without ligature of the splenic vein.

We report a case of resection of the portal vein, inserting a graft from internal jugular vein and anastomosis with portal vein, superior mesenteric vein and splenic vein.

SAFETY AND EFFICACY OF ULTRASONIC SCALPEL IN THYROID SURGERY

Chakirov D., Kehayov A., Dimov R., Argirov, D.

University Hospital "Kaspela"-Plovdiv, Department of General Surgery, Medical University , Plovdiv (Bulgaria)

Modern advances in thyroid surgery is inextricably linked to the use of hemostatic techniques, shifting the traditional ligature method. One of these techniques is ultrasonic scalpel, in a compatibilizing function of the disconnection of tissue and hemostasis. The main issues taken into account when introducing new technologies is their respect to efficacy and safety in use. In this sense, we performed a retrospective study of these two aspects in 63 patients with total thyroidectomy treated in General Surgery Clinic, University Hospital "Kaspela" for a period of three months - 01.12.12-28.02.2013. Surveyed criteria were - early postoperative bleeding, clinical manifestation of postoperative hypoparathyroidism and postoperative clinical manifestation of the paralysis of recurrent laryngeal nerves. Our study showing that in patients of the target group were not observed any complications occurring as criteria for impaired performance or safety. This allows us to conclude that the use of ultrasonic scalpel in thyroid surgery is a method of choice regarding the best short and long results.

RECONSTRUCTIVE UNCUT OPERATION AFTER DISTAL GASTRECTOMY FOR GASTRIC CANCER

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2 Kutaisi Referral Hospital (Kutaisi, Georgia)

Background: To prove surgical safety and functional efficiency of uncut Roux-en-Y operation as alternative method of reconstruction of digestive tract after subtotal distal gastrectomy.

Material and methods: There are demonstrated the analysis of treatment of 22 patients with distal gastric cancer. During the period from 2013 to 2015 all 22 patients have undergone a subtotal gastrectomy resection with reconstruction using uncut Roux-en-Y modification. We compared results of treatment of these patients with earlier operated patients with traditional Roux reconstruction method.

Results: Duration of formation of traditional gastroenteroanastomosis by Roux and enteroenteroanastomosis by Brown was 75 ± 2 min., duration of formation of uncut Roux-en-Y operation was 60 ± 1 min. In 5 patients after traditional reconstruction method was diagnosed Roux stasis syndrome. After uncut Roux-en-Y modification regurgitation of bile wasn't recorded, in these patients was a tendency to increase of body weight.

In 1 traditionally operated patient was diagnosed formation of stricture of gastroenteroanastomosis. In patients operated by the modified method, specific complications connected with surgical technique wasn't diagnosed.

Postoperative *lymphorrhea* in both groups of patients was marked with an identical frequency. Length of stay in hospital after traditional operation was 10.9 ± 2 days, after the modified operation – 7.1 ± 3 .

Conclusion: Safety, physiological efficiency of uncut Roux-en-Y operation of allows to consider it as priority method in reconstruction after a subtotal distal resection of stomach.

ONE-STAGE SURGICAL TREATMENT CASE OF INNATE GIGANTIC NEVOCELLULAR NEVUS

I.Nadiradze G.Kashibadze V. Mamatsashvili G.Chiqobava V.Dolidze

Vienna University, Georgian-Israel Clinic "Gidmedi" (Austria, Georgia)

For the first time in Georgia, because of “innate gigantic nevocellular nevus” (23X27cm), which took the whole right arm pectoral girdle going to the arm, on the 8th of December, 2014, a 13 year old girl (history of a patient #1024) was operated on: One-stage excision of a pigment lump within the scales of sober tissues (1 cm distance before fascia and nevus edges) with free transplantation of skin from right thigh (using dermatome).

The postoperative period was uneventful, the process of adhere of grafts transplantation was satisfactory, without any complications. The patient was discharged from the hospital on 19th of December.

OUR 2 YEARS OF EXPERIENCE IN LIVING DONOR LIVER TRANSPLANTATION

K.Kashibadze¹ G. Tomadze² L.Gogichaishvili³ L.Kokhreidze⁴

1BRH and Shota Rustaveli Batumi State University (Batumi, Georgia)

2Iv. Javakhishvili Tbilisi State University (Tbilisi, Georgia)

3Traumatology Hospital (Tbilisi, Georgia)

4BRH Surgical Department (Batumi, Georgia)

Using the right liver lobe from a living donor is very difficult and responsible moment of liver transplantation. In many developed countries, this type of liver transplantation is not more than 5-10 % of the total number of liver transplants. But, unfortunately, in countries where are still difficulties with cadaveric transplantation, no other way, except the most challenging and dangerous which is living donor liver transplantation, is left.

Materials and methods:At this point, In Georgia, under the legislation, onset of death is recognized after cardiac arrest and also after brain death. But unfortunately there is no further definition indicated in law, of the possibility to carry out a cadaveric transplantation. Only living donor transplantation is allowed, including unrelated donors. That's why on December 14th, 2014 first living donor (brother) liver transplantation, with transplantation of right liver lobe, was performed. To date, only 7 such transplants were performed.

Results and discussion:Among the operated patients, 2 cases were with diagnosis of cirrhosis, end-stage hepatitis C, 2 cases were with hepatitis B with Delta agent, 2 cases with Budd-Chiari syndrome and 1 case with autoimmune hepatitis.

The duration of the first operation was 23 hours, the last 11.5 hours. Blood loss during the first operation was more likely due to partial thrombosis of the portal vein. During the operation thromboendarterectomy from common portal vein was performed and was 3.75 liters. During the 5th operation it was lesser-1.3 liters. After the second operation, recipient developed biliary peritonitis due to insolvency of bilio-entero anastomosis. The patient was treated conservatively with the use of external drainage of the abdominal cavity and bile ducts. After 25 days, recovery occurred and the patient was discharged from the hospital. After 2 months he was operated, bilio-entero anastomosis was recovered; he was discharged on 9th day in a good condition. On 13th day, after 5th operation, complications in the bile ducts also occurred. This time it was revealed with stenosis and cholangitis. After conservative treatment and probing of the bile ducts using retrograde cholangiography recipient state has dramatically improved and was discharged from the hospital on day 23 after transplantation.

TIPS OR PORTO-SYSTEMIC SHUNT, UNCONTROLLED VARICOSE BLEEDING FROM UPPER GI TRACT, DURING END STAGE LIVER DISEASE (ESLD).

K. Kashibadze, Z.Chikhladze, M. Nakashidze, R. Bolqvadze

BRH and Shota Rustaveli State University, (Georgia, Batumi)

Porto-systemic bypass surgery is not a new method of treating or ameliorating problems related with cirrhosis of the liver, and especially with portal hypertension. Today it is very rare to find publications related to these operations because transjugular porto-caval bypass largely replaced this traumatic surgery with a relatively easy TIP. But if you put bypass to patient with background complication of cirrhosis, than in 75% of the cases it is not available to make living donor liver transplantation or it will be high traumatic and be complicated with high blood loss. And after partial porto-systemic bypass we reserve life to patient and prolong the preoperative period for transplantation.

Materials and methods. First operation of this type we performed after our first living donor liver transplantation, because there was meaning of this, for preparing and bringing the patient to the LDLT transplantation. For eighteen months we have performed 9 operations with similar techniques. The total duration of the operation was 2.6+0.25 hr. average blood loss was 145+25ml. 3 patients were taken from intensive care unit they were on artificial ventilation of lungs, 2

patients because of re bleeding from varicose veins with a probe of blackmore and the rest were taken from wards, more or less in compensative state.

Results and Discussion. The postoperative period prolonged coma and mechanical ventilation was required in 4 patients. The average duration of the state was $7+1.4$ day. The remaining 5 patients were extubated after 2 hours from operation, and expression of encephalopathy was not observed. Speaking about those 4 patients in intensive care unit is impossible, because all of them were under protecting narcosis, but after extubation expression of encephalopathy was not observed. Clinical and Biochemical indicators and Instrumental observations show almost normal values, after $12+3.4$ day from operation. All patients were discharged in better condition.

PERSPECTIVES OF USING NEW „ASEPTIC” BIOCOMPOSITE MESHES IN HERNIOLOGY

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Background: Hernia is one of the widespread surgical pathologies as it is found in 4 % of the population and its share among the inpatient surgical diseases is about 18-30 %. Consequently annually up to 20-21mln hernioplasties are carried out worldwide.

Despite many years of experience in the field of hernia surgical treatment there still exist many unsolved problems such as a safe and non infected closure of defects of abdominal cavity wall. Up to 200 methods of hernioplastics, various implantations and application of synthetic materials refer to lack of the optimal surgical strategy.

This was the main goal of our experimental study. The aim of the study was to improve the result of treatment of abdominal wall hernias with the use of new antiseptic , polymer, bio-composite protective mesh membrane covered with “Coladerm” + “Chlorhexidine”.

Methods: Experimental study involved 21 rabbits. Meshes were fixed on anterior abdominal wall according to the following scheme:

Option I: mesh size 10-20mm was put into both the groin area of the rabbits;

Option II: A light standard mesh grid size 10-20mm covered

with, "Coladerm" was placed on both sides of abdominal wall of the rabbits;

Option III: A light mesh, covered with "Coladerm" + "Chlorhexidine", was placed in to the abdominal wall of the rabbits.

Removal dates of taking the animals from experiments were 14th, 30th, 45th, 90th and 180th days for further histomorphological and bacteriological research.

Results: The best result from these options was when implants we covered with "Coladerm" + "Chlorhexidine", which was shown on follow up period.

Conclusion: In third control group expressed strong connective tissue formatting stromis picture, which is the main task of modern hernia plastic. It is expected that new bio-composite meshes, covered by "Coladerm" + "Chlorhexidine", may be successfully used in clinical practice, which will reduce infectious complications of meshes and problems associated with them.

PAIN MANAGEMENT PRINCIPLES AT VERTEBRAL COLUMN AND JOINTS PATHOLOGY

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Severe pain in patients may cause physical and emotional feelings and serious disorders of homeostasis.

Blockage of peripheral nerves and plexus has unusual analgesic effect after reconstructive surgery of knee joint, but in case of large joint arthrosis such anesthesia is not sufficient. The main cause of it is: 1) short-term effect of anesthesia (5-6 hours). 2) Disorder of integrity of cartilage tissue of joint bones surfaces. 3) synovitis. Multimodal analgesia during arthrosis also is insufficient. There are also data proving the lack of effectiveness of local anesthetics.

Materials and methodic: 28 patients with pain syndrome have been under our observation. I and II degree of Gonarthrosis and Kox-arthritis were diagnosed for 16 patients, 8 patients underwent a surgery for herniated lumbar intervertebral discs, 4 patients underwent reconstructive surgery of knee joint.

During arthrosis and after reconstructive surgery of knee joint in order to pain relief intraarticular and periarticular injection was conducted (15-20 ml ozon with concentration 10-15 mcg/ml, totally 3-4 injection for each course of treat-

ment). Growth factor treatment, chondroprotectors and sodium hyaluronates were included in complex therapy of arthrosis. The patients who underwent surgery for herniated intervertebral discs were injected cocktails with the following consistency: Sol. Lydokaine 1%-5ml+sol.NaCh 0.9%-5ml+Drastop 200 mg+Heparin 2500 unit, totally: 5-6 injection.

Results: After intraarticular or paravertebral injection, ozon immediately disintegrates, free active oxygen enriches bone, cartilage tissues and tendons. Joints become flexible.

Immediately after the first injection patients can feel analgesic effect of ozon which is a great relief for them. Effect may continue for 3-4 days. Duration of treatment is reduced by 6-7 days.

Summary: Proposed method: intraarticular, pertiarticular and paravertebral injection provides effective management of severe pain.

Intraarticular, pertiarticular and paravertebral injection has prolonged analgesic effect that provides accelerated recovery of patients.

Ozon inclusion in complex therapies of arthrosis delays disease progress. In certain group of patients (I-degree arthrosis) it may result sharp improvement, in another group of patients (II and III-degree arthrosis) improves the quality of life and removes the necessity of endoprosthesis surgery for a long time.

OUR EXPERIENCE IN SPLEEN KEEPING OPERATIONS

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Spleen has a vital function in organism and the view that the classical treatment of damaged spleen has been splenectomy needs to be reviewed.

Due to the structure of the spleen, its gentle parenchyma, even the slightest damage of the capsule may cause a fairly big bleeding, which influences the surgeon, who thinks it might be impossible to achieve hemostasis, and the surgeon chooses splenectomy. In our experience, it's vital to start an operation urgently. At the moment of laparotomy, we may face a vast amount of free blood in abdominal cavity, reinfusion of which is possible with the modern equipment. At that time, cleavages and wounds of the spleen are covered with stiff blood clots, which significantly slows down the intensity of bleeding.

Our attention was drawn by the irrefutable fact, that unlike the abdominal cavity, it's not life threatening to allow accumulation of vast amount of blood in closed spaces (retroperitoneum, between fascia, between muscles. It's the same after the fracture of pelvis bones, backbone, extremity tubular bones.

Due to this fact, theoretical analyses and experiments, we have come up with original operation – moving the damaged spleen to retroperitoneum area (copyright #5/314)

Methodology: We are attaching atraumatic grasper for blood vessels, which significantly slows down the bleeding. We are knotting and cutting the blood vessels going through the ligaments. Afterwards, we are closely looking and understanding the surface of the spleen, ligating and stitching the damaged blood vessels, coagulation with electrosurgical knife, ultrasound, laser ray, in case of need the application TachoComb, Surgicel, etc. Afterwards, we are removing the graspers from the magistral blood vessels and evaluating the effectiveness of manipulations undertaken. The mobilized spleen, treated with the aforementioned methodology, is moved to the created 'pocket' in retroperitoneum area. Schematically, it is done as follows: In the left lateral canal, we are cutting across the peritoneum of the rear and side walls of abdomen on the projection of spleen leg. Or the 'pocket' according to the size of spleen is created, where we move the spleen to. We are stitching the leaves of the resected peritoneum in a way which avoids the compression of the blood vessels of the door. We are placing the drainage pipes in the right corner of the pocket for managing and controlling the bleeding. We are taking out the pipe to the additional section of the side wall of the abdomen.

We have undertaken this operation with the aforementioned methodology to 19 patients. The biggest blood loss from the control drainage was 35 ml/1. There was no necessity of relaparotomy and/or splenectomy.

In 3 cases we held hemisplenectomy because of echinococcus of the spleen (1) and abscess of the spleen (2).

THE ROLE OF ESOPHAGEAL AND GASTRIC STENTING IN TREATMENT OF FISTULAS

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Esophageal, gastric and duodenal stenting was performed in 39 patients from 2009 in Aversi Clinic. In 26 cases stenting procedure was utilized due to esophageal malignant obstruction; in 2 cases – for longitudinal burn stricture of the esophagus; in 11 – esophageal fistulas and esophagogastric anastomotic leak. In 36 cases covered stents were placed in the esophagus and stomach. In 1 case semicovered stent was placed in the duodenum. In 17 cases carcinoma was located in the middle and distal portions of the esophagus and in 9 cases esophageal malignancies involved proximal stomach as well. For the later stents special antireflux valves were used. There were no complications detected during the stent placement. In 1 case the stent migrated into the stomach. The problem was fixed on the other day by the special stent extractor device. All fistulas were closed in 2 – 12 week period. Esophageal, gastric and duodenal stenting by covered stents should be considered as an effective mini invasive method of choice in the treatment of malignant and benign obstructions of upper GI tract and for effective closure of fistulas and anastomotic leaks.

PERCUTANEOUS LASER DISC DECOMPRESSION (PLDD) - INDICATIONS AND COMPLICATIONS – OUR EXPERIENCE

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PLDD is minimal invasive procedure. Under local anesthesia, needle inserted percutaneously into the nucleus pulposus, under fluoroscopic monitoring. We are making discography in all cases, to find out wholeness annulus fibrosus. After this nucleus pulposus is denaturized by laser and aspirated. Volume of the disc is decreased.

At first we made 9 procedures. All of these patients had pain in extremities. 4 of them where cervical spine level, diagnosed by MRI. In one case we stopped operation after discography. 3 of them were treated by PLDD. 5 patients lumbar spine disc protrusion, 3 diagnosed by CT, 2-MRI. In 7cases pain were stopped, in one case decreased and after 2 weeks relieved. After 2 weeks, in one case we made microdiscectomy.

PLDD is minimal invasive procedure, with minimal complications. In all cases for PLDD should be done MRI and discography.

ИСПОЛЬЗОВАНИЯ КОМПЬЮТЕРНОЙ ХИРУРГИЧЕСКОЙ НАВИГАЦИИ В ХИРУРГИИ ПОЗВОНОЧНИКА.

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Целью проведенного исследования являлось изучение результатов использования системы компьютерной хирургической навигации при операциях, сопровождающихся транспедикулярной фиксацией позвоночника на грудном и поясничном отделах за период с начала по конец 2015 года. Рассмотрены были варианты использования навигации как при классических доступах, так и при вмешательствах со сниженной травматичностью. Не смотря на значительное сокращение количества некорректно установленных винтов по сравнению с традиционными методиками контроля, присутствовали случаи неправильной установки винтов и в одном случае даже потребовалось повторное хирургическое вмешательство по переустановке винта. На основании изучения результатов были выяснены причины, которые влияют на эффективность и точность при работе с системой компьютерной хирургической навигации, определен ряд условий, соблюдение которых позволяет максимально повысить эффективность работы системы навигации. За отчетный период выполнено 38 хирургических вмешательств с использованием навигации, 7 из них по малотравматичной методике. Операции выполнены при следующих патологиях: спондилолистезы – 18, переломы грудных и поясничных позвонков – 11, стенозы поясничного отдела позвоночного канала – 7. В послеоперационном периоде всем пациентам выполнено компьютерно-томографическое (КТ) обследование. У троих пациентов выявлено некорректное стояние винтов при отсутствии неврологических осложнений. Одному потребовалось повторное хирургическое вмешательство по переустановке винтов, поскольку последние не обеспечивали стабильность конструкции.

Учитывая наличие отрицательных результатов (2,63% реопераций), проведен анализ работы с системой компьютерной хирургической навигации и определен ряд условий, выполнение которых позволяет обеспечить максимальную точность установки винтов при работе с навигацией.

БЛИЖАЙШИЕ РЕЗУЛЬТАТЫ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ ПАЦИЕНТОВ С МЕТАСТАЗАМИ В ПОЗВОНОЧНИКЕ

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Введение. У 10-40% пациентов, страдающих солидными злокачественными новообразованиями, развиваются метастазы в позвоночнике, при этом у 10-20% из них появляются клинические признаки нестабильности позвоночника и/или симптомы сдавления спинного мозга, что приводит к резкому ухудшению качества жизни пациентов.

Материал и методы исследования. Материалом для исследования послужили данные о 150 пациентах, прооперированных в РНПЦ ОМР им. Н.Н. Александрова по поводу метастатического поражения позвоночника, с 2007 по 2016 гг. В группе было 98 (65,3%) мужчин, 52 (34,7%) женщин. Возраст пациентов варьировал от 23 до 78 лет (медиана – 56 лет). В анализируемой группе преобладали пациенты, страдавшие раком почки – 39 (26,0%), раком предстательной железы – 25 (16,7%), раком молочной железы – 22 (14,7%), раком легкого – 16 (10,7%). У 35 пациентов (23,2%) были метастазы других злокачественных новообразований, у 13 (8,7%) – метастазы из неуставленного первичного очага. Локализацией метастазов у 8 (4,6%) пациентов был шейный отдел позвоночника, у 104 (69,3%) – грудной отдел, у 38 (25,3%) – пояснично-крестцовый отдел. Структура выполненных оперативных вмешательств: декомпрессия спинного мозга без стабилизации позвоночника – 102 (68,0%), декомпрессия спинного мозга со стабилизацией позвоночника – 45 (30,0%), спондилэктомия – 3 (2,0%).

В послеоперационном периоде умерло 5 пациентов (3,3%). Причинами смерти были тромбоэмболия легочной артерии – у 2 пациентов, легочно-сердечная недостаточность – у 2, прогрессирование опухолевого процесса – у 1.

Ближайшие результаты лечения были оценены по динамике интенсивности болевого синдрома (использовалась визуально-аналоговая шкала) и неврологического дефицита (шкала Frankel, 1969).

Результаты. Хирургическое лечение пациентов с метастатическим поражением позвоночника привело к уменьшению степени выраженности

болевого синдрома у 89,2% пациентов, улучшению в неврологическом статусе – у 67,5% пациентов. Факторами, снижающими эффективность хирургического лечения, являются 1) наличие множественных метастазов в позвоночнике; 2) преобладание нейропатического и/или психогенного компонентов болевого синдрома; 3) поражение смежных позвонков у пациентов с механическим компонентом болевого синдрома; 4) наличие нижней параплегии в предоперационном периоде; 5) частичное устранение стеноза позвоночного канала; 6) интраоперационное кровотечение из опухоли.

Закключение. Своевременно выполненные хирургические вмешательства у пациентов с метастатическим поражением позвоночника позволяют улучшить качество их жизни и создать условия для проведения дальнейшего противоопухолевого лечения.

ЭНДОПРОТЕЗИРОВАНИЕ ПОЗВОНКОВ ПРИ ХИРУРГИЧЕСКОМ ЛЕЧЕНИИ ОПУХОЛЕЙ ПОЗВОНОЧНИКА

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Введение. Злокачественные новообразования позвоночника (первичные и метастические) локализуются преимущественно в телах позвонков, вызывая переднее сдавление спинного мозга. Удаление опухолей позвоночника en bloc возможно не всегда по причине развития опухолевого стеноза позвоночного канала и инвазии опухоли в спинной мозг и его корешки. Однако, адекватная декомпрессия и надежная стабилизация позвоночника должны выполняться у всех пациентов. «Золотым стандартом» лечения как первичных опухолей позвоночника, так и метастазов в течение длительного времени считалось выполнение двухэтапного хирургического лечения (одномоментного или двухмоментного): задней декомпрессии спинного мозга и задней транспедикулярной стабилизации позвоночника и удаления опухоли тела позвонка из переднего доступа с использованием для восстановления опороспособности позвоночного столба сетчатых имплантатов с трансплантацией фрагментов аутокости.

Материал и методы исследования. Материалом послужили данные 10

пациентов, которые были прооперированы по поводу опухолей позвоночника в клинике в 2015-2016 гг. Для передней реконструкции позвоночника были использованы эндопротезы тел позвонков (производитель НПО «Медбиотех»). В анализируемой группе было 6 женщин и 4 мужчин. Возраст пациентов варьировал от 36 до 68 лет (медиана 56). У 1 пациентки была первичная опухоль (хордома L3), у 9 – метастазы: у 3 – рак легкого, 2 – рак молочной железы, 2 – рак почки, 1 – рак шейки матки, 1 – рак печени. Операция была выполнена на шейном уровне у 1 пациента, грудном – 3, поясничном – 5. Продолжительность операции варьировала от 120 до 270 минут (медиана – 160), объем интраоперационной кровопотери – от 100 до 2000 мл (медиана – 600). Всем пациентам в последующем было проведено комплексное лечение основного заболевания.

Результаты. У 100% пациентов было отмечено улучшение в неврологическом статусе, уменьшение степени выраженности болевого синдрома – у 90%. Все пациенты были вертикализированы на 3-5 сутки после операции и смогли самостоятельно передвигаться без посторонней помощи. У 90% пациентов не потребовалась дополнительная задняя стабилизация позвоночника. У 1 пациентки в раннем послеоперационном периоде развился тромбоз правой подмышечной артерии с субкомпенсированной ишемией правой верхней конечности на фоне длительного приема тамоксифена, что потребовало выполнения экстренной тромбэктомии. Других осложнений и летальных исходов не было.

Заключение. Эндопротезирование позвонков позволяет восстановить опороспособность позвоночного столба и обеспечить надежный передний спондилодез без задней стабилизации позвоночника у пациентов с опухолевым поражением позвоночника и продолжения лечения основного заболевания.

SLEEVE GASTRECTOMY IN PATIENTS WITH GERD - OUR EXPERIENCE

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Aim: Comparison of GERD symptoms resolution/improvement in GERD patients having VSG and VSG+hiatoplasty.

Materials: 85 patients (33.5%) from 253 total VSG series were included in study group having preexisting GERD with 12 (4,7%) perioperatively confirmed hiatal hernia. 34 patients from study group (12 with hiatal hernia and 22 without hiatal hernia but having anamnesis of severe heartburns before surgery) underwent VSG with hiatoplasty associated with adequate mediastinal dissection of lower esophagus to lower GE junction. 51 patients underwent VSG only. Follow up period was from 6 to 48 months. Follow up criteria included verbal interviews revealing existence of GERD symptoms and need for PPI medications. Surgery related morbidity and weight loss results have been evaluated .

Results: No major surgical morbidity had been seen in study group.

28 Patients undergone VSG + hiatoplasty had total resolution of GERD symptoms with no need of PPI medication after 3 month period , other 4 are in need to have PPI to resolve problem.

12 of 51 patients with VSG only are in good condition without PPI, 35 can control reflux with PPI and dietary recommendations, but 4 patients are subject for RYGB due to PPI and dietary recommendation failure.

There was no significant difference in weight loss rate in both groups.

Conclusions:

1. VSG + hiatal repair with adequate dissection of lower esophagus can be option for Patients with preexisting severe GERD
2. We recommend to perform hiatal repair in cases with laparoscopically evident crural defect
3. More evidence are needed to establish stronger recommendations toward performing VSG+hiatal repair or RYGB in patients with GERD

SURGICAL TREATMENT OF TYPE 2 DIABETES MELLITUS”

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Background :Type 2 diabetes mellitus is associated with excess cardiovascular morbidity and mortality

Methods: Metabolic surgery includes procedures such as: Laparoscopic ileal interposition with sleeve gastrectomy; Mini gastric bypass.

Result: Metabolic surgery is an evolving procedure that offers good control of type 2

diabetes mellitus and other metabolic derangements and also helps in weight reduction.

Conclusion: Metabolic surgery is effective in treating diabetes ,not only in morbidly obese but also in non-morbidly obese patients.

SURGICAL METHOD SELECTION IN METABOLIC SURGERY

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Background: There is no ideal metabolic surgery. All patients deserve procedure, which is not only superior but also which is better for an individual patient. **Methods:** It provides an overview of the benefits and pitfalls of the most commonly performed metabolic surgeries

Result: The biliopancreatic diversion with duodenal switch gives the highest remission of diabetes, with a recurrence rate of 5-10%; Ileal interposition with sleeve gastrectomy induces remission of type 2 diabetes mellitus in most patients, even with a BMI between 23 and 34kg/m², and is effective in ameliorating other components of metabolic syndrome; With gastric bypass recurrence of diabetes is between 30 and 45%, for the sleeve gastrectomy it is between 50 and 55%.

Conclusion Matching the correct patient to the correct method is a challenge in metabolic surgery.

MINI GASTRIC BYPASS AS UNIVERSAL SURGICAL PROCEDURE FOR TREATMENT OF METABOLIC SYNDROME ON PATIENTS WITH BMI >32

KG/M2

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Background: MGB was originally performed by American surgeon Tuttleger in 1997. From today's perspective based on worldwide medical experience MGB is a safe , comparatively simple , physiological surgical procedure which is widely used around the world. In Georgia MGB (in Omega Loop) was first done by Professor Vladimir Gondzhilashvili and his crew in 2014.

Materials And Methods: In our clinic 6 procedures were performed by our surgical crew since 2014 . All 6 patients (age 29-55 y., 4 male and 2 female) had

an expressed metabolic syndrome. Their BMI was between 31.7 to 55.5 KG/M2. All had T2DM, high arterial blood pressure. One of the patients had to go through pancreas body and tail resection due to insulinoma in 2009. Earlier, two patients with BMI of 48 and 55.5 KG/M2 had to go through intragastric balloon due to being overweight without noticeable effect. After sleeve gastrectomy (2010) one had expressed weight and T2DM reverse. Other two overweight patients with BMI of 49.4 and 52.3 KG/M2 had T2 DM. 5 of the 6 patients had laparoscopic MGB and the other one laparotomic MGB. The length of surgical procedure usually took around 2:30 -4:00 hours.

Results: During 6-18 months observation normalized all patients not only weight, but glycemia, lipid profile and arterial blood pressure. It must be noted that patients with heavy morbid obesity lost > 60% of excess weight. Patients with BMI around 33 KG/M2 along with glycemia normalization had only lost around 14% of their bodyweight which was caused by difference in postoperative therapy (which usually takes around 6 months to complete). As of today none of the patients require the said procedure nor consume anti diabetic and other medication. Their therapy is only symptomatic.

Conclusion: Based on our and worldwide medical experience MGB can be used as: Bariatric procedure; Anti Diabetic (T2DM) BMI 32 > KG/M2; Re bariatric procedure (revisional bariatric procedures); From technical point of view it's easier to perform compared to plastic RYBP; It does not require long term replacement therapy based on global statistics it's long term results are just as effective as RYBP

TECHNICAL ASPECTS AT ENDOSCOPIC SURGICAL PROCEDURES OF GI TRACT POLYPS AND NEOPLASMS

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Background: Endoscopic mucosal resection is a method of choice for removal of GI polyps and neoplasms, especially when its size does not exceed 30 mm. The aim of this study was to see the efficiency and safety of endoscopic-surgical procedures.

Patients and methods: The study includes the data of the procedures from January 2013 to July 2016, during which 54 patients were observed - 28 men and 26 women aged 28-86 (the mean age - 57.20).

Results: In 24 cases the lesion was removed with biopsy forceps (cold method) and in 33 cases with endoscopic mucosal resection, defect closure with Hemoclips 1-4 (mean 2), no complications such as bleeding or perforation which needed surgical treatment were observed, only minor bleeding, in 4 patients 1.32%, which was treated with electrocoagulation). Follow up period was 6-12 months, no recurrence was observed.

Localization: Caecum - 2, Ascending colon - 19, Transverse - 6, Descending - 4, Sigma - 18, Rectum - 11, Stomach - 2, Duodenum - 2 case. 2 or more localisation of the lesions were observed in 12 cases.

Lesions: In 77.8% (42 cases) were low grade dysplasia and 24.07% (13 cases) high grade dysplasia. 1.85% (1 case) neuroendocrine tumor 0-I. 3.7% (2 cases) early cancer 0-IIa. The size of neoplasms and polyps varied from 3 to 38mm (20.5 on average).

Conclusion: EMR is an effective and safe method, with low percentage of lymph node metastases at cancer in „situ” less than 5 %, low rate of complications, no need of surgical resections, cost effective procedure with good quality of life.

CLASSIFICATION OF ERRORS AND COMPLICATIONS IN SURGERY GUNSHOT CHEST WOUND

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Relevance. Chest injuries, according E.A. Vagnera, even in peacetime, make up 8-10% of mechanical damage. This error in diagnosis and treatment are found in more than 30% of cases, the complication rate ranges from 13 to 21%, and the mortality rate reaches 10%.

Purpose of the study. Error analysis in breast surgery gunshot wounds and their impact on the occurrence of complications, as well as the development of the classification of errors and complications.

Material and methods. In the period from 1985 to 2014 treated at the De-

partment of Thoracic Surgery 432 th Head Military Medical Center Armed Forces of the Republic of Belarus there were 156 patients with open chest injuries, which accounted for 31.3% of all injuries of the chest. Of these, 106 (67.9%) injuries were inflicted firearm, 50 (32.1%) - piercing and cutting items. In 77 (72.6%) had suffered bullet wounds, in 29 (27.4%) - fragmentation. Exit wounds were diagnosed in 56 (52.8%), penetrating trauma with injuries of the chest - in 87 (82.1%).

Thoracotomy (TT) at different times after being wounded implemented in 12 (11.3%) patients with gunshot chest wound, in 10 (9.4%) injureds - VATS surgery with the use of modern endoscopic techniques and tools.

Results. In the postoperative period in 5 (4.7%) injured with gunshot chest wound developed empyema, in 9 (8.5%) - pneumonia, in 10 (9.4%) - festering wounds. Victims died 3 (2.8%) 2 - a heart wound, 1 - with lung injury, esophagus and other organs.

Error analysis in the diagnosis and treatment of gunshot chest wound allowed us to develop a classification.

I. Organizational errors

1. Late delivery of the wounded to hospitals.
2. Errors in helping gunshot chest wound prehospital.

II. Tactical errors

1. Underestimating mehanogeneza injury (especially in providing assistance to victims with gunshot chest wound in the presence of body armor).
2. Inaccurate choice of treatment..
3. Do not hold VATS in the diagnosis and surgical correction gunshot chest wound.

III. Technical errors

1. Errors during drainage of the pleural cavity.
2. Errors during surgical treatment of wounds chest.
3. Errors in operations on internal organs.

IV. Errors postoperative management and treatment of patients

1. Lack of targeted intensive care.
2. The absence of measures to achieve adequate breathing, effective coughing and full respiratory activity.
3. The absence of a full post-operative analgesia.
4. Late and inadequate smoothing lung.

5. The late decision to rethoracotomy when the formed and coagulated hemothorax impossibility another way to spread light.

6. Failure to complete infusion therapy.

Conclusion: We hope that this classification errors will allow doctors in most cases to avoid complications in surgery of the chest gunshot wounds.

ПОСЛЕОПЕРАЦИОННЫЕ ДЕФЕКТЫ БРЮШНОЙ СТЕНКИ ОБШИРНЫХ РАЗМЕРОВ: СОВРЕМЕННЫЕ АСПЕКТЫ ЛЕЧЕНИЯ

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Актуальность. Учитывая биохимическую концепцию патогенеза послеоперационных вентральных грыж (ПОВГ), важным аспектом в лечении пациентов, с выявленными изменениями метаболизма коллагена, является синтез соединительной ткани с достаточной прочностью в области герниопластики.

Цель исследования. Обосновать возможность использования аутотрансплантации мезенхимальных стволовых клеток из жировой ткани (МСК ЖТ) в лечении пациентов с ПОВГ.

Материал и методы. В основную группу вошли 5 пациентов с ПОВГ, которым выполнена пластика брюшной стенки полипропиленовой сеткой совместно с клеточной трансплантацией аутологичных МСК ЖТ (патент РБ №19274). Пластику дефекта у 11 пациентов с ПОВГ (группа сравнения) выполняли с использованием полипропиленовой сетки с интраперитонеальным расположением. Оперативные вмешательства во всех случаях завершали сшиванием краев дефекта апоневроза. Этапы предтрансплантационной подготовки культур МСК ЖТ пациентов с ПОВГ проводили по разработанным методикам (патенты РБ №17458 и № 17567). Количественное определение концентрации коллагена I и III типов методом иммуноферментного анализа проводили в супернатантах первичных культур МСК ЖТ здоровых доноров (n=5), МСК ЖТ пациентов с ПОВГ (n=7) и МСК ЖТ пациентов с ПОВГ, прошедших предтрансплантационную подготовку (n=7), а также в раневом экссудате (n=24), забранном из области пластики дефекта на 3 и 7 сутки после операции у пациентов исследуемых групп с оценкой отношения коллагена III/I

типа.

Результаты. Продукция коллагена первичными культурами МСК ЖТ пациентов с ПОВГ отличалась от культур МСК ЖТ доноров значительным повышением уровня коллагена III типа, преобладание которого приводило к увеличению отношения коллагена III/I типа. Предтрансплантационная подготовка МСК ЖТ пациентов с ПОВГ приводила накоплению коллагена I типа с 0,78 (0,49÷1,66) пг/мл до 54,5 (1,84÷59,70) пг/мл, превосходящая по своей интенсивности увеличение концентрации коллагена I типа (35,1 (27,20÷45,90) пг/мл и 174 (35,90÷551,0) пг/мл, $p<0,05$), что, в свою очередь, явилось результатом падения величины отношения коллагена III/I типа в 4,8 раза относительно уровня первичной культуры, оставаясь при этом выше значения культур доноров.

При исследовании экссудата на 3-и сутки после пластики не было установлено различий в концентрации коллагена I и III типов. На 7 сутки наблюдения применение сетки сопровождалось увеличением содержания коллагена III типа в 1,4 раза по сравнению с 3-х суточным раневым экссудатом с 1493,43 (1038,0÷2358,0) нг/мл до 2126,86 (1975,0; 2347,0) нг/мл. Присутствие МСК ЖТ в зоне аллопластики приводило к более выраженному росту величины коллагена I типа в 1,6 раза относительно 3 суток с 83,0 (81,0÷98,0) нг/мл до 129,0 (112,0÷130,0) нг/мл и падению накопления коллагена III типа до 1698,8 (1342,0÷1974,0) нг/мл ниже уровня группы сравнения в 1,3 раза, что предопределило снижение соотношения коллагена III/I типа в 1,5 раза в динамике. Толщина апоневротических структур при пластике с применением аутологичных МСК ЖТ была в среднем в 2 раза меньше, чем над ранее имплантированной хирургической сеткой и составила $0,7\pm0,3$ см и $1,6\pm0,3$ см соответственно.

Вывод. Выявленные изменения синтеза коллагена указывают на позитивное влияние МСК ЖТ на структуру синтезируемой соединительной ткани и обосновывают эффективность клеточной трансплантации в качестве нового направления в лечении пациентов с ПОВГ.

CHYLOUS ASCITES. A CASE REPORT

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A rare case of a patient suffering from ovarian carcinoma is presented. The initial manifestation was chylous ascites.

She was a woman 72 years old who came to the hospital with weakness, anemia, anorexia and progressive distension of her abdomen. Initial paracentesis on admission showed milky ascitic fluid. The findings of the computed tomography that followed were very big ascitic collection and a vague impression at the area of the omentum at the upper abdomen. In order to accelerate the diagnostic and therapeutic process a diagnostic laparoscopy was proposed to the patient. After aspirating several liters of ascitic fluid bilateral oophorectomy was performed as well as biopsy of the omentum and the peritoneum. Of notice is that the liver was the sole intraperitoneal organ not affected by the disease. The postoperative course of the patient was uneventful. The histology showed adenocarcinoma of the ovary that infiltrated all the specimens. The patient was started on chemotherapy as soon as possible. No improvement was noticed and the patient eventually died two months later.

ORTHOPAEDIC TREATMENT OF BORDERLINE PATIENTS WITH HIGH- ENERGY TRAUMA

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Summary: **I. Introduction:** Patients injured in High-energy, usually with skull - brain damage, rupture of internal organs, multiple limb fractures, pelvis, spine. **II. Methods:** Over the past two years we have treated 14 patients in the border state of which 9 females and 5 males aged 19 to 73 years. After the resuscitation events and overcome post-traumatic shock, operational tactic is placing external fixates, then on the fourth day we proceed with the conversion. **III. Results:** 10 of the patients were discharged without complications after general hospital an average of 19 days. In other observed delayed adhesions or infections of hospital stay on average 35 days and multiple rehospitalisations. High-energy -Pylon fracture, foot and ankle are notorious in that they occur concomitant infections related injury complications. Early stabilization of the fracture, consistent with systemic physiology of the patient and the condition of the local soft tissue does not expose the patient to increased risk of systemic collapse, but instead stops the cycle of persistent musculoskeletal injuries associated with fracture and bleeding. **IV. Conclusions:** Recent decades are characterized by significant numerical growth of heavy multiple and com-

bined injuries, of which 15 to 50 % end with death. Severe musculoskeletal trauma is a life-altering condition which leads to increased morbidity and a plurality of repeated interventions.

DIABETES MELLITUS -THE 21-ST CENTURY HEALTHCARE PROBLEM: FROM RISK FACTORS TO GLOBAL EPIDEMIC

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National Center for Diabetes Research (Tbilisi, Georgia)

Global Prevalence: Diabetes (DM) is a huge and growing problem, and the costs to society are high and escalating. According to IDF Atlas 7-th Ed. Update there are 422 million people with diabetes. In most developing countries it took the form of epidemic. One of two people with type 2 diabetes does not know he has the condition. It has become one generation younger. There is evidence that type 2 diabetes in children and adolescents is increasing. According to IDF data more than 318 people had pre-diabetes in 2015. In 2015 there were 542 000 children and adolescents with type 1 diabetes, 86 000 new cases are registered annually. Diabetes is one of the most widespread NCD. In most high income countries it is the 4th or 5th leading cause of death. Approximately 5.1 million people aged 20 - 79 years died from diabetes in 2015. It is 8.4% of global all-cause mortality in this age group; 50% are < 60 years of age. The burden of mortality from diabetes is largely underestimated as diabetes is not always mentioned in death certificates as the cause of death. For Georgia IDF Atlas give diabetes prevalence of 7.9% (5,0-13,90), this numbers are extrapolated from the neighbouring countries.

Risk factors: Risk factors for diabetes development can be non-modifiable (e.g. ethnicity, age, genetics, etc) and modifiable (e.g. low physical activity, unhealthy diet, smoking, dyslipidemia, CVD, MI/stroke in anamnesis, hypertension, etc). Obesity is an independent and very powerful risk factor for DM and other non-communicable disease development. Urbanization and lifestyle awoke the whole number of risk factors that previously were underestimated. The underestimated risk factors are - sleep duration, vitamin D deficiency, TB, COPD (Chronic Obstructive Pulmonary Disease), periodontal disease, marriage between blood relatives, excessive alcohol intake, urbanization, high concentration of BPA BPA (bisphenol-A), "light" drinks, fruit juices, air pollution and some other new risk factors.

Solutions: 1. To perform screening and data processing according to the

unified standards to obtain comparable data. 2. Initiate risk factor management. 3. While diabetes risk factors are common worldwide, to take into account the risk factors specific for the given country. 3. To actively involve Governments in diabetes screening, prevention, management programs and implementation of the healthy life style on the national level.

DIABETES AND DEPRESSION – LES LIAISONS DANGEREUSES

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National Center for Diabetes Research (Tbilisi, Georgia)

Depression is as old as the Universe. It is constantly accompanying the human beings, no matter what nation or culture they belong to. The main signs and symptoms are known since the times of Hippocrates. Depression (Latin Deprimo – suppression) is a psychic disorder, that is characterized by the negative triad, it is an irrational and pessimistic view of the three key elements of a person's belief system present in depression – low/depressed cognition, loss of ability to be happy, cognitive and motor activity reduction. Depression can be observed in almost every chronic diseases – CNS (central nervous system) disorders, neoplasms of various etiology, TB (tuberculosis), hepatitis, systemic disorders of connective tissue, endocrine pathologies, mainly diabetes mellitus and hypothyroidism. The WHO states that depression took the form of epidemic; estimated number of people with depression worldwide exceeds 121 million. By 2020 depression prevalence will reach that of infectious diseases and cardio-vascular disorders – the today's absolute leaders. In people with depression the risk of diabetes development is 65% higher than in those without it. When two conditions are present the prognosis (complication prevention and management, adherence/compliance) and outcomes are significantly worse, that when only one condition is present. Patients come to a doctor not only with their disease, but with their ability to fight it as well. The role of the doctor is to help his/her patient use their inner resources.

THE ROLE AND PRINCIPLES OF SELF-MONITORING OF BLOOD GLUCOSE IN TYPE 2 DIABETES MELLITUS

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History of SMBG: Self-monitoring of glycemia has the long history; the first method to test glucose at home – 1941, Clinitest® effervescent urine sugar testing tablets launched by Bayer; 1-st Self Monitoring Blood Glucose (SMBG). quantitative estimation, photometric method - 1970- 1971 (Model 5541, Serial 563, Patent Pending, Ames Company, Div. Miles Laboratories Inc., Elkhart, Indiana, U.S.A).

Requirements for SMBG meters: While selecting the meter attention should be paid to many various factors, though the most important one is meter's accuracy. According to 2013 ISO (International Organization for Standardization) Recommendations 99% of readings should fall within the reliable. The ISO standards are important for ensuring the blood glucose (BG) monitors we use are sufficiently reliable on a day to day basis. Modern meters meet all request, mainly the accuracy one.

Role of SMBG: Landmark studies (DCCT, UKPDS) proved that intensive SMBG is the integral part of the effective diabetes (DM) management that plays important role in the prevention of DM complications. In 2009 IDF published the 1-st Guideline on Self-Monitoring of Blood Glucose in Non-Insulin Treated Type 2 DM. SMBG helps to: a) achieve individual glycemia targets; b) fix and avoid hypoglycemia episodes; c) adopt treatment regimen and meal plan to patient's life style; d) titrate therapy. Key points for SMBG are: a) fasting; b) 2-hr post each meal; c) at bed-time; d) at 3a.m., and e) when uncommon signs/symptoms develop (e.g. hypoglycemia symptoms).

SMBG principles: According to test frequency SMBG could be of - low, intermediate, high, intensity; it depends on glycemia control level and drugs used.

Shortfalls: Unfortunately SMBG misses glycemia peaks and glycemia variability. Diabetic patients overall stay 29% of the day in the hyperglycemic range, even in those well-controlled on oral drugs, post-prandial glycemia (PPG) values exceed 140mg% after 57% of meals. Complete characterization of glycemia is best accomplished by CGMS (Continuous Glucose Monitoring System).

Conclusion: The appropriate use of SMBG/GCSM in DM optimizes DM management through timely treatment adjustments, avoidance of hypoglycemia episodes based on the results and improve both clinical outcomes and quality of life. However, the value and utility of SMBG/GCSM may evolve within a preventive care model that is based on ongoing monitoring and ability to adjust management as DM progresses over time.

HEALTH ECONOMIC CONSEQUENCIES OF DIABETES FOOT COMPLICATIONS: REVIEW OF INTERNATIONAL STUDIES

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Background: In addition to causing suffering and morbidity, foot lesions in diabetic patients have substantial economic consequences, because diabetes is a chronic disease that requires a life-long commitment of resources to prevent and treat complications. The disease affects an increasingly large number of people around the world, putting them at risk for disability and diminished quality of life.

Methods: Health economic studies are rarely planned or implemented in Georgia. Thus, the proposed study mainly represents desk research. The author reviewed published international articles on health economic consequences of diabetes foot complications. Additional data were collected from 11 diabetes foot rooms in Georgia.

Results: Comparisons of results from various health-economic studies are complicated by differences in the study design (prospective vs. retrospective, primary vs. secondary data), patient populations, types of foot lesions, health care systems and settings, reimbursement systems, treatment practices, the time frame for analysis. In addition, some studies lack information about the year of costing, the monetary exchange rate, and the type of costs actually included. Other studies have included a mix of patients with and without diabetes. Costs reported from many studies are probably underestimated, because it is often unknown how, and to what degree, patients were treated before referral. The period before referral for foot ulcer treatment may represent patient and physician delay, as has been reported in several centers. It was found that the total costs of a lower-extremity amputation include more than just inpatient care and surgery; outpatient visits and topical wound treatments, required until complete healing has been achieved, must be included as well. Despite the different methods used, many studies confirm the substantial economic consequences of diabetic foot lesions.

Conclusion: Diabetic foot infections are one of the most costly foot complications because of their long healing time and often poor outcome. The large costs and poor quality of life associated with diabetic foot complications indicate that management strategies that speed healing and reduce the number of amputations could be cost effective. The chronic lifelong multi-factorial problems associated with diabetes, the heterogeneous patient populations, the long duration of wound healing,

the simultaneously occurring complications, the treatment by many specialists and professionals, and the complex causal relations are factors that complicate prospective health-economic studies of diabetic foot lesions. Prevention, including patient education, foot care, and special footwear in accordance with present international recommendations, is cost effective or cost saving for all diabetic patients at high risk for foot ulcers and lower extremity amputation.

VISCERO-ABDOMINAL OBESITY AS ONE OF THE MAIN RISK FACTORS FOR TYPE 2 DIABETES AND ITS LATE COMPLICATIONS

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Batumi Endocrinological Center (Batumi, Georgia)

Background and Aims: Obesity is one of the main risk factors for type 2 diabetes (T2D) - the condition that has taken the form of epidemics and is at an increase in all the age groups and all the countries. Obesity increases the risk and accelerate progression of late diabetes complications, mainly diabetic foot syndrome (DFS). According to the WHO prognosis (made in 2002) it was awaited that the number of people with diabetes will reach 300 millions by 2025; though in 2016 there is already 422 millions people with diabetes worldwide. Back in 1956, depending on the fat tissue distribution, J. Vague separated two types of obesity – android and genoid. J. Vague was to demonstrate that that out of those two types of obesity abdominal one, that is characterized by the viscera-abdominal fat accumulation (in the upper part of the trunk and abdomen with the increased mass of visceral fat) is one of the leading risk factors leading to T2D development. Two conditions play key role in T2D development – insulin-resistance (IR) and impaired insulin secretion. Progressing IR leads to disorders in insulin secretion by beta-cells, that results in impaired glucose tolerance (IGT, or pre-diabetic state); at this stage beta-cell function is reduced to 75%. Further functional decrease (TO 50%) leads to T2D manifestation. Prevention of T2D means modification of risk factors of the disease before its manifestation; it is especially important in people with viscera-abdominal obesity and other modifiable risk factors i.e. metabolic disorders).

Methods and Conclusion: A Program on Obesity Monitoring is being carried out at the Batumi Endocrinological Center; in the framework of the Program we are carrying out education of the people with obesity/overweight, pharmacologic/non-pharmacologic management and continuous follow-up of the condition, as well as

screening, education and monitoring of patients with diabetic foot syndrome. Implementation of the Program is the way to halt T2D/DFS incidence/prevalence rise and in the city of Batumi.

DIABETES FOOT SYNDROME – CLINICAL CASE

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Diabetic foot room (DFR) is functioning at the Batumi Navy Hospital since March, 2016. This was the first patient with Diabetic Foot Syndrome (DFS) that entered the DFR at our Hospital. The case is worth your attention. The patient A.B., male, age – 62, Body Mass Index (BMI) – 23.3kg/m² (normal weight). The patient was admitted with following symptoms and complains: high blood glucose (BG) – HbA1c-9.8%; weight loss; sensation loss in both lower extremities; tingling in the feet (ants running in the feet); painful sensation; skin colour changed (cyanotic), fungus on the toe nail; as a result of itching, skin on the feet damaged, with bubble rash; serotic discharge; hyperemia around the wounded areas; dry, cracked heels. Patient was treated with oral hypoglycemic agents (OHA), though OHAs were not taken regularly. Dietary recommendations were not followed either. Laboratory tests were performed and dermatologist and podiatrist consultations were carried out. To achieve good glycemia control insulin therapy was initiated (patient agreed to inject insulin). The patient visited podiatrist once a week. Starting from the very first visit to the DFR education on diabetic foot care was initiated and carried out regularly. Besides insulin, administration of alfa-lipoic acid was initiated (Tiogamma – 10, IV; Milgamma – 10, IM), then, treatment with Tiogamma, 600mg x for 3 months, and Milgamma, 1 tablet x 2 times a day for 20 days was continued. The patient was also taking Cardio-Aspirin 100 and Rosuvastatine 10mg. HbA1c control in 1.5 month was recommended. The patient came for the follow-up visit as scheduled. HbA1c at surveillance visit – 7.8%. Condition of both feet during the follow-up visit was satisfactory.

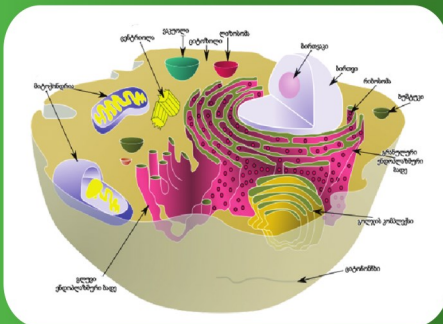
COMPLETE

NEOBLOCK FORTE **ფორტი**



- მასტოპათია
- ქუქუს კიბო
- საშვილოსნოს მიომა
- ენდომეტრიოზი
- ენდომეტრიუმის ჰიპერპლაზია
- ალამიანის პაპილომაპირუსთან დაკავშირებული სიმსივნეები (HPV)
- წინამდებარე ჯირკვლის ადენომა

**1 კავსულა ჭამის
შემდეგ 2-ჯერ
დღეში, კურსის
ხანგრძლივობა
შეადგენს 3-6 თვეს**



HELSINKI, FINLAND

ნეობლოკი

COMPLETE

NEOBLOCK FORTE ფორტე

750 მგ №60 კაფსულა

ფარმაცოლოგიური მოქმედება:

ნეობლოკი წარმოადგენს ონკოგენურ პროტექტორს.

ნეობლოკში შემავალი აქტიური კომპონენტები – ინდოლ-3-კარბინოლი (I3C) და კატეხინები წარმოადგენენ ფიტოქიმიურ ნივთიერებებს.

ინდოლ-3-კარბინოლი და კატეხინები ბლოკავენ:

- ჰიპერ- და ნეოპლასტიური პროცესების განვითარებას
- პათოლოგიურ პროლიფერაციას და სიმსივნურ ნეოანგიოგენეზს

ნეობლოკი ეფექტურია ეპითელური წარმოშობის ყველა სახის

(მათ შორის HPV ვირუსით გამოწვეული) სიმსივნის სამკურნალოდ, როგორც ესტროგენდამოკიდებული, ასევე ესტროგენდამოუკიდებელი სიმსივნეების დროს

მოქმედების მექანიზმი:

- მონაწილეობს სასქესო ჰორმონების მეტაბოლიზმსა და რეგულაციაში
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SPREAD OF CANCER WORLDWIDE AND FUTURE PROSPECTS

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Background: Estimates of the worldwide incidence and mortality from 27 major cancers and for all cancers combined for 2012 are now available in the GLOBOCAN series of the WHO International Agency for Research on Cancer. We review the sources and methods used in compiling the national cancer incidence and mortality estimates, and briefly describe the key results by cancer site worldwide and in Georgia. Overall, there were 14.1 million new cases and 8.2 million deaths in 2012. More than 12000 new cancer cases and more than 7000 death were estimated in 2012 in Georgia.

Incidence: Cancer is a leading cause of disease worldwide. An estimated 14.1 million new cancer cases occurred in 2012. Lung, female breast, colorectal and stomach cancers accounted for more than 40% of all cases diagnosed worldwide. In men, lung cancer was the most common cancer (16.7% of all new cases in men). Breast cancer was by far the most common cancer diagnosed in women (25.2% of all new cases in women)

Mortality: Cancer is a leading cause of death worldwide, with 8.2 million deaths in 2012. More than half of all cancer deaths each year are due to lung, stomach, liver, colorectal and female breast cancers. Approximately 44% of cancer cases and 53% of cancer deaths occur in countries at a low or medium level of the Human Development Index (HDI)

Prevalence: 32.5 million people diagnosed with cancer within the five years previously were alive at the end of 2012. Most were women after their breast cancer diagnosis (6.3 million), men after their prostate cancer diagnosis (3.9 million), and men and women after their colorectal cancer diagnosis (3.5 million).

Results:World cancer trends: Approximately 44% of cancer cases and 53% of cancer deaths occur in countries at a low or medium level of the HDI. As low HDI countries become more developed through rapid societal and economic changes, they are likely to become “westernised”. As such, the pattern of cancer incidence is likely to follow that seen in high HDI settings, with likely declines in cervix uteri and stomach cancer incidence rates, alongside increasing incidence rates of female breast, prostate and colorectal cancers. This “westernisation” effect is a result of reductions in infection-related cancers, outweighed by an increasing burden

of cancers more associated with reproductive, dietary and hormonal risk factors

Conclusions: Projections to 2030

If recent trends in major cancers are seen globally in the future, the burden of cancer will increase to 23.6 million new cases each year by 2030. This represents an increase of 68% compared with 2012 (66% in low and medium HDI countries and 56% in high and very high HDI countries). In the European Union, there are currently an estimated 2.66 million new cancer cases and 1.28 million cancer-related deaths per year. Moreover, due to the effects of population growth and ageing, the burden of cancer in Europe is projected to increase in the coming years and decades.

ACCURACY OF RISK OF MALIGNANCY ALGORITHM (ROMA) IN WOMEN WITH PELVIC MASSES

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Ovarian cancer is the seventh most common cancer in women in the World (18 most common cancer overall), with 239,000 new cases diagnosed in 2012. In approximately 70% of all cases it is not diagnosed before reaching an advanced stage. As a consequence, in 2012, the rate of ovarian cancer was more than two times higher in Central and Eastern Europe compared with Eastern Asia. The 5-year prevalence of women globally living with ovarian cancer is 22.6 per 100,000. (1, 2).

Fiji had the highest rate of ovarian cancer, followed by Latvia and Bulgaria.

Macedonia is on the 12th place.

About 58% of ovarian cancer cases occurred in less developed countries.

The highest incidence of ovarian cancer was in Europe and Northern America; and the lowest incidence in Africa and Asia.

From all ovarian masses detected in pre-menopausal and postmenopausal woman, malignant are only 10 % in the first group and 40% in the second, respectively (3). Thus, it is very important to evaluate their risk for having malignant process. Currently, the tumor markers CA125 and human epididymis protein 4 (HE4) as well as the risk ovarian malignancy algorithm (ROMA) and risk malignancy index (RMI) values are used as tools to differentiate the low- and high-risk patients with ovarian cancer. In more than 85% of advanced-stage ovarian carcinoma cases, the levels of CA125 have been found to be elevated above the cutoff value for high-risk patients (>35 U/ml). In contrast, the levels of CA125 are elevated in only 50% of

early-stage ovarian carcinoma cases (4). Moreover, in post-menopausal women, CA125 values greater than 95 U/ml are associated with a positive predictive value of 95% (5). HE4 is a recently discovered tumor marker that has been shown to have a sensitivity of 72.9% and a specificity of 95% for differentiating between types of ovarian masses, and these values are higher than those related to the use of CA125 (6). In 2009, Moore et al. (7) proposed that the ROMA value, which takes into account the levels of CA125 and HE4 together with menopausal status, could be used to evaluate ovarian masses using only quantitative and objective parameters. The use of this algorithm in cohorts of pre- and post-menopausal women resulted in a sensitivity of 88.7% and a specificity of 74.7% (7). Almost 20 years prior to the development of the ROMA, Jacobs et al. (8) created the RMI, which takes into account the CA125 value, menopausal status, and ultrasound parameters. RMI values greater than 200 were shown to be associated with a higher risk of malignancy and demonstrated a sensitivity of 85.4% and a specificity of 96.9% (8). The cut-off value for women age is 50 years old or younger with 1 year not having a menstrual cycle.

The algorithms calculation:

The ROMA should be calculated as described by Moore et al. (7). The predictive index values:

Pre-menopausal Predictive Index:

$PI = 212.0 + 2.38 * \ln(HE4) + 0.0626 * \ln(CA125)$; and

Post-menopausal Predictive Index:

$PI = 28.09 + 1.04 * \ln(HE4) + 0.732 * \ln(CA125)$.

In addition, the Predicted Probability (PP) was calculated as:

$PP = \exp(PI) / [1 + \exp(PI)]$.

The RMI should be calculated according to the criteria described by Jacobs et al. (8) as follows: $RMI = U \times M \times \text{serum CA125}$, where $U = 0$ for an ultrasound score of 0, $U = 1$ for an ultrasound score of 1, and $U = 3$ for an ultrasound score of 2-5 and $M = 1$ for pre-menopausal women and $M = 3$ for postmenopausal women. If the patient underwent CT or MR prior to ultrasound, the parameters for the sonographic evaluations should be identical to those described by Jacobs et al. (8) and Moore et al. (9).

The cutoff values for CA125 and HE4 are 35 U/ml (as recommended by the manufacturer) and 70 pM [as used by Moore, et al. (9)], respectively. These cutoff values are the same as those used for the validation of the ROMA (7). The ROMA

cutoff values for high-risk patients are 13.1% and 27.7% for pre-menopausal and post-menopausal women, respectively, as suggested by Moore et al. (7). The cutoff RMI value for differentiating between benign versus malignant masses is 200, as proposed by Jacobs et al. (8)

Despite small variations, the four methods that are available - for their diagnostic accuracy for calculating the risk of malignant adnexal process (CA125, HE4, ROMA, and RMI) show similar perspectives.

The RMI have the lowest sensitivity but provided the best numeric accuracy of the four methods.

The tumor marker HE4 demonstrates the best overall sensitivity for the evaluation of malignant ovarian tumors and the differential diagnosis of endometriosis.

All of the parameters demonstrate increased sensitivity when tumors with low malignancy potential were considered low-risk, which may be used as an acceptable assessment method for referring patients to reference centers.

LUNG CANCER EPIDEMIOLOGY IN ADJARA SINCE 1902 TO 2012 YEARS

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The first registration of malignant tumors in Adjara was completed in 1902. From then until 2012 in different periods, there had been identified 10 basic cancers in both genders. By using the method of descriptive statistics, we have studied the dynamic pattern of the morbidity with cervical, skin, gastric, breast and lung cancers.

In 1902 -1955 yy the cervical cancer was in the first place. The abrupt decrease of this morbidity has been started since the 60^s. The mentioned trend has been revealed more clearly in recent years, thanks to the screening programs.

The gastric cancer was in the fourth place in Adjara in the beginning of the XX century. In the 60^s it shifted in the first place. But during the last 40 years the decrease of the morbidity is noted and it is on the 4th – 5th place at the moment.

Skin cancer morbidity ranks 2nd and 3rd place during the last 110 years. This

indicator compares relatively high in Adjara to the other regions of Georgia . probably due to more prolonged exposure to ultraviolet rays during the year.

XX century 60s from among female breast cancer is steadily in the first place.

Lung cancer incidence increasing trend starting from the fifties and the present, the incidence of cancer in the structure occupies the first place. While in other regions in the first place is breast cancer among both genders. High incidence of lung cancer may be caused by tobacco production in the mountainous areas, by Batumi Oil-processing factor that has been released into the environment. Also at the Chernobyl nuclear power station explosion caused the pollution of the atmosphere.

Thus, in 1902-2012 yy it was changing environment and lifestyle-related factors and population exposure to cancer-causing levels. Periodically varied etiologies impact on the population, which led to the incidence of this cancer structure and dynamics, Resulting in this lung cancer from the 50s of the XX century moved from fifth to first place.

COLLABORATIVE SURGICAL PROCEDURES IN ONCOGYNECOLOGY: CLINICAL EFFICACY AND PROPOSALS

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Background: We describe our experience of treatment of benign and malignant gynecologic pathology with make an emphasis on combined and simultaneous surgical procedures and collaborative team approach for optimization of the clinical outcomes of specialized care cases. Recently the combination of gynecologic and different surgical procedures is become more common in various institutions, but there are still some controversial questions concerning classification, terminology, proper definition and clinical assessment of traumatism of performed surgical procedures.

Methods: A retrospective review of 1327 patients of gynecologic surgery at 2012-2015 is analyzed. Analyzed data included: indications for surgery, initial treatment, p re-operative status, extent of the procedure, operative time, blood loss, infusions and complications.

Results: Of 1327 patients, the median age was 51 years (range: 27-76). Benign gynecologic pathology was diagnosed at 1114 (83%) and correspondingly gynecologic malignancies at 221 (17%) with I-II stage of disease in 70% and III-IV stage – at 30% of all cases. Recurrent tumors were revealed at 18 cases: cervical stump tumors – 10 cases and another 8 cases with following localization: retroperitoneum – 3, omentum – 3, abdominal wall/bladder – 1, mesentery/sigmoid colon – 1. Concomitant surgical pathology was revealed at 95 of all cases and the most often were found: abdominal adhesions – 33, hernias – 18 and cholecystolithiasis – 16. There was no operative mortality in the immediate post-operative period, 16 deaths occurred at follow up period (6 months – 2 years). The overall prevalence of composite 30 day major postoperative complications was 4,3% (57 cases).

Conclusion: Based on our experience and appropriate anatomico-surgical landmarks we propose a new more optimal classification of abdominal hysterectomies. Our results suggest that joint surgical treatment is the best approach in repeated surgery and advanced cases to achieve the surgical adequacy. Thus, collaborative surgical management is feasible and realistic approach for optimization of clinical outcomes of treatment.

PELVIC EXENTERATION FOR ADVANCED PELVIC MALIGNANCY; 5-YEAR EXPERIENCE

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Introduction: Surgical operations for advanced pelvic malignancy are one of the most demanding, most mutilant and most stressful operations, for both, the patient and the surgeon. The objective of this study was to assess the type of urinary diversion and intestinal reconstruction as well as the oncological results in patients submitted to pelvic exenteration for a period of 5 years.

Material & Methods: From January 2009 to January 2015, 19 patients with pelvic malignancies including advanced transitional cell bladder carcinomas, undergone pelvic exenteration. All patients were initially planned and prepared for total pelvic exenteresis but in selected cases sphincter preservation technique was performed.

Results: Twelve patients had total pelvic exenteration without sphincter-

sparing procedure and colostomy and ileal loop derivation were performed. In 2 patients anal-sphincter preservation was done with double-stapled rectal anastomosis while urine derivation was performed using ileal loop technique. In 6 patients both anal and urine sphincter-sparing procedures were performed with double-stapled rectal anastomosis and Studer orthotopic bladder. The mean age of the patients was 66.3 years. We had no lethal complications within the first 3 months after the operation. Seven patients presented with hydronephrosis and urinary infection in the first 6 months postoperatively. All of the patients with sphincter-sparing procedures had no urine or fecal incontinence. The mean follow up of the patients was 47 months. In the follow up period 4 patients died in the first 15 months after the operation (1 due to pulmonary complication; 3 deaths cancer related). Six patients are alive so far. The median overall survival in the follow up period is 42.85 months (45%). Histology reports showed all of the cases were T4 disease; 12 patients with advanced bladder TCC, 2 patients with cervical cancer, 2 with rectal adenocarcinoma and one with concomitant prostate and exocrinous carcinoma.

Conclusions: Pelvic exenteration remains the only option for patients with advanced pelvic malignancies. It is a difficult operation with big morbidity and acceptable mortality rate. The quality of life could be enhanced if urinary and fecal sphincter preservation with orthotopic neobladder is performed. The results are significantly higher if no previous radiation therapy was applied.

TRANSABDOMINAL AND LUMBAR TUMOR NEPHRECTOMY CLINICAL-ANALYSIS

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Introduction: Our purpose was to make a clinical analysis between open surgical treatment types (transabdominal and Lumbar radical nephrectomies) of the kidney renal cell carcinoma.

Materials and Methods: From 2002 till 2015 in our clinic 123 radical tumornephrectomies was done because of the Renal cell Carcinoma of the kidney. The average age was 52, 7y (Patients from 32 till 76 years).

From 125 patients 85 underwent operation by transabdominal approach, while 38 patient we did by lumbotomy (cancer dimension < 6sm) from which partial

nephrectomy was done in 33 cases - 5 was radical nephrectomy. From 85 patients - 25 underwent paraaortic and paracaval lymphadenectomy (transabdominal approach) Correlation between male and female was 1,2:1.

From 123 patients RCC was seen in 85 cases (71%), Papillary Cell cancer 6 (4,8%) Chromophobal cell cancer 15 (12%) Tubular-cell carcinoma 7 (5,2%), Sarcomatoid Renal Cell Carcinoma subtype 10 (7%). All patients underwent standard courses of immunotherapy.

Observation of the patients processed from 1 till 3 years (CT ;MRI)

Results: From 123 patients first year local metastasis were seen in 7 patients (5,2%), second year – 2 patients (1,6%). In 3 patients who underwent partial nephrectomy developed recurrence, finally radical nephrectomy was done. In 4 patients (3,3%) 3 years after surgical treatment- urothelial cancer was generated.

Renal cell carcinoma - 123 patient			
Transabdominal (intercostal)		Lumbotomy	
85		38	
paraaortic and paracaval lymphadenectomy	Tumornephrectomy	Radical nephrectomy	Partial nephrectomy (cancer size <6sm)
25	60	5	33
positive lymph nodes		negative lymph nodes	
11		14	

(Transitional cell carcinoma of the bladder).

Conclusion: After surgical treatment of the RCC (kidney) expected generation of local metastasis or recurrence depends on tumor size, histomorphological type and proliferation.

RENAL CELL CARCINOMA- GLOBAL AND REGIONAL EPIDEMIOLOGY

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Background: After over two decades of increasing rates, kidney cancer incidence trends worldwide show signs of plateauing or decreases in recent years, worldwide. In comparison the situation and the epidemiological parameters shows that in

the Republic of Macedonia there are signs of increasing. Incidence rates for renal pelvis cancer have declined, while kidney cancer mortality rates overall have leveled. These patterns are consistent with reports of incidental diagnosis and downward shift of tumor stage and size in clinical series. The changing prevalence of known risk factors for renal cell cancer, including cigarette smoking, obesity, and hypertension, may also be influencing the incidence trends, although their relative impact may differ in various populations. Genetic susceptibility and its interaction with environmental exposures are believed to influence renal cell cancer risk, but limited studies based on candidate gene approaches have not produced conclusive results. Large consortium efforts employing genome-wide scanning technology are underway, which hold promise for novel discoveries in renal carcinogenesis. Kidney cancer among adults consists of malignant tumors arising from the renal parenchyma and renal pelvis. Nearly all renal pelvis cancers are of the transitional cell type, comprising less than 10% of the microscopically confirmed kidney carcinomas. Adenocarcinomas arise primarily in the renal parenchyma (hence forth referred to as renal cell cancer), accounting for over 90% of kidney carcinomas. The majority of kidney cancer among children is nephroblastoma (Wilms tumor), comprising about 1.1% of all kidney cancers. This malignancy is not a focus of the current review.

Methods

A descriptive epidemiology is used and also a retrospective cohort study in the period of 2000 till 2007-th comparing with the result from the global epidemiological findings about the epidemiology of renal cell carcinoma.

Results: Renal cell cancer incidence rates vary substantially worldwide. Rates are generally high in Europe and North America and low in Asia and South America. Within a continent, rates also differ by country. Across Europe, incidence among males ranged more than five-fold: from 2.9 per 100,000 in Serbia to 15.2 per 100,000 in the Czech Republic. Even within a country, rates can be dissimilar across regions, such as 3.6 per 100,000 in Salerno and 9.0 per 100,000 in the North East region of Italy. Rates among females are generally about half those among males and also vary geographically. In comparison with Macedonian results, predominantly males are more affected (4:1). The incidence rate is 2.1 per 100,000, and mostly between the age of 50- 70 years.

Conclusion: In comparison with the global epidemiology of renal cell carcinoma, the Republic of Macedonia has a lower incidence rate to the other countries in Europe and the other continents, but still has a bigger incidence rate compared with

the incidence rate in the past.

MINIINVASIVE SURGERY IN DIAGNOSTICS OF MEDIASTINUM AND LUNG PATHOLOGIES

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Lung cancer and Lymphomas are most common tumors in thoracic practice. However, there are other rare tumors, this makes a need for pathological verification. It's not always possible to verify diagnosis with routine examinations (bronchoscopy and others tests), so in our clinic we do advanced examinations; endoscopic transbronchial biopsy and CT-guided Percutaneal Transthoracic Needle Biopsy(CT-TNB), with real time fluoroscopy and step-by-step methods. In 215 diagnostic manipulations, we got morphological verification in 209cases. In diagnostic department of Consilium Medulla, we also do thoracoscopy biopsies of mediastinal lymph nodes and lung, also atypical lung resections. From 53manipulations 39was finished with thoracoscopy, 14with mini thoracotomy(WATS). In all cases we got morphological verification.

DEVELOPMENT OF CARCINOMA OF THE CECUM

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A case of a 66 years old man is presented. He suffers from carcinoma the cecum with an unusual but absolutely predictable course of his disease.

The patient had a colonoscopy because he had noticed blood per rectum. A big polypoid tumour of the cecum was detected and the histology showed a tubulovillous adenoma with different sites of severe dysplasia. Because of high suspicion of malignancy operation was proposed to the patient but he strongly refused.

Seven years later he comes to the hospital with fatigue, weight loss and anemia. On colonoscopy a big mass of the cecum was observed. Similar findings were observed at the computed tomography. Many small hepatic metastases were also observed as well as a single one at the right lung. At laparotomy that followed, a big carcinoma of the cecum was found that was infiltrating the near by ileus in two sites. A right hemicolectomy was performed with excision of a segment of 60 cm of small

bowel. The postoperative period was complicated by urological problems. Chemotherapy that followed was not completed because of side effects and patient's refusal. One year and a half after the operation the patient is very ill with disseminated disease.

The case is presented to show how a mild easily treatable disease can become a catastrophe if left untreated.

СОВРЕМЕННЫЕ ПОДХОДЫ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ КОЛО-РЕКТАЛЬНОГО РАКА

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Лапароскопическая техника выполнения лимфодиссекции D3 при раке правой половины ободочной кишки – очень важный аспект современного хирургического лечения коло-ректального рака. В настоящее время нет общепринятой техники "complete mesocolic excision".

После осуществления тракции за купол слепой кишки ассистентом, хирург рассекает париетальную брюшину под проекцией a.v. ileocolica. Диссекция производится в медиально-латеральном направлении, фасция Тольда отделяется от мезоколической фасции. Хирург приподнимает мезоколон и удерживает его как занавеску, способствуя проникновению углекислого газа под давлением в щелевидное пространство между фасциями. Визуализируются и отделяются от мезоколической фасции двенадцатиперстная кишка, головка поджелудочной железы и ее крючковидный отросток, под фасцию в этой ключевой точке следует установить салфетку, которая будет служить визуальным ориентиром. Далее рассекается париетальная брюшина корня брыжейки тонкой кишки от уровня основания a.v. ileocolica до основания корня брыжейки поперечно-ободочной кишки. Выделяется основание a.v. ileocolica, последние клипируются и пересекаются. Скелетизируется передняя полуокружность верхней брыжеечной вены до уровня основания венозного ствола Генле. Под основание венозного ствола устанавливается вторая "сигнальная" салфетка. После этого маневра брыжейка ободочной кишки на уровне основания основных сосудистых магистралей отделена от верхних брыжеечных сосудов

"сигнальными" салфетками. Рассекается желудочно-ободочная связка непосредственно у дуги желудочно-сальниковых сосудов. После отсечения брыжейки поперечно-ободочной кишки от нижнего края поджелудочной железы соединяются обе плоскости диссекции. Выделяются толстокишечная ветвь ствола Генле, клипирруется, пересекается. Выделяются основания средних толстокишечных сосудов, клипируются и пересекаются.

RARE VARIANT OF EMBRYONAL RHABDOMYOSARCOMA OF UNUSUAL LOCATION

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Objective: Here we report rare variant of embryonal rhabdomyosarcoma - Spindle cell rhabdomyosarcoma, clinically presented as a abscess of perianal region. During surgery tumor with severe perifocal edema and inflammation was found.

Methods: Resected tumor nodules 4.5X3.0X3.0 and 2.5X1.5X1.5 in size were well circumscribed. On cut surface soft, homogenous, yellow-white tissue was found. Routine H&E stain and immunohistochemistry (with anti- Desmin, Vimentin, CD117, CD56, S100, aSMA, Synaptophysin, CD34, CD99, Ki67 antibodies (Leica, Germany)) was performed.

Results: Microscopically tumor had heterogeneous structures, consisted of spindle cell proliferations with arrayed in fascicles or whorls - growth pattern more similar to leiomyosarcoma. Malignant cells had elongated nuclei with blunted ends, small nucleoli, and eosinophilic cytoplasm. Sparse multinucleated cells was found. Mitotic figures, including atypical forms was >5 in 10 HPF. No collagenous deposition between cells. Inflammatory infiltrate was heterogeneous, with higher degree at the periphery. Tumor contained variable-sized, thin-walled blood vessels. Immunohistochemically tumor cells expressed Desmin, Vimentin, CD117, CD56, CD99 (focal staining) and was negative for S100, aSMA, Synaptophysin, CD34. Ki67 labeled more than 50% of tumor cell nuclei.

Conclusion: Tumor was classified as spindle cell rhabdomyosarcoma (SOIP - embryonal rhabdomyosarcoma, well differentiated type).

METASTATIC BREAST CANCER, THE MODERN APPROACHES IN TREATMENT

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Notwithstanding of recent development of diagnostics and new approaches in treatment of stage IV breast cancer disease, the treatment of metastatic Breast cancer yet remains as one of the significant problems of the medical World.

The studies and practice at our clinic has defined many different cases which included both - standard type of treatment, such as: chemo, target, hormone/ radiation therapies in combination with surgery (loco regional treatment) or without surgery and the ones that can be considered as non-standard approach when the surgery derives from non-standard metastatic development of the breast cancer. When the secondary damages were discovered in the form of ulcerated tumor of sternum; ulcerated supra clavicular area; neck lymph nodes; soft tissue damages in different areas and also combined damage of pleura with ribs.

During 2012-2016 we have carried out more than 70 with the metastatic breast cancer. They were separated in 2 groups. 40 of them were the De'novo patients (metastatic from the beginning) with metastasis in one organ or multiple damage and have not received any treatment at that moment, In other cases patients were not De'novo and all of them have previously gone through the both: surgical and systemic treatment of primary breast cancer, which had developed only one metastatic lesion of above mentioned areas.

In Ist group 20 patients went through the systemic treatment only and 20 of them received both systemic and surgical (loco regional treatment only which included lumpectomy, simple or radical mastectomy) treatment.

In II group all the patients went through the surgery for metastatic disease. The decision to go through the surgery has been taken after the resistance of the disease towards the systemic therapy was defined. All above mention patients renewed systemic treatment after the surgeries.

The current results of trial in I group has shown that patients who were treated with surgery in comparison with patients without surgery had : 1) improved metastatic progression free survival-21%, 2) improved OS-28%, 3) better efficacy of complex treatment in patients with bone metastasis only, 4) less efficacy of complex treatment with multi organ metastatic damage, 5) improved quality of life.

In II group of patients even though the number of progression free survival

and overall survival has not increased dramatically, we have seen the significant improvement of quality of life together with psycho-social rehabilitation.

CANCER OF PROXIMAL JEJUNUM

Case report

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Background: Malignant neoplasms of small bowel are among the rarest types of cancer, accounting for only 2% of all gastrointestinal cancer. Around 98 % of small bowel tumors are made up of adenocarcinomas, carcinoid tumors, lymphomas or sarcoma/gastrointestinal stromal tumors (GISTs).

Case report: 45 years old Patient (female) applies to our clinic using the one and a half year disease with symptoms: asthenia, nausea, vomiting, weight lost 17 kg, pain in epigastrium area, anemia. The patient has been had the comprehensive medical examinations, including the computer tomography. The following diagnosis was made: Jejunum cancer II A stage, no evidence of advanced tumor. The patient has got the surgical treatment, in way of the intraoperative, the diagnosis is confirmed. The cancer was located in proximal part of jejunum, in particular, directly near the Treitz ligament. Resection of Jejunum with regional lymphadenectomy was performed with the technical difficulties. Morphological report: solid Adenocarcinoma of jejunum, pT3 G3N0M0. The patient is discharged from the hospital with satisfactory condition, is given the adjuvant chemotherapy.

The diagnosis of the small bowel tumor is associated with big difficulties and it is often connecting the results of concur between the clinical data and the analyses of instrumental studies of indirect signs.

NON-STANDARD OPERATIVE SURGERY IN ONCOLOGY

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Background: Lots of patients with heavily pre-treated locally advanced and/or recurrent tumors are considered as incurable and only treatment option in such cases can be surgical, this type of operation is often related with great technical problems and should be reviewed as nonstandard and needs careful action and im-

provisation from surgical staff.

Methods: In Institute of clinical oncology was performed 16 operations of this type from 2014 to 2016; 7 cases were mediastinal, lung and chest wall recurrent tumors, 5 case of breast cancer recurrence in neck lymph nodes and 8 case of other localization cancers with metastases in lungs, mediastinum and neck lymph nodes, surgeries were done in 3 patients with endometrial and cervical cancer and 2 with kidney cancer and 3 patients with soft tissue and head and neck cancer.

In all cases operations were wide, during mediastinal tumors surgery was done with sternotomy approach, mono or bilateral pleurotomy with pericardium and lung resection. In 2 cases of Lung recurrent tumors were performed lobectomy with circular bronchus resection and in 2 cases pneumenectomy with pericardiectomy, in 1 case was done pneumenectomy with circular resection of treacheal bifurcation. During chest wall tumors were performed 3th -5th ribs and sternum resection, in case of breast cancer recurrence sternum and ribs resection and fascial futlar lymph node dissection.

Incidence of postoperation complications was low and revealed as wound putrefaction only in 2 cases from 16. Discussing of long-term results due to few clinical data is impossible at this moment. Mortality was not seen. A year after surgical intervention there was no any disease recurrence; 2 cases of distance metastases were detected in patients with lung recurrent cancer within 1.5 year period. All other patients are in follow up.

CANCER CONTROL IN GEORGIA

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Background: The current cancer patterns in Georgia indicate that a significant proportion of cancer cases and deaths are preventable if appropriate actions are undertaken. The ageing population of Georgia will contribute to further rises in cancer burden unless structured prevention, early detection and treatment interventions are optimally scaled up in a balanced manner across the country. The estimates from the International Agency for Research on Cancer (IARC) indicate 12 361 new cancer cases (6235 among men and 6126 in women) per annum in 2012. The most frequent cancers were as follows: breast (n=1541), lung (n=1129), head and neck (n=781), stomach (n=711), colorectal (n=605), prostate (n=570), liver (n=439), corpus uteri

(n=432), cervix uteri (n=425), and bladder (n=331). The estimated number of deaths from cancer in 2012 was 7319; with 3996 among men and 3323 among women. Of the more common cancers in Georgia, lung, head and neck, cervix, stomach and liver cancers are eminently preventable, whereas control of breast and colorectal cancers predominantly relies on early detection and appropriate treatment.

In GLOBOCAN 2012 cancer incidence in Georgia was estimated from medium quality complete national mortality estimates using modelled survival.

A population-based Cancer Registry (PBCR) needed to be established and plans should be put in place immediately, in order to established quality data on the cancer burden and trends in the country to inform health care decision-making and resource allocation. And Georgian Population-based Cancer Registry was set up since 2015.

Objectives:The aim of the project was to:

1. Implement Modern Cancer Registration System in Georgia.
2. Ensure compliance of reporting standards.
3. Create registry that will meet international data standards.

Methods:In 2011-2016 as a result of active work with Ministry of Health Care (MOH) preliminary actions were taken under the State Programme, including:

- Translation and publishing of ICD-O-3;
- Translation of CanReg5 software and training of registrars;
- Translation and filling of dictionaries: topography, morphology, administrative units, and institutions providing oncology services;
- Participation in international training and courses organized by International Agency for Research on Cancer (IARC);
- Trainings on ICD-O coding for oncologists and pathologists
- Introduction of “Cancer notification form” on all cases diagnosed and/or treated in Georgia.

Government has funded a “State Program of Modern Cancer Registry Implementation”. The need to develop a PBCR is acknowledged by the Ministry of Labour, Health and Social Affairs and the National Centre for Disease Control and Public Health (NCDC), as stated in the draft National Cancer Control Strategy.

Results:According to the schedule I stage of the program has been completed successfully.

- New model of Cancer Registry has been developed

- The first results of the register are received:
- 9819 new cases of cancer have been diagnosed in Georgia in 2015 (240 per 100 000). The standardized incidence rates (per 100,000 persons) were 252 for males (n=4471) and 276 for females (n=5348).
- The cumulative percentage rates, to 75 years of age, were 32.9% for males and 38.1% for females. 67.5% of cases have been registered in 30-70 age group.

Conclusion: In future, Cancer Control Program will be focused on four thematic research areas:

Theme 1: Investigations of environmental, genetic and basic behavioral risks and biomarkers associated with liver and bladder cancer occurrence and early detection;

Theme 2: Investigations of cancer genetic/genomic risk testing to inform prevention, improve patient outcomes and develop interventions to enhance clinical and policy translation;

Theme 3: Research on the use and outcomes of cancer treatment and survivorship and interventions to improve these outcomes;

Theme 4: Research on population risk prediction and impact of cancer control interventions to inform clinical practice and policy debates about the most effective and cost-effective care.

GENETICS AND ONCOLOGY – MODERN APPROACHES

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Oncogenetics has appeared as a new field in science in past 20 years. This field is a mixture of oncology and genetics. Nowadays there are no leading hospitals which do not incorporate oncogenetic laboratories in oncologic departments. Oncogenetic laboratories conduct modern tests which decipher genetic material including that of cancerous cells. Oncology departments employ genetics doctors, who consult the patients along with other specialists.

Oncogenetics has three main directions. The first is diagnostics and monitoring of malignant processes in hematopoietic organs. There are certain pathologic processes in hematopoietic organs, the root cause of which is changes in DNA and chromosomes.

The aim of oncogenetics is identifying such genetic and hereditary processes. In addition, molecular diagnostics give oncogenetics the ability to not only diag-

nose malignant processes but also quantify such cells, in case they exist in the blood.

Quantitative analysis is especially important for making observations during treatment dynamics.

The second direction is diagnostics and prevention of hereditary cancer. Molecular diagnostics and genetic sequencing allows us to determine heredity of cancer. There are a number of malignant tumors which are transmitted hereditarily, through autosomal-dominant inheritance. Such cancer is caused by changes in genetic material, genetic mutations in particular. Types of cancer in this group are breast cancer, prostate cancer, intestinal cancer, pancreatic cancer, thyroid cancer, gastric cancer, etc. Diagnosing hereditary cancer is important in patients with personal anamnesis, because such cancer is characterised with high malignancy. In case of positive diagnosis, it is necessary to also investigate first and second degree relatives for prevention.

The third direction is investigating genetic materials from cancerous cells. Modern methods make it possible to separate genetic material of cancerous cells and test for various chromosomal or gene mutations. Such analysis is important in selecting correct treatment, in particular chemotherapy. There are a number of changes, which affect the strategy of treatment. Conducting such analysis is necessary for selecting targeted therapy.

Unfortunately oncogenetics is still at the starting stage in Georgia. As geneticists, our mission is to spread the information in the medical society about the importance of this field. The aim of the presentation is to underline the significance of oncogenetics in the field of oncology. In addition, the goal is to deliver information about current research and methods which are already implemented and are conducted in Georgia.

BLADDER CANCER IN THE AJARIAN AUTONOMOUS REPUBLIC CLINICAL EXPERIENCE OF CANCER CENTER A.A.R

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The Ajarian Autonomous Republic in the structure of cancer incidence in 1902-2014 in 10 primary cancer bladder cancer held steady 8-9 place . Men are affected 4 times more often than women with bladder cancer. bladder cancer in 90%

was transitional cell carcinoma, in 5% squamous cell carcinoma, 2% adenocarcinoma, 3% - various. Due terms that radiation therapy was characterized by such a threatening complication as radiation cystitis In 1990s because on this radiation therapy has lost its relevance.

In 1990 s y. for systemic chemotherapy was used MWAC regimen. This regimen was characterized with high toxicity and its consumption was limited. For intravesical instillation was used chemotherapy with adriablastin, mitomicin C and BCG.

In 1990-2014 yy for muscle-invasive bladder cancer 209 operations were done. Resection of the bladder wall 74(34,4%), 9(12.1%) of them transplantation ureter with ureterocystoanastomosis. Recently, the amount of the transaction is significantly reduced the cause of this is the expansion of indications TUR operation and cystectomy. Cystectomy, double-side uretherocutaneostomy 59 (28%) operation. Postoperative mortality 6,7% (4). This type of surgery in the postoperative period after 2-3 years is characterized by the obstructions. Apparently this is explained by a poor home care.

Double-side uretherocutaneostomy 29(13,8%). Morbidity 17,2% (5). The operation is losing its relevance since it recently replaces partly less traumatic percutaneous nephrostomy. Since 1999 in A.A. onco center for urinary diversion using the ileum used due to the lower electrolyte reabsorption. 40 operations by Bricker - conduit formation of "wet stoma". 7 the retaining urine low pressure reservoir. Postoperative mortality 2.1 %. Bricker operation to this day remains the gold standard. Orthotopic reservoir of low pressure is very comfortable for the patient and future is for it.

PANIC ATTACKS AND CANCER

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The person may seem fine between attacks, but is usually very afraid that they will happen again. Panic attacks can be an alarming symptom of anxiety. Panic attacks happen very suddenly and often reach their worst within about 10 minutes. Symptoms of a panic attack, Shortness of breath or a feeling of being smothered, An urge to escape, Feeling dizzy, Racing heart, unsteady, lightheaded, or faint, Chest pain or discomfort, Trembling or shaking, Sweating, Fear of losing control or “going crazy”, Feeling as if they’re choking, Numbness or tingling sensations, Feeling

“unreal” or “detached” from themselves, Chills (shaking or shivering) or hot flashes (may involve sweating or facial reddening) A cancer diagnosis can have a huge impact on most patients, families, and caregivers. Feelings of depression, anxiety, and fear are very common and are normal responses to this life-changing experience.

The study included 60 patients from 25 to 75 years. Out of them women were 60, Men- 35, surgery had only 20 patients, chemotherapy 16. 4 After radiation therapy, combined therapy - 20 patients. From 60 patients 25% was suffering from mild Panic attacks, The average - 27%., Severe - 27%. without Panic attacks -3 %. Suicidal thought was detected in 45% of surveyed patients, a panic or somatic - vegetates disorders -79% (headache, dizziness, palpitations, and weakness). 80% complained of sleep disturbance (difficulty in sleeping, in the middle of the night awakening, early awakening), some of the symptoms of asthenia was found in 56%. Psychological rehabilitation centers for cancer patients is necessary to establish on a base of oncology clinics. Professional psychological help will improve oncology patients 'quality of life'. Psychosocial treatment approaches that may be of value include those that provide information and support and those that address any combination of emotional, cognitive, and behavioral factors

SURGICAL TACTICS IN EARLY CANCER PATHOLOGY GENITAL ORGANS

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A retrospective analysis of case histories of 179 patients with early onco-pathology of genital organs was made (microinvasive cervical cancer T1a first stage - 27 (15 %) , microinvasive cervical cancer T1a second stage , minimal endometrial cancer T1a stage - 38 (21.2 %) , ovarian cancer T1a stage - 57 (54.3 %) of patients who were treated in Batumi medical center in 1990-2010.

The study of five years long treatment results in early cancer pathology of genital organs showed the presence of recurrence after surgical treatment of one patient (3.7 %) with cancer of the cervix (T1a first stage) , two patients (5.2%) with uterine body cancer (stage T1a) and also two patients (2%) with ovarian cancer (stage T1a).

The retrospective analysis of the material gives an opportunity to make a conclusion about the treatment of patients with early forms of genital organ cancer.

Patients with primary cervical cancer T1a first stage (lesion depth 3 cm),

with invasion of 1 mm a cervical conization can be made , while from 1 to 3 mm - simple hysterectomy with ovarian preservation among young women. When there is a microinvasive cervical cancer T1a second stage (depth of 3-5 mm lesions, tumor diameter less than 7 mm) extended hysterectomy takes place in order to achieve good results.

High results of treatment of patients with a minimal uterine body cancer stage T1a (when the tumor is limited by endometrium or simply grows less than half the thickness of the endometrium) can be obtained by limiting the volume of surgical intervention with a simple hysterectomy with appendages.

The optimal volume of surgery among patients with ovarian cancer stage T1a (when the tumor is within one ovary, when capsule is intact, the tumor is on the surface of the ovary) is a hysterectomy with appendages and a damaged gland resection.

Above-mentioned treatment strategy of patients with early forms of genital organs cancer provides a reliable cure and medical-social rehabilitation of women.

DEPRESSION IN PALLIATIVE CANCER CARE

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Clinical depression causes great distress, impairs functioning, and might even make the person with cancer less able to follow their cancer treatment plan. The good news is that clinical depression can be treated. Depression is thought to be common in palliative cancer care, but there is inconsistent evidence regarding their relevance for other aspects of quality of life. In Batumi med center , semi-structured interviews assessing depression were administered to 81 patients who were receiving palliative care for cancer. There were 12 women and 69 men, with a median survival of 63 days. Symptoms of clinical depression-Ongoing sad, Loss of interest or pleasure in almost all activities most of the time. Major weight loss or weight gain. Being slowed down or restless and agitated almost every day, enough for others to notice. Extreme tiredness (fatigue) or loss of energy. Trouble sleeping with early waking, sleeping too much, or not being able to sleep. Trouble focusing thoughts, remembering, or making decisions. Feeling guilty, worthless, or helpless. Frequent thoughts of death or suicide (not just fear of death), suicide plans or attempts. Some of these symptoms, such as weight changes, fatigue, or even forgetfulness can be

caused by the cancer itself and its treatment. But if 5 or more of these symptoms happen nearly every day for 2 weeks or more, or are severe enough to interfere with normal activities, it might be depression.

The most frequent individual diagnosis was major depression (13.1%, 95% confidence interval=9.9-16.9). Comorbidity was common, with 10.2% of participants meeting criteria for more than one disorder. Those diagnosed with a disorder were significantly younger than other participants ($P=0.002$). They also had lower performance status ($P=0.017$), smaller social networks ($P=0.008$), and less participation in organized religious services ($P=0.007$). In addition, they reported more severe distress on 14 of 18 physical symptoms, social concerns, and existential issues. Of those with a disorder, 39.8% were being treated with antidepressant medication, and 66.7% had been prescribed a benzodiazepine. In conclusion, it appears that depression and anxiety disorders are indeed common among patients receiving palliative care. These disorders contribute to a greatly diminished quality of life among people who are dying of cancer. People with cancer, as well as their friends and family, can feel distress about these things at any time after a cancer diagnosis, even many years after the cancer is treated. As the cancer situation changes, they all must cope with new stressors as well as with the old, and their feelings often change, too. Depression, anxiety, and other emotional problems can nearly always be helped with a combination of medicines, groups, or psychotherapy. But first, a person must recognize that they need help dealing with their emotions and responses to the major changes that cancer brings to their lives. In the confusion and stress that come after a diagnosis of cancer, the emotional problems of both people with cancer and those around them can often become fairly serious before they're recognized.

TREATMENT OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CHRONIC HEPATITIS C

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Hepatocellular carcinoma usually develops in patients with hepatitis B virus infection, hepatitis C virus infection, or alcoholic liver disease. The risk of developing HCC is also known to be age-dependent. The HCC can start in liver or be secondary cancer which have spread from other organs. We have treated seven patients with LIPOSOMAL DOXORUBICIN CAELIX 20mg/m² i.v. every 21 days, and

INTERFERON-ROFERON A 3ME/0,5ml. third a week. Roferon is a protein which consists 165 amino acids, that is cause of damage injury cells by virus, also decrease cancerous cell's DNM and RNM proteins synthesis. The drug has antiproliferativ effect for the cancerous cells.

DECELLULARIZED AND LYOPHILIZED HUMAN AMNION/CHORION MEMBRANE GRAFTS FOR CLOSING POST-LARYNGECTOMY PHARYNGOCUTANEOUS FISTULAS

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Background: Squamous cell carcinoma is the most common pathological type among the cancers of the larynx. Standard treatment for squamous cell carcinoma of the larynx is the combination of chemotherapy, radiotherapy, and laryngectomy. Pharyngocutaneous fistula is a common complication of laryngectomy. We hypothesized that decellularized and lyophilized human amnion/chorion membrane can be an effective, non-invasive method of treating pharyngocutaneous fistula.

Methods: A total of 67 patients with laryngeal squamous cell carcinoma were retrospectively analyzed after treatment in a prospective trial. After preoperative chemotherapy, radiotherapy, and total or extended laryngectomy, primary wound healing occurred in 42 (62.7%) patients. Pharyngocutaneous fistula developed in 8 (11.9%) patients. Decellularized and lyophilized human amnion/chorion membrane grafts were used to reconstruct the fistulas.

Results: The average time for the full healing of the wound in all patients after transplantation of these grafts was 18 days. **Conclusion:** The advantages of using these grafts over other existing methods of pharyngocutaneous fistula treatment are that they are non-invasive, prevent donor morbidity, and enable management of the wound without using classical wound gauze.

РЕДКИЙ СЛУЧАЙ СОЧЕТАНИЯ ГАСТРОИНТЕСТИНАЛЬНОЙ СТРОМАЛЬНОЙ ОПУХОЛИ ЖЕЛУДКА И ХРОНИЧЕСКОГО ЛИМФОЛЕЙКОЗА: ТЕРАПЕВТИЧЕСКИЙ ПОДХОД

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Резюме: Синхронное возникновение и клиническое проявление двух неоплазий, таких как хронический лимфолейкоз (ХЛЛ) и гастроинтестинальная стромальная опухоль (ГИСО), явление исключительно редкое и случается не чаще 3 случаев на 10 миллиардов населения. В доступной нам литературе описаны только два подобных случая. Естественно, не существует общепринятых терапевтических стратегий для больных, страдающих ХЛЛ и ГИСО одновременно.

Мы сообщаем о 66-летнем пациенте, оперированном в 2014 году по поводу ГИСО. Во время инициального обследования у него обнаружен лейкоцитоз и доказан ХЛЛ.

Методы: Во время диагностирования пациенту осуществлены гистологический и иммуногистохимический анализ опухолевой ткани, флоуцитометрия периферической крови (ПК), флуоресцентная *in situ* гибридизация (FISH) лейкоцитов ПК, фиброгастроскопия, компьютерная томография (КТ).

Результаты: Наличие ГИСО у нашего пациента было доказано через гистологический и специфический иммуногистохимический анализ. Во время первичного обследования был обнаружен лейкоцитоз и абсолютный лимфоцитоз при отсутствии других отклонений гематологических и биохимических показателей. Лимфаденомегалия и гепатоспленомегалия на тот момент также не были обнаружены. Флоуцитометрия ПК выявила наличие моноклональной В-клеточной популяции с иммунофенотипическими характеристиками ХЛЛ. Не были открыты отклонения клинически значимых молекулярно-цитогенетических маркеров. После оперативного устранения ГИСО начато лечение тиразинкиназным ингибитором (ТКИ) – Имакребином. В отношении ХЛЛ пациент оставлен без терапии, под клиническим наблюдением.

Клиническое наблюдение в течении двух лет, включающие фиброгастроскопию, показало, что пациент находится в состоянии ремиссии в отношении ГИСО. Лечение ХЛЛ не было необходимо до февраля 2016 г., когда был зарегистрирован прогрессирующий лейкоцитоз (до 210 G/L) с подтвержденными посредством КТ клиническими проявлениями

генерализированной лимфаденомегалии и в легкой степени гепатоспленомегалии. После первого терапевтического курса по протоколу Ретуксимаб+CVP зарегистрировано полное и продолжительное нормализование гематологических показателей и отсутствие лимфаденомегалии и гепатоспленомегалии. В настоящее время пациент проходит непрерывный курс лечения ТКИ и под клиническим наблюдением в отношении ХЛЛ.

Вывод: Наш клинический опыт лечения уникального случая сочетания ГИСО и ХЛЛ показал, что эти два коренно различных по своей биологической природе заболевания могут быть одновременно третируются согласно современным методическим указаниям для каждого из них.

FETAL STRESS AND BREASTFEEDING

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Background: The amount of stress experienced by both the mother and fetus during pregnancy varies considerably. Stressful life events of fetal period negatively affect maternal and infant outcomes including breastfeeding initiation. A certain amount of stress is normal when considering the events surrounding childbirth and the onset of lactation and is unlikely to have any detrimental effects. However, women and infants whose experience is at the high end of the range for stress may be at greater risk for adverse outcomes.

Objective: To examine the association between of stressful life events during pregnancy and breastfeeding outcomes.

Materials/methods: 35 (severe stress n=15; mild stress n=10; control n=10) women were included in the study. Maternal stress observed, with plasma cortisol levels taken from participants'. Subjectively, each day during the first 1 week postpartum, the mothers collected a milk sample and recorded breastfeeding.

Results: Mothers' blood cortisol levels were positively associated with severe stress ($p < 0.001$) and negatively associated with bonding ($p < .001$). The composite score of the self-reported stress indicators, was found to be negatively associated with initiation of lactation ($p < .005$), associated with milk volume ($p < .005$)

frequency of feedings ($p < .001$) and duration of first feeding ($p < .001$).

Conclusion: Fetal stress can hinder the establishment of successful breast-feeding practices. Possible recommendations for mothers, whose experience of severe stress during pregnancy are serotonin reuptake inhibitors (SSRI, even if the most evidences suggest that the risks for infants are low). Other recommendation is to change consultation directions of mothers.

APPLICATION OF PROBIOTICS IN PEDIATRICS: ANALYSIS OF THEIR THERAPEUTIC AND PREVENTIVE EFFECT FROM THE POINT OF VIEW OF EVIDENCE-BASED MEDICINE

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Wide range of functions performed by probiotic strains, allows to use there versatile therapeutic potential for complex effect on the macro organism. It is important to conduct ongoing analysis of therapeutic and preventive effect of probiotics on child's microbiota from the point of view of new scientific technologies and evidence-based medicine, in order to provide their rational choice in different diseases.

RECURRENT WHEEZING IN PRESCHOOL CHILDREN: TREATMENT CHALLENGES

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Wheezing in preschool children is a very common symptom, but only some of these children will experience continued wheezing in later childhood making the diagnosis and treatment of these children challenging. Recurrent wheezing have a significant morbidity and it's estimated that about one third of school age children manifest this symptom during the first 5 years of life.

Episodes of wheeze in young children might be clinically severe and can result in parents seeking medical attention. Since no standard definition for the type, severity, or frequency of wheezing exist for this age group, clear evidence-based recommendations are lacking.

A pragmatic clinical classification of wheezing is episodic (viral) and multiple-trigger wheezing. The therapeutic options for recurrent, multiple-trigger wheez-

ing are different from those for acute, episodic first-time wheezing. Proper identification of children at risk of developing asthma at school age may predict long-term outcomes and improve treatment and preventive approach, but the possibility to identify these children at preschool age remains limited. The goal of long-term management of recurrent wheeze is to reduce symptoms, use of short acting beta agonists, and risk for future severe exacerbations and hospitalizations.

The evidence base for the management of recurrent wheezing in preschool children remains incomplete. Inhaled corticosteroids remain first-line treatment for multiple-trigger wheeze, but may also be considered in patients with episodic viral wheeze with frequent or severe episodes. Oral corticosteroids are not indicated in mild-to-moderate acute wheeze episodes and should be reserved for severe exacerbations in hospitalised patients. Leukotriene-receptor antagonists (LTRA) have been proposed as an alternative therapy, especially in poorly compliant preschool children, or in subjects who show adverse effects related to long-term steroid therapy. The excellent safety profile of LTRA and the possibility of oral administration, represent the main strengths of its use in preschool children with recurrent wheezing.

BRONCHIAL ASTHMA: AGE-SPECIFIC PRACTICAL ESSENTIALS

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Background: The new guidelines have also shifted focusing asthma control as the principal basis for ongoing asthma assessment, while retaining assessment of asthma pattern as the basis for the decision to initiate asthma preventer treatment. The latest guideline has increased the focus on recognition and response to severe and life-threatening asthma, although the principles of acute asthma management remain the same.

The clinical definition of asthma in children is ‘the combination of variable respiratory symptoms (e.g. wheeze, shortness of breath, cough and chest tightness) and excessive variation in lung function, i.e. variation in expiratory airflow that is greater than that seen in healthy children (‘‘variable airflow limitation’’).

Diagnosing asthma in children aged 0 to 5 years can be difficult because: episodic respiratory symptoms such as cough and wheeze are common in early

childhood; in a significant proportion of children, bronchodilator-reversible wheezing improves with age; spirometry has limited feasibility in this age group.

As with other age groups, the goals of asthma management in young children are:

- To achieve good control of symptoms and maintain normal activity levels
- To minimize future risk; that is to reduce the risk of flare-ups, maintain lung function and lung development as close to normal as possible, and minimize medication side-effects.

Maintaining normal activity levels is particularly important in young children because engaging in play is important for their normal social and physical development. It is important to also elicit the goals of the parent/carer, as these may differ from conventional medical goals.

The goals of asthma management are achieved through a partnership between the parent/carer and the health professional team, with a cycle of:

- Assess* (diagnosis, symptom control, risk factors, inhaler technique, adherence, parent preference)
- Adjust treatment* (medications, non-pharmacological strategies, and treatment of modifiable risk factors)
- Review response* including medication effectiveness and side-effects.

This is carried out in combination with:

- Education of parent/carer, and child (depending on the child's age)
- Skills training for effective use of inhaler devices and encouragement of good adherence
- Monitoring of symptoms by parent/carer
- A written asthma action plan.

This resume of presentation discusses the age-specific recommendations for the diagnosis, assessment and management of children with asthma and the available evidence on which these recommendations were based.

FETAL STRESS AND IMPACT ON CHILDHOOD WHEEZING

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Background: Childhood wheezing accounts for significant morbidity and health care use. Recurrent wheeze may be a precedent of asthma and reduced lung function. Those children who had more frequent wheezing before 3 years of age had an increased risk of asthma at 6 years of age. Severe stress is not always easily avoided, but daily stress, and specifically that associated with pregnancy itself, should be minimized as much as possible. Maternal severe stress during pregnancy might affect fetal lung development and subsequently predispose children to childhood asthma, but the role of fetal stress in the pathogenesis of childhood wheeze remains controversial.

Objective: To evaluate the independent effects of fetal stress on early childhood wheezing and asthma development.

Methods: Case-controlled retrospective study among 6-8 children (n=82). We assessed by the questionnaire the stress during fetal period at second trimester of gestation.

Results: Maternal severe stress during pregnancy can trigger wheezing and asthma of their child during the first 6 years of life. In final multivariate analyses, several determinants were statistically significantly associated with increased risk of childhood wheezing and asthma: However, we found that higher levels of fetal stress increased odds of wheezing in children (OR = 1.4; 90% CI = 1.32–1.93). Other perinatal and current maternal life events were also associated with asthma outcomes.

Conclusion: These findings suggest a direct mechanism relating between stress and wheeze in early childhood. Fetal exposure to maternal stress may contribute significantly to the population burden of preventable childhood respiratory illness. Severe stress during pregnancy may be opens a window for fetal programming of immune functioning.

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IMPACT OF FETAL STRESS AND C-SECTION ON ADHD

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Introduction: Attention-deficit/hyperactivity disorder (ADHD) is among

the most commonly diagnosed behavioral disorders in children. It is clinically characterized by hyperactivity, impulsivity and inattention. These symptoms often continue into adulthood and may lead to an increase of family conflict, poor occupational performance and academic failures throughout adult life. Study has been shown that ADHD is a highly genetic disorder, with complex and multifactorial environmental risk factors.

Study Purpose:To examine the relationship between fetal stress, confinement type and ADHD in children.

Design of study:Prospective cohort Study

Material and Methods:The study was conducted as part of the state program component, where studied mental and behavior development Disorders of children aged 1-6 years. Inclusion criteria's were: verified ADHD, the existence of prenatal stress, ADHD Subjects associated with and without hyperactivity syndrome, gender, age, nationality, social condition, breast-feeding frequency.

Results:During the study were investigated 302 patients with mild and moderate degrees mental disorders, from which 39 subjects had ADHD and one of them without hyperactivity form. 32 were boys. 12 were born by C-section, 11 mother had a prenatal stress. ADHD was diagnosed by Conners Early Childhood scale. $P < 0.01$

Conclusion:Our study shows that maternal stress during pregnancy and C-section born type increases the risk of ADHD diagnosis late time of life. The study illustrates the need for increased support to pregnant women whose children are at higher risk of developing ADHD symptoms.

CHILDREN'S FOOD SECURITY LEVELS IN GEORGIA

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Children's meal is the topical issue for all countries in the world, as it is not provided equally in all countries. Children's nutritional behavior and food security, food-grade and education of the public about the need for their children, significantly reduces the risk of diseases related to the food in children. In recent years, attention of the world is increased towards the consumption of the feed, which is particularly dangerous for children, because of their accumulation in the body affects the devel-

opment of some body systems and leads to growth retardation and varying degrees of functional disorders.

The food security is unequal in many Low-income countries, including Georgia; one of the main problems is the completeness of infant nutritional food. The availability of imminent products is low. Therefore increases the risk of disease development, such as growth retardation, weight deficiency, metabolic problems, obesity, and diabetes.

Children's food security interest is extremely high, therefore a lot of social and scientific research was carried out by international organizations. Malnutrition or eating disorders causes severe physical and economic damage to the country; to alleviate the occurrence of significant human and social resources and, therefore, contributes to the country's economic growth.

Children's meals have the great importance of parental awareness and the provision of food in kindergartens. Therefore, social survey of parental awareness about children feeding and Kindergartens nutritional supplements was conducted. Research has shown that parental awareness of children's meals is quite low and children's meals are not balanced.

The research of preschool employees has established low level of awareness of children's organized facility about children who need special feeding table. All pre-school facility is not provided with food menu, which is compiled by the Special Service. In most cases, the diet is not definite the protein, fat and carbohydrate composition, as well as vitamins and minerals.

THE LEADING CAUSES OF MORTALITY AMONG THE CHILD POPULATION (ELDER GROUPS) IN THE REPUBLIC OF BELARUS

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The main causes of mortality among the child population in the Republic of Belarus have been studied in two groups: teenagers (10-13 years) and adolescents (15-17 years).

The data from the official statistical reports (2011-2015) have been studied. The average values for this period, including the levels of various reasons, the accu-

racy of the mean values, and the accuracy of the estimated differences between the age groups have been calculated.

The levels of average annual mortality rate among adolescents ($35.15^{0}_{/0000}$) were twice higher than in children aged 10-13 years ($16.99^{0}_{/0000}$). It has been found that the leading causes of death in the both age groups were “injury, poisoning and certain other consequences of external causes”. The share of injuries in the structure of mortality made 48.4% for children aged 10-13 years and 64.2% for adolescents aged 15-17 years. Other causes are arranged in descending order. In children aged 10-13 years, they are: diseases of the nervous system (the second position, 16.7% of the cases), neoplasms (the third position, 10.1%), congenital malformations, deformations and chromosomal abnormalities (the fourth position, 7.5%), diseases of the circulatory system (the fifth position, 5.6%) and certain infectious and parasitic diseases (the sixth position, 4.4%). These 6 reasons accounted for 92.8% of all cases.

In adolescents, the reasons are as follows: neoplasms (the second position, 10.9%), diseases of the nervous system (the third position, 8.5%), diseases of the circulatory system (the fourth position, 4.6%), symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (the fifth position, 4.5%), congenital malformations, deformations and chromosomal abnormalities (the sixth position, 4.4%). The share of these 6 reasons accounted for 96.6% of adolescents' mortality cases.

The intensity levels of mortality for various reasons was significantly higher in adolescents with injuries (2.7 times), diseases of the genitourinary system (2.4 times), neoplasms (2.3 times), diseases of the circulatory system (1.7 times). The greatest excess has been recorded for the class “symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified” (4.3 times).

In the group of teenagers, higher death rates have been recorded for certain infectious and parasitic diseases (3.8 times), diseases of the digestive system (2.5 times), endocrine, nutritional and metabolic diseases (1.6 times) and diseases of the musculoskeletal system and connective tissue (1.5 times).

The differences between the main reasons of mortality and their levels in adolescents and teenagers have been revealed.

The findings should be taken into account when planning the preventive work and medical and non-medical interventions aimed at the preservation of life and maintenance of children's health in the both groups (teenagers and adolescents). A particular attention should be given to various aspects of injury prevention.

BILE PATHWAY RECONSTRUCTION AND DUCTULAR REACTION FOLLOWING COMMON BILE DUCT OCCLUSION

(Experimental Study)

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Investigation of biliary pathway of rodents (Wistar and Fisher rats) on the different terms after common bile duct ligation (CBDL) shows that ductular reaction following biliary obstruction includes “pre-proliferative”, “proliferative” and “para-proliferative” features interfering in time.

Ductular profiles appearing in several hours after CBDL represent the widened branches of periportal biliary plexus and periportal/intralobular fragments of the canals of Hering.

The proliferating cholangiocytes, hepatocytes and oval cells (peaks of mitoses of these cells replace one-another in 2nd-6th days after CBDL) create neoductules disseminated in all areas of liver lobules. These neoductules are in connection with existed biliary pathway and subjected to increased biliary pressure.

Part of hepatocytes reveals the features of biliary transdifferentiation on the different terms of CBDL. Ductular-like structures formed by the hepatocytes with transformed cytokeratin profiles also become the integrated part of intralobular biliary network.

Thus, the ductular reaction following CBDL is based on different mechanisms and associated with high plasticity of biliary pathway.

INFLUENCE OF EXOGENOUS ANDROGEN ON METABOLISM IN LIVER OF MALE RATS WITH ALLOXAN DIABETES

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Background: Both types of diabetes (I and II) are characterized by chronic hyperglycemia, causing a disturbance of the metabolism of carbohydrates, proteins and lipids in various organs, including the liver. At the same time, it is considered that men's liver is more dependent on the concentration of genetically determined androgen in the blood, than women's one.

Methods: The influence of exogenous androgen on blood concentrations of glucose, insulin, corticosterone, somatotrophic hormone, testosterone and estradiol was studied in male rats with alloxan diabetes - by radio-immunological methods. The intensity of DNA and RNA synthesis as well as expression of androgen receptors in liver tissue were estimated by radiometric method.

The research was performed on 15th, 30th and 45th days after modeling the diabetes, also after 15 days from methyltrienolone injection to animals with 30-days diabetes.

Results: It was revealed that the concentration of glucose, estradiol, somatotrophic hormone and corticosterone were gradually increasing at all stages of diabetes, while the concentrations of insulin and testosterone were reducing. Index of intensity of DNA and RNA synthesis as well as the expression of androgen receptors in liver tissue were also declining. The injection of methyltrienolone reveals the trend of normalization of all aforementioned changes. **Conclusion:** The study shows that exogenous androgen has a corrective effect on metabolic processes in the liver of male rats damaged by alloxan diabetes.

THE PECULIARITIES OF MYOCARDIAL MICROCIRCULATORY BED AND ENDOTHELIAL PERMEABILITY UNDER REMODELING CONDITION

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Background: We can distinguish that hyperfunction of endothelial lining is the reaction to energy (oxygen) deficiency due to myocardial infarction. There appear a number of adaptation reaction directed to the restoration of damaged homeo-

stasis of heart muscle cells, including transcapillary permeability. The first earliest reaction is edema of endotheliocytes and disruption of their junctional complexes. In this point of view, biological sense of function's dissociation and role of this dynamic processes in starting phase of myocardial arrest are not well understood.

Research goal is to make some presumption about structural organization of tissue metabolic transport and role of junctional fibrous components in this facts.

Methods: Rabbits (n=20) with modeled left ventricle myocardium infarction (under prescription of “Georgian association for Laboratory animal sciences “Galas” and European Guide for the Care and Use of Laboratory animals (Strasbourg, 02.12.2005).

Euthanasia method – intraperitoneal injection of hexenal 300 mg/kg. Delivery period – 15, 30, 45, 60 min after coronary artery ligation. Preparation – 1) histology: hematoxylin-eosin (H@E) staining, 2) electron microscopy fixation – glutaraldehyde, contrast by uranylacetate, EM Tesla BS 500, using magnification 5000 – 30 000X.

Results and Conclusion: (H@E) multiple dissipated necrotic foci in left myocardial area, edema. Atypical reaction in capillaries wall on the energy deficiency is to make additional ways of macromolecules and gas permeability between blood and surrounding tissues by zonula occludentes enlargement, detected in EM study. In this reaction modification of the pinocytotic vesicles diversity alongside of endothelial surfaces also take part. Appearance of: 1) large pore equal structures into continuous capillaries like “drop” valves, 2) opening of tight junctions, 3) distinct filamentous structure containing ferric saccharate particles (permeability marker). From our points of view they are leading concept mechanisms in dramatic myocardial remodeling to compensate oxygen deficiency.

Really, the extensive new technologies are obvious to well describe this problem.

MORPHOLOGICAL-FUNCTIONAL CHANGES DEVELOPED IN PLACENTA DURING SOME PATHOLOGIES OF PREGNACY

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There is no more difficult problem in obstetrics than pathologies developed during

the pregnancy such as gestosis, anemia, hypotonia, etc

During the last five years, frequency of gestosis increased by 3-4%. There is still a danger for normal development of pregnancy and risk of mother and foetus death. Anemia of different genesis is also frequent complication for pregnancy that influences roughly pregnancy and delivery.

Placenta is changing during all the above pathologies – placenta is an organ, which takes important place in the connection of mother and foetus. In some cases, the knowledge of its structural changes helps us to understand reasons of diseases of newborns as well as condition of the mother.

An object of our research was to study changes developed in placenta during some pathologies of pregnancy.

As material, we used placentas of women, who have the above pathologies during the whole period of pregnancy. We took material for histological research from central and lateral parts of placenta, put it to Carnoy's fluid, colored paraffin sections by hematoxylin-eosin and picrofuxin by methods of Van Gieson and Brash-et. After appropriate processing, we studied ultra-structure by microscope „Tesla-B-500”.

During severe form of gestosis, serious disorder of blood circulation in placenta happens that appropriately causes changes of its tissues. During severe form of gestosis, in the basic villus and chorion of placenta there is decrease of penetration of the wall of great vessels observed that causes edema, sclerosis, hyperplasia and fibrinoid degeneration. There is stenosis of vessel's lumen, sometimes complete obliteration, thrombi, hemorrhage in intervillous cavity observed too. Veins are varicose, capillary network of finite villi are “overflowed” by blood, bloodless villi can be observed too.

There were severe destructive changes of plasmodiotrophoblast revealed – vesicles facing to the lumen are decreased significantly. There are intracellular and intercellular edemas observed. In cytoplasm there is swollen mitochondrion appeared, except primary and secondary lysosomes, there are vacuols of different size found, quantity of granulation endoplasmic reticulum is decreased. All the above point to the necrobiosis process running for a long time. Syncytial layer becomes thinner around the capillaries.

Histochemical researches shown us that during gestosis of severe form, quantity of glycogens in DNA and RNA in placenta is decreased in comparison with its normal rate and we meet it, basically, in the capacity of “dust” in the walls of great vessels and some villi.

In the placenta of pregnant anemic women, there are serious changes of degenerative – sclerotic and hemodynamic type observed. Laying of fibrin in quantities causes fibrinoid degeneration of villi in quantities and, practically, they are excluded from the functional part of placenta, they lose their functions, placenta's stroma is strongly collagenized, especially, quantity of immature and capillare-free finite villi around the vessels is increased. There is hyperplasia and agglutination of some finite villi observed, they create big conglomerates. Syncytial cover of villi is exhausted, destructed and disappeared in some places.

Quantity of nuclei in syncytial cytoplasm is decreased in some places and in other places they are located by groups. Nuclei have oval or round forms. Quantity of micro-villi is decreased. Basal membrane is destructed or exfoliated in some places it is. Quantity of cytotrophoblastes is significantly increased that can be considered as reaction of villi's epithelium toward the chronic hypoxia of maternal part of placenta. Change of hemodynamic type is expressed by stasis of intervillous space in either great vessels or capillaries, with hemostasia, “overflowing” by blood, hemorrhage.

During the above pathologies, some compensative mechanisms appear in placenta, which facilitate retention of pregnancy, such as increase of quantity of finite villi and capillaries, appearance of “syncytial buds” and syncytial-capillar membranes, as well as increase of micro-villi in some places

RESPONSE OF HYPOTHALAMO – HYPOPHYSIAL HORMONES AND RENIN – ANGIOTENSIN SYSTEM ON THE POSTAGGRESSIVE REACTION OF AN ORGANISM

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Background: In connection with a steady increase of traumatization, we represent the study of hypothalamo-hypophyseal hormones (ACTH, vasopressin) and Renin-Angiotensin-Aldosterone system characteristics during a heavy visceral trauma.

Methods: Experiments were performed on 28 mongrel male dogs. Traumatization (eventration of the bowel, mesentery panchulation) caused the 30-50% drop of arterial pressure and the blood circulation decreased by 45-65%. The studies defined two groups of animals: the first group – dead after prolonged traumatization, the second group – survivors. The concentration of hormones in blood plasma was

determined by radioimmunoassay. Experiments were approved by the Institutional Animal Care and Use Committee on Bioethics.

Results and Conclusion: According to the data: during the early stage of postaggressive reaction, immediately after a primary hyperfunction of neurohypophysis, the hypofunction is observed, one of the main causes of which is the disconnection of vasopressin synthesis (hypothalamus) and secretion (hypophysis). Concerning the adrenocorticotropin function of adenohypophysis, two types of reactions are observed. The first type is expressed in breach of a negative feedback mechanism, present between the adrenal cortex and adenohypophysis, increasing the ACTH concentration in blood. Second type is expressed in negative feedback and a decreased ACTH concentration.

The reaction of the renin-angiotensin-aldosterone regulation system to the traumatic shock has a mono-directional character, as of qualitative response, which becomes apparent in repeated activation of these systems.

The quantitative response of the system is opposite to the qualitative reaction: in one case, we observe the efficiency of adaptative process, where the organism survives, while in the second case - the fatal result is related to the interaction of cellular receptors with catabolic hormones and vasopressin.

POTENTIAL DONOR AS AN OUTCOME OF FAILED EXTRACORPOREAL RESUSCITATION

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Background: According to the World Health Organization (WHO), 200 000 cases of cardiac arrest are recorded per week. In addition, 90% of patients die at home or in the office (out-of-hospital) before the arrival of the emergency. Such critical condition is the first manifestation of the disease in 1/3 of all incidences. The application of conventional methods of resuscitation is effective only in 10% of such patients. Currently the new method - called extracorporeal cardiopulmonary resuscitation (ECPR) is considered to be the most effective. Using special perfusion systems, returned to life 40% of patients. The rest 60% of sufferers, who record to have a refractory cardiac arrest, may be considered as a potential organ donors according to the classification of Maastricht.

Methods: The new approach is proposed to increase the donor pool. In case of inefficiency of the extracorporeal resuscitation, performed because of the cardiac arrest in out-of-hospital conditions, the artificial circulation should be continued during transferring the patient to the hospital. Eventually, the patient's condition should be determined by the council of physicians at the hospital and further treatment should be decided accordingly. If the brain function is preserved, substitution of the patient's cardiac function with artificial analog will be possible. In case of loss of brain function, recognition of the patient as donor or refusal to donation may be decided with the participation of relatives and lawyers.

Results: While using this new resuscitation method, the patient's organs are in optimal perfusion conditions despite the firm, the refractory cardiac arrest, and eventually, if acknowledged as the potential donor at the hospital, it would be possible to get transplants, with minimal warm ischemia. For the realization of this idea, a group of scientists at the Institute of Morphology of TSU have successfully conducted experimental researches on animals, since 2001.

Conclusion: The widespread introduction of the proposed method of resuscitation in practice, will improve the quality of treatment of patients with cardiac arrest and at the same time, increase the potential donor pool, and improve the quality of organ transplants.

DECELLULARIZED HUMAN PLACENTA AS A THREE-DIMENSIONAL SCAFFOLD FOR TISSUE ENGINEERING

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One of the most attractive features of treatment of patients with fulminant hepatic failure is the development of efficient, safe and easily accessible liver support system, which will make it possible to support the patient in the acute phase of liver failure and help the native liver to recover, or to provide time for finding a suitable donor. This work concerns the possibility of creating auxiliary liver from the decellularized human placenta. As a substrate for the creation of auxiliary liver the fragments of liver tissue were used, containing the entire range of cells of the given organ. The decellularized human placenta was used as a three-dimensional scaffold. Auxiliary liver was transplanted heterotopically into 12 sheep. Fragments of the liver lodged in a three-dimensional scaffold of a placenta formed the homogeneous tissue,

which visually does not differ from the normal liver parenchyma. Cellular composition of the transplanted fragments did not have signs of disorganization, steatosis or bile accumulation. After inclusion in porto-caval blood flow, the vascular system of the decellularized placenta provided adequate blood supply of the transplanted liver fragments during the whole period of observation. Human placenta is easily accessible natural material with a well-developed vascular system and can be used in the bioengineering of the organs and tissues, as well as for auxiliary liver creation.

THE ROLE OF RESEARCH UNITS IN THE TRAINING OF MEDICAL STUDENTS FOR DEVELOPING OF SURGICAL SKILLS

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Background: Despite the intensive clinical application of the scientific and technological innovations, the effect of the human factor in surgical intervention remains decisive. The existing model of training highly qualified specialists in the residency program does not always render positive results. For adaptation of the educational process with modern conditions it is developed the new method and forms to stimulate the motivation of students for intensification of training and perfection of surgical habits. The method of colleagues at the department of clinical anatomy of the medical faculty of Tbilisi State University is based on the early professional orientation of the students, and their active attraction in the specialized surgery groups within the department's "Scientific-Training Center of the Experimental Surgery". The Center has united the abdominal, thoracic, microvascular surgery, plastic surgery, anesthetic groups and the group of artificial life support.

Methods: Teaching was carried out on the basic and specialized stages of preparation in the duration of 6 years in conjunction with regular classes at the faculty. 50 students (I-VI year of education) were involved in surgical trainings. The first 2-year of training was performed on dummies and biotissues.

The first 2-year of training was performed on dummies and biotissues. Next 2-year - training in experimental researches on animals, with mastering the habits of restoration and preservation of the functions of vital organ. The intensive surgical training is possible only in specialized settings, such is the Scientific-Training Center of the Experimental Surgery.

Results: 1. As compared with the rest of the fellow students, significantly higher level of knowledge of theoretical foundations and practical skills in various fields of surgical specialty.

2. Positive influence on learning process in general, with improved academic performance of students in every surgical discipline.

3. Popularization and promotion of scientific work with active engagement of students in research activities of the department.

4. "Painless" adaptation of students in the clinical departments of hospitals.

Conclusion: At the end of the undergraduate study it allow to reach the high level of skills in basic surgical manipulations and practical habits.

PANCREAS ISLET ENDOTHELIAL CELLS DURING ALLOXAN DIABETES AND AFTER ACTION OF PLAFERON LB

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Background: Pancreas islets' endothelial cells play an important role in the early phase of type 1 diabetes mellitus. It is well known that the endothelial layer represents a barrier to blood cells and produce number of vasoactive substances, angiogenic substances and growth factors. B-cells and the islet micro-vascular system cooperate in the maintenance of glucose homeostasis. Research of the special morphology of islet endothelial cells and its role in the physiologic function of pancreatic islet β -cells is of great theoretical and practical interest. The overall aim of the present study is to investigate the influence of amniotic derived peptide (Plaferon LB) on renewal processes in the pancreas of rats with Alloxan-induced diabetes.

Methods: The pancreas was studied in the experimental model of diabetes with the following research methods: light microscopic, electron-microscopic, immunohistochemical and electron-radiographic. A total of 90 Wistar laboratory rats were used in the experiment. Among them, 30 received an Alloxan injection to induce diabetes and underwent treatment one month later with Plaferon LB for 10 days (Alloxan/Plaferon LB-treated group). Another 30 rats received an Alloxan injection, however no subsequent treatment with Plaferon LB (Alloxan-treated group), while

the rest 30 rats were used as a control group (control group).

Results: Present study using the light and electron-microscopic research methods showed that during the development of Alloxan-induced diabetes changes, such as dystrophy and necrosis, were apparent not only in the β -cells, but also in the vascular system of the pancreatic islets. The endothelium underwent alterations (dystrophy and desquamation of the endothelium) followed by the transendothelial migration of immune and inflammatory cells into the pericapillary space and the endocrine tissues, with consequent progressive injury of the β -cells. Alloxan/Plaferon LB-treated group presented endothelial layers that appeared to be thin and well-fenestrated. Immunohistochemical analysis showed that CD34-positive cells were located within islets and scattered throughout the pancreas. Endothelial cells of islet sinusoidal capillaries were strongly expressed by CD34. The same research method revealed CD34-positive precursor cells in subpopulations of cells adjacent to the ductal epithelium. Using the electron-radiographic method high synthetic activity of deoxyribonucleic acid was revealed also in the same cell population.

Conclusion: Based on present findings, we suggest that Plaferon LB exerts antioxidant and anti-inflammatory effect, stabilizing oxidative metabolism in the vascular system. According to this finding, we hypothesized that Plaferon LB activates processes of endothelial proliferation and initiates formation of new capillaries. Plaferon LB might activate angiogenic processes and mobilizes bone marrow derived cells in pancreas of the Diabetic rats.

THE BREAST CANCER CLINICAL FEATURES

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Background: The breast cancer is morphologically and clinically heterogeneous disease, however, it is less clear how clinical features relate to tumor characteristics and histological specificity in female patients. In accordance with these goals it was necessary to accomplish morpho-epidemiological research in Georgia.

Methods: 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.

Results: The case-reports of 2000 – 2009 in Georgia were studied. Data obtained revealed that there is very high percentage of lately established diagnoses among the patients with all types of breast cancer and, as a consequence, in all cases predominate II, or III stage of cancer. That emphasizes the importance of the breast cancer screening-program, started in Georgia. The invasive lobular carcinoma is characterized by most rapid and widespread of metastasis in comparison with other types of breast cancer.

Conclusion: The predominant age for women with all histological types of breast cancer is between 41 and 60 years, or after 60, in menopause; most of patients with all types of breast cancer reported having multiple abortions in anamnesis. The most correlation with hereditary factor reveals among patients with Paget disease, while the less – among women with intraductal carcinoma in situ. These findings might be useful in prevention efforts for breast cancer in Georgia.

RARE TYPE OF BENIGN MELANOCYTIC TUMOR OF THE BRAIN

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Objective: Benign melanocytic tumor of the brain is rare finding and diagnostic dilemma for pathologists. We report a case of infratentorial benign melanocytoma in 42 years old female, clinically manifested as a hemorrhagic stroke. MRI revealed infratentorial tumor.

Methods: Resected tissue was studied by H&E and immunohistochemistry (with anti- Melan-A, CD117, S100, CD99, GFAP, Synaptophysin, AE1/AE3, 34 β /E12 and Ki67 antibodies (Leica)).

Results: Microscopically tumor consisted of slightly spindled, well-differentiated melanocytes, containing high amount of melanin. They formed of tight nests, fascicles and sheets. Cells contained oval or bean-shaped nuclei, small eosinophilic nucleoli, no cytologic atypia. Mitoses - <1/10hpf. Tumor expressed Melan-A and S100 and was negative for CD117, CD99, GFAP, Synaptophysin, AE1/AE3 and 34 β /E12. Ki67 labeled <1% of nuclei.

Conclusion: Based on histopathologic features, differential diagnosis included melanocytoma, melanoma, melanotic schwannoma and meningioma. Unlike

our case, melanoma cells are more pleomorphic and has higher mitotic rate. Melanotic schwannoma was excluded by molecular profile (GFAP-, Melan-A+). Tumor also was negative for pancytokeratin markers, which excludes meningioma. Tumor was classified as benign melanocytoma. No adjuvant chemotherapy or radiation therapy was performed. After 16 month of follow up, patient has no recurrence and return to normal life with minimal neurologic complication (slightly decreased field of vision).

CHARACTERISTIC OF THE MICROCIRCULATION IN THE COLON AND PANCREATIC ADENOMA (SEVERE DYSPLASIA)

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Introduction: The past decade is characterized by the increased interest in pre-cancer and cancer risk factors for dysplasia (e.g. adenomas with severe dysplasia) in the benign tumours. The overall aim of the present study is to identify, assess, and diagnose early pre-cancer risk, as well as, select prognostication biomarkers in separate groups of dysplasia of the colon and pancreas samples.

Methods: The samples in the present study represented histologically verified adenoma of the colon (n=17) and pancreas (n=12) with severe dysplasia. The sample staining was performed using the H&E. Using the electronic radiographic method, the synthesis of DNA and RNA by ^3H -thymidine and ^3H -uridine was studied in the colon and pancreas post-surgical samples. The doses were the following: ^3H -thymidine (specific activity 22 Ci/ml) of 10 mCi/ml per dose and ^3H -uridine (specific activity 24 Ci/ml) of 100 mCi/ml per dose. This method was used for marking of: a) the cell's current biological process and b) active proliferative areas. Immunohistochemical research method was used to determine the factor of vascular growth, peculiarities of expression of VEGF-A and CD34 in adenomas during the development of dysplasia.

Results: The adenomas with severe dysplasia were characterized by disorganization of the tissue architectonics and of the cellular differentiation disorganisation. Research of stroma of the present pathology revealed the strengthening of the angiogenesis and neoangiogenesis, which was confirmed by electronic radiographic research method. In particular, intensive marking by ^3H -thymidine was observed in

the most parts of the endothelial cells. Additionally, in adenomas with severe dysplasia one can find the endotheliocytes, which synthesize the RNA and therefore, were characterized by high-level metabolism. The immunohistochemical investigation revealed positive reaction on VEGF and CD34 in endothelial cells of the adenomas, which gives information about *de novo* dysplasia of endotheliocytes. The positive reaction of microvascular system on VEGF was observed basically in stroma, while the expression of CD34 occurred often around the adenomatous glands. It is remarkable, that the VEGF, CD34 expression and synthesis of DNA were significantly increased in adenomas with severe dysplasia, as compared to the norm. This could be used as a prognostic marker of biological potential of this process. Adenoma with severe dysplasia represents pre-condition of cancer development, which can serve as background for the possible emergency of the micro-carcinoma e.g. intra-epithelial cancer. In case of cancer cell invasion in this area, focal carcinoma and subsequently, adenocarcinoma will develop.

Conclusion: The present study showed that the colon and pancreatic adenomas with severe dysplasia represent the risk factors for cancer development. A special attention should be paid on assessment of micro-carcinomas, as long as, they often give the hidden remote metastases, which are masking the primary location of the pathological process.

FEATURES OF THE AORTIC WALL MORPHOLOGY AND IMMUNOHISTOCHEMISTRY UNDER ANEURYSM

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Background: The purpose of the study is to determine the different morphological manifestations of the aortic wall aneurysmal transformation on the background of compensatory-adaptive changes (v. vasorum and angiogenesis) focusing on arterial hypertension.

Methods: We used surgical material from the Acad. G. Chaphidze emergency Cardiology Center (Tbilisi).

For morphological study ascending aorta tissue samples were staining by hematoxylin and eosin and examined in the Light microscope Daffodil MCX-100 (Austria). For immunohistochemistry (IHC) studies used vascular endothelial

growth factor (VEGF) and neoendotelial cells receptors marker CD34 ("Novocastra" Mouse Monoclonal Antibody). IHC reaction were evaluated by semiquantitative method according the number of positively stained cells in points.

Results: In all layers of the ascending aorta is observed both elastic and collagen fibers homogenization, also lysis foci infiltrated by macrophages. In the smooth muscle cells hydropic dystrophy and necrosis take place, aortic wall normal structure was replaced by the adipose tissue and multifocal calcification. In various fields of view there are multiple microthrombuses and hemorrhage. On the border of media and adventitia there are areas of myoelastofibrosis, sklerofibrosis and also lymphomacrophage infiltration. The media muscle component is thickened and infiltrated with histiocytes. There are necrotic changes of smooth muscle cells and transmural hematomas.

Conclusion: VEGF and CD 34 are specific factors regulating angiogenesis under the aortic aneurysm and thereby inhibit neovascularization. There quantity, distribution and state of the v. vasorum wall give evidence about an active intramuscular hemodynamic rearrangements of the aortic wall, due to arterial hypertension level, intended to compensate ischemia, hypovascularisation and disorganization of the vessel wall inner layers in the process of aneurysm formation, which, along with the pathogenesis systemic factors, determine the duration and asymptomatic course of the disease.

IMMUNO-CYTOLOGICAL ASSESSMENT OF SPLEEN CELLS IN POSTOPERATIVE PERIOD OF SPLEEN PRESERVING SURGERY

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Background: The aim of this study was to study the ultrastructural properties of the spleen cells and their ability to implement co-operative functions in immune responses in the post partial resection of the organ.

Methods: The experiments were carried on 36 male rats (130-160g). The partial resection of the spleen was made to the animals under anesthesia using the laparotomy. The rats were taken out from the experiment after 1, 7, 15, 30, 90 and 180 days from its start. Ultrathin spleen sections were examined in electron microscope

TESLA BS 500 considering the 4000 – 14000 increase.

On the basis of the ultrastructural study of the left spleen part the functional activity of the cells, as well as significant activation of the immune system after organ preserving surgery were revealed and studied in our experiments for the first time.

Results: The results enable us to conclude that the in the rest spleen the binding process of pathologically modified erythrocytes is conducted in two phases: on the first stage the mortal erythrocytes, as adsorbents antigens, stimulate the transformation of B lymphocytes into plasma cells, thereby increasing the production of antibodies. The disposition of the mortal red blood cell nearby the plasma cells causes the antigen-antibody complex formation, which in turn leads to the disintegration and lyses. On the second stage the erythrocytes, destroyed by macrophages, are eventually bound and proceed. The substances, released in this process lead to the regulation of erythropoietin.

Conclusion: We can suppose that the operated spleen is capable to activate its own protective function and may produce a humoral immune response to self-antigens, as response to the surgical trauma and directed to restore homeostasis.

From the above, it can be concluded that spleen (organ-preserving) surgery has important advantages in the case of injuries of the abdominal cavity.

PARAFUNCTION OF ADENOHYPOPHYSIS IN WOMEN WITH NON-INSULIN DEPENDENT DIABETIC RETINOPATHY

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Background: The level of prolactin, somatotropin and thyreotropin hormones were measured in blood of patients with non-insulin dependent diabetes mellitus (NIDDM) with and without diabetic retinopathy (DR).

Methods: 51 female patients aged from 50 to 70 were examined. The patients were divided into three groups. I group included 17 female patients with NIDDM without DR. II group – 17 patient with NIDDM complicated by DR and III control group – practical healthy females without hereditary diabetes.

Results: Our study showed that NIDDM with DR is characterized by expressed

changes of pituitary hormone levels. NIDDM without DR – somatotropin and prolactin concentrations are increased, thyreotropin is decreased. Findings, obtained after research have shown, that levels of all studied hormones – prolactin, somatotropin and thireotropin in I and II groups had similar quantitative changes, but we observed the difference in increasing their degrees.

Conclusion: Reviewed data give reason to include levels of content of prolactin, somatotropin and thyreotropin in blood plasma to the markers in the pathogenesis of diabetic retinopathy.

LOCAL ISCHEMIA OF THE HEART ON THE BACKGROUND OF COMPENSATORY MYOCARDIAL HYPERTROPHY

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Background: It was studied the heart muscle and its blood vessels structural changes under the experimental myocardial infarction in the preceding background of pathological changes, namely the vessel-tissue relationships after the coronary artery ligation on the background of myocardium hyperfunction and hypertrophy.

Methods: Experiments were carried out on adult mongrel dogs of both sexes. 1,5-2 month later after modeled aortic stenosis or open arterial duct (aorto-pulmonary anastomosis) made ligation of coronary artery branch, because in this time in the hypertrophied myocardium under the experimental heart defects there is a pronounced failure of compensatory-adaptive conversion. For the control to carry out the same operation on the intact heart.

For histological investigation paraffin sections were stained by hematoxylin-eosin and studied by the microscope "Ergeval". For electron microscopy - myocardium slices were prepared by generally accepted technique and examined by the electron microscope Tesla BS 500.

Results: In contrast to the control group in experimental animals in the early stages of the experiment infarct zone occupies a much larger area and in most cases extends into the thickness of the myocardium. The process of organization delayed too. More severe lesions in the experimental animals caused by previous changes in the myocardium and blood vessels.

Conclusion: Histological and electron microscopic studies of the heart muscle and

blood vessels showed that ligation of anterior interventricular branch of the left coronary artery in 1,5-2 months after the modeled aortic stenosis, or open arterial duct is a more adequate model of myocardial infarction than similar coronary artery ligation on the background of intact heart.

This allows us to recommend the use of this model for the study of myocardial infarction in experimental conditions.

NANOPARTICLES AND NANOTECHNOLOGIES IN MEDICINE: CONDITION AND PROSPECTS

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Nowadays, nanomedicine is defined as the observation, monitoring and control of human biological systems at the molecular level using nanodevices and nanostructures, including their correction and construction.

The final prospects of using nanotechnologies, like nanorobots or other nanotechnologies in medicine, proved to be the opportunity for changing cellular structure at molecular levels.

Nanotechnologies in medicine, pharmacy or the adjusting fields of the sciences are focused on solving specific problems:

- Formation of solid bodies and surfaces with modified/alterd molecular structure;
- Development of nanocontainer vector technologies for drugs delivery;
- Synthesis of new chemical compounds without using chemical reactions;
- Development of self-regulating (self-destructing) systems on the base of bio-analogues - bacteria, viruses, protozoa;

Development of accurate medical nano-manipulators and diagnostic devices;

In medicine, nanotechnologies are used in five main fields: target delivery of active drugs, new methods and approaches using nanoparticles, in vivo diagnostics, in vitro diagnostics, medical implants.

It should be noted that the need to provide a thorough and comprehensive study of all aspects of nanoparticles affecting living systems does not reduce the

great interest of scientists and practitioner- physicians in these preparations.

To study nanoprocesses and their mechanisms, norms, standards, methodologies and then, on this base to study pharmacologic features, toxicity and ecology of candidate drugs will allow us to develop and formulate the rules/instruction that might be conventionally called as GNP (good nanotechnological practice). As for our opinion this period will open a new page in medicine.

ABOUT INTERPRETATION OF THYROID GLAND MICROCARCINOMA DATA

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Background: 2015 Annual Meeting of Endocrine Pathology Society in Boston (March 21, 2015) suggested the recent trend incidence of papillary thyroid carcinoma (PTC) less than 1-2 cm in size, while the incidence and frequency of common large tumor are stable (Pacini F., 2012; Bongiovanni M. et al., 2015; Nikiforov M. et al., 2015). Our database reported that nowadays the most occurring PTC in Georgian regions is a microcarcinoma (mPTC) in patients older than 40 years. But diagnostic accuracy and crucial points how to manage such microcarcinoma, presentation, clinical impact and surgical intervention are not clear including its definition.

The aim of this study was to distinguish mPTC in thyroid lesions removed by surgical resection and discuss its pathological modality of presentation.

Methods: A total 72 cases of surgically resected thyroid lesions during 2015-2016, were collected from National Endocrine Institute (Tbilisi) and National Centre of Intervention Medicine of Western Georgia (Kutaisi), paraffin embedded and Hematoxylin and eosin stained samples were used for histopathological examination.

Results: From total 72 cases only 7 histories (10%) of mPTC have been detected in preoperative stage – during neck ultrasound performed for thyroid disease. All patients – women aged 32±48 years old. Surgical prevalence correlated with thyroid sectioning as reported by F. Pacini (2012), but significantly is affected by the underlying thyroid lesion mainly higher in multinodular goiter, and autoimmune Hashimoto disease. From all 72 cases in 43 – was mPTC (60%), almost of the papillary histotype (classical form of PTC)) and by follicular variant of PTC in our experience – only 2 cases.

Histopathological presentation – usually non-encapsulated, sclerotic, large

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majority are subcapsularly located and infiltrating surrounding thyroid tissue. Follicular variant of mPTC represent protrusions and invasion in thyroid parenchyma whereas papillary histotype belongs to diffuse scleroting, trabecular, tall cell variants associated with worse prognosis.

Consequently, as in large tumors, the histological subtype is an important and deciding prognostic factor.

Our data represent multicentricity, bilaterality and minor extrathyroidal invasion same of classical PTC. Lymph node metastases, and distant metastases discovered with lower frequency.

Conclusion: mTPC appears similarity of histological findings with large PTC, determining biological behavior and how to manage thyroid micro-nodules.

STROKE IN A DEVELOPING COUNTRY – EASTERN EUROPEAN PERSPECTIVE

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Stroke in developing countries is characterized by higher morbidity and mortality compared with developed countries. Developing countries share common problems with stroke management such as shortcomings in stroke prevention, diagnosis, treatment and rehabilitation caused by lack of specially trained specialists and expertise, lack of equipment, inadequate diagnostic evaluation and insufficient funds. There is a deficit of information on stroke warning signs on a population level, improper pre-hospital management and delayed admission. Stroke units, by its modern definition implying management of a stroke patient by multidisciplinary team, advanced monitoring and early rehabilitation, are lacking. Absence of national guidelines on stroke management contributes to lack of evidence-based interventions. Unproven medications such as cerebral vasodilators and “cerebroactive” or “nootropic” drugs are intensively marketed and commonly prescribed. Rates of thrombolysis and thrombectomy are relatively low. For secondary prevention, in some countries, antiplatelet agents are not used systemically and anticoagulants are usually underprescribed. Endarterectomy and stenting are done rarely with few exceptions. All of these contribute to the high burden of the disease. Prioritization of stroke by the governments as a major public health problem together with other chronic diseases as well as formulation and adoption of a comprehensive and inte-

grated national policy against stroke can be an effective measure for reducing the disease burden.

**PSYCHOGENIC NONEPILEPTIC SEIZURES - FROM CARE PROVIDERS'
KNOWLEDGE TO DIAGNOSTIC AND MANAGEMENT PROVISION**

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Psychogenic non-epileptic seizures (PNES) represent unique challenges in terms of diagnosis and management for clinical neuropsychiatry. During last decades the bio-psycho-social model of psychogenic seizures received much attention. Whilst PNES are a phenomenon which is recognised around the world, different contributing factors may be identified across various sociocultural groups. Country's economical level may greatly determines the healthcare provision level in relation to patients with PNES. However, cultural peculiarities and traditions also influence on diagnostic and therapeutic standard currently incorporated in the medical care for PNES in different part of the world. Is it important to reveal these features for better understanding the diagnostic and treatment differences and gaps for this disorder.

For accurate description of provisions for patients with PNES around the world the PNES Task Force, formed by the International League against Epilepsy (ILAE) Neuropsychobiology Commission, currently conducted an international survey (LS-36) for health professional involved with PNES. The survey was performed also in Georgia, a small country (around 3.7 million inhabitants) where epilepsy service was introduced in 1974, which due to socioeconomical cataclysm switched at the end of 90's from fully state-funded to mostly private health care system. According to the survey results there is a clear preponderance of intellectual (professional knowledge) and diagnostic resources (diagnostic tests and investigations) over utilization of these resources by patients (73% of responders are confident about diagnosing PNES but just 42% are involved in different form of disease management). Physicians even expressed high level of willingness to use cognitive-behavioral therapy (83%) in PNES, which is rarely available in Georgia (27%) due to a shortage of trained specialists.

Improvement of health care for PNES patients depends on multiple factors, which should be carefully weighted depending on country's local traditions and services.

ELECTROCLINIC VARIATIONS OF SYNAPTIC PATHOLOGY

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Analysis of the M-responses parameters of the muscles by means of indirect maximal stimulation with different frequencies is a very important method for diagnostic of Myasthenia gravis (MG). As an indicator of degree of neuromuscular transmission damage, a difference expressed in percents (decrement) between the first- and fifth M-responses was used. To define the dynamic of the release of a neurotransmitter and its interaction with acetylcholine receptor of the postsynaptic membrane in 265 MG patients with 3 imp/sec stimulation in a series of five responses, we have determined the decrement (%) of the size of every following M-responses amplitude in correlation with amplitude of M-response of the previous. 265 MG patients were investigated, out of which 148 (55.9%) were female and 117 (44.1%) were male aged from 10 to 75. MG was diagnosed according to clinical and electromyographic (EMG) data, the level of antibodies against Acetylcholine receptors (AChR), Titin and MuSK, and results of pharmacologic tests. CT of chest was done to reveal pathology of the thymus. The most significant decrement of the M-responses at 3 imp/sec stimulation in a series of five responses was found between the second- and the first M-responses and between the third- and second responses. These data correlate with classically evaluated decrements between the first- and the fifth responses ($r=0.64$; $p<0.001$). The difference between the fifth- and the fourth M-responses was minimal. Thus, during the stimulation, the efficiency of released neurotransmitter interaction with receptors gradually decreases until the third impulse, when the physiologic decrement of neurotransmitter release takes place but from the fourth impulse mobilization of neurotransmitter begins. It is characterized for Lambert-Eaton myasthenic syndrome (LEMS) that as a response to the fourth and fifth stimulus, M-response amplitudes (area) continue to decrease compared with the third- and the fourth M-responses, while this difference is minimal in MG, and all these indicate to the differences in character between the neurotransmitter release and its interaction with AChR of postsynaptic membrane in different synaptic diseases, and this will facilitate to determine the character of the synaptic damage.

ETIOLOGY AND PATOGENESIS OF THE CORONARY SINUS EXPANSION

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Background. The coronary sinus (sinus coronaries) (CS) is the main venous blood «collector». CS is located in the upper half of the rear department coronal sulcus and is opened a small hole in the right atrium.

The size and shape of the CS are variable and depend on sex, age, weight, height, body type, the presence or absence of increased load on the various departments of the heart.

The CS expansion is observed by increasing its blood supply as a result of:

-additional / anomalous connection vessels (the persistent (extra) left superior vena cava (PLSVC), confluence of the superior or inferior vena cava, total or partial anomalous pulmonary venous connection, partial anomalous hepatic venous connection, fistula coronary artery - CS;

- posts CS with both atria ("unroofed" CS);
- aneurysm CS;
- increasing the pressure in the right atrium.

Methods. The CS dilation is often inadvertently revealed during transthoracic echocardiography (TTE). Expect for high pressure in the right atrium the reasons for the CS expansion difficult to identify. Using transesophageal echocardiography, Multi-Detector Computed Tomography, magnetic resonance venography, radionuclide angiocardiology establish the cause of the CS expansion. Suspicion of PLSVC - contrasting veins of the left hand.

Results. It is known that the size of the CS defined by dynamic TTE may vary considerably and depends on the volume of shunted blood and / or pressure in the right atrium. The dimensions and shape of the coronary sinus may be in the normal range if there is no significant hemodynamic its blood supply. The CS expansion is diagnosed with an increase in his blood filling. The rhythm and conduction disturbances, non-specific changes in the ST segment depression and T wave inversion in the in the inferior leads with the electrocardiography are associated with the expansion of the coronary sinus mouth.

Conclusion. In identifying the dilatated CS with dynamic TTE is necessary to eliminate the causes of the CS expansion to prevent the development of rhythm and conduction disturbances.

SPECT/CT - PRINCIPLES AND CLINICAL APPLICATIONS

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Correlative imaging has been used in clinical practice, mainly for the interpretation of nuclear medicine studies where detailed anatomical information is often lacking.

SPECT/CT combines the functional imaging capabilities of Single Photon Emission Computed Tomography with precise anatomical overlay of Computed Tomography images acquired sequentially, as a part of a single study.

SPECT/CT systems usually use a low dose single slice CT where both the SPECT and CT detector are mounted on the same rotating platform. The system is characterized by high spatial resolution and faster scanning time, combining contrast provided by tumor avid radiopharmaceuticals with the anatomic precision of CT.

The increased diagnostic value of integrated SPECT correlated with CT includes: improvement on lesion detection, more precise localization of foci of uptake resulting in better differentiation of physiological from pathological uptake, characterization of serendipitous lesions and confirmation of small, subtle or unusual lesions.

SPECT/CT is useful in solving problems when the location of the activity is unclear on planar imaging, allows higher sensitivity and specificity than routine nuclear scintigraphy and obviates the need for delayed images and multi-days studies.

SPECT/CT fusion images affect the clinical management in a significant proportion of patients with a wide range of diseases. The main clinical application of SPECT/CT in routine nuclear medicine practice is in the area of bone scanning, graft infections, cardiac imaging, parathyroid imaging, lymphoscintigraphy, patients with unexplained abdominal pain, tumor and mass localization (general oncology) and especially in thyroid cancer staging.

SPECT/CT added to the bone scan improves characterization, localization, specificity, sensitivity (especially in lytic and soft tissue infiltrations), diagnostic confidence, conclusive reports, decreasing number of further investigations and reducing time to treatment. It is quite often than benign processes can simulate malignancy, neoplastic lesions may occur in distribution suggestive of arthritic change. SPECT/CT is especially important for soft tissue abnormalities that are usually not detected on routine bone scanning.

In cardiac studies SPECT/CT imaging can provide unique complementary information on coronary anatomy as well as on pathophysiological lesion severity. It improves diagnostic assessment and risk stratification helping decisions with respect to revascularization in patients with coronary artery disease.

In thyroid cancer staging iodine thyroid SPECT/CT is more specific than planar and SPECT studies, allows additional informations in more than 40% cases, further characterization in more than 70% foci and improves diagnostic confidence of observers.

SPECT/CT is very important in treatment planning, regarding sentinel node biopsy, targeted therapy (neuroendocrine tumor's peptide therapy) and radioembolisation (in hepatocellular carcinoma and liver metastases of colorectal cancer).

In sentinel node biopsy SPECT/CT improves detection and localization, providing more accurate staging, especially valuable in difficult cases when planar images shows neither sentinel lymph nodes or unexpected lymphatic drainage.

The SPECT/CT obtained data should be used in guiding further investigations, excluding the need for further procedures, changing inter and intramodality therapy, including soon after treatment has been initiated and by providing prognostic information related to the disease.

The further developments in SPECT/CT technique will be expectedly in synthesizing novel tracers for response assessment, improving scanner quality (SPECT and CT respectively) and advanced software with possibility of quantification (standardized uptake value-SUV) and fusion of both images.

It is expected that the role of SPECT/CT, as well as PET/CT in modifying clinical practice will continue to develop in the future and that these diagnostic tools will be the basic components of 'personalized medicine.

APCRG ACTIVITIES OVERVIEW

I.Margvelashvili

*Association of the Pharmaceutical Companies Representatives in Georgia
(Tbilisi, Georgia)*

The main goal of the Association activity is to support the development of the modern, ethical and open pharmaceutical market in Georgia. APCRG actively cooperates with all stakeholders involved in improvement of regulatory environment in Georgia (& Caucasus):

Governmental & NGOs: Ministry of Labour, Health & Social Affairs, Ministry of Finances (customs department), State Procurement Agency, National Statistics Office of Georgia, National Center of Intellectual Property, Open society Soros Foundation, BBSA, International Transparency Georgia, PSI- Partnership for Social Initiatives, Insurers Association of Georgia and others, Economic Policy Advocacy Coalition (EPAC) membership. Professional associations: Association of pharmaceutical companies in Georgia (distributor's union), Pharmacists Association of Georgia, Georgian Medical Association (GMA), Union of Medical Associations, MoU signed with Association of Medical Journalist Cooperation in scientific / educational field: APCRG is cooperating with Tbilisi State Medical University (TSMU), Javakhishvili Tbilisi State University (TSU), San Diego State University-Georgia (SDSU-Georgia).

Pharmaceutical Market of Georgia – MAIN CHALLENGES: regulations modification in order to harmonize with internationally adopted standards. Fields to be highlighted, mechanisms for the quality control of medicines marketed in Georgia, elaboration of the relevant regulations for biosimilars, placement of the proper pharmacovigilance procedures, implementation of the GMP and GDP standards.

Do we have counterfeits in Georgia? This question can be answered only via Implementation of the appropriate cooperation between customs department and MoHLSA, Implementation of the pharmacovigilance Procedures, Implementation of the appropriate procedures for the surveillance of the turnover of medicines.

To combat counterfeits we need INCREASE THE ROLE OF HCP AND ENSURE IMPLEMENTATION AND THE PROPER FUNCTIONING OF THE FEEDBACK SYSTEM FROM HCP.

Pharmaceutical companies and HCP relation (self regulation) In May 2014 APCRG member companies have endorsed APCRG Code of Practice which has been elaborated within 2011-2014 based on principles developed by: International Federation of Pharmaceutical Manufacturers Associations, World Medical Association, International Council of Nurses, WHO.

Conclusion: APCRG does its best in order to ensure the independence of healthcare specialists decision to prescribe medicines. The pharmaceutical industry is liable to provide healthcare professionals with accurate information about medicinal products in order to introduce the correct methods of product use- as a part of CME. The industry interaction with healthcare professionals must support the idea, that pharmaceutical industry liability towards patients must be on the same level as

healthcare professionals liability towards their patients. Pharmaceutical companies should maintain high standards of special promotion while carrying out promotional activities and should meet legal, regulatory and professional requirements currently in force in Georgia.

**ГЕМОДИНАМИЧЕСКИЙ ПРОФИЛЬ НОВОГО МЕХАНИЧЕСКОГО ПРОТЕЗА
КЛАПАНА СЕРДЦА
БЕЛОРУССКОГО ПРОИЗВОДСТВА В АОРТАЛЬНОЙ ПОЗИЦИИ**

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Цель исследования. Изучение гемодинамических характеристик в аортальной позиции нового механического протеза клапанов сердца белорусского производства.

Материал и методы. При коррекции приобретенных аортальных пороков сердца у 304 пациентов с 2008 по 2011 гг. применялся механический клапан белорусского производства с улучшенными техническими характеристиками (производство Беларусь). Эхокардиографическое определение гемодинамических характеристик механического протеза (эффективная площадь открытия клапана (ЭПО), пиковый и средний трансклапанный градиент) с расчетом индексированного на площадь поверхности тела ЭПО (и ЭПО) в зависимости размера протеза в послеоперационном периоде выполнялось всем пациентам. SPSS 15.0 была использована для статистического анализа.

Результаты. Во время операции 2,0% пациентов имплантирован протез 19 мм, 10,5% – 21 мм, 26,6% – 23 мм, 34,9% – 25 мм, 21,4% – 27 мм и 2,6% – 29 мм. При Эхо-КГ ЭПО составила для протеза 19 мм – $1,41 \pm 0,24 \text{ см}^2$, 21 мм – $1,75 \pm 0,32 \text{ см}^2$, 23 мм – $1,86 \pm 0,28 \text{ см}^2$, 25 мм – $2,04 \pm 0,24 \text{ см}^2$, 27 мм – $2,28 \pm 0,35 \text{ см}^2$, 29 мм – $2,39 \pm 0,52 \text{ см}^2$. Выявлена достоверная разница между соседними парами размеров протезов (ANOVA $p < 0,01$), за исключением протезов диаметром 27 мм и 29 мм (Scheffe $p = 0,86$). Средний трансклапанный систолический градиент также достоверно различался среди типо-размеров

протезов ($p = 0,001$) и составил для протезов 19 мм – $20,0 \pm 3,0$ мм Hg, 21 мм – $15,6 \pm 3,9$ мм Hg, 23 мм – $12,1 \pm 5,6$ мм Hg, 25 мм – $12,9 \pm 4,74$ мм Hg, 27 мм – $12,2 \pm 4,4$ мм Hg и 29 мм – $10,7 \pm 3,9$ мм Hg. При этом ни для одного типа-размера протеза белорусского производства средний и пиковый трансортальный градиент не зависел от ФВ ЛЖ ($R^2 = 0,052$, $p = 0,001$) или от КДО и КСО ЛЖ ($R^2 = 0,052$ и $0,06$ соответственно, $p = 0,001$). На основании полученных данных с учетом стандартизованного иЭПО разработана таблица дооперационного прогнозирования «протез-пациент несоответствия». Средний иЭПО для имплантированных протезов составил $1,07 \pm 0,21$ см²/м². Среди всех прооперированных пациентов в группе иЭПО $< 0,9$ см²/м² отмечен у 32 пациентов (10,5%).

Выводы. Обобщены результаты клинического применения двустворчатого протеза белорусского производства в раннем послеоперационном периоде. Показано, что белорусские протезы по клинко-гемодинамическим характеристикам не уступают другим применяемым двустворчатым протезам импортного производства. Разработана таблица дооперационного прогнозирования развития «протез-пациент несоответствия».

IMPACT OF APOLIPOPROTEINS ABNORMALITY IN VASCULAR CALCIFICATION IN UREMIC PATIENTS TREATED WITH CHRONICAL HEMODIALYSIS

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Vascular calcification (VC), an independent and strong predictor of cardiovascular risk, is often found in CKD patients. The degree of VC is providing incremental prognostic value over traditional risk markers. There is interest in improving our understanding of mechanisms, establishing diagnostic methods and effective prevention and treatment modalities. The abnormal mineral metabolism of CKD is known to facilitate the progression of VC, in concert with altered activities of VC inhibitors. Cardiovascular diseases (CVD) and you continue to remain as one of the most frequent causes of morbidity and mortality in patients with Chronic renal failure terminals. Mechanism and etiopatogenesis by which uremia itself lead to vascular calcification without those soft tissue and their correlation to premature athero-

sclerotic processes and cardiovascular diseases in uremic patients are still unknown. The purpose of the work: The aim of the paper was to be disclosed abnormalities impact effects of lipo / apoproteins and their correlation in the appearance of atherosclerotic processes (of the coronary arteries, cerebral, pulmonary, peripheral arteries etc.) and accelerated atherosclerosis in the uremic patients threatened with hemodialysis (HD).

Materials and Methods: As working material was used blood taken from the veins of patients with ESRD and coronary diseases- $N = 120$ (mean age = 60.40 ± 6.50 years, of whom 55 were females (mean age = 58.90 ± 7.40 years) and 65 males (mean age = 59.60 ± 8.70 years) and the control group of 120 health persons. In meant time during examination of the lipids profile also we examination of concentration of apolipoproteins (Apo-A1, Apo- B100, Lp (a), Apo-C2, ApoC3, Apo-E, total homocystein (tHcyt, Lipoprotein Lipasae-LPL)].

Results: The results obtained from the examination of parameters of uremic patients be threatened with HD and controls group of health are presented in Table number 1 and 2. difference that was evidenced by the values obtained for the all the examined parameters between the patients and the control group is significantly for a $p = 0.0001$.

Conclusion: Detection of risk factors and the impact of abnormalitie of lipo / apoproteins to vascular calcification cardiovascular disease in the early stages of renal insufficiency is necessary in would reduce early mortality from atherosclerotic cardiovascular consequences of myocardial infarction, insults cerebrovascular in patients uremic be treated with HD chronic repeated.

KINESITHERAPY ALGORITHM IN PATIENTS WITH BURN INJURIES

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Introduction: Burning (combustio) is damage to the skin and underlying structure, sometimes combined with general reactions of the organism as a result of the action of various physical and chemical factors.

Methods of study: assessment of breath, functional assessment of affected areas, and evaluation of trofic muscle imbalance. Methods- inhalation therapy, passive

and active physiotherapy, treatment of thermal injury by means of preformed physical factors.

Results: For the past six years have treated about 310 patients with different types of thermal injuries and complications.

Conclusion: Physician medicine and rehabilitation is an interdisciplinary specialty that intervenes in the first hours when affected by thermal trauma patients. We believe that in a perfectly performed surgery without the participation of rehabilitation teams at the bedside of the patient, it would be impossible for the quick and timely resocialization and restoring the damaged functions of the patients suffered burns.

THE PREVALENCE OF DIFFERENT TYPES OF HPV INFECTION AMONG WOMEN IN REPUBLIC OF MACEDONIA

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Objective: Human papillomavirus (HPV) infection is estimated to be the most common sexually transmitted infection. Baseline population prevalence data for HPV infection is very important for introduction of different kind of preventive measures especially widespread availability of a prophylactic HPV vaccine.

Methods: We analyzed 1145 female patients, 129 with positive Pap test (80 HPV positive and 49 HPV negative), and 1016 controls. The study was performed in 2015 at the University Clinic for Gynecology and Obstetrics, and in the Primary Health Institution "Dr. Emilija Trajkovska".

Results: From 1145 analyzed female patients and 129 (11.3%) positive Pap test, we found only 80 (7%) HPV positive patients. The prevalence of different HPV types was as following: HPV 16 was found in 18 patients (22.5%) (the most prevalent type); HPV 51 in 8 patients (10 %), HPV 52 (6.25%) and HPV39 (6.25%) both in 5 patients, HPV 53 in 4 patients (5%), HPV59 in 4 patients (5%), HPV68 in 4 patients (5%); HPV 31 in 3 patients (3.75%), HPV58 in 3 patients (3.75%), HPV66 in 3 patients (3.75%), HPV73 in 3 patients (3.75%), and HPV type 6 in 2 patient (2.5%), HPV33 in 2 patient (2.5%), HPV35 in 2 patient (2.5%), HPV42 in 2 patient (2.5%), HPV45 in 2 patient (2.5%), HPV56 in 2 patient (2.5%), HPV61 in 2 patient (2.5%), HPV62 in 2 patient (2.5%), HPV70 in 2 patient (2.5%), HPV82 in 2 patient

(2.5%).

In patients with HPV positive test, 39 patients (48.75%) were with 1 type of HPV, 23 patients (28.75%) with 2 types of HPV, 12 patients (15%) with 3 HPV types and only 6 patients (7.5%) with 4 types of HPV.

Conclusions: From our study we can conclude that HPV infection is estimated to be the most common sexually transmitted infection. Also in our study we have determined that HPV type 16 is still the most common type in our country, but the prevalence of the other types showed that today HPV 51 is on the second place, and 39 and 52 on the third place. In similar studies carried out in our country, in 2005, HPV 31 was on the second place and on the third place was HPV 58. Furthermore, nowadays we have determined new HPV types, maybe because of the new technology and improvement of the HPV laboratories and wider travelling and increased tourism in Republic of Macedonia.

THE PREVALENCE OF ABNORMAL PAP SMEARS IN DIFFERENT ETHNIC POPULATION IN MACEDONIA

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Objective: To determine the prevalence of abnormal Pap smears in different ethnic population in women from Macedonia. In our country, Pap smear test is included in the prevention program against cervical cancer to be performed every year in women aged 18 to 65.

Methods: We analyzed 1145 female patients, 129 with abnormal Pap smear and 1016 controls. The study was performed in 2015 in women aged 18-65, at the University Clinic for Gynecology and Obstetrics, and in the Primary Health Institution "Dr. Emilija Trajkovska".

Results: From 1145 analyzed female patients and 129 (11.3%) abnormal Pap smears, we found 9 patients (6.97%) with cell changes from viral infection, 50 (38, 76%) HPV positive patients on cytology test, CIN 1 in 34 patients (26.35%), CIN 2 in 9 patients (6.97%), ASC in 19 patients (14.72%), ASC-H in 6 patients (4.65%), and CIS in 2 patients (1.55%). Furthermore, from all Pap test positive patients, 15 patients had previous cervical conisation and following re-infection. The distribution of ethnicity among abnormal Pap smear women was as following:

107 (82.94%) were Macedonians, 12 Serbians (9.30%) with all types of cervical intraepithelial lesions, 5 Roma ethnicity (3.87%), 3 (2.32%) Albanians, 1(0.77%) Bosnian and 1(0.77%) Turkish ethnicity all with CIN1 lesion.

Conclusions: Our study showed that the Macedonian population as the predominant population in Republic of Macedonia, was the most prevalent ethnicity with cervical intraepithelial lesions.

КОМПОНЕНТНЫЙ ПОДХОД К АНАЛИЗУ СМЕРТНОСТИ И ГЕНДЕРНАЯ СВЕРХСМЕРТНОСТЬ

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Компонентный подход к анализу смертности основывается на установлении условного минимального уровня смертности как наименьшего достигнутого уровня смертности данного возраста или возрастной группы в максимально благоприятных социальных и экологических условиях. Соответственно, превышение реального уровня смертности над условным минимальным уровнем обозначается как сверхсмертность. Разделение смертности по условному минимальному уровню смертности задает формирование в каждой возрастной группе двух компонент смертности. Компонента условной возрастной смертности - доля смертельных исходов, соответствующая минимальной смертности в данной возрастной группе. Компонента сверхсмертности – доля смертельных исходов в реальном показателе смертности, составившая превышение над условным минимальным уровнем смертности. Анализ сверхсмертности на основе определения условного минимального уровня, может быть проведен для возрастных групп, гендерных групп, профессиональных групп и по другим отличительным признакам отобранных субпопуляций населения.

Гендерная сверхсмертность как превышение уровня смертности одного пола над уровнем смертности другого пола является одним из наиболее часто исследуемых аспектов смертности. В данных исследованиях за условный минимальный уровень смертности принимается уровень смертности одного из полов, в зависимости от того, уровень смертности какого пола имеет более

низкие значения. Превышение уровня смертности мужчин над уровнем смертности женщин является одной из наиболее серьезных проблем, с которой столкнулось общество в период демографического перехода. В последние десятилетия предметом исследования является сверхсмертность мужчин, при сопоставлении с более низкими показателями смертности женщин. Исследованию причин и динамики сверхсмертности мужчин посвящено большое количество научных работ, но в силу сохраняющихся различий смертности по гендерному признаку, актуальность данного вопроса не утратила своей значимости.

Избыточная смертность мужчин в возрасте 20-50 лет по сравнению со смертностью женщин - одна из ведущих особенностей смертности населения Республики Беларусь последних десятилетий и причина большого разрыва в продолжительности жизни мужчин и женщин. В отдельные годы смертность мужчин превышала смертность женщин в 3-5 раз, что повлекло за собой значительную разницу в продолжительности жизни на протяжении последних десятилетий. Диспропорция в продолжительности жизни мужчин и женщин в БССР, наносившая существенный социально – экономический ущерб, была отмечена еще в 70-е годы прошлого столетия и определена как государственная народохозяйственная проблема. В конце 90-х годов коэффициент смертности мужчин превышал таковой у женщин в 1,2 раза. С увеличением показателя продолжительности жизни, различия ожидаемой продолжительности жизни мужчин и женщин также возрастали. Разница в ожидаемой продолжительности жизни с 4 лет в 20-х годах прошлого столетия, достигла 12 лет к 2005 году. В 1990 году превышение смертности мужчин над смертностью женщин составляло 8,7%, в 1993 году 14,8%, в 1995 году – 17,3%, а в 2003 году 24,6% (Раков А.А., 1969; Бедный М.С., 1979; Урланис Б.Ц., 1978; Пилипцевич Н.Н., Ломать Л.Н., 2000; Шахотько Л.П., 2006). Аналогичная ситуация наблюдается и в постсоветской России. Более половины избыточных смертей мужского населения в 90-х годах составляли смертельные исходы в возрасте 20 - 60 лет. Несмотря на то, что сбережение жизней мужчин трудоспособного возраста еще в 80-годы прошлого столетия, было определено как актуальная проблема, разрыв в продолжительности жизни мужчин и женщин 10 и более лет, особенно в группах молодого и среднего возраста, значительно превышающий таковой показатель экономически развитых стран, наблюдается в России, Беларуси и в Украине (Вишневский А.Г., 1997,

Щавелева М.В., 2011).

В середине XIX века отличия между интенсивностью смертности по полу практически отсутствовали. Различия смертности мужчин и женщин в России в конце XIX столетия были незначительны и менее выражены, чем в других странах. Смертность женщин в возрасте 15-39 лет несколько превышала смертность мужчин, с 40 до 54 лет мужская смертность превышала женскую и затем постепенно выравнивалась к 65 годам. Различия смертности трактовались как периоды повышения мужской или женской смертности (Новосельский С.А., 1916; Урланис Б.Ц., 1978). Средняя продолжительность жизни (число лет жизни), исчисленная на основании материалов переписи 1897 года и данных об умерших за 1896 – 1897 годы, в Европейской России составляла у мужчин 29,3 года, у женщин 31,6 года. В Белоруссии 31,4 и 33,4 соответственно (Куркин П.И., 1938).

Снижение смертности у женщин во время демографического перехода было более выраженным, чем у мужчин. Периоды женской сверхсмертности, как превышение смертности женщин над смертностью мужчин, практически полностью исчезли, уступив место мужской сверхсмертности, как превышение смертности мужчин над смертностью женщин, которая приобрела устойчивый характер. Продолжительность жизни женщин начала существенно опережать продолжительность жизни мужчин, а высокая смертность мужчин превратилась в угрозу демографической безопасности страны.

Социальное расслоение общества явилось одной из причин дифференциации смертности различных групп населения. Различия смертности населения, объединенного в группы по каким – либо признакам (полу, возрасту, профессии, вероисповеданию и т.д.), обусловлены биологическими и социальными факторами. Интенсивность смертности мужчин достоверно выше, чем женщин при тотальном сопоставлении данных, а продолжительность жизни мужчин во всех странах меньше, чем женщин, в связи с чем, показатели смертности по полу рассчитываются отдельно (Мерков А.М., 1974). По мнению ряда зарубежных и отечественных исследователей биологически обусловленная разница в продолжительности жизни мужчин и женщин составляет 2-3 года (Овчаров В.К., 1997; Шахотько Л.П., 2006). Вместе с тем, авторы считают совместное исследование продолжительности жизни мужчин и женщин упрощенным (Гаврилов Л.А.,

Гаврилова Н.С., 1991).

Влияние социальных факторов обуславливает особенности и значимые различия смертности мужчин и женщин. Высокая материнская смертность, обусловленная патологией беременности, родов и послеродового периода на протяжении нескольких столетий была одной из ведущих причин смерти как следствие низкого развития лечебной и профилактической медицины. Высокий уровень материнской смертности в прошлом был причиной превышения в отдельных возрастных группах женской смертности над мужской. Женская сверхсмертность способствовала развитию медицинской науки и практики в интересах сохранения жизни женщин репродуктивного возраста (Вишневский А.Г., 1982; Урланис Б.Ц., 1978). Политика здравоохранения в отношении различных социальных групп обуславливает особенности смертности мужского и женского населения (Westerling R., 2001). Выполнение женщинами репродуктивной функции обеспечивает их особое положение в системе общественного здравоохранения. Охрана матери (и ребенка) всегда являлось приоритетным направлением развития и деятельности системы здравоохранения Республики Беларусь (Жарко В.И., 2014, 2015).

Трудовая и профессиональная деятельность мужчин на вредных и травмоопасных производствах отраслей народного хозяйства, руководящая работа, связанная с высоким уровнем ответственности, способствуют более высокому уровню смертности. Также повышенная смертность мужчин связана с поведенческими факторами (злоупотребление алкоголем, курение). Ответственность за обеспечение семьи на фоне исторически сложившихся в социуме высоких ожиданий от мужчин, работа в более сложных условиях, способствуют формированию стрессового напряжения. Использование алкоголя как средства снятия напряжения напрямую связано со смертностью от внешних причин (травмы, отравления, несчастные случаи). Результаты регулярно проводимых в Республике Беларусь опросов показали, что элементы здорового образа жизни в большей степени свойственны женской части населения. Низкий уровень двигательной активности способствует формированию негативных тенденций смертности населения в стране. Для мужчин характерна более высокая самооценка здоровья и значительно меньшая забота о здоровьесбережении, плохо развито самосохранительное поведение. Женщины более серьезно относятся к здоровью и

продолжительности жизни, прилагают значительно большую активность по реализации установки здоровьесбережения (Калинина Т.В., 2012; Лапина С.В., 2015).

Различия продолжительности жизни мужчин и женщин в течение XX века увеличились с 1-2 до 8-10 лет, что было связано с изменением условий и образа жизни (Lopez, 1983). Несмотря на различия возрастной и социальной компонент смертности мужчин и женщин, оценка сверхсмертности мужчин основываться на сравнении уровней смертности по гендерному признаку. Проведение раздельного анализа сверхсмертности мужской и женской субпопуляций возможно при установлении условно-минимального уровня смертности для каждой из них, который принимается как критерий сравнения. Исходя из того, что возрастные компоненты смертности являются относительно стабильными как минимум в течение нескольких десятилетий (Гаврилов Л.А., Гаврилова Н.С., 1991), их уровень может служить критерием оценки сверхсмертности в каждой возрастной группе. Соответственно, индекс сверхсмертности субпопуляций мужчин и женщин определится как отношение реального показателя смертности данной возрастной группы к значению условно-минимальной смертности.

Выводы. Предложенный компонентный подход к анализу смертности может быть использован в практике управления здравоохранением. Полученные результаты позволяют провести оценку и анализ сверхсмертности населения на основе выделения условного минимального уровня смертности, выявить резервы и установить пределы снижения смертности за счет преждевременной предотвратимой смертности на популяционном, региональном и территориальном уровне. Принятие эффективных мер по оптимизации показателей здоровья на популяционном, региональном, территориальном уровне целесообразно с учетом гендерных и возрастных различий, определить которые позволяет компонентный подход к анализу смертности. Устанавливаемые половозрастные особенности смертности населения представляют аналитическую основу для планирования и проведения диспансерной работы и профилактических мероприятий.

THE RISK ASSOCIATED WITH HIGH QUALITY OF DRINKING WATER SUPPLY IN GEORGIA

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Drinking water is an important condition for maintaining the life. The health condition of population and the level of sanitary-epidemiological prosperity depend on drinking water, which is continuously supplied, is of proper quality and quantity. 70% of the population of Georgia is central supplied by drinking water by means of water supply network. 72% of water pipes over arranged on the basis of underground waters having rich in minerals and microelements, 28% of water pipes – on the stock of low mineralization surface waters.

Besides the mentioned above, practically every water object is under the negative anthropological and technogenic influence. Only the certain researches made by the Georgian scientists reveal that the population living in different districts and regions of the country uses low (50-100 mg/L) as well high mineralization (1000-1500 mg/L and more) drinking water which are characterized by different hardness, clearly different consistence of chlorides, sulfates, macro and micro elements and lack of these elements as well. In National Normative documents determining the quality of drinking water (water standard, hygienic normative of quality) there are not Ca and Mg, as well as admissible hygienic normative of some essential microelements, as a result of which, there is a system of their controlling and estimation.

The researchers showed that Dedoplistskaro population uses high hardness drinking water characterized by high level of hardness (10,2-15,7 mg.ecv/l). High level of cholecystitis, osteoarthritis, hypertensive diseases, as well as (kidney, bladder and gall-bladder diseases) cholelithiasis are in correlation with high concentration of Ca and Mg Salts in drinking water. It should be noted that of the National Food Agency Bacteriological contamination of drinking water across the country in of the 2014-2016 years, he was on the same level and amounted to 40.7% of the samples taken.

The goal of examination was “The hygienic estimation of quality of small scale water supply systems, wells and springs of Dusheti and Marneuli regions”. Sanitary-hygienic and sanitary-technical condition of individual wells, natural

springs and low power rural water-supply systems of these regions is not satisfactory. According to the results of the examinations, drinking water in Dusheti region is characterized by satisfactory mineralization, fluorine content is mainly equal to 0 or is very low and it is noted in spring water. Drinking water in Marneuli region is characterized by satisfactory and optimal mineralization, fluorine content is not fixed in any sample. According to microbiological indicators, it is mainly noted high microbe contamination of well and spring water. The water quality of non-centralized water supply systems does not provide population with supply of epidemiologically safe drinking water.

The analysis and synthesis of data reports for the 20014-2016 years of the National Food Agency and scientific, Drinking water was researched with accredited methods and ISO's international standards.

Allocated areas of varying degrees of risk to public health on the priority indicators of the chemical composition of drinking water from underground sources, salinity, hardness, fluoride. Manganese and high risk Microbial contamination of drinking water for healthy. Due to deficiency of fluoride in drinking water, the population of mentioned territories is under high risk of non-infection diseases caused by deficiency of this microelement.

THE NEED OF EDUCATION IN PC AND COMMUNICATION SKILLS IN CRITICAL AND INTENSIVE CARE SETTINGS IN GEORGIA

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Background: Physicians working in critical and intensive care settings encounter death of chronic incurable patients on a daily basis; however they have scant skills on how to communicate with the patients and their family members. The aim of the present survey is to examine communication of critical and intensive care physicians with patients' family members receiving treatment due to chronic incurable diseases/conditions and to compare the views of families with physicians working in critical and intensive care settings.

Methods:The survey was conducted in four cities of Georgia (Tbilisi, Kutaisi, Batumi and Telavi) in 2014. Physicians working in critical and intensive care settings and family members were asked to fill in separate questionnaires, covering various aspects of communication including patients' prognosis, ways of death occurrence, treatment plans and religion. Participants ranked their responses on a scale ranging from "0" to "10", where "0" represented "never" and "10" - "always". After data collection, responses were recoded into three categories: 0-3 = never/rarely, 4-7 = somewhat and 8-10 = often/always. Differences were tested using Pearson's chi-square or Fisher's exact test as appropriate. P value of < 0.05 was considered as significant.

Results:Sixty-five physicians and 59 patients' family members participated in this cross-sectional study. Majority of their responses was statistically significantly different. Only one quarter (23.7%) of family members of patients receiving medical aid in critical and intensive care settings were satisfied with the communication level. In contrast, 78.5% of physicians considered their communication with families as positive ($p < 0.0001$).

Conclusions:The survey revealed the mismatch between the views on communication of critical and intensive care settings physicians and family members of the patients with chronic incurable diseases receiving care in critical and intensive care settings. In order to provide the best care for chronic incurable patients and their family members, physicians working in critical and intensive care settings must have

MEDICAL MALPRACTICE AND PROFESSIONAL LIABILITY INSURANCE IN GEORGIA - CURRENT SITUATION AND ITS PERSPECTIVES

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Risk insurance for professional medical activities today is one of the most topical issues in health care. This type of insurance is to protect the insured's claim against the third party, that emerged as a result of his/her medical activities during the eligible professional mistake.

Medical activity always contains the risk of harm to the patient's health. According to Parkinson's Law, any system involving humans is not reliable. The main defects are caused by medical personnel's unintentional activity in Medical care (services). None of the physician is safe from the risk, even the most famous ones. The responsibility lies not only on medical personnel, but also on organization,

as an employer.

At a time when the issue of patients' rights and violation is actively raised in society, critical coverage of medical action caused any damage, do not expose the issue of the responsibility of the medical staff, whether they are protected or not, what are the legal tools they can use to protect their rights.

With the increase of the public mentality, as it has happened in Western World, the victim asks compensation from the relevant bodies for punishment of the person who caused the damage, and also payment for the damage caused by the action of the latter. Accordingly, in case of stating the medical mistake financial compensation for the damage caused by the medical staff automatically comes to the question. Today the situation is not economically affordable, or even impossible to deal with neither for the doctor nor for the medical institution.

From 14 operated insurance companies in 2015, only six offered professional liability insurance for medical staff.

With help of our young colleagues, we did doctors' interviewing by the specially-designed questionnaire. Random sampling method was used for the selection of the medical institutions and respondents. The survey was carried out in Tbilisi and west Georgia (Imereti region). In sum 200 doctors participated in the survey.

On the questions:

"How well are you informed about your rights" 33% of respondents (66) answered that they read some information about it; detail knowledge has - 12.5% (25); partially informed - 26% (52), just heard about it - 20% (40); 8.5% of respondents find it difficult to answer.

"Are you informed about the professional liability insurance": 45% of respondents (90) answered that partially are; detail knowledge has - 12.5% (25), read some information about it;- 16.5% (33); just heard about it - 19% (38); 7% of respondents find it difficult to answer.

"Do you have professional liability insurance ", most of the respondents 90% (180) answered "No"; positive answer was only 10%.

"Your opinion about doctors, who insured professional liability are protected or not?"

Most of the respondents 48.5% (97) think that partially; 8.5% (17) considers doctors are protected; 22% (44) answer is negative; 21% of respondents find it difficult to answer.

The Development of the medical staff's professional liability insurance is very important for the developing country as Georgia. This business is still in the process of development and the insurance, as a culture, also is developing. Another factor to consider is the fact that medical personnel is not so well stimulated to be insured with the professional liability insurance, which makes a suggestion on its inappropriate popularization. If interest rises, the product will be attractive to rest of the companies and therefore competition will increase, and this will cause the strengthening doctors' protection, which is vital for the modern Georgian healthcare system.

GEORGIAN INSURANCE MEDIC'S AGENCY – FIRST STEPS IN MEDICAL MALPRACTICE INSURANCE AND ITS DEVELOPMENT

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In 2011 by the initiative of Georgina Medical Association (GMA) in cooperation with insurance company “Ardi Group” was established Ltd. **Georgian Insured Medic's Agency (GIMA).**

The main functions of the Agency was written and they are: Support of professional liability insurance culture and practice development in medical field; Support of protection of rights as the medics as the patients; Mediation in disputes between doctors and patients; Based on the experience create the professional liability insurance development strategy and recommendations.

During the years 2012-2015 **GIMA done Expertise Service on 272 cases** (261 Medical staff and 11 Medical Institution). From the medical cases for the I risk category (surgery and critical medicine profile)– 177 cases; II – risk category (therapy profile) – 62 cases, III risk category (Dentistry) – 8 cases and IV risk category (adjunct staff) – 14 cases.

The main priority of the Georgian Insured Medic's Agency is the “three rings service” – it means combined service of the expertise department of the GMA, Lawyers and legal Agencies and Insurance Company. Each “ring” covers each other and works as one combined scheme, as the professional mediator between the patient and the medical staff or institution.

GIMA also has more major preferences:

We provide the expertise and legal assistance in the cases, which happened before the insurance period

Compensation of the patient suffered material damages;

Minimum exceptions.

Doctors' professional liability insurance policy, which is given together with ARDI insurance company, can used by certified doctors, dentists and nurses.

Insurance policy compensation subjects are the following cases, if medical done involuntary mistake or negligence:

During the diagnostic; the outpatient treatment; the stationary patient treatment; the conducting of medical manipulations; the patient service at home, if the visit is officially implemented.

On the beginning of our work the compensated risks was: compensation costs in case of patients death, costs associated with the patient's condition deteriorates, legal costs and compensation for the certificate stoppage or cancellation. In next two years, after the study of the insurance market and situation in the Georgian healthcare system we added two more extra risk compensations: Patient suffered material damage (costs) and accident insurance of the medical staff.

ОПЫТ ПРИМЕНЕНИЯ ПОДЗЕМНОЙ СПЕЛЕОТЕРАПИИ В УСЛОВИЯХ СИЛЬВИНИТО-ГАЛИТОВЫХ ШАХТ ПРИ ЛЕЧЕНИИ ХРОНИЧЕСКИХ ЗАБОЛЕВАНИЙ ОРГАНОВ ДЫХАНИЯ

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Актуальность: в настоящее время наиболее актуальной проблемой в лечении и реабилитации хронических заболеваний верхних дыхательных путей как аллергического, так и инфекционного генеза, является поиск новых методов немедикаментозного воздействия на воспалительный процесс. В структуре заболеваемости и причин общей смертности хронические заболевания органов дыхания входят в основную группу. Лидирующие позиции среди хронических заболеваний верхних дыхательных путей занимает бронхиальная астма. По статистическим данным Всемирной Организации Здравоохранения в мире той или иной формой бронхиальной астмы страдает каждый двадцатый человек. Применение метода спелеотерапии в условиях подземного спелеокомплекса представляется одним из перспективных направлений в этом вопросе.

Цель: проанализировать результаты применения метода подземной спелеотерапии в условиях сильвинито-галитовых шахт г.Солигорска (Беларусь) при лечении пациентов с хроническими заболеваниями верхних дыхательных путей на базе ГУ «Республиканская больница спелеолечения» в период с 2013 по 2015 годы.

Материалы и методы: аналитический, социологический, статистический. Проведен ретроспективный анализ результатов курсового спелеолечения пациентов с хроническими заболеваниями верхних дыхательных путей на базе Государственного учреждения

«Республиканская больница спелеолечения» (г. Солигорск, Беларусь) за период с 2013 по 2015 годы. Непосредственные результаты лечения оценивались на основании жалоб пациентов, данных объективного осмотра и лабораторно-инструментальных исследований. Курс спелеолечения варьировал от 16 до 18 сеансов.

Результаты и обсуждение: за период с 2013 по 2015 годы на базе Государственного учреждения «Республиканская больница спелеолечения» пролечено 11756 пациентов. Распределение по возрасту от 18 до 60 лет (самая трудоспособная часть населения) – 8354 (71%), старше 60 лет – 1711 (14,6%), дети – 1691 (14,4%). Из них мужчины составили 4937 (42%), женщины – 6818 (56%). По данным анкетирования к концу спелеолечения в среднем в 97,2% случаев отмечается улучшение общего состояния: 34,8% пациентов – значительное улучшение, 62,4% - умеренное улучшение, а по результатам пациентов спустя год после курса спелеолечения лечебный эффект сохраняется в среднем около $7,0 \pm 0,4$ месяцев. На основании проведенной экспертной оценки качества лечения повторные курсы спелеотерапии способствовали более длительной ремиссии – до 2,5-3 лет. После курса спелеолечения достоверно отмечалось увеличение показателей функции внешнего дыхания. По данным Лаптевой Е.А. (2003) статистически значимый прирост ОФВ1 (объема форсированного выдоха за первую секунду) отмечался у пациентов с аллергической формой бронхиальной астмы к концу 2-ой недели спелеолечения, у пациентов со смешанной формой бронхиальной астмы (БА) и хронической обструктивной болезнью легких (ХОБЛ) к концу 3-ой недели. Также отмечалось статистически достоверное снижение уровней иммуноглобулинов А,М,Г к концу 2-ой недели у пациентов с аллергической формой БА, а у пациентов со смешанной формой БА и ХОБЛ снижение уровней иммуноглобулинов отмечалось к концу 3-й недели. По данным выборочного социологического анкетирования после курсового спелеолечения практически все пациенты отмечали улучшение общего самочувствия, имело место повышение толерантности к физическим нагрузкам и тенденции к уменьшению объема базисной терапии при бронхиальной астме.

Заключение: метод подземной спелеотерапии в условиях сильвинито-галитовых шахт Солигорского калийного месторождения (Беларусь) является достаточно перспективным направлением в

реабилитации хронических заболеваний органов дыхания и требует дальнейшего изучения с целью расширения перечня показаний к применению подземной спелеотерапии в практическом здравоохранении. Можно говорить об эффективности данного метода немедикаментозного лечения и целесообразности включения в программы реабилитации пациентов с хроническими заболеваниями верхних дыхательных путей.

ВОЗМОЖНОСТИ СПЕЛЕОТЕРАПИИ В КОМПЛЕКСНОМ ЛЕЧЕНИИ ХРОНИЧЕСКИХ ПОЛИПОЗНЫХ РИНОСИНУСИТОВ

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Актуальность: хронический полипозный риносинусит (ХПРС) – хроническое воспаление слизистой оболочки носа и околоносовых пазух, которое характеризуется образованием и рецидивирующим ростом полипов. Распространенность ХПРС в общей популяции населения Европы достигает до 4,3%, а наличие сопутствующей бронхиальной астмы доходит до 70%. Учитывая частые рецидивы, возникающие в 60-80% случаев, только хирургическое лечение этого заболевания не всегда достаточно эффективно. Наиболее оптимальной тактикой при ХПРС является оперативное лечение с длительными курсами топической терапии глюкокортикостероидами. Поиск новых методов лечения данной патологии остается одним из важнейших направлений в практике оториноларинголога. Доказано, что хронические воспалительные заболевания верхних и нижних дыхательных путей имеют сходную этиологию, а строение слизистой этих отделов дыхательного тракта гистологически почти идентично. Известно, что признанным методом немедикаментозного лечения пациентов с патологией органов дыхания является спелеотерапия. Учитывая вышеизложенное, данный метод лечения представляется весьма перспективным в комплексном лечении ХПРС и требует его дальнейшего изучения.

Цель: изучить эффективность подземной спелеотерапии и определить КЖ при лечении пациентов с ХПРС на базе Государственного

учреждения «Республиканская больница спелеолечения» (г.Солигорск, Беларусь).

Материалы и методы: в исследовании участвовало 44 пациента с основным диагнозом хронический полипозный риносинусит, сопутствующий диагноз - бронхиальная астма. В анамнезе у всех пациентов эндоскопические вмешательства по поводу ХПРС, всем назначалась назальные кортикостероиды. Все пациенты прошли лечение методом подземной спелеотерапии в условиях подземного спелеокомплекса Государственного учреждения «Республиканская больница спелеолечения» (г. Солигорск, Беларусь). Средний возраст пациентов составил 44,6 года. Среди них женщины – 26 человек (59%), мужчины – 18 человек (41%). Курсы спелеотерапии имели длительность от 16 до 18 процедур. Эффективность проводимого лечения оценивали по данным передней активной риноманометрии до и после спелеотерапии. Исследование проводилось при помощи прибора Rhino 3000 «ATMOS» по стандартной методике исследования. Для определения качества жизни (КЖ) пациентов использовали субъективную оценку выраженности симптомов, опросник SNOT-20 и данные визуально-аналоговой шкалы (ВАШ).

Результаты и обсуждение: по данным передней активной риноманометрии до начала спелеолечения средние значения суммарного объемного потока (СОП) составили $254,27 \pm 78,70$ см³/с, суммарного сопротивления (СС) – $4,02 \pm 1,89$ Па/см³/с. После курса подземной спелеотерапии средние значения СОП составили $667,47 \pm 84,47$ см³/с, средние значения СС – $2,06 \pm 0,92$ Па/см³/с. При оценке результатов лечения у пациентов достоверно отмечалось улучшение функции носового дыхания. Пациенты, прошедшие курс спелеотерапии также отмечали субъективно уменьшение выраженности симптомов ХПРС, что подтверждалось эндоскопическим исследованием носовой полости. До начала лечения субъективная оценка выраженности симптомов (в баллах) составила $2,04 \pm 0,16$, после лечения – $0,59 \pm 0,16$; по данным опросника SNOT-20 (в баллах) показатель равнялся до лечения $2,52 \pm 0,14$, после лечения – $0,98 \pm 0,09$; при оценке тяжести заболевания по данным ВАШ получены следующие результаты: до спелеолечения – $8,3 \pm 0,56$, после спелеолечения – $1,44 \pm 0,67$. Имеет место положительная тенденция при сравнении результатов лечения данным методом до и после подземной спелеотерапии.

Заключение: эффективность спелеотерапии в условиях подземного спелеокомплекса в лечении пациентов с ХПРС подтверждается данными субъективных и объективных методов лабораторно-инструментальных исследований. Метод позволяет уменьшить выраженность симптомов основного заболевания, улучшить качество жизни пациентов, и может быть весьма перспективным направлением в комплексном лечении пациентов с ХПРС. Применение подземной спелеотерапии может быть рекомендовано включению в программы реабилитации пациентов с ХПРС в сочетании с БА в комплексе со стандартной терапией.

СПЕЛЕОТЕРАПИЯ В ЛЕЧЕНИИ ХРОНИЧЕСКИХ ЗАБОЛЕВАНИЙ ОРГАНОВ ДЫХАНИЯ: ЭЛЕМЕНТ ТЕРАПИИ ИЛИ ЭТАП РЕАБИЛИТАЦИИ?

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Актуальность: хронические заболевания органов дыхания в настоящее время, наряду с ишемической болезнью сердца, артериальной гипертензией, сахарным диабетом составляют группу наиболее распространенных заболеваний. По прогнозам экспертов Всемирной Организации Здравоохранения хронические заболевания органов дыхания относятся к заболеваниям, несущим выраженную социальную нагрузку, и в ближайшее десятилетие станут самым распространенным заболеванием, как в развивающихся, так и в развитых странах. Кроме того, хронические заболевания органов дыхания входят в группу основных причин общей смертности населения. В основе широкого распространения данной патологии лежат существующие негативные экологические сдвиги, возрастающая загазованность и запыленность окружающей среды, рост числа вирусных

респираторных инфекций, и как следствие, увеличение аллергических заболеваний. В настоящее время до 40 % населения в мире имеет проявление аллергии в форме различных патологических состояний.

Цель исследования: определить значение метода спелеотерапии в комплексном лечении пациентов с хроническими заболеваниями органов дыхания, а также обозначить перспективы его применения в программах медицинской реабилитации у пациентов с данной патологией.

Материалы и методы: социологический, аналитический, статистический. Исследование проводилось на базе Государственного учреждения «Республиканская больница спелеолечения» (г. Солигорск, Беларусь) в период прохождения курса подземной спелеотерапии пациентами с различной патологией органов дыхания. Возраст пациентов варьировал от 18 до 65 лет. Курсовое спелеолечение варьировало от 16 до 18 процедур. Средняя длительность курса подземной спелеотерапии составила 17,3 сеанса. Для оценки эффективности метода спелеотерапии использовали анонимное анкетирование до и после лечения.

Результаты и обсуждение: в комплексном лечении хронических заболеваний органов дыхания, особенно тяжелых и среднетяжелых форм, существуют проблемы, которые не могут быть решены с помощью только лекарственной терапии. В этих условиях большое значение приобретает поиск новых эффективных не медикаментозных методов воздействия на воспалительный процесс при хронических заболеваниях органов дыхания, одним из которых является спелеотерапия в условиях сильвинито - галитовых шахт на базе Солигорского калийного месторождения (Беларусь).

Применение не медикаментозных методов в схемах лечения и программах медицинской реабилитации заболеваний верхних дыхательных путей обусловлено их физиологичным действием на организм пациентов и широким спектром воздействия на воспалительный процесс. Также при применении этих методов имеет место снижение лекарственной нагрузки. Всем этим параметрам соответствует метод спелеотерапии. Основой выраженного терапевтического воздействия на организм пациента при использовании спелеолечения является фактор стабильности микроклимата подземной спелеосреды. К этим факторам в условиях сильвинито - галитовых шахт можно отнести следующие показатели: температура в подземном спелеокомплексе в холодное и теплое время года остается постоянной – 15-16°

С, относительная влажность воздуха составляет 60-75%, скорость движения воздуха – 0,15 м/с, концентрация соляного аэрозоля – 0,25-0,35 мг/м³, диаметр частиц соляного аэрозоля не превышает 5 мкм, содержание кислорода – 20,0 об%, содержание углекислого газа – 0,04 об%, низкое содержание микрофлоры – 150 микробных тел в 1 м³ воздуха, а также отсутствие аллергенов и высокая ионизация воздуха за счет легких аэроионов отрицательных и положительных зарядов.

Спелеотерапию при лечении хронических заболеваний органов дыхания следует рассматривать в двух контекстах: как элемент лечения с целью снижения лекарственной нагрузки на организм пациента и стабилизации основных клинических симптомов заболевания, и как этап медицинской реабилитации, направленный на адаптацию пациента к социуму и оптимизацию функционального статуса.

Заключение. Таким образом, метод подземной спелеотерапии в условиях сальвинито-галитовых шахт представляется весьма перспективным, обеспечивающим высокий лечебный эффект, не медикаментозным методом воздействия на хронический воспалительный процесс. Включение в программы медицинской реабилитации данного метода позволит существенно улучшить функциональный статус пациентов с хроническими заболеваниями верхних дыхательных путей, уменьшить объем базисной лекарственной терапии, и как итоговый результат приведет к снижению экономических затрат на лечение пациентов с данной патологией.

THE SECOND PILLAR OF HEALTH INSURANCE IN THE REPUBLIC OF BULGARIA. OPPORTUNITIES. OBJECTIVES. FUNCTIONS

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Health insured people in the Republic of Bulgaria receive medical care within scope and volume provided for in the legal regulations and at the expense of the health insurance contributions collected by the system of mandatory health insurance. There is a systematic annual shortage of financial resources to fully cover the need for diagnosis and medical treatment of any health insured patient seeking health services. The shortage of financial means instigates migration of the medical specialists towards more economically developed states, due to the failure of the system to

ensure decent remunerations. The atmosphere of doctors-patients communications, in turn, has extremely deteriorated. On one hand, this is due to the discrepancy between the expectations of the patients to receive full and totally adequate and timely health cares at the expense of their paid-up health insurance contributions, and the capability of the system to ensure this outcome. On the other hand, lack of adequate remunerations discourages the medical specialists and provokes frustration in them while practicing their profession. In this complicated environment of the Bulgarian healthcare, the solution should be sought in precise valuation of all the facts and action-taking. The key lies in analyzing people's ability to generate resources for healthcare, adequate costing and pricing of the healthcare services, decent compensation for the medical labour and formation of a mechanism to build on the healthcare budget of mandatory health insurance through provision of additional monetary fund. This mechanism needs to be presented to the public together with reasoned estimates and evidence of its effectiveness and efficiency.

Fundamentals of the second pillar of health insurance can be built on the philosophy of additional health insurance in two forms, namely additional voluntary health insurance and additional mandatory health insurance. The objective of the additional mandatory health insurance is to provide those who seek medical care, with the possibility to ensure they shall get the maximum of the service without having to pay extra money, and at the same time to provide financial resources for proper functioning of the system while respecting the highly qualified labour of the physicians.

THE GROWING ROLE OF THE FACULTY OF PUBLIC HEALTH - MU SOFIA IN THE FORMATION OF A NEW GENERATION OF HEALTH POLICY MAKERS, MANAGERS AND EXPERTS IN HEALTH CARE

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Summary: In the development of medical science and practice at the beginning of the XXI century public health problems caused enormous interest and acquire special significance. Modern medical education is impossible without building a modern approach to the importance of disease control, prevention and the role of the individual to form his health. There is a growing need for professional health management in reforming health care system, which requires managers with new

thinking and multilateral training. The training of the new generation of health policy makers, managers and health experts is the meaning and the main goal of the Faculty of Public Health at the Medical University of Sofia., whose activity is presented in this publication.

**ОТДЕЛЬНЫЕ ХАРАКТЕРИСТИКИ БАЗОВОГО И ДОПОЛНИТЕЛЬНОГО
ОБРАЗОВАНИЯ ГЛАВНЫХ МЕДИЦИНСКИХ СЕСТЕР В РЕСПУБЛИКЕ
БЕЛАРУСЬ И ЗА РУБЕЖОМ: СХОДСТВО, РАЗЛИЧИЕ**

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Аннотация. Приведены отдельные сравнительные характеристики базового и дополнительного медицинского образования в Республике Беларусь, германской и англосаксонской моделей, показано сходство и различие в их организации, проанализированы тенденции обучения главных медицинских сестер.

Ключевые слова: главная медицинская сестра, образование, сходство, тенденции.

Актуальность. Фундаментальным принципом Великой хартии университетов, принятой в г. Болонье (1988), явился реализованный в Республике Беларусь (РБ) принцип свободы предлагать модель национального образования, которая учит уважать великую гармонию природы и жизни, учитывает требования существующей системы здравоохранения [1,2]. Понимание универсальной ценности здоровья стало фактором, осознаваемым не только организаторами здравоохранения, но и населением, в связи с чем, политика справедливого улучшения здоровья является источником стимула для науки и сестринских технологий. Воспитание сопричастности к новому типу стратегии в интересах здоровья осуществляется в базовом и дополнительном образовании главных медицинских сестер (ГМС) 4 вузов и Белорусской медицинской академии последипломного образования (БелМАПО) в направлении достижения целей Здоровья-2020, для чего необходимо понимание педагогами и медицинскими работниками направления пути обучения.

Цель исследования: установление закономерностей, сходства и различия по некоторым характеристикам образования ГМС в РБ в сравнении с германской и англосаксонской моделями.

Задачи исследования: определить сходство и различие в обучении медицинских сестер в отдельных странах Европейского региона и в РБ, анализировать состояние организации обучения ГМС.

Материал и методы: аналитический, социологический, исторический. Основными моделями, по которым осуществляется обучение медицинских специалистов, являются германская модель (ФРГ) и англосаксонская (Великобритания, Канада, США) [3]. Продолжительность программ обучения по англосаксонской модели колеблется от 4-5 лет (США), до 5-6 (Великобритания, Польша), а допуском к самостоятельной практике становится резидентура, длящаяся в Канаде и США 3-5 лет, в Англии - 1-6 лет. Эффективной, но менее стандартизированной считается германская модель с особенностью 2-х летней подготовки к поступлению через программу «Абитуриент», продолжительность учебы для получения общего медицинского образования 6 лет, а для допуска к самостоятельной практике – 11 лет, а также необходимостью отработать ассистентом (практикантом врача) не менее 4,5-5,5 лет. В РБ продолжительность базовой подготовки в 4 вузах (Белорусском, Витебском, Гродненском, Гомельском государственных медицинских университетах) составляет 5-6 лет. Подготовка проводится по 7 специальностям в очной форме, 6 из которых обеспечивают получение квалификации «Врач», 1 – специальности – «Медицинская сестра с высшим образованием», продолжительность обучения - 4-5 лет, что соответствует европейским стандартам.

Сходством систем образования медицинских сестер с высшим образованием в ряде европейских стран, Российской Федерации (РФ) и в РБ является структура, условия приема, одинаково продолжительные сроки обучения, практико-ориентированный допуск к самостоятельной практике. В соответствии с рекомендациями Всемирной Федерации медицинского образования выделяют базовое (преклинику и клинику), последипломное образование (в РБ – дополнительное), резидентуру, или специализацию, непрерывное профессиональное развитие (повышение квалификации) (ПК). В период базового медицинского образования студенты приобретают сведения и

навыки по общим профессиональным, естественнонаучным и клиническим дисциплинам, осваивая фундаментальные науки на 1-3 курсах, на старших - внутренние и хирургические болезни. Производственная практика после 3-его курса – сестринская, после 4-ого – поликлиническая, после 5- го врачебная. Право на занятие должности врача – специалиста и сестры с высшим образованием имеют лица, получившие высшее медицинское, фармацевтическое или сестринское образование, после прохождения интернатуры и сдачи государственного квалификационного экзамена (ст. 56 Закона «О здравоохранении» РБ). Интернатура продолжительностью 12 месяцев проводится по 34 специальностям в организациях здравоохранения (ОЗ), а для специальностей «Бактериология», «Санитарно-гигиенические лабораторные исследования», «Валеология», «Общая гигиена», «Эпидемиология» - 5 месяцев, по другим специальностям – иные (табл.).

Сокращение сроков обучения сестринскому делу до 1 г. 10 мес. обусловлено дефицитом специалистов и является временной мерой. В РБ существует альтернативная форма подготовки высококвалифицированных кадров в виде клинической ординатуры с практической направленностью и продолжительностью 2 года при дневной форме подготовки, 3 – по заочной форме, что дает право на получение свидетельства о присвоении квалификации. В стране действует система ПК, при которой оптимальным количеством часов для присвоения новой квалификационной категории руководителей и специалистов с высшим медицинским (сестринским) образованием является объем не менее 160 час. Для подтверждения имеющейся квалификационной категории нужно 100 час., для лиц, не имеющих квалификационной категории – не менее 80 час.

Подготовка в РБ научных медицинских кадров высшей квалификации ведется по образовательной программе в 2- ступенчатой системе: аспирантуры с получением научной квалификации «Исследователь» (1 ступень дополнительного образования по подготовке специалистов с навыками планирования, проведения, анализа научных исследований, разработку диссертации на соискание ученой степени кандидата наук); образовательной программы докторантуры. Это 2 ступень для подготовки специалистов с навыками организации научных исследований по новому направлению, развитию существующих направлений, анализа и обобщений результатов научной деятельности, подготовки диссертации на

соискание ученой степени доктора наук (реализуется в дневной форме – 3 года, заочной – не более 4-х лет, и в форме соискательства - не более 5 лет).

Срок обучения	Шифр	Специальность
2 г .6 мес.	2-79 01 33	«Зубопротезное дело»
	2-79 01 04	«Медико-диагностическое дело»
	2-79 01 03	«Медико-профилактическое дело»
2 г. 10 мес.	2-79 01 34	«Лечебное дело»
1 г. 10 мес.	2-79 01 31	«Сестринское дело»
	2-79 01 34	«Лечебный массаж»

Таблица – Сроки обучения другим специальностям в сестринском деле

Деятельность педагогов медицинских образовательных учреждений базируется на ценностях, лежащих в основе политики Здоровье-2020: всестороннем подходе к детерминантам здоровья населения страны, используемом в учебных программах обучения ГМС. Включает развитие лидерства; практическое использование предпосылок позитивных сдвигов в деятельности специалиста нового типа – помощника врача по амбулаторно-поликлинической помощи; совершенствование командных форм деятельности; фактически состоявшееся возрастание гуманитарного потенциала сестринского сообщества через благотворительность и общественную деятельность. Развиваясь в русле мировых образовательных тенденций, белорусские педагоги обеспечивают мотивацию на непрерывное развитие ГМС согласно типологии образования ЮНЕСКО [4]. Это повышение требований к уровню интеллектуальных способностей специалистов, формирование устойчивой мотивации к обучению всю жизнь; создание синергетических обучающих отношений в учебных конференциях и обучающих семинарах врачей и сестер; построение модели развития индивидуальных свойств личности, генерации знаний с эффективным использованием в изменяющихся обстоятельствах. Девиз деятельности ГМС – «От знаний к совершенству личности» применяют как принцип современного обучения SMART (конкретность, измеримость,

достижимость, реальность действия с конкретизацией срока исполнения). Задачи дополнительного обучения – научить ГМС решать реальные проблемы, выработать устойчивость к стрессам, научить предупреждению деструктивных конфликтов в коллективе.

Заключение: На протяжении развития сестринского дела имели место трудности в системе медицинского образования в РБ [5]. Система непрерывного профессионального развития ГМС в РБ может быть укреплена за счет правового обеспечения их карьерного роста, приобретения большей самостоятельности в профилактической деятельности помощника врача по амбулаторно-поликлинической помощи с высшим образованием. Безопасность и эффективность медицинской помощи обеспечивается изменением профессиональных квалификационных характеристик кадров за счет увеличения доли медицинских сестер с высшим образованием. Кадровый потенциал страны для ведения научных исследований в области сестринского и акушерского дела готовится из числа магистров по реабилитологии, как направлению, наиболее полно отвечающему потребности практического здравоохранения, находится в русле «Стратегических направлений укрепления сестринского и акушерского дела в Европе для достижения целей политики Здоровье 2020», рекомендованных ВОЗ (2015). Сравнительный анализ систем базового и дополнительного образования ГМС в РБ и за рубежом выявил сходство и различие современного состояния их обучения в мире.

СРАВНЕНИЕ ОТДЕЛЬНЫХ ХАРАКТЕРИСТИК ДОПОЛНИТЕЛЬНОГО ОБРАЗОВАНИЯ ГЛАВНЫХ МЕДИЦИНСКИХ СЕСТЕР В РЕСПУБЛИКЕ БЕЛАРУСЬ И ЗА РУБЕЖОМ: ТЕНДЕНЦИИ

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Аннотация. Проведено сравнение отдельных характеристик дополнительного медицинского образования в Республике Беларусь, германской и англосаксонской моделей, проанализированы тенденции обучения главных медицинских сестер.

Ключевые слова: главная медицинская сестра, образование, тенденции.

Актуальность. Приверженность принципу: «Действовать как можно

раньше, действовать надлежащим образом, действовать вовремя и действовать сообща, провозглашенный в Минской декларации, подписанной 53 странами-членами Европейского региона Всемирной организации здравоохранения (ВОЗ) (2015) дает инструмент улучшения общественного здоровья через систему государственного управления, в которой участвуют главные медицинские сестры (ГМС). Воздействие на фактор ценности здоровья осознан не только организаторами здравоохранения Республики Беларусь (РБ), но и населением, в связи с чем, политика справедливого улучшения здоровья является источником стимула для науки. Воспитание сопричастности к новому типу стратегии в интересах укрепления здоровья населения осуществляется в дополнительном образовании ГМС согласно достижению целей Здоровья-2020 [1, 2], для чего необходимо понимание педагогами направления пути обучения.

Цель исследования: определение тенденций по отдельным характеристикам дополнительного образования ГМС в РБ в сравнении с германской и англосаксонской моделями.

Задачи исследования: анализировать состояние обучения ГМС в отдельных странах Европейского региона и в РБ, сделать выводы по тенденциям организации обучения в системе дополнительного образования.

Материал и методы: аналитический, социологический. Известными в мире моделями обучения медицинских специалистов, являются германская модель (ФРГ) и англосаксонская (Великобритания, Канада, США). Продолжительность программ обучения англосаксонской модели колеблется от 4-5 лет (США), до 5-6 лет в Великобритании, Польше, Российской Федерации (РФ). Допуском к самостоятельной практике является резидентура 3-5 лет (Канада, США) и 1-6 лет в Англии. Германская модель имеет особенности подготовки: к поступлению через программу «Абитура» (2 г.), продолжительность учебы для получения общего медицинского образования (6 лет), допуск к самостоятельной практике (11 лет), необходимость отработать практикантом врача (ассистентом) не менее 4,5-5,5 лет. В РБ продолжительность базовой подготовки в вузах составляет 5-6 лет по 7 специальностям в очной форме, 6 из которых обеспечивают получение квалификации «Врач», 1 – «Медицинская сестра с высшим образованием», продолжительность обучения - 4-5 лет, соответствующая европейским стандартам. По ряду специальностей продолжительность обучения колеблется от 2 г. 10 мес. (Лечебное дело), 2г. 6 мес. (Зубопротезное дело, Медико-

диагностическое дело, Медико-профилактическое дело), до 1 г. 10 мес. (Сестринское дело, Лечебный массаж). Альтернативная подготовка специалистов по клинической ординатуре практической направленности (2 года при дневной форме подготовки, 3 – по заочной) дает право на присвоение квалификации. Действует система повышения квалификации (ПК), при которой оптимальным количеством часов для присвоения новой квалификационной категории руководителей и специалистов с высшим медицинским (сестринским) образованием является объем не менее 160 час., для подтверждения имеющейся нужно 100 час., для лиц, не имеющих квалификационной категории – не менее 80 час. Преимуществом непрерывного профессионального образования начинается с завершения базового (вуз) и длится на протяжении активной профессиональной деятельности ГМС, она необходима в связи со значительной скоростью изменений в практике современной медицины, включает самообучение и самоконтроль, в качестве профессиональной гарантии качества помощи. Используемая в РБ типология ЮНЕСКО позволяет систематизировать содержание и структуру непрерывного профессионального медицинского образования (формальное, неформальное, информальное) каждого из видов обучения. В Финляндии для повышения безопасности пациентов прикладывают комплексные усилия по совершенствованию обучения ГМС, оптимизируя пропорции учебного времени. Так, теория составляет в программе 55,7%, практика – 42,9%, диплом - 7,2%, факультатив – 1,42%, что близко к структуре программ обучения на курсе повышения квалификации «Организация сестринского дела» кафедры общественного здоровья и здравоохранения ГУО «Белорусская медицинская академия последипломного образования» (курс ПК «ОСД» кафедры ОЗиЗ БелМАПО) [3, 4]. В государствах Европейского региона реализуют наиболее доступный вид обучения – формальное профессиональное образование, осуществляемое педагогами в соответствии с концепцией непрерывного развития: life-long learning (обучение на протяжении всей жизни). Оно включает третичное (среднее и/или высшее профессиональное образование), неформальное, проходящее вне учебных заведений, без участия преподавателя, при отсутствии системности, учебного плана, а также информальное образование (самообразование). Это общий термин для индивидуальной познавательной

деятельности за пределами стандартной образовательной среды, осуществляется самой ГМС через свободный поиск информации из разных источников, необязательно носит целенаправленный характер, широко распространен в США. В РБ внимание государственной образовательной политики направлено на формальное обучение, а за рубежом - к среде информального образования для социализации личности, формирования коммуникативных навыков, особо важных в геронтологии, для социальной адаптации (реабилитации) лиц с особенностями развития (Чехия, Польша, Венгрия, Израиль, Финляндия). Тенденцией в образовании ГМС в странах Европейского региона и в РБ является контроль качества образования и наличие единых оценочных критериев. Также известно, что механизм ПК профессорско-преподавательского состава вузов несовершенен, в РФ рекомендуется не только повышение профессионального уровня в избранной области, но и в педагогике, как это делается в РБ.

В 1998 г. Гродненском государственном медицинском университете разработан образовательный стандарт первого поколения по специальности «Сестринское дело», введен в 2000г. Изменилось отношение кафедр вузов к методической работе, проявившееся в качественных, содержательных отличиях учебно-методических пособий для медицинских сестер с грифом Министерства образования РБ. Так, на курсе ПК «ОСД» кафедры ОЗиЗ БелМАПО за 15 лет издано 4 учебных пособия с подобным знаком качества, 4 монографии, 28 учебно-практических и учебно-методических пособий, 5 инструкций, 1 стандарт деятельности, что свидетельствует об эффективности осуществляемого руководства по улучшению качества дополнительного образования для ГМС [4].

Цели непрерывного образования ГМС, согласно доктрине Life-long learning, принятой в Европе, и в РБ, состоят в поддержке необходимого уровня профессионального развития, компетентности. Включает проверку приобретенных знаний, умений, навыков и компетенций на основе разных механизмов оценки профессиональной квалификации, обеспечиваемых гибкими программами ПК, дистанционным образованием (ДО), электронными формами обучения; возможностью сетевого взаимодействия реализации программ учреждений образования; контролем реализации традиционного классического и ДО [4]. Одним из современных трендов в медицинском

образовании с использованием новых информационных технологий и виртуальных пациентов является симуляционное обучение практическим навыкам, а также развитие нового клинического мышления в центре которого – пациент, что соответствует рекомендациям ВОЗ (2008) [6]. Особенностью в системе дополнительного образования взрослых в РБ стало внедрение в практику курсов ДО для специалистов, не осуществляющих лечебно-диагностическую деятельность (руководителей, экономистов, бухгалтеров организаций здравоохранения), достоинством их внедрения является экономический эффект без отрыва от своих обязанностей [4]. Отличием подготовки научных кадров высшей квалификации в РБ является 2-ступенчатая образовательная программа. Аспирантура, с получением научной квалификации «Исследователь» (1 ступень дополнительного образования), предполагает подготовку диссертации на соискание ученой степени кандидата наук. Образовательная программа докторантуры (2 ступень) существует для подготовки специалистов по организации научных исследований в новом научном направлении, или развитию существующих, по анализу, обобщению результатов научной деятельности, подготовке диссертации на соискание ученой степени доктора наук. Эта ступень реализуется в дневной форме (3 года), заочной (не более 4-х лет), и в форме соискательства - не более 5 лет.

Деятельность педагогов медицинских образовательных учреждений базируется на ценностях, лежащих в основе политики Здоровье-2020: всестороннем подходе к детерминантам здоровья населения страны, используемом в учебных программах обучения для ГМС. Включает развитие лидерства; практическое использование предпосылок позитивных сдвигов в деятельности специалиста нового типа – помощника врача по амбулаторно-поликлинической помощи; совершенствование командных форм деятельности; фактически состоявшееся возрастание гуманитарного потенциала сестринского сообщества через общественную деятельность. Развиваясь в русле мировых образовательных тенденций, белорусские педагоги обеспечивают мотивацию на непрерывное развитие ГМС согласно типологии образования ЮНЕСКО [2].

Важной тенденцией за рубежом является многообразие форм мотивации населения в сохранении и укреплении здоровья, лежащих в основе формирования качественно нового уровня сестринской помощи населению. Это обеспечивается совершенствованием профессиональной подготовки,

развитием научных исследований в области сестринского дела, использование их результатов в практическом здравоохранении на основе существующих стратегии в системе непрерывного обучения ГМС [5]. Популяризация перед населением экономической целесообразности инвестиций в здоровье базируется на опубликованной ВОЗ экономике здоровья. Согласно этому, 1 у.е. в пользу профилактики болезни сохраняет 7 у.е. финансов, не израсходованных впоследствии на лечение, что может быть доводом населению к приверженности сохранять и укреплять здоровье. Известная статистика ВОЗ по инвестициям в профилактику ИБС в странах Европейского региона: Финляндии, пропорции вклада в лечение по отношению к предупреждению болезни составляют 24%:74%; Чехословакии – 39%: 60% соответственно; Польши – 43%: 49%, свидетельствует о значительном снижении уровня смертности населения [6].

Полезным для сохранения и защиты психического здоровья ГМС является общая для системы базового и дополнительного обучения в Европе и в РБ тенденция к нейтрализации длительного профессионального стресса применением технологий предупреждения СЭВ, популяризации знаний по ранней диагностике и профилактике депрессий, наркомании и самоубийств [3,4]. Рост суицидов сокращается во всем мире целенаправленными мерами социальной защиты и активной поддержкой сообществ «Анонимные алкоголики», «Анонимные наркоманы», в работе которых активно участвуют медицинские сестры [6]. Развитие теории и практики сестринского дела в прикладных исследованиях по санаторно-курортному, реабилитационному и медико-социальному направлению деятельности обусловлено общей тенденцией к постарению населения в Европе. Направленность современного образования ГМС в вузах и колледжах РБ отмечена ростом научно-исследовательской активности ГМС, которая в системе дополнительного образования за 2002-2010 гг. возросла с 0,4% до 2,8%, составив в 2010 г. 5,2% от числа обучавшихся в БелМАПО. Возрастание роли акушерки, медицинской сестры в оказании помощи пациенту сочетается с высокой оценкой общества их вклада в общее дело за 2008-2010 гг., рост на 8,6% числа лиц, получивших почетные звания, награды, с 14,4% до 23% [4].

Заключение: Тенденции медицинского образования за рубежом и в РБ свидетельствуют о резервах его совершенствования, используемых в

обучении ГМС. Совершенствование системы дополнительного медицинского образования базируется на взаимодействии общих программ обучения в РБ с международными структурами, становясь ядром повышения качества образования, обеспечивающем новый тип стратегии в интересах укрепления здоровья населения.

Установленные в разных странах особенности в области сестринского образования базируются на профессиональных стандартах. Основные компетенции ГМС в РБ обеспечивают гарантии соблюдения принципов политики Здоровье-2020.

Кадры для ведения научных исследований в области сестринского и акушерского дела готовятся из числа магистров по реабилитологии, как направлению, наиболее полно отвечающему потребности практического здравоохранения. Сравнение систем дополнительного образования ГМС в РБ и за рубежом выявил единые тенденции современного состояния их обучения в мире.

МОДЕЛЬ ЗДРАВООХРАНЕНИЯ В БОЛГАРИИ – ПОТЕНЦИАЛ ОПТИМИЗАЦИИ

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Аннотация: Введение. Здравоохранение является сложной системой, включающей в себя деятельности, связанные с управлением, финансированием и предоставлением медицинских услуг с целью улучшения статуса здоровья населения. Современная система здравоохранения базируется на принципах солидарности, права выбора и эффективности при расходовании ресурсов системы и таким образом имеет как социальные, так и экономические характеристики.

Болгарское здравоохранение, высшей целью которого являются сохранение и улучшение состояния здоровья населения – неделимая часть национального хозяйства. За последние 20 лет в системе здравоохранения в Болгарии осуществились изменения, почти идентичные с теми в остальных бывших социалистических странах – переход от бюджетной к страховой

модели финансирования и введение базарных механизмов при функционировании и управлении системы.

Методика исследования. В целях анализа использованы следующие научные методы: документальный – для анализа нормативных документов, касающихся системы медицинского страхования в Болгарии и других европейских странах; анкетный – для установления степени удовлетворенности болгарских граждан и медицинских специалистов системой национального медицинского страхования; математико-статистический – в целях обработки результатов анкетного исследования.

Результаты исследования: Осуществлен анализ среди 55 медицинских специалистов и 100 болгарских граждан с обязательной медицинской страховкой. В процессе исследования установлено, что 82% из анкетированных специалистов работает одновременно и с Национальной кассой медицинского страхования и с частными страховыми компаниями. 91% тех же специалистов отмечает, что не оценивает как эффективной модель медицинского страхования в Болгарии. Большинство указывает на тот факт, что объем и качество медицинской услуги, оплачиваемой Национальной кассой медицинского страхования не соответствуют требованиям пациентов. По мнению 88% пациентов, использующих медицинские услуги в связи с обязательным медицинским страхованием 64% воспользовались внебольничной помощью, а 40% и больничной помощью. Большинство анкетированных пациентов отмечает, что несмотря на обязательную страховку, которая у них есть, при получении медицинской помощи им приходилось доплачивать за услугу.

Вывады: Полученные и анализированные результаты исследования являются основанием сделать вывод, что болгарская система медицинского страхования работает успешно, но существуют направления, требующие корректировки. Ряд примеров эффективно функционирующих моделей медицинского страхования в Европе могут послужить в процессе оптимизации системы здравоохранения в Болгарии.

CONTINUING PROFESSIONAL DEVELOPMENT OF DOCTORS - A GUARANTEE OF QUALITY IN PROFESSIONAL PRACTICE AND PATIENT SAFETY

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The paper dealt with practices in European countries for Continuing Medical Education in the historical aspect. Conducting continuing medical education is an important element in the implementation of national health policy. Training of health professionals is essential for ensuring the required quality of medical services and improving their efficiency. It is emphasized that the lack of regulations in the coordination, terms and condition of conducting ongoing training and monitoring of these activities is a prerequisite for reducing the quality of medical services. It was concluded that in Bulgaria the system lacks tools for evaluation, coordination and monitoring of the quality of CME events, priority to professional organizations, reckoned from Health Law and the Law on professional organizations. It is stated that to conduct an effective continuing education is necessary to establish special regulations. We discuss some of the developed and signed documents and an analysis of the draft Law amending the Law on doctors' and dentists (LAS OF LPOPPDM). As an example of the impact of professional qualification on the quality of medical services we discuss some results of the control activities of the Executive Agency "Medical audit" in the field of pediatrics.

MIGRATION PROCESSES IN BULGARIAN HEALTHCARE- MOTIVES AND MOTIVATION

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The authors summarize the ongoing health reform results. Human Resources characteristics in the Bulgarian health sector are indicated by specialty, number, ratio medical specialists to population in comparison to European standards. Own study is undertaken of migration processes by using the Bulgarian Medical Union register and number of issued certificates. Questionnaire is developed, filled

in by the willing physicians, when they receive certificate for working abroad. Contemporary trends in in-country and trans-border migration of medical specialists are presented. The analysis concludes that annually an average of 500 physicians indicate willingness to immigrate, 51-60% male to 40-49% female. Analysis is undertaken of the reasons for immigration processes. Main motives singled out are better career prospects, higher standard of living; low pay and lack of trust in patient-doctor relationship in Bulgaria. The disproportions of numbers and specialties on regional level are highlighted. A number of possible solutions are suggested and concrete recommendations are made for solving the human resources issues in Bulgarian health care.

COGNITIVE AGING MANAGEMENT AND WORKABILITY

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While in terms of age aspects of the work shift, regimes of rest and work and physical work load some action areas are identified and recommended, mental and cognitive aspects of maintaining efficiency in aging workforce are underestimated and remain outside the scope of the tasks and action of occupational health specialists.

Cognitive age changes among workers and management is now recognized as a priority task for specialists in occupational health in today's knowledge economy where longer working life is an economic and social necessity. Underlying reasons which is decisive for the choice of this theme are: - Demographic change and need for action by companies related to the organization and design of work, - Relatively little knowledge about the relationship age- productivity, - A higher level of performance before retirement determines the quality of life after retirement, - Prevention of socially significant health problems like Alzheimer's disease and dementia associated with high economic costs, - Low capacity and competence of the professionals in the country.

Our objectives are to analyze current situation, practice and normative base

concerning cognitive management in aging process in the country and to point out applicable practice measures and based on the deficits. Many jobs today do not require physical strain, but acquire new skills or advanced training to adapt to changing environments. Today's work and industry are dominated by cognitive demands; it means all processes of perception and thinking and mental performance as knowledge, attitudes or beliefs. These capabilities and performance change with age. US data show that 25% of the population over 65 years lost their brain performance and suffers from memory loss and mild cognitive impairment.

There are many ways in which the brain can be affected and impaired as we age incl. the influence of social determinants - the cause of health inequalities. The reduced brain volume leads the list. Brain cells shrink and decrease as we age and is known as "brain atrophy", which affects memory, learning ability; the processes of decision, making us feel disoriented. The main reason and mechanism of brain atrophy is too high level of stress and bad nutrition. The more stress, which react negatively, the more cortisol is secreted by the adrenal glands causing higher release of insulin from the pancreas and the memory area in the hippocampus in the brain decreases. High cortisol levels noticeably impair memory functions.

The various abilities and functions that underlie numerous competences change very differently with age and individual experiences. Established is a link between long duration of monotonous work and physiological changes in the brain. Chronic stress negatively affects the brain in all age groups. Therefore, mastering and slowing brain atrophy is a priority not only for medical professionals and psychologists, but also for employers and policy makers of economic and political decisions.

Individuals adapt throughout their whole lives. They are able to learn and to mobilize additional reserve capacity and concentrate their efforts in areas where they can store and maintain a high level of given capabilities.

Resources and opportunities to contribute to the management of active aging in the workplace are 1/ the training of specialists in occupational health, to learn and be able to apply psychological knowledge, theory and practice of finding adequate solutions and learning that help workers stay healthy, motivated and willing to continue their career to maintain and develop interest in other fields of activity and life and 2/ Development of proper cognitive abilities training programs based upon the knowledge and last research data from the developmental and learning psychology.

The model of public health is effective in terms of successful aging and can be used by different mental health and wellbeing professionals as by responsible for occupational health and policy makers. It includes a variety of activities and factors from different fields and levels - from individual behavior, work and social environments& services to the mass media.

PROBLEMS FACES BY PHD STUDENTS IN PUBLISHING THEIR RESEARCH PAPERS

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It is considered that the scientist's productivity, relevance and impact is assessed by such bibliometrics indicators, as the number of publications in peer-reviewed academic journal, Citation Index, H and G indices. According to data of International Scientific Journal & Country Ranking (<http://www.scimagojr.com/countryrank.php>) Georgia holds 88th place among 239 Countries.

The necessary requirement for graduating from PhD program of Faculty of Medicine, Ivane Javakhishvili Tbilisi State University (FMTSU) and defense PhD thesis is to have published at least 3 academic papers but at least one of them - in the international journal, obtained the Thomson Reuters Impact Factor (IF). The experience shows, that PhD students face various problems in publishing their researches in such category journals.

Questionnaires were administered to PhD students enrolled in the PhD program of FMTSU from 2010 and who had attempted to publish a scientific paper in journal with Thomson Reuters-'s IF. Questionnaire included all of the possible issues, for what the work was rejected or returned to the authors of "resubmitting/ revising". It was found out, that on average, each doctoral student in the study period made submission for 4 times.

It appeared that no manuscripts were accepted at first; 60% of papers were resubmitted twice; 30% - 3 times and 10% - 4 times. 25% of articles were published in the journals with IF less than 1; 55% - in journals with IF 1-3; 20% - in journals with $IF \geq 3$.

Investigating the problems of submission and publication processes, we found out that the common reasons for rejections or for major revision were: poor



Ivane Javakhishvili Tbilisi State University



Ivane Javakhishvili Tbilisi State University

Founded at the beginning of the 20th century, Ivane Javakhishvili Tbilisi State University (TSU) is the first Georgian University and the first higher education institution in the South Caucasus. Considered as a “white temple of science and education” TSU has always played a crucial role in the life of Georgian society.

First opened in 1918 TSU bears the name of its founder Professor Ivane Javakhishvili who gathered Georgian scholars educated in Europe to establish a national university. Being a renowned historian with a Western education himself, Javakhishvili contributed greatly to making “The Georgian University in Tiflis” as it was then called, a classical European institution of higher education.

Today, the university’s main directions, principles, values and reforms are carried out dynamically in a systematic, coordinated manner and have placed TSU on a development path leading towards a common European Higher Education Area.

TSU is a driving force behind Georgian higher education. As a forward-looking university, TSU realizes that it faces new demands and strives to meet the challenges of the century, and to prepare its students for further professional activities. As a university with an outstanding reputation and traditions, the cream of Georgian university entrants frequently name TSU as their first choice.

TSU is the largest university in Georgia with over 22.000 students and 9 academic units:

- Faculty of Humanities;
- Faculty of Economics and Business;
- Faculty of Law;
- Faculty of Exact and Natural Sciences;
- Faculty of Social and Political Sciences;
- Faculty of Medicine;
- Center for Languages;
- Institute for European Studies;
- International School of Economics

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writing (poor English) (almost 100%), non-clear research hypothesis (60%), non-appropriate ethical considerations (60%), inadequate or insufficiently described material and methods (40%), poorly formulated conclusions (30%), technical mistakes in provided references (10%), other (5%).

For the improvement of quality of scientific papers of PhD students of FMSTU and support their publishing in international “peer-review” based journals with IF, the mandatory courses in "Academic writing", "Problem-based learning", "Biostatistics and epidemiology", "Bioethics" are included in PhD program's curricula. Also, FMSTU founded on-line medical open accessed Journal “Translational and Clinical Medicine - Georgian Medical Journal” (indexed in Google scholar) in 2016. This journal has the same requirements for publishing manuscripts as the journals with Thomson Reuters IF. PhD students are encouraged to use this opportunity to publish their first manuscripts (mostly “literature reviews” and “research hypothesis”). The academic staff of University provides all necessary consultations in English, ethical issues and statistics.

REVISITING LIVER REGENERATION –UNRESOLVED QUESTIONS EMERGED DURING ORGAN REGENERATION

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Liver regeneration is unique ability of this organ to restore its mass/volume and functioning capacity almost completely, in a short time, following partial hepatectomy (PH). Liver resection becomes a routine intervention nowadays due to increased incidence of liver pathologies and living donor liver transplantation procedures. However, the complex mechanism of liver regeneration still remains to be challenging, requiring several hundred translational and clinical studies annually, dedicated to different aspects of this unique process.

It is established that liver mass restoration after PH is based on hepatocyte proliferation (some researchers support the presence of both – hyperplasia and hypertrophy of liver cells). At the same time, the behavior of liver tubular structures has been left beyond attention - how do branches of portal and hepatic veins, hepatic

artery and bile duct “follow” the growth of organ volume: by sprouting of new branches or extension/elongation of the old ones? Also, it is not completely understood, how the architectonics of microcirculatory module of liver lobes is changed after PH.

Our study aims to research the transformation of architectonics of liver tubular structures in liver regeneration following PH. For this purpose, we have used the method of “corrosion casts”. For remodeling of portal tubular structures of male Wistar Rats subjected to 70% PH by standardized two knots method (Mitchell and Willenbring, 2008), we used the kit of “Protacryl-M” (commonly applied in dental practice) including both liquid and solid components, in addition to colored pigments.

The pilot analysis of the obtained casts (including scanning electron microscopy of micro specimens) revealed that they evidently reflect the architecture of studied vascular structures and are completely convenient for the relevant description/measurement of the branching, surface and sizes of the different fragments and can provide justified answer for above listed questions.

PECULIARITIES OF SPERMATOGENESIS REGULATION AND SPATIAL ORGANIZATION IN SEMINIFEROUS TUBULES OF RAT TESTIS

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In mammals the process of spermatogenesis, which occurs for almost the whole lifetime of an animal, depends upon a pool of spermatogenic stem cells within the testes that undergo asymmetric division to both maintain the stem cell population and give rise to progenitors that will proceed through spermatogenesis to generate mature spermatozoa. It still remains unclear though what are the precise molecular mechanisms of sperm production, differentiation, and maturation as well as the origin of so called waves of spermatogenesis within the seminiferous tubules of testis. The study in the field will contribute to the improvement of clinical treatment of different pathologies (e.g. oligospermia, azoospermia) connected with the sperm production disorders. Based on literature data the enzyme phosphodiesterase plays an important role in regulation of spermatogenesis through breaking of cAMP and thus hindering the process. Previously we have shown that adult rat spermatozoa

contain the proliferation-inhibiting thermostable protein complex (TPC) with Calmodulin (CaM) as an active component. Given the fact that Ca²⁺-CaM complex leads to the activation of phosphodiesterase, it can be assumed that this well known mechanism is responsible for the depressing effect of TPC.

The goal of the study was to determine Calmoduline participation in the regulation of spermatogenesis as well as to study the specificity of seminiferous tubule spatial organization.

Materials and methods. The experiments were held on prepubertal (25-day-old) white non-linear rats. Animals were divided into two groups: 1) the control group of intact animals; 2) the group of experimental animals intraperitoneally injected with 200 mcg of Calmodulin. Both groups were injected with colchicin (1 mcg/1g) 2 hours prior to removing the testes. Testicular tissue was fixed in 4% formaldehyde, and embedded in paraffin, 5mcm sections were prepared and stained with hematoxylin-eosin. The serial sections (80 slices) were also prepared for a partial reconstruction of the tubule 400 micron length fragment. The changes in testicular tissue histoarchitecture were evaluated under the light microscope ("Hamilton" DN-200M).

Results and discussion: The study has revealed that after intraperitoneal administration of exogenous Calmodulin in experimental group of rats the number of spermatogenically "active" sections of seminiferous tubules decreases by approximately 22% comparing to the control group. The microscopic analysis showed that in the 400 micron length fragment of tubule one can observe spermatogenically "active" and "inactive" segments. There are also transitional tubular forms, though the accurate determination of different forms of tubular regions requires the reconstruction of a complete tubule, which is the aim of our further research.

Summary: The received data made us to conclude that: 1. Exogenous Calmodulin has an ability to disturb the process of spermatogenesis in prepubertal white non-linear rats testis; 2. Growing prepubertal white non-linear rat testis contain tubules with segments of different spermatogenic activity.

PREIMPLANTATION GENETIC DIAGNOSIS

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Objective: To describe process of preimplantation genetic diagnosis (PGD),

which allows the selection of embryos with out mutations for implantation.

Methods: I have identified most common genetic diseases we meet in new borns in our country. I learned the connection between mothers age and the prevalence of those pathologies. I studied the results of performing PGD on embryos derived by in vitro fertilization in order to deliver an unaffected infant.

Results: Several inherited diseases can now be diagnosed by genetic analysis of single cells biopsied from human eggs and preimplantation embryos following in vitro fertilization, “at risk” couples can, therefore, have only unaffected embryos replaced in the uterus and avoid the possibility of terminating a pregnancy that might only be diagnosed as affected later in gestation.

Conclusion: PGD is an alternative that can be offered for many genetic diseases and represents a method to decrease and potentially eliminate the transmission of severe genetic diseases. It is believed that this technique will eventually be successful for more hereditary disorders.

COMMON BILE DUCT RECONSTRUCTION USING THREE DIMENSIONAL SCAFFOLD FROM DECELLULARIZED HUMAN UMBILICAL CORD AND PLACENTAL ARTERIES

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Background: Treatment of biliary atresia is a major challenge in pediatric surgery. Up to this day multiple biologic and artificial materials have been used to prevent bypassing biliary sphincter mechanism, however, no viable option has been found yet. The current work is about using three dimensional scaffold seeded with isolated cholangiocytes for creation of common bile duct equivalent.

Methods: The placentas have been acquired from healthy women who gave birth at 38-42 week and after signing written consent. Placenta was decellularized with SDS and triton X-100 solution. Cholangiocytes were isolated and seeded onto arteries in bioreactor with required enironment. Common bile duct equivalent was used to reconstruct damaged bile duct in inbred Lewis’s rats.

Results: Although, the bile duct equivalent restored bile flow in the beginning, vascularization was not enough to adequately supply the graft. Therefore, long term graft survival was in doubt. That is why, demucosed intestine segment with

intact artiovenous supply was used to enhance vascularization and supply the graft with sufficient blood. Conclusion: Based on current results, we can say that decellularized human umbilical cord and placental arteries together with vacularization with demucosed intestine segment can be used for common bile duct reconstruction.

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