МЕДИЦИНСКИ УНИВЕРСИТЕТ
„ПРОФ. Д-Р ПАРАСКЕВ СТОЯНОВ“
ВАРНА, БЪЛГАРИЯ



ВАРНЕНСКИ МЕДИЦИНСКИ ФОРУМ

том 1, 2012, брой 2

Варна - 2012

The Black Sea Symposium for Young Scientists in Biomedicine

Varna

September 20-23rd

site: bsysb.mu-varna.bg







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LAPAROSCOPIC FUNDOPLICATION – PAST, PRESENT AND FUTURE

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The first laparoscopic fundoplication was performed 20 years ago. Before introducing this technique into practice several issues needed to be clarified and still, some of them require further research.
The aim of this study is to summarize the available literature data about laparoscopic fundoplication, to specify the contemporary indication and methods of choice for laparoscopic fundoplication. We present our own experience with 130 patients with open and laparoscopic fundoplication.
The perioperative results are better in the laparoscopic group, with comparable functional results after 5-year follow-up. The laparoscopic Nissen fundoplication is a worldwide accepted method of choice, whereas the latest tendency recommends tailored approach.

MANAGEMENT OF ADVANCED GALLBLADDER CANCER

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Gallbladder cancer is not only the most common biliary tract cancer, but also a highly lethal malignancy, with a 5-year survival rate of 5% for those patients with disease not amenable to surgical resection. Radical surgery is advocated for patients with stages II and III disease, and includes cholecystectomy, lymphadenectomy and en bloc hepatic resection, with or without bile duct resection. However, such a radical resection has relatively high morbidity and debate continues as to the relative risk-benefit of radical surgery for such advanced mortality rates given the poor prognosis of stage IV patents.

There are many types of management of advanced gallbladder cancer and the aim of this presentation is to reveal the different types of this malignancy according to its anatomical localization and the possible surgical treatment of an advanced gallbladder cancer.

Recent data suggest that aggressive resection may improve long-term survival, even in patients with advanced stage disease. The prognosis of patients with Stage IV disease who accepted radical surgery is significantly better than those who accepted chemotherapy or another palliative treatment. Therefore, surgical resection remains the only curative treatment for gallbladder advanced cancer.

PALLIATIVE OPTIONS IN THE TREATMENT OF PANCREATIC ADENOCARCINOMA

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INTRODUCTION/BACKGROUND: The pancreatic adenocarcinoma (PA) is one of the most lethal malignancies being the fourth leading cause of cancer deaths worldwide. Despite the significant progress in diagnostic modalities the PA is still diagnosed at late stages when curative treatment is no longer possible.

MATERIALS AND METHODS: We performed a literature review of the recent developments in the area of palliative care for pancreatic cancer. The experience of our clinic with conventional surgery and nonsurgical methods is analyzed and presented.

RESULTS: Nonresectable cancers bring up the question which palliation treatment should be used: surgical or nonsurgical. Traditionally when obstructive jaundice occurs biliary derivation is performed in order to relieve it. In patients with imminent or actual duodenal stenosis a gastrojejunostomy is indicated. The alternative options for these conditions are the biliary and duodenal stents placed endoscopically. The management of pain can be accomplished: with pain medication (proven to be not effective enough), with percutaneous celiac plexus blockage, and during exploratory surgery – direct injection of anesthetic agent at the level of celiac axis. We report our experience with group of 45 patients, one part of them received conventional surgical treatment, and the other one underwent endoscopic treatment.

CONCLUSION: The management of PA patient remains a challenge in spite of the clear progress made in diagnostic studies, surgical and palliation treatments. Multidisciplinary approach is necessary to optimize the overall care. Considering the late diagnosis of the majority of PA patients, palliative techniques should not be neglected, but well mastered.

A RARE CASE OF RUPTURE OF HEPATIC HYDATID CYST THROUGH DIAPHRAGM IN THE PERICARD

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Hydatid disease is one of the most commonly occurring tapeworms disease caused by the larvae of Echinococcus granulosus. Its distribution is endemic, covering different regions of the globe. Infection of humans, who are an intermediate host occurs primarily by ingestion of contaminated eggs by the parasite food and water or by direct contact with contaminated dogs. After entering the intestine larvae pass through the wall of the bowel into the portal blood and lymph vessels, and by them reach the liver, who is their first barrier. Thus the liver is the most common target organ for development of echinococcus cyst. Lungs are the

second most common affected organ. Almost all other organs are affected, but their overall incidence is about 10%. Involvement of the heart and pericardium is between 0.5 and 2%.

We present a rare clinical case of a 31 year old man with symptoms of hidroperikardium as a result of liver microperforation of echinococcus cyst through the diaphragm into the pericardium. The diagnosis was confirmed by echocardiography, chest X-ray, CT of the abdomen and the chest and was confirmed by intraoperative findings. The treatment involved both thoracotomy and laparotomy for applying the surgical procedures needed for removal of the pathological process.

Keywords: Echinococcosis, tamponade of the heart, hydropericardium

ASSESSMENT OF ANTIBACTIRIAL ACTIVATY OF URINES IN FAVOR TO INTERPRETATION OF THE MICROBIOGICAL TESTS

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Aim: To test urine samples for presence of antibacterial drugs. To investigate the clinical significance of bacteria growing in numbers lower than 100 000 colony-forming units per milliliter (CFU/ml). Try to find correlation between the lower counts of microorganisms in urine cultures and the antibacterial activity of the tested samples.

Materials and Methods: The study included 221 urine samples from 169 patients.We adapted the disk-diffusion method of Bauer-Kirby for the purpose of our research: as test microorganism we used *Micrococcus luteus* (ATCC 9341) and sterile discs of filter paper that we moistened in the tested urine sample. The results were interpretated semi-quantitatively with one, two or three pluses. The bacterial count of the urine samples and the identification of the isolated microorganisms were performed by conventional methods.

Results: From the tested 221 urine samples we found antibacterial activity in 57 cases. 39 of the positive samples didn`t show bacterial growth and in the most of them the sediment was poor. In two of the samples there were signs for significant bacteriuria, despite of the administered therapy. In the rest of the samples (12) the amount of the bacteria was about 10^4-10^5 CFU/ml, the sediments were poor, but the follow up of these patients showed the presence of urinary tract infection.

Conclusion: Microbiology laboratories should perform a complete work-up on samples containing low count of bacteria in cases of antibiotic administration and final interpretation should be done together with a physician.

Key words: *Micrococcus luteus*, Urinary tract infections (UTIs)

MEDICAL TREATMENT OF THE CHRONIC ANAL FISSURE

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BACKGROUND: The key to the treatment of chronic anal fissures is decreasing of the abnormal anal pressure at rest. The failure of the reduction of anal pressure at rest is associated with persistent symptoms.According to literature data the results of medical treatment of CAF are variable: some authors reported success in 20-30% and others in 80-90% of the cases. Medications causing reduction of anal pressure at rest are divided into 4 groups: Donors of nitrooxide (Glycerin trinitrate); Calcium antagonists (Nifedipin, Diltiazem); Phosphodiesterase inhibitors (Sildenafil);Blockers of cholinergic nerve endings (Botox).

Methods: We applied medical treatment for chronic anal fissure in 19 patients. In 8 patients we used 0,2% Nitroglycerin ung., local application three times for 24 hours for 30 days and in 11 patients - 0,2% Nifedipine gel local application twice in 24 hours for one month.

RESULTS: In the group with local application of nitrooxide donors we reported 50% epithelization versus 100% in the group with local application of calcium antagonists.

CONCLUSION: Medical treatment is the first line of specific therapy in the treatment of chronic anal fissures. Choosing an appropriate drug for treatment should be based on the possibility of a favorable response, considering the reported possible side effects and consistent with individual patient tolerance.

KEY WORDS: chronic anal fissure; anal pressure

TRANSUMBILICAL LAPAROSCOPIC CHOLECYSTECTOMY - TLC

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Background:
Since the introduction of laparoscopic cholecystectomy as the gold standard procedure to remove the gallbladder, many surgeons have attempted to reduce the number and size of ports in laparoscopic cholecystectomy to decrease parietal trauma and improve cosmetic results.

AIM: Purpose of this publication is to share our experience in TLC.

Patients and methods: between August'2011 and August'2012, 60 patients underwent of TLC. 41 was with chronic cholecystitis and 19 with acute inflamated gallbladder - 13 with chronic exacerbated cholecystitis and 3 with acute cholecystitis – 3 with phlegmonous cholecystitis and 1 with gangrenous cholecystitis.

Results: TLC was performed in 60 unselected consecutive patients. The mean age of the patients was 51yrs, 44 (73.3%) of the patients were females. According to the diagnosis 41 (68.3%) patients had chronic cholecystitis and 19 (31,7%) had acute cholecystitis – 13 patients had chronic exacerbated cholecystitis, 3 patients had phlegmonous cholecystitis and 3 had gangrenous cholecystitis. The mean operating time

was 58,8 min (40-100min). There were not conversions to standard LC and to laparotomy.

Conclusion: TLC can safely and rapidly replace standard LC in everyday surgical practice. The conversion rate of TLC is comparable with the standard LC, but the operating time is still longer in TLC.

Key words: transumbilical laparoscopic cholecystectomy (TLC)

MALIGNANT PLEURAL EFFUSIONS OF LUNG CARCINOMA- CONTEMPORARY DIAGNOSTIC ASPECTS

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Malignant pleural effusions result from pleural dissemination and determine stage IV of the disease. Those effusions, in which malignant cytological material is found, are called malignant. If an effusion is found without malignant cytological material it is called paramalignant and results from impaired lymphatic circulation, reduced intrapleural pressure- result from hypoventilation or athelectasis etc.

Aim: Achieving morphological verification and histological typing of the process are essential for the staging and the therapeutical approach in patients with malignant pleural effusions.

The aim of our study is to determine the role and the value of different diagnostical methods such as: cytology of pleural effusion, Immuno-histochemie, VATS- biopsy and video-assisted mini- thoracotomy.

Materials and methods: We present materials from the Thoracic surgery clinic at Medical university- Varna, including analysis of the results from different diagnostic methods. In our clinical practice we applied the following methods: rentgenography, CAT, MRI, PET-scan, cytological examination of the effusions, VATS, mini-thoracotomy with biopsy and Immuno-histochemie of the pleural effusion.

Results: Analysing the results we established that 40% of the cases remain undiagnosed after conventional cytological examination. VATS- biopsy reveals best results, allowing histological typing and therapeutic intervention – talk pleurodesis after debridman and sanation of the pleural cavity. Diagnostic has improved via Immuno-histochemical analysis.

Conclusion: Analysing the results obtained we regard that VATS or video- assisted mini- thoracotomy are of highest prognostic value.

Key words: malignant pleural effusion, diagnostics, VATS.

CAPABILITIES OF HARMONIC SCALPEL IN NECK ENDOCRINE SURGERY

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New resecting tools in the surgical treatment of thyroid pathology were introduced in recent years.
Aim: to reveal the capabilities of harmonic scalpel and our experience based on its application in the surgery of thyroid gland.

Patients and methods: For the period January 2008- June 2011, 1541 patiens, aged 6- 73 years, were operated on in our institution, using harmonic scalpel. Resection was performed through classic Kocher approach in 621 patients. Minimally opened access wass applied in 734 patients and video- assisted approach was applied in 186 patients. All operations were performed using Ethicon Endo Surgery Care harmonic scalpel. Length of the surgical incison, use of hemostatic tools and ligatures, resecition volume, use of drainages, operative time, intra- and postoperative complications, postoperative hospital stay were evaluated.
Results: Resection volume varied from isthmectomy to thyroidectomy. All operations were performed using no ligation tools and sutures. Lack of bleeding and shortened operative time were found. There were no drainages used, regardless of the resection volume, in most cases.
Increase of intra- and postoperative complications frequency was not found. Significantly shortened was the postoperative hospital stay.
Conclusion: We regard that harmonic scalpel application in thyroid surgery is exceptionally effective and safe, providing reliable hemostasis and shortened surgical duration.
Key words: thyroid surgery, harmonic scalpel, complications

HARMONIC SCALPEL APPLICATION IN PARATHYROID SURGERY

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The normal and pathologic histological features of glandular parenchyma, the anatomical proximity of the parathyroid glands with critical structures and the specific coagulation disorders due to certain pathologic processes, in particular secondary hyperparathyroidism in patients on chronodialysis determine the use of the harmonic scalpel as a reliable hemostatic source.

Aim: To reveal the advantages of the harmonic scalpel in the surgery of parathyroid glands, based on our clinical experience.

Material and Method: For the period 2008 – May 2012, 117 patients with secondary hyperparathyroidism – 82 males and 35 females were operated in our institution. Hemostasis was performed through Ethicon Endo Surgery Care harmonic scalpel in 66 patients with secondary hyperparathyroidism.

Results: The use of harmonic scalpel, compared to conventional operative methods reveals significant advantages towards the frequency of postoperative bleeding, necessity of drainages, type of drainages used, postoperative hospital stay and aesthetic results. The lack of significant thermal effect determines the lower frequency of recurrent nerve impairment.

Conclusion: We regard that the use of harmonic scalpel reveals statistically significant advantages compared to conventional surgical methods, which approves it as a standart for best practice in endocrine surgery.

Key words: harmonic scalpel, secondary hyperparathyroidism

PHYLLODES TUMORS AS A LITTLE PART OF THE BREAST TUMORS

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Introduction: The phyllodes tumors occupy a small, but not so unimportant part in the main count of mammary tumors. Due to its distinct histologic type, this tumors and its its malignant form, known as cystosarcoma phylloides should be suspected in all newly diagnosed breast neoplasm.
Aim: To focus on the importance of filoidnite tumors than other benign and malignant tumors of the mammary gland.
Material and Methods: The selected analysis is based on data from the long experience of the clinic of thoracic surgery in the surgical treatment of phyllodes tumors but also contemporary publications in Bulgarian and English literature.
Results: The interest on these tumors comes from histological variations in which they can exist - namely benign (85-90%), borderline (1-2%) and malignant (10-12%) form. They are relatively rare pathology and amounted to 2 to 4.4% (or 0.3 to
0.9% - western authors) of mammary tumors. Frequently the disease affects the fourth decade of age, distinguishing it from benign fibroadenoma occurring in the second decade. The age of patients with benign lesions is less than another patients with malignant forms. The bigger rate are unilateral. They have a same clinical characteristics like anothers breast tumors. Most - extensively validated and reliable diagnostic method is the excision biopsy. Therapeutic approach depends on the histological type of tumor. There is a good prognosis for the benign and the margins type, and severe for the malignant. The rate of postoperative recurrence is significant - about 20%, wich means a presens of rest tissue or native base of tumor growing.
Key words: phyllodes tumors, breast tumors, prognosis.

Breast conserving operationsfor patients diagnosted with breast cancer

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Breast conserving surgery aims to ensuring survival equivalent as mastectomy, better cosmetic results and a low incidence of recurrent carcinoma.
Goal - to present the different types of breast conserving operations and the criteria for selecting patients.
Material and methods - Patients were selected for breast conserving operation on the grounds of preoperative mammography (ultrasound) of both breast, cancer size, histologic result of the tumor obtained by excision biopsy or core-biopsy, the patient's age and family history for breast cancer.
If the patient has no contra indications is planned for surgery. Options for breast spearing operations are - lampectomy, quadrantectomy and subcutaneous mastectomy.
Results - Our results show that surgical time and postoperative complications were less than those with conventional mastectomy. The incidence of relapse and survival are comparable with mastectomy. Breast conserving operation gives better cosmetic result and psychological comfort of the patient.
Conclusion - Given our experience and literature check we believe that breast concerving therapy is a method of choice for well-selected patients.
Keywords – breast conserving therapy, breast concerving operations, mastectomy, recurrence.

Session 2

BIO MAGNETIC NANOPARTICLES AND THEIR APPLICATION IN DRUG DELIVERY

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Magnetic nanoparticles (MNPs) have proved to have a varied future application in biomedicine, including their use as contrast agents in MRI, labeling particles for stem cells labeling, and in controlled drug distribution, gene therapy and targeted cancer treatment. The aim of this review is to accent on the varied drug delivery possibilities that MNPs offer, thus increasing drug efficacy and specificity.

MNPs have two major advantages: low toxicity and size of 1-100nm. They can be implanted into the human organism via the *intra-venous* path and drug molecules or gene segments can be attached to them. If a low-intensity magnetic field is applied to the patient's body, the MNP-drug complex is driven through the bloodstream to the target organ, or directly to the tumor cell accumulation site, thus not harming healthy tissue and increasing the efficacy of the drug. Furthermore, gene therapy, also a theoretical area of application of MNPs, is based on repairing genetic disorders and obtaining therapeutic peptides and proteins that can stimulate the immune system.

However, there are certain difficulties: 1-to overcome the linear blood flow in the human body so that the bioactive molecule can penetrate in depth and accumulate where needed; 2-short gene *in vivo* half-life and the difficulty to cumulate them in sufficient quantities;3-the tendency of magnetic nanoparticles to form clusters.

Be that we overcome the obstacles and introduce the method on common scale, a revolution in treating a variety of diseases is to start and our ambition is to see it in our lives.

REVIEW OF FIVE NON-POPULAR HERBS IN BULGARIA WITH POTENTIAL ADAPTOGENIC PROPERTIES

StanimiraVasileva, Iliya Zhelev, Kaloyan Georgiev

Prolonged stress, whether a result of mental/emotional upset or due to physical factorssuch as malnutrition, surgery, chemical exposure, excessive exercise, sleep deprivation,or a host of other environmental causes, results in predictable systemic effects. Thesystemic effects of stress include increased levels of stress hormones such as cortisol,a decline in certain aspects of immune system function such as natural killer cellcytotoxicity or secretory-IgA levels, and a disruption of gastrointestinal microflorabalance.

The aim of the further study is to research the three electronic databases up to 2012 and to present a data of five herbs - *Euterpeoleracea* (acai), *Myrciaria dubia*(camu camu), *Malpighia emarginata* (acerola), *Physalis peruviana* and *Lycium barbarum*, which are imported in our country and are present on the market and have been used in other parts of the world for a long time for their antioxidant properties.

UNREGULATED DISPOSAL OF MEDICINES – A BRIEF OVERVIEW OF THE DAMAGE THAT CAUSES

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Medicines constitute a significant source of environmental pollution. When improperly disposed of, pharmaceutical products of all types get into the water. Unused and expired medicines cannot be returned to the drug stores from which they are bought, because in Bulgaria there is no law on how to deal with these products. In order to establish the degree of awareness among people, an inquiry was made, showing that 67% of the interviewed are unaware of the damage of unregulated expired drug disposal, with 90% of the people stating they simply throw them in the bin or in the toilets in their homes. Additionally, people taking both over the counter drugs and such prescribed by a physician contribute to the water pollution, because not all products are fully dissoluble in the gastrointestinal tract, resulting in the formation of different metabolites, excreted from our bodies. Another source of pollution is the pharmaceutical companies, because they dispose large amounts of their own production into the water supply. Since even the most state-of-the-art sewage disposal plants are unable to fully cleanse the water from the medicines dissolved in it, the "cocktail" of various narcotic substances raises concerns for long term consequences for our health. Fish, being natural water inhabitants, is also negatively influenced – the mix of drugs in the water, mostly of hormonal products is a cause for serious reproduction problems in many fish types. The pin-pointing of the problem and its inclusion in new bills could reduce the inevitable consequences of gradual pollution.

ANALYSIS OF SURVEY RESULTS OF HEALTHY VOLUNTEERS TO PARTICIPATE PHASE I CLINICAL TRIALS AND BIOEQUIVALENCE STUDY

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Introduction: the number of Phase I clinical trials and bioequivalence study in Ukraine is rising. One of the important aspects in this sphere is organization and holding clinical trials with healthy volunteers, who can feel discomfort caused by various factors during trials.

Aim of study was analysis of healthy volunteers' opinion about discomfort factors in clinical trials.

Materials and Methods: 99 volunteers who had experienced Phase I clinical trials or bioequivalence study were interviewed. All data were statistically processed.

Results: analysis of data showed that 50,51% of volunteers were men, 49,49% - women; the age of most men was 18-25 years, for women – more than 40 years; 57,58% have higher education; 41,41% are employees; 26,26% were taking part in trials the first time; 41,41% participate in clinical researches once a year. Analysis of impact of age, gender, education, frequency of participation and number of participations to some sides of trials was made. It was found that the criterion of age significantly affects the volunteers' relation to the pharmacological group ($P=0,015<p\text{-level}=0,05$) and dosage form of drug ($P=0,001<p\text{-level}=0,05$), number of hospitalization days ($P=0,002<p\text{-level}=0,05$), opportunity of side effects' emergency ($P=0,014<p\text{-level}=0,05$). The criterion of frequency of participation in clinical trials has influence on the volunteers' relation to the opportunity of side effects' emergency ($P=0,015<p\text{-level}=0,05$). One of the questions in the form dealt with the importance of developing a compensation system for the discomfort of healthy volunteers during the clinical research – 97,98% positive answers.

Conclusion: during the survey important aspects of planning clinical trials that dealt with discomfort level for volunteers were identified. In plans we want to make correlation of experts' and volunteers' opinions in discomfort factors.

A PROMISING TREATMENT FOR CANCER: PARECOXIB SIGNIFICANTLY INTENSIFIES ANTITUMORAL EFECTIVENESS OF TSPP-BASED PHOTODYNAMIC THERAPY

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Introduction Photodynamic therapy (PDT) is a promising therapy in cancer that exerts its antitumoral action by generating ROS with consequent inflammation and hypoxia that induces the expression of angiogenic and survival factors. Administration of a highly selective COX-2 inhibitor in combination with PDT would hinder abnormal cell proliferation.
Materials and Methods The study was performed on 5 groups (n=40) of Wistar male rats, bearing Walker 256 carcinosarcoma: group 1 (control) received TSPP alone (TSPP), group 2 was irradiated 24h thereafter (TSPP+IR) and group 3 received Pcox prior to irradiation (Pcox+IR); group 4 received TSPP and Pcox before irradiation (TSPP+Pcox+IR) whilst group 5 received Parecoxib only thereafter (TSPP+IR+Pcox). We investigated the oxidative (malondialdehyde-MDA, carbonylated proteins-CP, reduced glutathione-GSH) and nitrosative (NO) stress parameters, interleukin (IL)-12, MMP-2 and VEGF levels. We have also imunohistochemically assessed COX-2 expression and quantified apoptosis by using the TUNEL assay.
Results MDA tumor levels were significantly elevated in the group 5 compared to group 2 ($p<0.05$) in correlation with a decrease of GSH ($p<0.05$) and NO levels ($p<0.002$). An increased index of apoptosis was observed in the same group ($p<0.05$). COX-2 levels were also elevated when compared to groups 2 and 4. Group 4 showed an increase in both VEGF protein levels ($p<0.03$) and NO production ($p<0.002$), suggesting that this therapeutic regimen induced the expression of angiogenic macromolecules. Finally, tumor tissue IL-12 and MMP levels were not correlated.
Conclusion These results provide strong evidence that administration of a selective COX-2 inhibitor after TSPP-based PDT might improve its therapeutic effectiveness.

Keywords PDT, cancer, inflammation, TSPP, Parecoxib

CARIES DETECTION AND DIAGNOSIS: NOVEL TECHNOLOGIE

Dian Nikolov, Ivo Aprilov, Diana Trufcheva, Siana Velikova, Stanislava Plamenova, Alexander Ivanov

In the past few years, there has been an increase in the research area for evaluating diagnostic methods linked to the early appearance of caries lesions. The scientific methods are conducted from two different perspectives.The first one is based on the dentifrice industry which main focus is to develop techniques that permit caries clinical trials (CCTs) to be reduced in terms of time and subject numbers in order to permit the investigation of novel anti-caries actives. The second scientific method comes from clinicians who, armed with the therapies to remineralise early lesions, are seeking new methods to reliably detect such demineralised areas and implement preventative dentistry.

The purpose of this paper is to look at the new technologies and their implication on the dental procedures. The techniques based on visual, optical, radiographic and some emerging technologies are used as a basis for the discussion. Each scientific method offers a set of advantages. However, it is the technique based on auto-flourescence (such as QLF) of teeth and electrical resistance (such as ECM) that offers the most reliable results in finding the early stage of enamel demineralization.

MAXILLOFACIAL SURGERY

Lilyana Stancheva Pavlova - 5th year student of Dental medicine at the Medical University "Prof. d-r Paraskev Stoyanov" of Varna.

The case is about a 49 year old female patient. She was admitted into the department of Oral and Maxillofacial Surgery with 4 months old complaint of growing swelling under her left ear.

During an examination of her face and neck at the department, an intumescence in the left parotidomassetric region was found. The formation was causing asymmetry of the patient's face and neck. The area was slightly painful during palpation. There was not increased regional lymph nodes.

The fine-needle aspiration biopsy of the tumor showed a picture of lymphoepithelial cyst in the parotid gland with secondary inflammation reaction. The patient was directed to a surgical removal of the formation at the clinic of Oral and Maxillofacial Surgery

EXPERIMENTAL STUDIES ON THE MECHANISM OF VISCERAL PAIN: EFFECT OF METAMIZOL

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Background: Chronic pelvic and urogenital pain is a common and debilitating problem that has a significant impact on the quality of life in patients. Although patients seek medical care the mechanisms still remain unclear. Recent data reveal major role of vanilloid- and P2X3-purinoceptors in the mechanism of distension/contraction induced pain from hollow organs. Metamizol is known as an effective analgesic drug with peripheral (COX inhibition) and central (increased β-Endorphin release) effects.

The aim was to study: *in vitro* Metamizol effects on (i) Spontaneous and electrically evoked uterine horn contractions in rats, (ii) $PGF_{2\alpha}$-induced contractile activity of uterine horn in rats; (ii) to study *in vitro* the effect of metamizol on firing of pelvic nerve afferents due to bladder distension.

Methods: Mechanical activity of isolated uterine horn was recorded as described elsewhere (*Kasakov, Cellek & Moncada, Br. J. Pharmacol. 115, 1149, 1995*).The effect of Metamizol on firing of pelvic nerve afferents due to bladder distension and/or intravesical application of ATP was previously described *(Vlaskovska et a., J. Neurosci., 21, 5670 - 5677, 2001).* The experimental protocols and surgical procedures were approved by the Ethics Committee of Medical University Sofia.

Results: Metamizol suppressed the spontaneous, as well as the electrical field stimulation evoked and $PGF_{2\alpha}$-induced contractions of isolated uterine horn. Metamizol (100-500μM) decreased concentration-dependently by 40-70% nerve spike activity due to bladder distension with a concomitant decrease of intralumenal pressure.

Conclusion: The results revealed a therapeutic potential of Metamizol in alleviation of pain in painful pelvic syndromes in human.*Acknowledgements:* The research was supported by the Council of Medical Sciences of Medical University Sofia (Grant 29 / 2011).

Session 3

MICROBIOLOGY AND EPIDEMIOLOGY IF LATE VASCULAR GRAFT INFECTION – A TEN YEAR EXPERIENCE

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Introduction: Late vascular graft infection is relatively rare, but catastrophic complication afterarterial surgery.
Aim: To determine mid-interval for development and causative microorganisms of late infection after reconstruction in aorto-iliac segment (AOIS).
Materials and methods: Clinical material includes 14 patients – 13 male and 1 female with late vascular graft infection treated in University Hospital of Pleven from 2001 to 2011. Microbiology investigation was performed by conventional methods for isolation and identification of aerobic, anaerobic bacteria and fungi, and by automated systems (Vitek2 and miniAPI, bioMerioux, France).
Results: A total of 58 specimens were obtained from patients before, during and after surgery. Positive microbial cultures were observed in 46 samples, included 12 segments of prostheses. 27 strains of microorganisms were isolated. All repeated isolated were excluded from analysis. The infection was monobacterial in 7 cases and polymicrobial in the other 10 cases. There was 6 associations between two types Gram (-) bacteria. Mortality rate was 35,71%. Mid-interval for development of infection in our study was 38,82 months (from 4 to 82 months)
Conclusion: Late prosthetic graft infection after reconstruction on AOIS is complication with high mortality. This type of infection usually is polymicrobaial. Infections caused by Gram (+) bacteria are more common but infections caused by Gram (-) bacteria have more severe outcome and worse prognosis.
Key Words: prosthetic vascular graft, infection

A CYTOCHEMICAL DIAGNOSTIC STRATEGY FOR EARLY DETECTION OF TUBULAR-INTERSTITIAL BACTERIAL NEPHRITIS (TIBN)

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Summary: Microscopic examination of urine can give us information about the qualitative and quantitative composition of organic forms. The cytology of the urinary sediment is an important study which, in its section - morphology of leukocytes, can confirm the presence of acute inflammation in the urinary tract.
Tasks and methods: The aim of the study was to try creating an easy to carry and use test of urine objectivity of glitter cells enabling these cells to be monitored with the help of the light microscope without being necessary to use phase-contrast microscope.
Material: In Hospital "St. Marina" – Varna were traced 68 patients with TIBN as a primary or concomitant illness and a group of 21 healthy people – control group, whose blood and urine were examined. Urine was collected through the EU Guidelines 2000 method.
Results: In the urine were cytochemically established two types of leukocytes which we visualized with our modified method. In 53 of the total group of 68 patients diagnosed with TIBN were found active leukocytes /glitter cells/. β-2

mikroglobulinuria was detected in 57 patients and in 62 was found bacteriuria, but the two indicators were not always detected simultaneously. In all the patients with TIBN with glitter cells found in the urine, was noticed that the level of β-2 microglobulin was higher than that of the control group of healthy people. Inverse relation, however, is not 100% valid.

Acute phase reactant CRP didn't show such diagnostic sensitivity and in the studied group weren't found significant deviations from the WBC average, compared with the control group ($p > 0.1$). Erythrocyte sedimentation rate (ESR) proved to be highly sensitive but less specific diagnostic marker for this nozology.

THE APPLICATION OF THREE-DIMENSIONAL AND FOUR-DIMENSIONAL ULTRASOUND IN FETAL MEDICINE

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BACKGROUND: Three-dimensional (3D) ultrasound has made a place in clinical practice and has become a major field of research in obstetric in last years. Examples are given to demonstrate the applicability and vividness of 3D ultrasonography in daily medical practice.

MATERIAL AND METHODS: In this article we review the diagnostic performance of the most widely used 3D ultrasound applications in the assessment of fetal anatomy and anomalies, explain the technique to gain correct 3D images and offer some practical advice for their efficient use three/fourdimensional
ultrasound applications are many and varied.

RESULTS: The use of three and four dimensional ultrasound in fetal medicine varies with the nature of the tissue to be imaged and the challenges each organ system presents, versus the advantages of each ultrasound application.

CONCLUSION: Three- dimensional and four- dimensional ultrasound has been extensively applied to the study of the fetus. Fetal applications include all types of anatomical assessment, volumetry and morphometry, as well as functional assessment. Three/four- dimensional ultrasound provides many advantages in fetal imaging; however, its contribution to improving the accuracy of fetal scanning over rates achieved with 2-dimensional ultrasound remains to be established.

Key words: Three/Four-dimensional, Ultrasound, Fetal

THE CARDIOVASCULAR SYSTEM CONDITION IN ADOLESCENTS OF KHARKIV REGION

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Background: according to statistics Ukraine takes one of the leading positions among European countries with the highest prevalence of the cardiovascular disorders. Due to onset of adult population's cardiac pathology in childhood, increasing the frequency of cases of sudden death among teenagers during sport events, lack of information about the epidemiology of heart diseases in adolescents were the reason for this study.

Methods: population study among 582 children (46.7±2.07% of boys and 53.3±2.07% of girls) Kharkov region aged 9 to 17 years.

Results: the most frequent complaints were: headache (53,96 ± 2,34%), palpitations (39,42 ± 2,29%), frequent nosebleeds (24,22 ± 2,01%), chestpain (22, 68 ±1.96%) and 7,70 ± 1,25% of children had at least one episode of syncope.

Increased blood pressure found in 14,08 ± 0,77% surveyed. In 74,74 ± 1,8% of students were found ECG changes: sinus tachycardia - 13,57 ± 1,42%; sinus bradycardia – 7,56 ± 1,1%; migration pacemaker - 3,61 ± 0,77%; atrial-ventricular block 1 degree - 0,52 ± 0,3%; WPW phenomenon - 5,67 ± 0,96%; long QT - 3,44 ± 0,76%; early ventricular repolarization syndrome - in 11,51 ± 1,32%; nonspecific repolarization process violation - in 32,65 ± 1,95%. Amount of ECG deviations increased after physical exertion and manifested in 78,35 ± 1,71% of children. Some changes on electrocardiogram (atrial rhythm, pacemaker migration, repolarization process violation) disappeared after exercise testing (7,22 ± 1,07%). In 33,7 ± 2,4% of children involved in professional sport deviations on the ECG were detected.

Conclusions: The prevalence of changes in the cardiovascular system in school-age children suggests the necessity of cardiovascular system detailed examination for early detection of violations and prevention of chronic cardiac disease development in adults.

THE LASER SCANNING CONFOCAL MICROSCOPY USEFUL FOR DIAGNOSTIC OF EVAPORATIVE DRY EYE

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Specialised Eye Hospital – Varna, Bulgaria

PURPOSE: To demonstrate in vivo laser scanning confocal microscopy diagnostic effectiveness in patient with evaporative "dry eye".

DESIGN: Case report

METHODS: The patient was examined by in vivo laser scanning confocal microscopy (HRTII Rostock corneal module). The study was based on trans-tarsal images (optical slices) of patient's eyes before and after one month treatment with eyelid hygiene products and artificial tears.

RESULTS: In vivo laser scanning confocal microscopy of patient with evaporative "dry eye" presented destructive changes of the Meibomian glands. Reported ocular surface and tear function abnormalities were correlated to the Meibomian glands dysfunction. After one month eyelid hygiene and artificial tears treatment the examination of the eyes demonstrated tendency to restoration of the structure.

CONCLUSION: In vivo laser scanning confocal microscopy can effectively demonstrate the morphological changes of the Meibomian glands in patients with evaporative dry eye symptoms. This new noninvasive technology is useful as a monitoring of the therapeutic effect in patients with Meibomian glands dysfunction. The examination has the potential to change the evaporative dry eye treatment approach.

ASSESSMENT OF THE LABORATORY DATA OF PATIENTS WITH CLINICAL MANIFESTATIONS OF THE METABOLIC SYNDROME

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Background: The metabolic syndrome is considered to be a problem of great importance all over the world. It is associated with high risk of cardiovascular and cerebrovascular diseases. Monitoring the insulin resistance is an extremely effective method for prevention of the complications of the metabolic syndrome.
Objective: to assess specific laboratory constellations in patients from the common medical practice with clinical manifestations of the metabolic syndrome.
Research Design: We examined a sample representative of patients - 6 men and 6 women, aged 44-55 years. They were recommended to undergo the following laboratory examinations in order to determine insulin resistance: detection of basal blood glucose levels in the morning between 7 and 9 a.m and 2 hours later, after normal breakfast (oral glucose tolerance test –OGTT), basal insulin and glycated Hemoglobin A1c.
Methods: examination of weight, BMI, waist circumference; clinical and laboratory methods – Class A for evaluation of blood glucose, insulin and glycated hemoglobin; methods of the non-parametric statistic analysis
Results: The mean SD values of the male patients for BMI and waist circumference are : 30.32 3.09 (m2/kg) and 105 9.72 (sm).The same parameters for women are: BMI – 29.44 3.46 (m2/kg) and waist circumference – 95 9.52 (sm). The basal blood glucose for men is: 5.83 0.48 (mmol/l). The blood glucose level in male patients is measured after 2 hours and normal breakfast – 7.43 2.63 (mmol/l). These data for women are 5.13 0.58 (mmol/l) and 5.72 0.97. The calculated value of the basal insulin and HbA1c for female patients are 13.28 4.83 (mU/l) and 5.79% 0.93. The following parameters for men are: basal insulin -13.4 3.82 (mU/l) and HbA1c - 6.4% 0.64. HOMA-IR (homeostasis model assessment-insulin resistance) indexes are precisely calculated: 3.45 1.28 for men and 3.04 1.2 for women.
Conclusions: Considering all results, we found impaired carbohydrate tolerance in both groups of patients, more significant in male patients. HOMA-estimated insulin resistance is found in patients of both sexes, predominantly in men.

NEW SCREENING METHODS FOR EARLY DETECTION OF CERVICAL CANCER. LIQUID BASED CYTOLOGY(LBC)- A CLOSE UP VIEW

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Aim: Our aim was to summarize our and foreign experience in screening of cervical cancer, using conventional PAP smear and liquid-based cytology-LBC.

Material and Methods: In the Department of Obstetrics and Gynecology of Medical university of Varna, Bulgaria we made clinical trial on 100 patients, that has the goal of comparing the results of liquid –based cytology with conventional PAP smear in different criteria and test its practicality in Bulgaria.

Results: There are significant advantages of LBC mainly due to the lower number of unsatisfactory results and higher specificity for LSIL(low grade lesions). Compared to foreign results our results are showing the same tendencies and values.

Conclusion: Our results and the ones of foreign authors for the benefits of LBC are undisputable, and it's a shame that this screening method is still rarely used in Bulgaria.

Key Words: LBC, PAP smear, screening methods, early detection, cervical precancer and cancer

Session 4

THE IMPROTANCE OF N-3 OMEGA FATTY ACIDS

Authors: Evgeniya Mihaylova, Tanya Stefanova

The aim of this review is to outline the current position of n-3 omega fatty acids in the field of clinic nutrition and healthcare. In the making of the presentation different scientific articles showing their significant advantages in taking without any side effects were used.

The n-3 PUFAs (polyunsaturated fatty acids) are widely accepted as an important part of modern nutrition because of their many beneficial effects on metabolism. It is reported that these acids have protective effects on cardiovascular inflammatory diseases and cancer. Many people consider them to be more beneficial than other dietary supplements. Some studies show that n-3 PUFAs help patients diagnosed with depression and stress. It is considered that they prevent Alzheimer`s Disease (AD). PUFAs are very important for the immune system. They help organism deal with inflammation, eczema, psoriasis and many others.

Despite the lack of knowledge of the correct dose or the possible contraindications when combined with drugs, other food and herbal supplements, the PUFAs are still widely used in modern dieting and consumed as food supplements. All used studies show that they are important functional supplements with no adverse effects.

VARIATIONS OF THE CORONARY ANATOMY

Savi Shishkov, Catherina Shirokova

The anatomy of the human heart has been a subject of scientific researches for centuries. In particular, the coronary circulation is a key factor to specific surgical interventions and recognition of pathology. This subject presents a huge interest because of the wide application of the data, acquired in using new and improved methods of image diagnostics.

The aim of the research is the coronary circulation and its variations. Depending on from which of the two coronary arteries the posterior descending artery (PDA) originates from, the circulation could be right-dominant, left-dominant co-dominant.

During the research it was used data from the personal files of 100 patients, who were scheduled for a CT scan (Siemens Somatom Definition, 128 slices) in two following months in 2012. After going through the data, some of the tomography images were examined. We were provided this information by the cardiology ward at St. Marina University Hospital – Varna. Exactly 100 patients were included in the research. Among them - 44 men and 56 women. After converting the data we came to the conclusion that 85% are with right-dominant coronary circulation, 11% - with left-dominant and 4% are with co-dominant. Two of the examined patients appeared to have unusual anomalies. One of the cases presented with missing left main artery (LM) and the other one – with the circumflex branch (RCx), originating from the right coronary artery (RCA).

In conclusion, the prevailing number of patients are with right-dominant type of coronary circulation. Also, the left-dominant represents a smaller number and the least common type is the co-dominant.

KOCURIA VARIANS PERITONITIS IN A CONTINUOUS AMBULATORY PERITONEAL DIALYSIS: A CASE REPORT

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Introduction: Kocuria spp. Are part of the normal flora of the skin and mucosal membranes of human body. They can be the causative organisms of complications associated with foreign devices (intravenous catheterization, ambulatory peritoneal dialysis and ventricular shunt).
Aim: We report a case of peritonitis by Kocuria varians in a patient undergoing continuous ambulatory peritoneal dialysis (CAPD). To describe specific phenotypic characteristics and antimicrobial profile of this rare and unusual pathogen.
Case report: A 57 years- old man was admitted to the hospital with signs of peritonitis, associated with CAPD (abdominal pain and turbid peritoneal dialysate). An empirical therapy with Cefazolin and Gentamicin started right after the patient had been hospitalized. Laboratory investigation of peritoneal fluid revealed 664 WBS/ µl (upper limit; <100/ µl). Microbiological investigation showed more than 25 WBC/ field on direct light microscopy. A culture of peritoneal dialysate revealed Gr (+) cocci, which were identified as K. varians. Final identification was performed by VITEK 2 System (bio Merieux). The isolated strain has unusual sensitivity to antimicrobial agents. Antibacterial therapy was changed according to results of antibiogram. Around two weeks later the patient was discharged because he showed improvement with treatment.
Conclusion: Although Kocuria spp. Are rare opportunistic pathogens with low virulence they must be interpreted very carefully when isolated from patients with foreign devices.

Key words: Kocuria varians, peritonitis, continuous ambulatory peritoneal dialysis (CAPD).

MICROBIOLOGY AND EPIDEMIOLOGY IF LATE VASCULAR GRAFT INFECTION – A TEN YEAR EXPERIENCE

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Introduction: Late vascular graft infection is relatively rare, but catastrophic complication after arterial surgery.
Aim: To determine mid-interval for development and causative microorganisms of late infection after reconstruction in aorto-iliac segment (AOIS).
Materials and methods: Clinical material includes 14 patients – 13 male and 1 female with late vascular graft infection treated in University Hospital of Pleven from 2001 to 2011. Microbiology investigation was performed by conventional methods for isolation and identification of aerobic, anaerobic bacteria and fungi, and by automated systems (Vitek2 and miniAPI, bioMerioux, France).
Results: A total of 58 specimens were obtained from patients before, during and after surgery. Positive

microbial cultures were observed in 46 samples, included 12 segments of prostheses. 27 strains of microorganisms were isolated. All repeated isolated were excluded from analysis. The infection was monobacterial in 7 cases and polymicrobial in the other 10 cases.
There was 6 associations between two types Gram (-) bacteria. Mortality rate was 35,71%.. Mid-interval for development of infection in our study was 38,82 months (from 4 to 82 months).

Conclusion: Late prosthetic graft infection after reconstruction on AOIS is complication with high mortality. This type of infection usually is polymicrobaial. Infections caused by Gram (+) bacteria are more common but infections caused by Gram (-) bacteria have more severe outcome and worse prognosis.
Key Words: prosthetic vascular graft, infection

TOTAL PLASMA EXCHANGE AS A TREATMENT OF NEUROLOGICAL DISEASES (3 CLINICAL CASES)

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Under the direction of Doc. Dr V. Platikanov DM
With the assistance of Dr P. Ivanova and Dr F. Kirov

The aim of this report is to assess the role of plasmapheresis in the treatment of neurological disorders.

In order to achieve this aim we have followed the development of three clinical cases: two patients with Guillain-Barré syndrome and one with chronic myasthenia gravis. Three procedures of plasmapheresis have been made to each of these patients. The removed volume of plasma has been replaced with 5% Human Albumin Solution, Hartmann's Solution (crystalloid), HAES Solution and fresh frozen plasma in the amount of 2:2:1:1 (total 3 l of each procedure).

Two courses of plasmapheresis have been made to the first patient with Guillain-Barré syndrome. When he entered the clinic with complaints of severe paralysis of the limbs for the first time, four procedures were made. The removed plasma was replaced only with organic plasma. The paralytic symptoms completely resolved but side-effects of the treatment (fever, rash) appeared for a few days. The complete remission lasted 11 months and then the patient re-entered with severe paralysis. Three procedures were carried out this time and the plasma was replaced with the described combination of solutions. No side-effects appeared with the exception of slight rash for few hours. The effect of the second course of plasmapheresis was weaker and partial, but still had significant improvement in mobility.

The movements of the extremities of the second patient with Guillain-Barre syndrome were reinstated almost completely after the procedures. There were just insignificant residual symptoms. Plasmapheresis was needed for the patient with myasthenia gravis in order to restore the paralyzed respiratory muscles. After three procedures the patient was extubated and discharged from the hospital capable of walking alone. No side-effects appeared on these two patients.

In conclusion based on these particular three cases the therapeutic plasmapheresis has a definite role in the treatment of patients with severe Guillain-Barre syndrome. It is also used successfully to control severe myasthenic crises.

Unfortunately, until the full extent of the etiology of these diseases, plasmapheresis remains an effective and safe symptomatic treatment which absolute outcome is not guaranteed.

Session 5

GLIOBLASTOMA STEM-LIKE CELLS

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Background: Glioblastoma multiforme is a brain tumor which is sustained by cancer stem cells (glioblastoma stem cells, GSC) which confer cancer treatment resistance. Metformin has been proposed as a GSC targeting component, while the tyrosine kinase inhibitor sorafenib appears to be suitable for GSC control. The aim of our research has been to assess the effects of these two drugs on GSCs in a preclinical study.
Methods: GSCs were isolated, cultured and were shown to express both the stem cell specific markers CD133, CD105, CD90, Nanog, Oct 3/4, CXCR4, nestin, and neural cell markers, such as glial fibrillary acidic protein and neurofilament protein. At 24 and 48 h after seeding, the GSCs were treated either with metformin, sorafenib or the combination of drugs. An MTT viability test was performed to establish GSC viability in each arm. Apoptosis was quantified by on-chip flow cytometry with Anexinn V-Cy5 Apoptosis Detection Kit and autophagy was assessed through fluorescence microscopy by using the LC3B Antibody Kit.
Results: A reduction in GSC proliferation was observed in the metformin treatment arm, while treatment resistance was observed in the Sorafenib arm. The combination treatment however showed a nearly complete pathologic response. A superior effect of the combination treatment was observed when the cells were treated constantly with metformin as opposed to a single dose approach. The results were confirmed by quantifying apoptosis and autophagy levels.
Conclusions: Our study showed that metformin augments the action of Sorafenib on GSCs and this warrants further investigation and consideration as a treatment option of glioblastoma.

MRI DIAGNOSTIC IN PATIENTS WITH EPILEPTIC SEIZURES

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Introduction MRI provides high definition of the different soft tissues, which makes it especially useful in brain-imaging. In this research, we apply it to patients with epileptic seizures with unknown pathology.
Aim of this study is to prove that the geneses of these clinical manifestations are supratentorial vascular malformations - cavernous angiomas (CAs) and arteriovenous malformations (AVMs). These are endothelial lined sinusoidal (CAs) or arteriovenous (AVMs) spaces without a muscular component to their wall that can cause epileptic seizures, focal neurological signs, headache or hemorrhage or could be clinically silent.
Materials and methods 10 patients with history of epilepsy were examined. In 8 of them supratentorial cavernomas were found, 2 of them had AVMs. MRI included standart T1 and T2 (T2*W) sequences. The same protocol is applied to all patients. Lesions were identified based on typical characteristics and were classified according to number, location and presence or absence of extralesional hemorrhage.

Results Solitary CAs were found in 7 patients and multiple – in only one. The MRI findings were classified in four groups. There were hemorrhages in two CAs (the patient with multiple lesions). In 3 of the patients epileptogenic lesions were surgically removed and the results were very good.
Conclusion MRI imaging is an alternative solution for diagnosing patients with idiopathic epilepsy. Gradient sequence is the best one for evaluating the size and number of the lesions.

THE PECULIARITIES OF HEART RATE VARIABILITY IN YOUNG PATIENTS WITH VERTEBROGENIC VERTEBROBASILAR INSUFFICIENCY

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The aim of the investigation is to estimate heart rate variability (HRV) performing De Kleyn Test in young patients taking into consideration the level of vertebrobasilar insufficiency (VBI).
Materials and methods. 49 patients undergoing treatment at the Neurology Department of Kharkiv Regional Clinical Hospital aged from 18 to 44 years with cervical osteochondrosis have been under investigation. Depending on clinical and hemodynamic data, the following groups were formed: group 1 – 19 patients with angiodystonic stage of VBI, group 2 – 16 patients with angiodystonic-ischemic stage of VBI, group 3 – 14 patients with ischemic stage of VBI. To assess the blood supply in the vertebrobasilar system, ultrasound dopplerography was performed; to diagnose the cervical part of the vertebral column the X-ray examination was done. To evaluate the changes in autonomic nervous system (ANS), the HRV was performed (Cardiolab, Khai Medica). The investigation was done in the rest and during performing De Kleyn Test.
The control group comprised 25. practically healthy individuals.
Results. The study of the HRV were characterized by increasing power of spectrum in the area of very lower frequency (especially in 1 group), that reflects activating of sympathetic part of the ANS, providing realization of ergotropic activity. In 3 group increasing power of spectrum in the area of high frequency was revealed, that reflects prevalence of parasympathetic part of the ANS, providing realization of trophotropic activity.
Conclusions. Thus, revealing results are in direct dependence from the level of VBI and the solution of this problem needs the comprehensive attention.

THE DYNAMICS OF THICKNESS OF RETINAL NERVE FIBER LAYER IN PATIENTS WITH UVEITIS COMPLICATED BY OPTIC NEURITIS

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Background. The thickness of the retinal nerve fiber layer is not only indicator of edema of the optic nerve, but the measure of its atrophic changes. Terms of atrophy of the optic nerve and factors contributing to its formation after inflammation require a clarification depending on the form of disease.
The aim of the research was to study thickness change of retinal nerve fiber layer in patients

with uveitis complicated by optic neuritis.

Materials and methods. We observed 22 patients (26 eyes were studied) with uveitis complicated by optic neuritis. There were 10 men (45.5 %) and 12 women (54.5%) in ages of 18 to 71. All patients were examined by standard ophthalmological procedures including Optical Coherent Tomography (OCT).

Results. All patients with uveitis in active stage had significant increase in the thickness of retinal nerve fiber layer in comparison to controls (139 } 11 μm and 102 } 8 μm, respectively, $p < 0.05$) according to OCT data. Thinning of the retinal nerve fiber layer was detected in 42.3 % patients before reduction of inflammation. Relapse of uveitis complicated by optic neuritis, was accompanied by a less pronounced thickening of retinal nerve fiber layer, in compared to first arising uveitis (127 } 9 μm and 155 } 10 μm, respectively, $p < 0.05$), which may be due to the presence of nerve fibers atrophy during previous attacks of uveitis.

Conclusions. In 42.3 % patients with uveitis complicated by optic neuritis was defined thinning of the retinal nerve fiber layers before reduction of the inflammatory process.

CLINICAL-DIAGNOSTICAL FEATURES OF PATIENTS AFTER MILD TRAUMATIC BRAIN INJURY

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Background. Traumatic brain injury (TBI) is one of the most common reasons of hospitalization in the world, the frequency of which yearly grows up.

Aim. Clinical-diagnostical features studying in young patients after mild traumatic brain injury.

Materials and methods. We have inspected 90 patients after mild traumatic brain injury (TBI), which were treated in the Kharkiv emergency unit hospital named by prof. A.I. Meshaninov. Also there were inspected 25 almost healthy people. Were used clinical-neurological, neuro-physiological, neuropsychological, biochemical investigations. All data were statistically processed.

Results. In the acute period patients complained on headache (91,6%), vertigo (35,4%), general weakness (83,3%), worsening in memory (87,4%), in attention (75,0%); reduction in sight (77,1%), rumor (64,6%), convulsive assaults (37,5%), apathy and sleepiness (22,9%). Accordantly to the neuropsychological investigation, were founded reduces of number of words for 10 words test memorizing (in comparison with control group), the lower total volume of reproduction ($p<0,05$), increasing time for working by Shulte's tables, more amount mistakes.

Studying BDNF in the blood serum has shown, that in the acute period, the changes are not such significant, as in distant. But not the same fact was observed by studying S100. It was shown, that S100 in the acute period of TBI increases more than twice in comparison with the control group. All changes correlated with complaints and neurological symptoms.

Conclusions: Even mild traumatic brain injury occurs the disturbance of neuropsychological indices and its' biochemical markers. This changes is necessary to take into account providing the treatment tactics in TBI patients.

ADIPOPARACRINOLOGY: PERIPROSTATIC ADIPOSE TISSUE AS AN EXAMPLE. EVIDENCE UPDATED

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The global epidemic of obesity (globesity) and related cardiometabolic, malignant and neurodegenerative diseases has focused attention on adipose tissue biology and the role played by adipose-secreted bioactive molecules (adipokines, neurotrophic factors, fatty acids, prostaglandins, steroid hormones, vitamin D3, NO, H_2S) in the regulation of a wide array of physiological and pathological processes. Until recently, physicians have looked upon obesity as an accumulation of external adipose tissue (subcutaneous and abdominal). This was routinely evaluated by anthropometric measurements including body mass index and waist, hip and, recently, neck circumference. However, recent data, using non-invasive imaging methods (echography, computed tomography, magnetic resonance imaging, and positron emission tomography), reveal a novel picture of adipotopography (fat mapping). Together with secretory functions, such a topography has been conceptualized as two major subfields of adipobiology, adipoendocrinology and adipoparacrinology. Here we introduce periprostatic adipose tissue as an example of adipoparacrinology of prostate cancer. Its implication in the therapy is also updated.

I thank my supervisors, Anton Tonchev, Peter Ghenev and George Chaldakov, for teaching me in research and data-mining work. And the urologists Nikolai Evtimov, Alexander Hinev and Deyan Anakievski who collected specimens of periprostatic adipose tissue we using in our common ongoing research project.

ВАРНЕНСКИ МЕДИЦИНСКИ ФОРУМ

том 1, 2012,
брой 2

ISSN 1314-8338

МЕДИЦИНСКИ УНИВЕРСИТЕТ
„ПРОФ. Д-Р ПАРАСКЕВ СТОЯНОВ“
ВАРНА, БЪЛГАРИЯ