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Abstracts from Jubilee Scientific Conference “40 years Medical University – Pleven”, 30 October - 1 November, 2014, Pleven

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PLENARY LECTURES

PERSONALIZED MEDICINE AND COCHLEAR IMPLANTATION

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Summary

Personalized medicine based on molecular-genetic evaluation of functional proteins such as otoferlin, connexin 26 and KCNQ4 or the Usher gene is becoming increasingly important for the indication of CI in the context of infant deafness.

The aim of personalized molecular medicine is to identify patients who will respond particularly positively or negatively (e.g. in terms of adverse side effects) to a therapy using the methods of molecular medicine. This should allow a specific therapy to be successfully applied or preclude its indication in order to avoid serious adverse side effects. This approach serves to stratify patients for adequate treatment.

Key words: otoferlin, connexin 26, KCNQ4

A CAREER IN CONGENITAL HEART SURGERY?

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Summary

Medical students and surgical residents have a wonderful spectrum of choice in deciding their future course of specialization: - a choice they may find daunting. Heart surgery is but one of those choices, and congenital heart surgery a yet smaller 'niche'. Why consider a career in congenital heart surgery (CHS)?

It is a fascinating specialty because of the intellectual curiosity it demands, it requires technically demanding surgery, and it will need innovation to incorporate the newer sciences into its continuing evolution. Congenital cardiac surgery offers not only emotional and psycho-logical challenges, but also physical ones. A wide range of patient size is encountered. In the same day, the surgeon may deal with the tiny structures and fragile tissues in a 450 g preterm infant and later be confronted by a 180 kg adult with a history of multiple previous operations. There may be a misconception that the era of pioneering in CHS is finished and the future will be less exciting. To the extent that new operations will be less likely, now that many options have been explored, that is true. Today's congenital cardiac surgeons will need to incorporate the sciences of molecular biology, genetics, stem-cell research & tissue engineering, experimental embryology, computer technology, statistical analysis and enhanced diagnostic procedures. CHS provides an opportunity for an academic career, and provides a challenge to improve care for the new and expanding population of

adult patients, and within the context of the developing world. In addition, there is a severe shortage of congenital cardiac surgeons in Western Europe, in fact much more than in any other surgical speciality. The demands of CHS are great, but the rewards are immeasurable.

Key words: congenital heart surgery, academic career

BIOMEDICAL SCIENCES

ORAL PRESENTATION

IN-VITRO EVALUATION OF NEW CHITOSAN-BASED MATERIALS

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Summary

The chitosan is a promising material for biomedical application due to nontoxicity, biodegradable, biofunctional, biocompatible properties in addition to having antimicrobial characteristics. We synthesized a series of new one step copreparation materials based on chitosan for bone, skin and dura mater replacement. The best way to selection materials with satisfactory properties is in-vitro evaluation on cell cultures. We used 3 different types of materials – chitosan films (200, 500 and 700 kDa), chitosan sponge and composite (chitosan-chitin and chitosan-apatite). All experiment was conducted in Department of Materials Science and Engineering, University of Sheffield, UK. For chitosan films and sponge and chitosan-chitin composite we used Murine long bone osteoblast (MLO) and for chitosan film and chitosan-apatite composite - Human oral mucosal fibroblasts (OF). We seeded 20 000 cells on each scaffold and evaluated cell viability (material toxicity) on 1, 4, 7 and 14 days for MLO and on 1, 4 and 7 days for OF. Also we evaluated collagen production on the end time-point of experiment. Results show that all materials are non-toxic and allow for cells growth and stimulate collagen secretion by the osteoblasts and fibroblasts. But the chitosan with high molecular weight (700 kDa) and chitosan-chitin composite have better biological response.

Key words: chitosan, murine long bone osteoblast, human oral mucosal fibroblasts

EXPERIMENTAL STUDY ON THE DEVELOPMENT OF TOLERANCE AND WITHDRAWAL SYNDROME TO PENTYLENETETRAZOLE-INDUCED SIZURES IN RATS TREATED WITH RETIGABINE

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Summary

The purpose of this study was to evaluate the development of tolerance and withdrawal syndrome to pentylenetetrazole (PTZ)-induced seizures on 14 day treatment with retigabine in rats. One hundred twenty male Wistar rats were divided in groups of 10 and treated orally for 14 days with resp. distilled water and retigabine (RTG) in dose 60 mg/kg b.w. The tolerance to the anticonvulsant effect of RTG was studied using subcutaneous injection of PTZ (120 mg/kg b.w.) on the 1st and 14th day. To determine the possible neuronal hyperexcitability on the 1st, 2nd and 3th day after termination of drug administration was used a lower dose of PTZ (65 mg/kg b.w.). According to our results there was no change in the anticonvulsant activity of RTG during the whole time of treatment. The study on withdrawal syndrome showed slightly decrease of the effect on the first day after the last treatment, but with no significant difference to the controls. The anticonvulsant effect of RTG on the 2nd and 3rd day was close to the control group. Our results showed no development of tolerance on subchronic treatment with RTG. There was no significant change in the neuronal hyperexcitability on the 1st, 2nd and 3th day after the termination of treatment. Based on these results we can suggest that RTG has no potential to develop withdrawal syndrome.

Key words: retigabine, withdrawal, tolerance, PTZ, rats.

LEPTIN AND GHRELIN – THE NEW OLD PLAYERS IN OBESITY AND DEPRESSION

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Summary

Participation of the anorexigenic peptide leptin and the orexigenic peptide ghrelin in the pathogenesis of metabolic syndrome and obesity is well studied. In this review we are taking a look at the structure, anatomical expression, regulation, receptors and physiological functions of these two peptides. Leptin, a product of the ob gene, consists of 167 amino acids and is produced almost exclusively in the adipose tissue. It acts on the brain and is a key element in the long-term regulation of energy balance. Leptin suppresses appetite and reduces body weight. Besides its central effects, important aspects of its action in peripheral tissues were discovered recently: direct regulation of immune cells, pancreatic beta cells, adipocytes and muscle cells. These finds open up new perspectives in the treatment of obesity and diabetes type 2. Ghrelin, a 28-amino acid peptide, is an endogenous ligand for the active form of the GHS-R (GHS-R1a), and stimulates food intake and the secretion of growth hormone. Produced in A/X-like cells in the stomach, ghrelin is the main orexigenic hormone acting on the hypothalamus and influencing eating behavior and energy metabolism. We stress on the role of ghrelin in neural mechanisms in the central nervous system associated with depression, as well as its role in prevention of Alzheimer's disease (increasing neural connections in the brain and the storage of new information). Studying new aspects of these two neuropeptides aims to expand our knowledge of the pathogenesis and therapeutic approaches to diseases with which they are associated: obesity, depression, type 2 diabetes,

essential hypertension, and more.

Key words: leptin, ghrelin, obesity, depression.

EFFECT OF HIGH-FRUCTOSE SOLUTION ON BODY WEIGHT, BODY FAT, BLOOD GLUCOSE AND TRIGLYCERIDE LEVELS IN RATS

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Summary

In Europe, as well as in Bulgaria, consumption of soft drinks and confectionery has increased for the last three decades and is partly responsible for the epidemic-like increase in obesity. These foods, originally sweetened by sucrose, are now sweetened by other caloric sweeteners such as fructose. In this study we investigated the effect of an eight week intake of 20% fructose solution on body weight in rats. Two adult rat groups (aged 120 ± 6 days) of Wistar line were studied: a Control group (C; n = 10; 5 male and 5 female) received water and standard rodent chow, and a Fructose group (F; n = 12; 6 male and 6 female) who received 20% fructose-in-drinking-water solution and regular rodent chow. All animals were weighed and measured (nose to anus length), and the Lee index (equivalent of BMI in rats) was calculated. Body fat was also analyzed. As indicators of increased caloric intake of the Fructose group we investigated glucose, triglycerides, and cholesterol (total, HDL and LDL) in blood. In conclusion, consumption of fructose solution in rats resulted in increased

body weight, length and measured body fat, increased blood glucose, total cholesterol and triglycerides in the Fructose group compared to the controls.

Key words: high-fructose diet, obesity, body weight, blood glucose, blood triglycerides

RESEARCH ON EGFR STATUS IN PATIENTS WITH NON-SMALL CELL LUNG CARCINOMA

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Summary

Introduction: EGFR (epidermal growth factor receptor) is a member of superfamily of tyrosine kinase receptors, which play a role of oncogenes in many cancers. Mutations in EGFR continuously maintained activated EGFR signaling pathway, leading to uncontrolled growth of the tumor cells, and inhibition of apoptosis. Mutations in EGFR have been observed predominantly in adenocarcinoma (AC) type of non-small cell lung cancer (NSCLC). EGFR mutant gene is a potent target for molecular therapy with tyrosine kinase inhibitors (TKIs). Aim: To determine EGFR mutational status of selected tumors of patients with NSCLC, using qRT PCR techniques. Materials and methods: One hundred forty nine patients (41 women and 108 men) with NSCLC were studied for EGFR status in the period of July 2013 - May 2014. Results: The morphology of all 149 cases included 77 (51.7%) ACs, 35 (23.5%) squamous cell carcinoma (SCC), 2 NSCLC- NOS, (1.3%) 1 adenosquamous and 34 (22.8 %) were other types. Patients carrying activating mutations in the TK domain of EGFR were twelve (8.1%) found in 8 ACs, 2 SCCs and 2 in NSCLC- NOS type. The most frequent mutation is a deletion in exon 19 (58.3%), followed by a mutation L858R in exon 21 (25%). In one case two mutations S768I in exon 20 and G719X in exon 18 in male patient were found.

Conclusions: Evaluation of EGFR status is important because TKIs are effective in patients whose tumors harbor activating mutations in the tyrosine kinase domain of the EGFR gene.

Key words: NSCLC, EGFR activating mutations, qRT PCR

HISTOLOGICAL CRITERIA PREDICTING THE POSSIBILITY OF MUTATIONS IN BRCA1 GENE IN OVARIAN CANCER

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Summary

One of the important genes related to ovarian carcinoma is the BRCA1 gene. Carriers of BRCA1 gene are at increased risk of development carcinomas at other primary sites. Since BRCA1 mutation in ovarian carcinomas is found in less than 1/5- th of all the cases, genetic testing of all carcinomas is not a cost-effective approach.

The aim of the following investigation was to study the application of several histological and immunohistochemical criteria for selection of BRCA1 mutated tumors for genetic testing.

Twenty-nine serous papillary carcinomas were retrospectively studied. Characteristics including tumor grade, presence of tumor necrosis, stromal reaction of the tumor, family history and immunohistochemistry expression of p53 protein were evaluated and statistically analyzed. BRCA1 status was evaluated using immunohistochemistry.

Nineteen (65,52%) of the studied cases demonstrated loss of immunopositivity for BRCA1. The presence of tumor necrosis occupying more than 6% of histological specimen ($\chi^2=5,15$; $p=0,023$)

and the high-grade tumors ($\chi^2 = 11,97$; $p < 0,001$) were significantly related to loss of BRCA1 immunopositivity. Stromal reaction ($\chi^2 = 0,05$; $p = 0,821$) and family history ($\chi^2 = 0,00$; $p = 1,00$) were not associated with immunostaining for BRCA1. The presence of immunopositivity for p53 was significantly associated with loss of BRCA1 immunostaining ($\chi^2 = 10,70$; $p = 0,001$). High grade serous papillary ovarian carcinomas with more than 6% of tumor necrosis and p53 immunopositivity are most likely with BRCA1 mutation. These criteria might be used as a cost effective approach for selection of cases for BRCA1 mutation testing and treatment with platinum based chemotherapy.

Key words: BRCA 1 mutations, ovarian cancer

INVESTIGATION OF TRIPLE-NEGATIVE BREAST CANCERS-MORPHOLOGICAL AND IMMUNOPHENOTYPIC CHARACTERISTICS

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Summary

Introduction: Breast cancer represents a variety of subgroups with unique biological and clinical characteristics. Basal-like variant of triple negative breast cancers (TNBCs) are aggressive cancers that affect young women. Expression of cytokeratins 5 and 17 identifies a group of breast carcinomas with poor clinical outcome.

Aim of the study: To examine the morphology and IHC characteristics of TNBCs and to identify the basal-like subtype of breast cancers.

Materials and methods: Retrospectively we have selected tumors based on the absence of IHC staining for ER, PgR and Her-2 (triple negative phenotype). Seventy seven breast carcinomas were found triple negative among 340 cases of breast cancer. CK5, 8,14, 17, EGFR, p63,

Caveolin-1 and p-cadherin were used as markers of basal and luminal differentiation.

Results: Among 77 TNBCs using the five-marker method for identification of basal-like cancers 80.55% were found positive. Positive for both EGFR and CK5 were 65.52% of tumors. Positive for EGFR and negative for Ck5 - 20.69%. According to the type of immunostaining TNBCs were subclassified into 2 categories-pure basal (40%) and baso-luminal (60%).

Conclusions: There is an evidence that the group of TNBCs is heterogeneous and does not comprise a 'single entity'. Triple negativity should not be used as a surrogate marker for basal-like cancers.

Key words: triple negative breast cancer, basal-like breast cancer, immunohistochemistry

RING STUDY TO EVALUATE THE ACCURACY, RELEVANCE AND THE CORRELATION BETWEEN IMMUNOHISTOCHEMISTRY AND IN SITU HYBRIDIZATION IN DETERMINING THE HER 2 STATUS IN WOMEN WITH BREAST CANCER

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Summary

Introduction: The status of HER2 in breast cancer is predictive factor for the effect of targeted therapy. Presently there are two widely used methods for HER2 status testing immunohistochemistry (ICH) and in situ hybridization analysis. The correlation of the overall result (positive/negative) between IHC and in situ hybridization technique is of great importance for the clinical practice.

Aim: The aim of this study was to evaluate the correlation between the immunohistochemistry (ICH) and in situ hybridization (ISH) methods for determining the HER2 status in women with breast cancer. **Materials and methods:** A total of 5606 cases were analyzed. ICH and ISH testing

was performed in accordance to standard laboratory protocols. HER2 status accessed by IHC and ISH was evaluated in accordance to recommendations of updated guide-lines.

Results: During the evaluation of the studied specimen we found out that over- and under fixation were associated with certain IHC and ISH staining artefacts. The use of fixatives different from 10% neutral buffered formalin also caused staining artefacts and interpretation problems. A total of 27% of discrepancies between IHC and ISH methods was found.

Discussion: The accuracy of all used methods was found to depend on the used tissue processing protocols. Pre-analytical, analytical and post-analytical stages, as well as the experience of technologist are of great importance for HER2 testing. Internal and external quality assurance evaluation can improve the diagnostic process and guarantee consistent tests results.

Key words: HER2, IHC, ISH, discrepancy

ASSOCIATION OF SNPS IN C1Q GENE CLUSTER WITH SOME OF IMMUNOLOGICAL PARAMETERS OF LUPUS NEPHRITIS

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Summary

Introduction: Systemic lupus erythematosus (SLE) is a systemic autoimmune disease and one of its most severe manifestations is lupus nephritis (LN). Hereditary C1q deficiency is strongly related to SLE. But we found that single

nucleotide polymorphism (SNP) of the C1q gene cluster – rs172378 is associated with susceptibility to LN in Bulgarian population. In present study we investigated whether the carriage of a particular genotype or allele of five different SNPs in C1q gene cluster affects the activity of lupus nephritis. Materials and Methods: Thirty eight patients with LN and 185 healthy controls, all from Bulgaria, were genotyped for five C1q SNPs, rs172378, rs587585, rs292001, rs294179 and rs631090 by quantitative real-time PCR methods. We also determined serum levels of C1q, C4, C3, anti-C1q autoantibodies, IgG-, IgM-containing circulating immune complexes (CICs) and hemolytic activity of C1q in relation to the SNPs genotypes. Results: We found that TT genotype of rs587585, rs631090 and rs294179 presents a risk factor in patients for having high levels of anti-C1q antibodies (p=0.004), high levels of IgG CICs (p<0.0001) and lower levels of C4 (p=0.028) respectively. The GG rs172378 genotype was bound with low hemolytic activity of C1q (p=0.005) and high levels of IgG CICs (p=0.042). We also found that haplotypes ATGCT, ACATT and GTGCT were associated in patients with higher IgM CICs (p=0.023), higher IgG CICs (p=0.001) and lower C1q (p=0.019) levels respectively. Conclusion: These results showed that the SNPs analysis for rs172378, rs587585, rs294179 and rs631090 could be used for evaluation of disease activity.

Key words: complement; C1q; lupus nephritis; SNP

MODULATION OF INSULIN SECRETION AND INSULIN SIGNALING BY SELENIUM

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Summary

The aim of this study was to present the current knowledge on the role of selenium (Se) in the synthesis and insulin signaling. Selenium is an exogenous antioxidant, which

performs its role mainly through the expression of selenoproteins: glutathione peroxidases (GPx), thioredoxin reductases (TrxR), and iodothyronine deiodinases (DIO). Insulin secreting beta-cells of the pancreatic islets contain particularly low amounts of the major antioxidants enzymes. Se may stimulate biosynthesis and secretion of insulin in pancreatic beta-cells, mediated by up-regulation of GPx1, selenoprotein P (Sel P), TrxR and DIO3. Selenium was found to act as insulin mimetic and to be anti-diabetic in earlier studies, but recent animal experiments and human trials have shown an unexpected risk of prolonged high Se intake in potentiating insulin resistance and type 2 diabetes. Se status and GPx1 expression have been reported to affect the activity of insulin. Low Se intake increases oxidative stress of whole organism including altered insulin secretion and signaling. Increased expression of selenoproteins due to long-term high Se intake resulted in hyperinsulinemia and decreased insulin sensitivity. A number of proteins in the insulin signaling cascade are sensitive to the cysteine oxidation. Low concentration of hydrogen peroxide generated by NADPH oxidases have been shown to be required as second messenger in early insulin signaling, but high concentration suppresses it. Future studies must perform to determine optimal daily selenium intake for relevant prevention and treatment of socially significant diseases.

Key words: selenium, insulin, diabetes mellitu

EVOLUTION OF ANTIBIOTIC RESISTANCE AND CLONAL SPREAD OF CARBAPENEM RESISTANT *ACINETOBACTER BAUMANNII* IN BULGARIAN UNIVERSITY HOSPITALS

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Summary

Object: *Acinetobacter baumannii* is a serious and emerging pathogen with increasing importance as the paradigm of a multidrug resistant, often untreatable hospital isolates. Carbapenem-resistant *Acinetobacter baumannii* (CRAB) have been increasingly emerged during the last decade in Bulgarian hospitals and raising concern about the limited therapeutic options. We investigated the molecular epidemiology of Bulgarian CRAB and characterized genes possibly responsible about the resistance.

Materials and methods: Identification and antimicrobial susceptibility testing of 137 non replicate CRAB from 11 hospitals obtained between 2004-2013 was performed with conventional methods and VITEK 2. AFLP analysis was done as described by Nemeč et al., 2001 and Duplex VNTR typing, according to Turton et al. 2009. A multiplex PCR for detection of 15 genes encoding MBL, Class A, Class D carbapenemases by Woodford et al., 2006; IS*Abai* by Turton et al., 2006. **Results:** A total of 16 AFLP types were distinguished. Isolates of AFLP types 5-10 were found in different cities and hospitals and showed a 80% relatedness - 'Bulgarian clone'. Grouping of isolates with LUMC reference strains identified AFLP type 5-10 with EU clone I; AFLP type 1 with EU clone II. Duplex VNTR typing showed two closely related genotypes to be involved in one outbreak. Overall 25 genotypes were detected among the 66 isolates. VNTR type of the 8 tested isolates correlated with the AFLP genotype. The isolates was positive for the carbaNP test. Two groups was found: negative for armA, OXA-23, OXA-58, positive for OXA-24 and negative for OXA-58, OXA-24, positive for OXA-23 and armA. **Conclusions:** The presence of OXA-23-, 24/40- or 58-like may explain the carbapenem resistance of most isolates. The AFLP and VNTR typing scheme appear to be highly discriminatory and provides reliable data for the outbreak clones. One group of widespread related types seems to represent a

novel clone. A few types occurred in more than one hospital suggestive for interhospital spread.

Key words: Acinetobacter baumannii, AFLP, VNTR, OXA-23, OXA-24/40, OXA- 58, armA

REPRODUCTIVE PROBLEMS IN WOMEN WITH PSOS, THE IMPACT OF PAI – 1 CARRIERS OF 4G PAI-1 POLYMORPHISM AND BMI

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Summary

Approximately 7-12% of women in reproductive age are affected by PCOS and 40 to 70 percent of them are overweight contributing to the clinical picture of PCOS and increased reproductive and metabolic disorder. In order to investigate the role of PAI-1 as a possible risk factor for the development of PCOS a group of 67 women with polycystic ovarian disease and 70 healthy controls were investigated for levels of PAI-1 and carriage of the promoter polymorphism 675 4G/5G in gene of PAI-1. The results of the DNA analysis showed a high carriage of polymorphism 675 4G/4G in promoter of PAI-1 gene in women with PCOS but not as significant (OR = 1.6645, p = 0.141). Serum levels of PAI-1 were significantly higher in total group of patients compared to controls. The levels of PAI-1 is correlated with carriage of 675 4G/5G polymorphism in the gene for PAI-1 (R= 0.534, p=0.03) as well as with BMI, like

correlation coefficients were higher in the group with PCOS. Data from the disease history showed a higher percentage of women with reproductive problems 61.5% (early pregnancy loss including infertility) significantly higher in the group with PCOS (70.1% compared to 54.1%). The carriers of polymorphism 4G are at greater risk for early pregnancy loss than those with 5G (52.55% спрямо 36.8%), which confirms that carriage of the polymorphism 4G/5G 675 gene PAI-1 has a specific in multifactorial pathogenesis and expression of PCOS.

Key words: PAI-1, PCOS

POSTERS

THE STRUCTURAL TRANSFORMATION OF THE IMMUNE AND ENDOCRINE ORGANS UNDER DEHYDRATION

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Summary

Our aim was to discover structural and morphological changes in spleen, thyroid gland and thymus due to extracellular dehydration. Rats were divided into 2 groups. 1st group which consisted of 5 rats, was used as a control group. 2nd group - experimental, 5 rats, for two months were kept on no-salt diet with fresh water replaced with bidistilled water mixed with diuretic (LASIX®) to simulate the average extracellular dehydration. These rats have shown extracellular water deficiency of 6-10%. ematoxylin and eosin-stained as well as Van Gieson's stained sections were made, which were then examined with optical microscope. The results of our study have shown signs of lowering the concentration of colloid in thyroid follicles. Morphometric study has showed enlargement of the follicles, indicating an increase in functional activity of the thyroid gland. There were evidence of vacuolization and lysis of follicular cells'

nuclei. Dehydration causes in thymus hyperplasia of endothelial cells and growth of connective tissue in vessels, transformation of parenchyma into adipose tissue. The amount of lobules in lobes of thymus decreased, destruction and death of lymphocytes occurred. In the dehydrated spleens, myriad morphological changes such as reduced size in marginal zone, minimal or near flaccid cells of the red and white pulps were seen. Extracellular dehydration results in morphological reorganization of thymus, thyroid gland, spleen.

Key words: extracellular dehydration, thymus, thyroid gland, spleen

VASCULAR CALCIFICATION AND OSTEOPOROSIS

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Summary

Introduction: The association between osteoporosis and cardiovascular atherosclerotic disease has been described in recent years. Osteoporosis is a serious health problem worldwide, associated with an increased risk of fractures and mortality. Vascular calcification is defined as independent risk factor for cardiovascular disease (CVD) and mortality. According to current understanding these two processes share common pathogenetic mechanisms. **Aim:** This review summarizes experimental and clinical data that support the interaction between vascular calcification and osteoporosis. **Methods:** Review of the literature. **Results:** Multiple factors such as bone morphogenetic proteins (BMP), receptor activator of nuclear factor κ B ligand (RANKL), osteoprotegerin (OPG), matrix Gla protein (MGP), parathyroid hormone, phosphate, oxidized lipids, vitamin K and D are implicated in both vascular and bone metabolism. The key proteins in bone metabolism – RANK, RANKL, OPG have been found at the site of arterial calcification, illustrating the interaction between

these two seemingly unrelated conditions. Many clinical studies have now confirmed the correlation between vascular calcification and osteoporosis as well as increased risk of cardiovascular disease (CVD) in patients with osteoporosis. **Conclusion:** osteoporosis, vascular calcification and CVD seem to be closely related independently of age. The intriguing question is whether vascular calcification impact bone metabolism, thus realizing crosstalk between these tissues. Further studies are needed to establish the relationships and to determine if osteoporosis is a cardiovascular risk factor.

Key words: vascular calcification, osteoporosis, CVD, RANKL, OPG

GRANULE CELLS OF THE COCHLEAR NUCLEUS IN RATS: ULTRASTRUCTURAL AND IMMUNOHISTOCHEMICAL STUDY

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Summary

In the present study, we examined the morphology of granule cells and synaptic relationships between a class of large synaptic terminals called mossy fibers and their targets within subdivisions of the granule cell domain. We have also studied the expression of AMPA (α -amino-3-hydroxy-5-methyl-4-isoxazole) receptor subunits in the cochlear nuclear complex of the developing rat. For these purposes we have used electron microscopic and immunohistochemical methods. We provide evidence for heterogenous class of granule cells innervated by mossy nerve endings and different dendrite classes in synaptic glomeruli. The mossy fibers are large, irregularly shaped terminals that are filled with round synaptic vesicles and mitochondria. Each terminal is surrounded by dendritic profiles upon which it forms

asymmetric synaptic contacts. GluR1, GluR2 and GluR3 subunits of glutamate receptors were expressed in the first four postnatal weeks.

These mossy fiber glomeruli are similar to those described in the cerebellum and the dendritic profiles were hypothesized to belong to granule cells. The results confirm parallel fiber pathways as glutamatergic and identify a synaptic population, projecting to granule cells, which is likely glutamatergic. During the development GluR3 staining resembled that of the GluR2. Age-related changes in labelling of GluR3 subunit in the microneuronal types between P10 and P40 were characterized by a progressive increase in the staining intensity.

Key words: granule cell, mossy fiber, synapse, immunohistochemistry, AMPA receptors

ANTIOXIDANT POTENTIAL – AN AMBIGUOUS INDICATOR OF OXIDATIVE STRESS

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Summary

Oxidative stress is considered to be a cause of disease and ageing. Its level is a continuous variable that is never zero since oxidative injury is constantly produced in living systems. A number of methods have been developed to measure oxidative stress levels. However, the scientific literature often reports general conclusions on the oxidative stress drawn from specific observations of separate component variations, related to antioxidant status alone. The aim of the present investigation was to measure the reducing potential and oxidative damage in blood of healthy adults above 40. We studied 49 healthy volunteers, 16 men (59 ± 3 y) and 33 age-matched women (57 ± 1 y). The blood reducing potential was evaluated by estimating the total content of blood sulfhydryl (SH)-groups. The degree of oxidative injury was measured by

the blood concentration of thiobarbituric acid-reactive material (TBARM).

We found that the blood SH-groups were significantly higher in men than women ($F=8.834$, $p=0.005$). The TBARM concentration was higher in men than women, as well ($Z=-2.014$, $p=0.044$). Thus, the registered higher blood reducing potential in this study obviously does not indicate low oxidative stress since higher oxidative damage in blood was found. We conclude that variations in antioxidant potential do not define unambiguously the oxidative stress level changes. Future studies are expected to show what the actual basal level of oxidative damage is in cells, which parameters should be measured to evaluate oxidative stress and how to standardize the results obtained.

Key words: oxidative stress, oxidative injury, antioxidant potential, oxidative biomarkers

IMMUNOFLUORESCENT INVESTIGATION OF DOPAMINERGIC NEUROTRANSMISSION IN THE RETINA OF COLD-BLOODED VERTEBRATES

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Summary

Dopamine is the neurotransmitter of one of the diffuse modulatory systems of the central nervous system (CNS). It is involved in numerous brain functions in normal and pathologic conditions. The purpose of the present investigation was to study the dopaminergic neurotransmission in an extracranial part of CNS - the retina of cold-blooded vertebrates. We used cryostat retinal sections from frog and turtle that were stained by primary antibodies directed against the dopamine transporter and dopamine D1 receptor (D1R). The secondary antibody was labeled with fluorochrome. The results showed that dopaminergic neurons in frog and turtle retina were located in the inner nuclear layer (INL). The perikaria of the majority of them were

situated immediately above the inner plexiform layer (IPL), corresponding to the amacrine cells. Single perikaria were visualized approximately in the middle of the INL and were interpreted as interplexiform cells. In turtle retina Muller glial cells were stained for dopamine transporter antibody. Anti-D1R immunofluorescence was observed in both plexiform layers – the inner and the outer one, i.e. the layers where the retinal neurons make their synaptic contacts. In turtle retina staining of single horizontal cells were shown. Our conclusion is that the dopaminergic neurotransmission is well expressed in both types of retinas. It is involved in afferent, as well in efferent transfer of information.

Key words: retina, dopamine, immunofluorescence.

EFFECT OF HANDEDNESS ON FUNCTIONAL ORGANIZATION OF BIMANUAL ISOMETRIC HANDGRIP

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Summary

The aim of this study was to examine force production during maximal isometric handgrip in unilateral (UL) and bilateral (BL) tasks in right- and left-handed subjects. Ten right-handed (RH) and 8 left-handed (LH) young men were studied. The subject was instructed after a command to perform a shot-like handgrip, raising maximal force as fast as possible. Three series were performed as follows: 1) UL - right handgrip; 2) UL - left handgrip; 3) BL handgrip. We measured peak force, time to peak of force and force rate. The BL/UL ratios for the right (R) and left (L) hand and L/R ratios for the UL and BL tasks were calculated. The L/R ratios for peak force and force rate in RH group ranged across all tasks and conditions from 0.71 to 0.75. They were significantly lower than 1 ($p < 0,01$). These ratios did not differ significantly from 1 for LH subjects (0,98 – 1,02), indicating the handedness in RH

group only. The BL/UL ratios for peak force were 0,89 and 0,89 in RH, suggesting symmetrical bilateral strength deficit. The magnitude of the bilateral deficit in LH group was larger for the dominant (L) hand compared to non dominant (R) hand – 0,93 and 0,97 ($p < 0,05$) respectively, suggesting an asymmetry of bilateral deficit in LH. These ratios for rate force indicated BD in the dominant hand of RH group only.

Key words: Handgrip, maximal force, bilateral deficit, handedness.

EFFECTS OF NEW MIF-1`S ANALOG ON STRESS-INDUCED ANALGESIA

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Summary

The aim of the present study was to examine the effects of novel CF3-(MIF-1) analog of MIF-1 on stress-induced analgesia. The experiments were carried out on male Wistar rats (180-200g) kept under normal conditions at ambient room temperature (22°C). Food and water were available *ad libitum*. All experiments were carried out between 09.00 and 12.00 a.m. Each group included 5-8 rats. The analgesic effect of CF3-(MIF-1) has been evaluated by paw pressure (PP) and hot plate (HP), and compared to the native tri-peptide MIF-1. The CF3-(MIF-1) analog was synthesized by prof. Thierry Brigaud research group and MIF-1 was obtained from Sigma. All drugs were injected intraperitoneally at a dose 1mg/kg after restraint and cold stress in rats. All procedures were approved by the Animal Care and Use Committee of the Medical University of Sofia. The results obtained showed

that both the non-fluorinated and the fluorinated peptides significantly decreased SIA in PP and HP tests during the whole investigated period and CF3-(MIF-1) had a stronger anti-opioid effect compared to MIF-1. In conclusion we assume that the incorporation of CF3 group in MIF-1's molecule results in increased suppressive effect of the newly synthesized analog in both tests applied and after both kinds of stress compared to the native tri-peptide MIF-1. CF3-MIF-1 has a stronger anti-opioid effect compared to MIF-1.

Key words: MIF-1, CF3-MIF-1 analog; stress-induced analgesia; pain threshold; hot plate latency

INTERACTIONS BETWEEN THE TYR-MIF-1 FAMILY OF PEPTIDES AND THE ENDOCANNABINOID SYSTEM AFTER HOT-STRESS-INDUCED ANALGESIA

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Summary

The aim of the present study was to reveal the influence of the Tyr-MIF-1 family of peptides along with the endocannabinoid system on pain perception after hot-stress-induced analgesia (HSIA). The experiments were carried out on male Wistar rats (180-200g) kept under normal conditions at ambient room temperature (22°C). Each group included 8-10 rats. All drugs were obtained from Sigma. CB1-agonist anandamide (at a dose 1mg/kg) and the antagonist AM251 (at a dose 1,25mg/kg) were dissolved in DMSO and injected immediately after the end of hot stress. The Tyr-MIF-1 peptides (at a dose of 1mg/kg) were dissolved in sterile saline solution (0.9% NaCl) and injected 10 min after anandamide or AM251. The administration of all the substances was intraperitoneal.

The nociception was measured by paw-pressure and hot-plate tests. All procedures were approved

by the Animal Care and Use Committee of the Medical University of Sofia. The results showed that the CB1 agonist increased the pain threshold compared to animals with only hot stress, while the peptides decreased the pain threshold with Tyr-W-MIF-1 having the most pronounced effect. In conclusion it could be stated that differences in HSIA after Tyr-MIF-1 peptides administration along with exogenous cannabinoids are due to the specific binding sites of each of the peptides as well as to CB1 modulating effects.

Key words: SIA, cannabinoids, Tyr-MIF-1 peptides, hot stress, nociception.

POSSIBLE CAUSAL LINKS BETWEEN OXIDATIVE AND EMOTIONAL STRESS

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Summary

Emotional disturbance is one of the most common types of psychological disorders. About 1/8 of the total world population suffers from some form of anxiety. Chronic psychological stress accelerates premature ageing and is considered to be a contributing factor to disease development. Recently, oxidative stress has been implicated in emotional stress, depression and anxiety disorders. The mechanisms through which emotional stress promotes oxidative stress, however, remain unclear.

The aim of the present work is to analyze the published data for possible causal relationships between oxidative and emotional stress and their contribution to disease and ageing. We conducted a systematic search of online databases such as PubMed, Google Scholar and Science Direct for peer-reviewed studies published between 2005 and 2013. The data show that the expression of oxidative stress-related genes strongly correlates with anxiety-related phenotypes. An increased serum level of oxidative RNA injury in chronic psychological stress has been registered. A positive relationship between oxidative status of

peripheral blood cells and anxiety-related behavior has also been demonstrated. It has been hypothesized that the enhanced levels of cortisol in response to acute stressful event has the potential to change the oxidative stress resistance of organism. The increased reactivity to cortisol, namely, has been suggested to mediate the link between oxidative and emotional stress. Furthermore, oxidative stress-related anxiety can be reversed in experimental models upon inhibition of some enzymes that is indirectly implicated in oxidative stress mechanisms. Oxidative and emotional stresses are inevitable nowadays. Clarifying the basic mechanisms underlying emotional and other stressful events may lessen their harmful effects.

Key words: Emotional stress, oxidative stress mechanisms, cortisol

DISEASES, TRACE ELEMENT STATUS, ANALYTICAL METHODS

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Summary

In many diseases and conditions are observed changes in micronutrient status. The aim of our study was to investigate serum micronutrient levels in health and disease by appropriate analytical methods to analyze the alleged changes in micronutrient status. Methods for determination of serum concentrations of micronutrients are spectrophotometric. We present a study of zinc, copper and chromium in 61 schoolchildren with primary arterial hypertension and 38 to three years children with iron deficiency anemia (IDA), and zinc in 17 schoolchildren with diabetes. In previous studies

examined patients with diabetes, cystic fibrosis, malabsorption syndrome, asthma. The results for serum zinc and copper in more than 50% of children with hypertension, diabetes and IDA, and serum chrome - at 90-100% of the subjects were statistically significantly lower than the controls. Deficient conditions were reported in the above-mentioned diseases. In conclusion we consider that the spectrophotometric method for determination of serum levels of iron, copper, zinc and chromium are sensitive enough have good reproducibility and reliability budget are suitable for screening analysis and are available for operational implementation. The participation of trace elements in lipid metabolism and their shortage of school-age patients with hypertension, can lead to early preclinical vascular changes and atherosclerotic changes. The diet is the main reason for the shortage of trace elements in children with IDA. As a cofactor to antioxidant enzymes, zinc improves insulin action. Disturbed zinc metabolism play role in the pathogenesis of diabetes and its complications. The results can be used to develop appropriate strategies - supplementation, food fortification and dietary diversification (modified) for the prevention and control of trace element deficiency in hypertensive and IDA, as well as other diseases.

Key words: trace element, analytical methods, children diseases

TRACE ELEMENT IN IRON-DEFICIENCY ANAEMIA OF CHILDREN

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Summary

In a number of diseases and conditions associated with impaired function in humans with changes in micronutrient status. Objective: To determine the trace element status and impact of micronutrient deficiency on metabolism and physiological processes in 0 to 3 year old children with iron deficiency anemia (IDA). Contingent and Methods: 30 patients of the University Hospital, Pleven, Bulgaria - I group; 48 patients of the Sumy Regional Child's Clinical Hospital, Sumy, Ukraine - II group; 25 healthy controls were investigated. Serum concentrations of iron, zinc, copper, chromium, cobalt, and nickel were determined spectrophotometrically and by atomic absorption spectrophotometry.

Results: Because the obtained serum levels of zinc, copper, and chromium were near the lower reference limits, I group was divided into IA and IB. In IA group, serum concentrations were lower than the reference values for 47%, 57%, and 73% of patients, respectively. In IB group, these were within the reference values. In II group, results for zinc, cobalt, and nickel were significantly lower ($p < 0.05$), and results for copper were significantly higher in comparison to controls. Conclusion: Low serum concentrations of zinc, copper, cobalt, and nickel were mainly due to inadequate dietary intake, malabsorption, and micronutrient interactions in both studied groups. Increased serum copper in II group was probably due to metabolic changes resulting from adaptations in IDA. Micronutrient deficiencies are related to metabolic changes as well as changes in the physiological processes in the humans. They affect the unity and interaction of structures that make up the human body and disturb vital functions in the humans.

Key words: trace elements, iron-deficiency anaemia, children

THE INFLUENCE OF THE MATERNAL SMOKING, THE DIET AND THE LEVEL OF TRACE ELEMENTS IN ADOLESCENTS WITH PRIMARY HYPERTENSION

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Summary

Primary hypertension frequency in children is determined by cardiovascular risk factors such as obesity, smoking and inappropriate diet. The success of strategies for its prevention is dependent on a plurality of perinatal and postnatal risk factors. The aim of this study was to investigate the influence of potential risk factors like maternal smoking during pregnancy and the diet throughout the first year of the child for primary hypertension occurrence and the level of certain trace elements in children with primary hypertension. Methods: The study was conducted among 61 students aged 10-17 years with hypertension and a control group of 20 normotensive children. Maternal smoking during pregnancy and the diet of the infant were determined and studied by conducting a survey. Spectrophotometric methods were used to determine the serum levels of the trace elements Zn, Cu, Cr. The data was processed statistically using Statgraphics. Results: We found that 47.5% of the mothers of children with hypertension had smoked during pregnancy. 80.4% of children with hypertension were formula fed and only 19.6% of them were breast-fed. Significantly lower levels of serum zinc ($9,90 \pm 1,63 \mu\text{mol} / \text{l}$) were found in 66.6% of the children with hypertension. Serum copper levels were statistically significantly lower in 50% of the children ($6,76 \pm 2,96 \mu\text{mol} / \text{l}$). All patients with hypertension had significantly lower chromium ($0,68 \pm 0,26 \mu\text{mol} / \text{l}$). Conclusion: Smoking mother during pregnancy and formula feeding during the first year of life can probably be considered risk factors for early hypertension manifestation. The status of trace elements Zn, Cu, Cr showed a deficit in children with hypertension. Given the role of these micronutrients in cholesterol metabolism, their low serum levels may lead to early, preclinical vascular changes. These results require more in-depth study of the causes of hypertension.

Key words: pregnant smokers, trace elements, primary hypertension

MENOPAUSE: A SOURCE OF OXIDATIVE STRESS AND A RISK FACTOR FOR DISEASE AND MORTALITY

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Summary

Menopause is considered to be a risk factor for disease and mortality. The published data show increased morbidity in women of post reproductive age compared to men of the same age and women of reproductive age. It is assumed that the hormonal imbalance leading to inflammation and oxidative stress is the cause of the increased morbid risk in postmenopausal women.

The objective of the present review is to synthesise the published evidence on the role of menopause-induced oxidative stress as a risk factor for disease and mortality. For the purpose, on-line databases Scopus, Google Scholar and Science Direct were used. The data analysis indicates menopause as a source of oxidative stress. The association between oxidative stress and estrogen deficiency has been demonstrated in many studies. An elevated serum level of lipid hydroperoxides, 4-hydroxynonenal, ox-LDL, and inflammatory cytokines has been registered in menopausal women. A reduction in glutathione and activity of some antioxidant enzymes in blood was also established. As a reason for the menopause-induced oxidative stress, some authors consider angiotensin II type-1 receptor overexpression, which leads to vasoconstriction and endothelial dysfunction. The increased NO deactivation may represent another mechanism by which oxidative stress contributes to the pathogenesis of cardiovascular diseases in menopausal women. It should be mentioned, however, that the researchers have used various oxidative stress biomarkers and studied individuals of different ages, ethnicity and postmenopausal period, which makes retrieving the correct conclusions difficult.

Future studies are expected to clarify the complex

role of oxidative stress in menopause as a factor for morbidity and mortality.

Key words: menopause, oxidative stress, chronic inflammation, hormonal imbalance

INTRINSIC FLUORESCENCE STUDY OF HUMAN C1Q – A TARGET MOLECULE FOR THE AUTOANTIBODIES IN LUPUS NEPHRITIS

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Summary

Lupus nephritis is severe inflammation of the kidney that is caused by systemic lupus erythematosus (SLE). Anti-C1q antibodies serve as a reliable serologic marker of active proliferative Lupus Nephritis (LN) in SLE. The events that turn a protective molecule like C1q into a target for the self immune response are unknown. C1q is thought to undergo a conformational transition exposing neo-epitopes that renders the molecule antigenic. Objective: To study the structural and conformational properties of human C1q by means of intrinsic protein fluorescence of native C1q and to analyze the interactions of C1q with increasing concentrations of an amphiphilic polyzwitterion (PZ) poly(ethylene oxide-*b*-*N,N*-dimethyl (methacryloyloxyethyl) ammonium propane-sulfonate). Methods: Fluorescence spectroscopy for analysis of the intrinsic fluorescence of C1q in PBS pH=7.2 (the final concentration of native C1q was 0.04 μM) and its interactions with different concentrations of PZ (polyzwitterions) – 0.05 mM, 1.5 mM, 25mM and 50 mM. Fluorescence spectra were recorded by a Cary Eclipse Fluorescence Spectrophotometer FL0908M014, equipped with a thermostated cell holder. All fluorescence measurements were

carried out in PBS pH=7.2 at 20°C. The Trp/Tyr emission was detected by the excitation of the protein at 280 nm and the emitted light recorded from 300 to 420 nm.

Results: The fluorescence spectrum of C1q was dominated by fluorophores (tryptophan and tyrosine residues) in a polar microenvironment (emission maximum at 341 nm). Upon binding of increasing amounts of PZ to C1q the emission maximum positions of Trp/Tyr fluorescence shifted to 337, respectively. The results indicated that the fluorophores tended to burry in the hydrophobic core of the protein. The observed changes in fluorescence intensity and emission maximum positions suggested that the interaction with ZP induced a series of conformational transitions in C1q. Conclusion: - Our data suggests that the increased hydrophobicity of C1q due to the conformational changes induced by PZ with sulfobetaine structure or different molecules and factors (viruses, bacteria, apoptotic cells) in the organism may convert this normal C1q in an autoantigen.

Key words: lupus nephritis; C1q; autoantigen; intrinsic fluorescence; conformational transitions

SALIVA – POTENTIAL BIOMARKERS AND DIAGNOSTIC POSSIBILITIES

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Summary

Saliva contains as locally produced as originated from serum biomarkers that can be used for diagnostics of oral and systemic disorders. Saliva compartments reflect organs' activity and are of informative value – lactate correlates with its capillar blood concentration, alfa-linolic and arachidonic acids are proportional to food intake. Saliva analysis can be used for diagnostics of: immune answer tested by lisosim, lactopherin, lactoperoxidase, immunoglobulines(IgA-85%, IgG andIgM-5-15%), agglutinins and mucine, and autoimmune, inherited and infection diseases, carcinomas, narcotic substances, bone

reabsorption too. Saliva gives the opportunity some tumor markers to be followed.

Saliva can be used for hormones' levels monitoring too. Saliva cortisol levels correlate with the free serum cortisol. There is a direct correlation between saliva and serum testosterone and estradiol' levels. Low estradiol saliva levels could be a marker for fetus retard development. Ovulation can be assessed by progesterone saliva levels. The system of renin-angiotensin-aldosteron and Na⁺/K⁺ ratio could be controlled too. Saliva growth factors, electrolytes and impaired Na⁺ transport could be of diagnostic interest in hypertension. Salivary C-reactive protein, leucotrien B₄, prostaglandin E₂, matrix-metaloprotease, creatinin, lisosim correlate with mean arterial blood pressure, arterial elasticity and pulse wave velocity. Saliva biomarkers as uric acid, nitrite, Na⁺, Cl⁻, pH, phosphate (positive feedback to glomerular filtration), lactopherin could be useful in renal insufficiency. Stress and pain could be examined by amylase, cortisol, lisosim and neuropeptides' levels. Saliva as a diagnostic fluid offers advantages enough – non invasive and painless examination, easily storage and transported and providing economically effective approach for big men's groups skringing

Key words: saliva, diagnostic fluid, biomarkers, hormones, electrolytes, stress.

MAGNESIUM AND BLOOD GLUCOSE LEVEL

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Summary

Magnesium is the fourth most abundant cation in the body and plays an important physiological role in many of its functions. Over 300 enzymes require the presence of magnesium ions for their catalytic action. Magnesium is a co-factor in multiple enzymatic reactions, including those involving energy metabolism, synthesis of DNA and proteins, and participates in the regulation of

ion channels.

Magnesium has a fundamental role in carbohydrate metabolism. It is involved at multiple levels in insulin secretion, binding and activity. Magnesium is a cofactor in both glucose transport mechanism of the cell membranes and for various intracellular enzymes involved in the carbohydrate oxidation.

The present review discusses the relationship between serum magnesium concentration and blood glucose level.

Key words - magnesium, insulin, glucose, diabetes

CHARACTERIZATION OF PULMONARY SURFACTANT COMPOSITION AND PROPERTIES IN PATIENTS WITH LUNG CARCINOMA

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Summary

Aim: To study the biochemical and biophysical properties of pulmonary surfactant (PS) in unventilated and ventilated lung during lung resection in patients with nonsmall cells lung cancer (NSCLC). The correlation between the changes in PS and perioperative complications was analyzed. **Material and Methods:** In

prospective study 32 patients with NSCLC and control group of 29 patients without cancer were included. Surgery was performed under general anesthesia and a double lumen tube intubation. After establishing the correct tube position bronchoalveolar lavage (BAL) with 20 ml 0.9% NaCl for each lung was performed. BAL samples were as follows: the 1st and the 3rd samples were taken from the healthy lung before and after anesthesia, resp.; the 2nd and 4th samples were taken from the cancer lung before and after lung resection. In the control group BAL was taken after intubation and at the end of anesthesia. Biochemical analysis of BAL included: the amount of total proteins, and phospholipids (PLs); thin layer chromatography (TLC) of individual lipids. Biophysical parameters studied included the equilibrium surface tension (γ_{eq}), minimal (γ_{min}) and maximal (γ_{max}) surface tension. **Results:** The amount of total proteins of BAL samples from cancer lung was significantly higher as compared to the healthy lung. In addition, there is a difference of this parameter before and after surgery for both lungs. The same tendency regarding total phospholipids was observed for the respective BAL samples. The TLC results confirmed the higher PLs content after lung resection. Statistically significant increase in surface tension values of BALs from patients with NSCLC as compared to control was observed. **Conclusion:** There were significant changes in composition and properties of pulmonary surfactant in NSCLC patients, as compared to control group. Hypoxia and inhalation anesthesia affects the biochemical and biophysical properties of PS. Most probably, the effects observed was a result of an increase in serum proteins content in samples, which have a potent inhibitory effect on lipids spreading at the alveolar surface.

Key words: pulmonary surfactant, nonsmall cells lung cancer

PHOTOCATALYTIC ACTIVITY OF PURE AND N-MODIFIED TiO₂

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Summary

Titanium dioxide is one of the most promising semiconductor photocatalysts, distinguished with its long-term stability, non-toxicity and excellent photocatalytic properties. However, its application is restricted because of the large band gap allowing absorption mainly of UV light and only small amount of visible light. Recently, the modification of the TiO₂ by doping with metals and non-metals is a promising approach for the improvement of the photocatalytic activity in visible light. It is established that the doping with non-metal ions leads to decreased particle size and increased surface area of TiO₂. The hopeful prospects from the addition of nitrogen increase the interest to this type of modification, however, the photocatalytic efficiency of the modification with nitrogen is not yet clarified enough. In some cases the photocatalytic activity in the presence of visible light increases, but does not change, and even decreases under the influence of UV light. In other cases a decrease of the activity in visible light was reported. Commonly, when examining the photocatalytic properties as standard is used the commercial TiO₂ Degussa P25. The aim of the present study was the synthesis of pure and N-doped TiO₂ and comparison of the photocatalytic activity of the synthesized preparations with those of Degussa P25. Pure titanium dioxide (anatase) nanoparticles were successfully synthesized using non-hydrolytic sol-gel method from TiCl₄ and benzyl alcohol. The N-modified titania was prepared by introducing appropriate amount of urea in the reaction mixture. The structure and morphology of the resulting particles were characterized by XRD, IR and UV-Vis analysis. The synthesized powders had crystallite size in the range 15-35 nm. The photocatalytic activity of synthesized and commercial TiO₂ was evaluated in the photodegradation of Malachite Green and Reactive Black 5 dyes under UV and visible light irradiation. Results indicate that in UV light the photocatalytic activity of synthesized pure titanium dioxide tends to be comparable with those of Degussa P25. In UV light the N-modified sample showed slightly improved decoloration activity against Reactive Black5 dye, while the photocatalytic activity towards Malachite Green dye was not changed.

At our experimental conditions, the rate of photodegradation with nitrogen doped TiO₂ in visible light was not improved.

Key words: TiO₂, photocatalytic activity, dye photodegradation

**MIXED
ADENONEUROENDOCRINE
CARCINOMAS OF THE CECUM.
CLINICAL AND
MORPHOLOGICAL ASPECTS.
A CASE REPORT**

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Summary

Mixed adenoneuroendocrine carcinomas (MANEC) are rare tumors in the gastroenteropancreatic system which were defined as such by the World Health Organization in 2010. They are binary neoplasms with morphological and immunohistochemical phenotype of glands and neuroendocrine carcinomas. Each one of these components needs to be present at the level of at least 30% in the tumor in order to be counted as part of the category. For the first time in history, Cardier described a gastrointestinal tumor with such characteristics in 1924. Later on, in 1987, Lewin classified these carcinomas into three types. Mixed adenoneuroendocrine carcinomas of the rectum and the colon count for about 3-9% of the colorectal neoplasms. The MANEC diagnosis can rarely be determined before an operation and can typically be reached via a histological and an immunohistochemical examination. This study presents the case of a 75-year-old female with a clinical report for abdominal pain, bloating and

constipation. The imaging examinations showed a tumor in the cecum and ascending colon. A right hemicolectomy was performed to the patient. After the histological study of the resection material, the patient was diagnosed with mixed adenoneuroendocrine carcinoma. The immunohistochemical study confirmed the exocrine and neuroendocrine nature of the tumor. MANEC are occult tumors which possess non-specific characteristics. They are mainly diagnosed through a pathomorphological examination and have a poor prognosis.

Key words: cecum, mixed adenoneuroendocrine carcinomas

BREAST METASTASIS OF A SQUAMOUS CELL CARCINOMA OF THE UTERINE CERVIX. A CASE REPORT

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Summary

The breast is an extremely rare target organ for metastasis of extramammary neoplasms. The occurrence varies between 1.7% to 6.6% in autopsies; between 1.2% and 2% in clinical cases; and around 2.7% in sputum series. In accordance with the primary tumor localization, it is more common to find metastases of lymphoma, melanoma, rhabdomyosarcoma, tumors of the lung and ovarian tumors. Breast metastasis of the uterine cervix is a very seldomly found. According to the published literature so far, there have been around 30 documented cases with such pathology. This study presents the case of a 48-year-old female with a squamous cell carcinoma of the uterine cervix, which was histologically verified in 2010. Three years after the initial tumor diagnosis, radiotherapy and chemotherapy, the patient was found to have a

cystic tumor formation in one of her breasts. The formation was painful to pressure. Quadrantectomy with an open biopsy was performed to the patient. Histological and immunohistochemical diagnosis rejected primary squamous cell carcinoma of the breast. The differential diagnosis of metastatic lesions in the breast is problematic and requires careful clinical history, immunohistochemical study and multidisciplinary approach in the management. Mammary metastases are a bad predictor and they serve as an indicator of generalized dissemination of the primary tumor process.

Key words: metastasis, breast, cancer, uterine cervix

ABOUT VASCULAR FEMALE GENITAL TUMORS WITH A REPORT OF A CASE: CERVICAL IN SITU CARCINOMA DURING ARTERIOVENOUS MALFORMATION/HAEMANGIOMA

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Summary

Vascular tumors are rare in female genital tract. Aim: The aim of this study was to describe a case with in situ carcinoma, developing on the cervical arteriovenous malformation /AVMH/ emphasizing the last lesion and to prepare a review of the literature. Material and methods: One case was a clinically diagnosed and histologically confirmed. Routine histological and histochemical methods are used. Histological methods including HE, histochemical stains for collagen and elastin fibers. Results: A 36 years old woman with preoperative diagnosis of the squamous in situ carcinoma is robot-assisted operated. Macroscopically cervix is in gray-reddish color. Histological examination

confirms in situ lesion, but unexpectedly diagnoses arteriovenous malformation/haemangioma, localized in cervix only. Conclusion: Vascular tumors in female genital tract are very rare and may take unusual complications as bleeding. All internale female genital organs may be involved. Histologically, vascular neoplasms are benign usually and malignant very rarely.

Key words: rare tumors, haemangioma, cervix, pathology

INTRACRANIAL POSTOPERATIVE GRANULOMA SIMULATING MENINGIOMA RECURRENCE. A CASE REPORT

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Summary

Introduction: Some of mass intracranial lesions are of inflammatory origin, but not tumors. Aim The aim of this study was to describe a case suspected for meningioma recurrence following 4 years of the first operation and diagnosis. Material and methods: One case was clinically diagnosed and histologically confirmed. Routine histological and histochemical methods are used. Histological metods including HE, PAS reaction and histochemical stains for collagen fibers. Results: A 80 years old man with preoperative CT diagnosis of meningioma recidive is operated and the mass lesion was avacuated. Macroscopically the lesion is in gray-yellowish color. Histological examination shows mixed foreign body and xanthogranuloma. There is no remnants of meningioma after histological evaluation of the whole material. Conclusion:

Tumor simulating mass intracranial lesions are rare and unexpected.

Their origin is inflammatory and traumatic including postoperative conditions.

Their location may be dural, arachnoid and intracerebral. Histologically, thsere are granuloma of foreign body type, xanthogranuloma or specific inflammatory granuloma of infectious and non-infectious origin.

Key words: tumor simulating lesions, brain, pathology

CAPILLAROSCOPIC PARAMETERS IN YOUNG MEN WITH OPTIMAL AND HIGH- NORMAL BLOOD PRESSURE

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Summary

Introduction: Microcirculation is debated to be the focus of the earliest manifestations of cardiovascular disorders. Its investigation may provide an opportunity for early intervention.

Goal: estimation of capillaroscopic parameters and their comparison in young men with normal and high normal arterial blood pressure (ABP). Material and methods: 50 young objects with optimal systolic (up to 120 mmHg) and diastolic (up to 80 mmHg) and high-normal systolic (130-139 mmHg) and diastolic (85-89mmHg) ABPs were followed up. ABP was measured considering the rules using Biopac system. PBP and MBP were calculated too. Capillaroscopy was carried up by multi-location JH 1005 capillaroscope possessing computerized microscopic dm-light TV monitoring and Microcirculation Image Data Analyzing System for microcirculatory status examination. The estimated capillaroscopic parameters were:

arterial and venous diameters, arterial/venous diameters ratio, top and length of the loop, abnormal capillars. Results: SBP, DBP, PBP and MBP in young objects with optimal ABP were as followed: 115.76 ± 3.7 , 72.80 ± 6.24 , 42.96 ± 4.35 , 87.12 ± 3.13 mmHg and while in these with high-normal ABP – 132.84 ± 4.7 , 86.44 ± 2.5 , 46.4 ± 2.2 , 101.9 ± 2.34 . As far as capillaroscopic parameters are considered, arterial/venous diameters ratio is lower ($p < 0.01$) and there is a tendency the percentage of the abnormal capillars to be higher in high-normal ABP group.

Conclusion: Considering high-normal ABP, the events concerning microcirculation are still functional. So there is plenty to be done in the field of prevention for better health.

Key words: high-normal blood pressure, microcirculation, capillaroscopy

DIETARY ADVANCED GLYCATION ENDPRODUCTS AND DIABETES-RELATED COMPLICATIONS

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Summary

The primary cause of diabetes-related complications is hyperglycemia, but the multiple mechanisms of its action are not fully understood. Advanced glycation endproducts (AGEs) – compounds formed when reducing sugars react with aminoacids, could be implicated in development of diabetic complications - cardiovascular, renal, ocular, neurological. AGEs are generated not only endogenously, by poor-controlled hyperglycemia, but also exogenously – in cigarettes and in foods. In this review we center on dietary AGEs and their impact on diabetic complications. Food-derived AGEs are product of high heat cooking in the absence of water.

Dietary AGEs are absorbed in gastrointestinal tract and contribute to the AGEs pool in serum. AGEs act directly or by specific receptors to induce oxidative stress, proinflammatory state,

growth factors synthesis, cross-linking of structural proteins. In diabetic patients, dietary AGEs restriction is reported to decrease inflammatory markers and improve insulin resistance. The beneficial influence of low dietary AGEs is more pronounced in patients with diabetic nephropathy – their high AGEs level is result of inadequate renal clearance. The restriction of AGE-rich diet may be a novel target for prevention of diabetes and diabetes complications. It is recommended to reduce food-derived AGEs in diet of diabetic patients by changes in cooking methods. Drug blockade of gut absorption of dietary AGEs is another option.

Key words: diabetes-related complications, dietary advanced glycation endproducts

ANATOMICAL VARIATIONS AND MICROSCOPIC ANATOMY OF THE THORACIC DUCT

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Summary

The aim of this study is to present the main anatomical variations of the human thoracic duct (TD) and histological characteristics of the wall in different topographoanatomical parts.

Materials and methods: TD was studied and described in 20 cadavers dissected in our department. Samples from abdominal, thoracic and cervical parts of the TD wall were taken and prepared by standard paraffin method. The slides were stained with HE, Azan and Van Gisson and studied under light microscope.

Results: We found some anatomical variations in forming of the cisterna chyli and localization of the lymphovenous junction. The classical cisterna chyli was visible in 11 cadavers. In other cases a plexus-like origin of the TD was present. The TD was drained into the left internal jugular vein in 10 cases, into left subclavian in 4, into the left venous angle in 5, and into the left brachiocephalic vein in 1 case. Histological peculiarities of the three parts of TD were observed. The smooth muscle cells were arranged

irregularly in each region of the TD. The abdominal and thoracic parts of the TD contain prominent muscle layer and probably exhibit active peristalsis, while the cervical part is less muscular and functions like a vein.

Conclusion: Knowledge of the anatomy and morphological characteristics of the TD has practical implications in thoracic surgery, radiology and anatomical dissections.

Key words: thoracic duct, cisterna chyli, thoracic duct wall, lymphatic valves

INVESTIGATION OF SIGNIFICANCE OF SPECIFIC SURFACTANT PROTEINS IN INTERACTION OF SURFACTANT PREPARATIONS AND RHAMNOLIPIDS

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Summary

Aim: To study the influence of bacterial biosurfactants (rhamnolipids) (exotoxins, secreted by pathogenic bacteria in some lung infections of patients with compromised immune system) on exogenous surfactant preparations (ESP) without specific proteins (ALEC) and with specific proteins (Curosurf).

Material and Methods: In the present study were used bacterial biosurfactants, isolated from the culture medium of the strain *Ps. fluorescens* HW-6, that contains rhamnolipid 2 (L-rhamnosyl-beta-hydroxydecanoyl-beta-hydroxydecanoate) and rhamnolipid 1 (L-rhamnosyl-L-rhamnosyl-beta-hydroxydecanoyl-beta-hydroxydecanoate) in the ratio 7:3 and their influence on monolayers formed by exogenous surfactant preparations ALEC and Curosurf. Change of the surface pressure is measured by Langmuir balance and morphology of the monolayer - with Brewster angle microscopy.

Results: In investigation of interactions of rhamnolipids with Curosurf in monolayers was

found poor spreading of the air-water interphase, and significantly higher values of equilibrium surface tension of the rhamnolipids in comparison with those of Curosurf. In dynamic conditions of the compression of the mixed monolayers rhamnolipids presence leads to significant reduction of the area of the hysteresis loop and prevention of the formation of the liquid - the condensed state of monolayers them "liquefy".

Study of rhamnolipids and ALEC monolayers showed that in the presence of rhamnolipids of the minimal surface tension decrease and increase of the area of the hysteresis loops in successive cycles of compression/decompression of the mixed monolayers compared with ALEC monolayers. The effect of the hysteresis area is strongly dependent of rhamnolipids concentration. BAM confirmed the disappearance of the large surface domains formed of Curosurf and presence of many small domains in higher rhamnolipid concentration.

Conclusion: The behavior of ESP, studied under dynamic conditions is different, result of presence of the specific surfactant proteins. The morphology of monolayers of pure ESP and those, mixed with rhamnolipids, leads to dispersion of the surface domains to big number of these with small size.

Key words: exogenous surfactant preparations, rhamnolipids

HISTOLOGIC TUMOR NECROSIS AS A PROGNOSTIC INDICATOR FOR CLEAR CELL RENAL CARCINOMA

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Summary

Clear cell renal cell carcinoma (ccRCC) is the most common renal tumor. Currently tumor stage, size and nuclear grade are widely accepted as important prognostic and predictive factors for RCC.

In this suspect the presence of necroses and their

area are also considered of some significance.

The aim of this study is to evaluate the presence and quantity of necroses in a sample of 43 ccRCC cases, measured by planimetry, divided into two groups: 13 with metastases (lymph node and distant) was established and was accepted as an evidence for more aggressive biological behavior compared to the rest (30) in which metastases were not present of time of surgery.

The results show that metastatic cases have larger necrotic zones compared to cases without metastases. The presence of tumor necrosis was associated with high T stage, larger tumor size and lower differentiation. No significant association between age or sex and the presence of tumor necrosis was observed.

In conclusion we suppose that the presence and quantity of tumor necrosis may be considered as a significant factor of ccRCC outcome.

Key words: clear cell renal cell carcinoma, tumor necrosis

XP11.2 TRANSLOCATION RENAL CELL CARCINOMA: A CASE REPORT AND A REVIEW OF LITERATURE

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Summary

Xp11.2 translocation renal cell carcinomas (RCCs) are recently recognized distinct subtype. They reveal variable histology pattern with papillary areas, eventually with solid or cystic zones. The cells have a somewhat voluminous, clear or slightly eosinophilic cytoplasm. Differential diagnosis includes papillary and conventional (clear cell) renal cell carcinomas. Genetic studies revealed translocations in Xp11.2 chromosome, all of them resulting in fusions involving the TFE3 gene. We report a case of a 26-year old patient, showing a solid image in the right kidney, who underwent radical nephrectomy. Grossly was observed a tumor measuring 4/3,5/4 cm,

located in the middle region of the kidney, well circumscribed. The cut surface was with brownish-yellowish color spotted with necroses. Histologically the tumor consists of oval cells with clear and light eosinophilic cytoplasm, nuclear polymorphism and inconspicuous nucleoli, arranged in mixed papillary and nested architecture. The stroma is hyalinized, with necroses and groups of psammoma bodies. The tumor cells were positive for CD10 and AMACR but negative for epithelial markers such as CK7 and epithelial membrane antigen (EMA). Reporting of this RCC variant as a definite entity seems to be important since data in the literature in regard to biological behavior are rather contradictory. As a conclusion is confirmed that it is a rare renal tumor, with peculiar morphogenetic characteristics. This type of tumor is relatively common in young adult patients and should be included in differential diagnoses in cases of clear cell RCC.

Key words: Xp11.2 translocation renal cell carcinomas

A LARGE MUCOEPIDERMOID CARCINOMA WITH RARE LOCATION

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Summary

The mucoepidermoid carcinoma constitutes the majority of malignant neoplasms found in both major and minor salivary glands. It consists of various proportions of mucous, epidermoid, intermediate, columnar, and clear cells, and is often cystic in pattern. Most of them (84–93%) initiate within the parotid glands. On rare occasions, it may occur within the submandibular glands, the mandible or maxilla. We present here a case of a 47-year-old man with painless growing mass in the region of his right submandibular gland persisting with voice change and swallowing difficulty. Radical neck

dissection provided a large oval material sized 13/11cm with a tumor formation sized 5/7cm, grossly presented with multiple cyst cavities filled with hemorrhagical and purulent infiltrate. The growing edge of the tumor was surrounded by multiple identical whitish satellites; one of them distinguishing in size – approximately 2cm large. Histologically the tumor and the satellites appear with epidermoid, intermediate and mucus excreting cells with atypia and necrotic fields; with lymphoid infiltration and invasion in the surrounding soft tissues, as well as a metastasis in one of the regional lymph nodes.

This case is an example of both rare location and atypical satellite growth pattern. According to the literature, it might be suggested that this type of growth is also associated with poor prognosis.

Key words: mucoepidermoid carcinoma

PLEOMORPHIC ADENOMA – MORPHOLOGICAL PECULIARITIES

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Summary

The pleomorphic adenoma or mixed tumor is the most common salivary gland tumor, representing up to 75% of all salivary gland tumors. Grossly, the tumors are smooth, multilobular, and appear encapsulated. Microscopically tumor microsatellites may be seen extending beyond the apparent capsule. The tumor is varied depending on the cellularity and the myxoid content. The presence of both epithelial and mesenchymal-like elements resulting from epithelial cells and myoepithelial cells produces significant diversity in the appearance of these tumors. Stromal components may have myxoid, fibroid, or chondroid features providing the mixed appearance of these lesions.

The aim of the present study is to examine thoroughly 30 cases of surgically removed pleomorphic adenomas and to analyse morphological peculiarities due to patients' age, gender and size of the tumor. The results show

tendency of morphological diversity depending on the sex and the age of the patient and also of the tumor to develop at a younger age. In 15 of the cases we observe small round foci of well demarcated tumor tissue located near the capsule of the main lesion, that are described in literature as microsatellites. These preliminary results suggest that morphological diversities of pleomorphic adenoma (especially the presence of microsatellites) may represent diversities in biological behaviour.

Key words: pleomorphic adenoma, morphological peculiarities

MORPHOLOGICAL CHANGES IN BRAIN DURING AN EXPERIMENTAL MODEL OF SCHIZOPHRENIA

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Summary

The presence of morphological injuries in the brain in schizophrenia could be the result of abnormalities in the expression of factors that regulate the proliferation and differentiation of neuroectodermal cells, as well as the chronology of these processes, resulting in a reduction of the quantity of neurons and glial cells and functional links between neuronal phenotypes, so such disorders can manifest in a later stage, in the mature nervous system. Structural alterations may correlate with symptom severity in psychotic disorders. In addition, it is known that cortical thickness and cortical surface area, as well, correlate with symptom dimensions of psychosis. Using an experimental model of schizophrenia by prenatal stress of Wistar rats the present study aims to evaluate the evidence for the role of neurotrophic factors (Neuroregulin-1 and its receptor ErbB-4) in the disease by focusing on its immunohistochemical expression in the hippocampal formation. In the present study we found that neurotrophic hippocampal expression is changed in offspring of prenatally stressed rats compared to the control animals. These data suggest that, stress before pregnancy

might have a profound influence on brain development of offspring that may persist into and be manifested in adulthood. Our findings may help to better understanding the etiology of schizophrenia, and eventually to contribute to the development of novel therapies for treating the disorder

Key words: schizophrenia, morphological injuries

EPIDERMOID CYST OF POSTERIOR CRANIAL FOSSA ASSOCIATED WITH CONGENITAL DERMAL SINUS TRACT – A CASE OF 39 YEAR OLD FEMALE PATIENT

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Summary

Aim: Congenital dermal sinus (CDS) with an underlying epidermoid is a rare, benign lesion of embryological origin and may occur anywhere along the neuraxis. The incidence of CDS alone has been estimated to be approximately 1 in every 2500 live births. Epidermoid cysts represent less than 2% of primary intracranial tumors. Clinical case: We are presenting here a case 39 -year old female patient with complaints of headache, vertigo, nausea and vomiting; radiological data suggested intracranial tumor in *fossa posterior*, craniotomy was performed and the biopsy specimen demonstrated the mass lesion to be an epidermoid cysts of intracranial dermal sinus tract. Conclusion: Epidermoid cysts are benign cysts with an ectodermal origin. Differential diagnosis includes arachnoid cyst, dermoid cyst,

and cystic neoplasm. The pathologic findings, origin, radiologic appearance, and differential diagnosis of epidermoid cysts are discussed.

Key words: congenital dermal sinus, epidermoid cyst, intracranial tumor

MORPHOLOGICAL PARAMETERS OF ATHLETES IN SUMY REGION

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Summary

Mainly sports result depends on morphological features of athlete that as one of selective factors determine success of sportsman. (Shaldin V.V. 2010) Purpose of research is to explore features of somatometric indexes of athletes. Objects of research were 39 students (18-21 years-old) of Sumy State University, the sportsmen who took part in the Championship of Ukraine. The first and the second group consisted of Masters of Sport of Volleyball (13) and Archery(10). The third group consisted of 16 students of basic group physical culture from Sumy State University. Anthropometric study was made according to V.V.Bunak schemes (1941).Results of research and their discussion As it follows from the results of research the sportsmen's weight in the first group is larger in comparison with the second group at 4.71% ($p>0.05$), in comparison with the third group at 7.38% ($p>0.05$), and the results of the third group in comparison with the second one show the difference at 0.12% ($p<0.05$).As it follows from the results of research the sportsmen's body length in the first group is larger in comparison with the second group at 5.66% ($p>0.05$), in comparison with the third group at 7.19%($p>0.05$), and the results of the third group in comparison with the second one show the difference at 0.37%($p<0.05$).On the average face width, head height, physiological face, chest length, brush length, brush width, pelvis width, shoulder girth in a stressed state, shin girth, shoulder width in the first group in comparison with the second group is larger at 1.99 ($p<0.05$), in comparison with the third group at 0,02

($p < 0.05$), and the results of the third group in comparison with the second one show the difference at 1.52 ($p < 0.05$). Conclusions: Many years of trainings and sport specialization as well as sports selection specify certain requirements for a sportsmen body build. Therefore anthropometric indexes in the first group are much larger than in the second and third group.

Key words: morphological parameters, athletes

CONGENITAL CYSTIC ADENOMATOID MALFORMATION OF THE LUNG – A CASE OF 21 YEAR OLD MALE PATIENT

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Summary

Aim: Congenital cystic adenomatoid malformation (CCAM) is a rare abnormality of lung development. It was classified into 5 types by Stocker in 2002 and is also known under the name congenital pulmonary airway malformation (CPAM). Cases are typically identified prenatally by routine ultrasonography screening. CCAM may present in the older child and adult as an incidental finding. **Clinical case:** Presented is a case of a 21 year old male patient who suffered from pulmonary infections with a recurrent productive cough 3-4 times the last 4 years. CT scannig of the thorax showed multiple cystic lesions in the middle and lower lobes. The areas with the lesions were resected – the macroscopic and histologic findings were typical for Congenital cystic adenomatoid malformation type 2, which is the final diagnose. **Conclusions:** Clinical presentations and prognosis are dependant on the type of lesion and its resulting sequelae. The diagnosis is confirmed histologically.

Key words: congenital cystic adenomatoid malformation, types, newborn period

PREDISPOSITION TO THROMBOPHILIA AND HYPOFIBRINOLYSIS IN PULMONARY EMBOLISM: ANALYSIS OF INHERITED FACTORS

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Summary

Pulmonary embolism is a blockage of one or several pulmonary arteries. Most often, the obstruction due to blood clots, which are moved from the veins in the lower extremities. Accurate diagnosis is critical because of the high 30-day mortality in patients in whom the diagnosis is missed on admission. The guidelines proposes the methodology and approaches for the best diagnostic procedures. Doubt for PE is often raised by the presence of risk factors for VTE, which are categorized into inherited and acquired, among these the importance of inherited/genetic thrombophilic factors is increasingly recognized.

The most frequent markers of the inherited thrombophilia are Factor V Leiden (FVL) and G20210A prothrombin gene mutation. Among the inherited factors causal to thrombophilia the C677T variant in methylentetrahydrofolate reductase (MTHFR) gene and factors like P1A1/P1A2 polymorphism in platelet glycoprotein IIb/IIIa (P1A2) and hypofibrinolytic polymorphism 4G/4G in PAI-1 gene are discussed with the controversial results.

In our study thrombophilic & hypofibrinolytic genetic variants were identified in 54.2% of 115 patients with PE. The most common significant genetic defects were FVL - 16.5% versus 6.2% in controls (OR =3.102, p=0.05), G20210A PT 5.7% versus 2.1% (R =2.9 83 , p>0.05) and PIA2 was found in 27.3% patients versus 19.9% (OR =1.523, p>0.05) and PAI-1 27.8% % versus 22.6% (OR = 1.501 p>0.05). MTHFR C677T carriage was inverse: 6.7% versus 13.4%. (OR =0,461 p=0.05) 15.65% of total patients had a history of recurrent embolic incidents. The risk of recurrence was higher for the carriers of FVL and G20210A prothrombin gene mutation.

Key words: thrombophilia, hypofibrinolysis, FVL, PTA G20210A, MTHFR C677T, PIA2 GLPR IIb/IIIa, PAI -1 4G/4G, pulmonary embolism

SERUM CONCENTRATIONS OF MATRIX METALLOPROTEINASES-2 AND - 9 (MMP-2 AND MMP-9) IN PATIENTS WITH ARTERIAL HYPERTENSION WITH AND WITHOUT TYPE 2 DIABETES MELLITUS

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Summary

Introduction: Matrix metalloproteinases (MMPs) are a family of zinc-dependent endopeptidases which participate in the remodeling of extracellular matrix. Experimental research has

shown that MMP-2 and MMP-9 may be related to increased synthesis of collagen and vascular changes in patients with arterial hypertension. MMPs are also increased in diabetes, but their effects at type 2 diabetes mellitus (T2DM) not been fully explored. Aim: The purpose of the study was to compare serum concentrations of MMP-2 and MMP-9 in patients with arterial hypertension with and without T2DM, with those of a control group of healthy individuals. Methods: Patients were divided into three groups: G1- 60 patients with arterial hypertension without diabetes (SBP=155.4±4.8; DBP=87.15±2.6 mmHg); G2- 50 patients with arterial hypertension and T2DM (SBP=146.83±11.9; DBP=82.55±9.7 mmHg); G3- 20 normotensive individuals without diabetes and without cardiovascular disease, control group (SBP=124.0±3.7; DBP=82.2±4.1 mmHg). MMP-2 and MMP-9 was determined by ELISA kit of the "R&D Systems". The analysis used the statistical program STATGRAPHICS. Results: It was found presence of statistical significant differences of MMP-2 between G1 compared to G3 (p=0.0033) and of G2 compared to G3 (p=0.0187). There are also statistically significant differences of MMP-9 between G1 compared to G3 (p <0.0001), of G2 compared to G3 (p=0.0013) and of G1 compared to G2 (p <0.0001). Conclusion: In patients with arterial hypertension with and without T2DM, serum concentrations of MMP-2 were increased significantly compared to those of the control group. The serum concentrations of MMP-9 in patients with arterial hypertension without diabetes were decreased double in comparison with the control group, whereas those with arterial hypertension and T2DM were increased almost double in comparison with the control group.

Key words: matrix metalloproteinases, type 2 diabetes mellitus, arterial hypertension

BIOCOMPATIBILITY OF CR-CO COATINGS PROSPECTIVE FOR MEDICAL APPLICATION

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Summary

The objective of this research is to develop such technology for electro-chemical deposition of cobalt alloys which will help avoid the difficult mechanical processing that follow the metallurgical casting, applied in dental practices. In this new technology a non-standard electrolyte for chromium coating type 'Chromispel' finds its application. It is indicative that it works at room temperature and has current usability several times higher than that of classical sulphate electrolytes. Experimental methods: On metal plates of made of steel by electro-chemical method, with direct current are deposited Cr-Co coatings at different regimes of electrolysis – time, density of current and content of $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$ in electrolyte. Their biocompatibility was tested with cell lines McCoy-Plovdiv and PDL. Results: From the carried out experiments and analysis of the results the following current conclusions can be made. The tested samples show very good or good biocompatibility of about 90% in regards with cell lines McCoy-Plovdiv and PDL in in-vitro conditions. With some of them were found better values in regard with the serumless cells McCoy-Plovdiv. This fact is due to the different technological parameters of deposition and the closely related with them functional properties of the coatings. It was found that in relation with their biocompatibility Cr-Co coatings are comparable to the medical steels used in practice.

Key words: Cr-Co alloy, biocompatibility, cell cultures, McCoy - Plovdiv

SURGERY AND ORTHOPEDICS

ORAL PRESENTATION

**UNUSUAL METHOD FOR
TREATMENT OF POSTOPERATIVE
AND UMBILICAL HERNIAS**

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Summary

It is known that most midline laparotomies end up with a ventral hernias due to disturbed innervation and blood supply and suppuration of the surgical wound. Patients with umbilical and incisional hernias are threatened by incarceration along with cosmetic defect and disturbances in the functions of the abdominal wall. The aim of this study is to share our experience in treatment of this type of hernias in 65 patients (39 (60%)-females; 25 (38.5%)) males) operated between 2008 and 2013. Hernias were located as follows: postoperative - 40, umbilical – 15, hernias of white line-5; 1 Spigel hernia and 1 parastomal hernia. The essential steps of our method are:

- 1) Economical midline incision of the hernia.
- 2) Significantly reduced wound surface and bleeding.
- 3) The polypropylene mesh is secured to the abdominal wall with single threads using a long straight needle.
- 4) Drainages on the mesh are not applied.

We share our experience with diagnosis, preoperative preparation and types of simultaneous operations taken. The operation technique is illustrated with a number of slides. The advantages of the method are discussed, there were no deaths and reoperations and minor number of suppurations. The follow up is very short (5 years), but we have no case of recurrence so far.

We consider this method of operation as easy to perform, radical and with minor postoperative

complications.

Key words: umbilical hernias, postoperative hernias

SURGICAL TREATMENT OF THYROID DISEASES - CONTEMPORARY PROBLEMS

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Summary

Aim and objectives: This study aims to perform a retrospective analysis of the patients with thyroid diseases operated in the Observed pathology of thyroid; organization of diagnostic and treatment process and results from the surgical intervention, including complications were analyzed:

Material and Methods: 381 patients with thyroid disease were operated between 2004-05.2014. A retrospective analysis of the demographic characteristics of patients, histology, surgical techniques and complications was performed. **Results:** 33 males (8.67%) of average age 53.4 years and 348 females (91.33%) of average age 49.75 years were operated; 3 men and 4 women were hospitalized again and reoperated after a certain period. A distribution of diagnoses at hospital discharge is provided. The largest number of patients is with diffuse or multinodular goiter - 185, followed by patients with thyroid adenoma - 76, patients with thyroid cancer - 38 and those with Graves' disease - 23. The average hospital stay was 4.7 days and in the last three years it has decreases to 4 days. Operations were analyzed by type according to diagnosis, coincidence of preoperative with histological diagnosis and complications. Recurrences were difficult to verify, and early complications were serious neck hematoma, requiring urgent reoperation, two suppurations of surgical wound. One case of postoperative hypo function of parathyroid gland was treated medically and histological result revealed an intra-thyroid localization of parathyroid tissue. In conclusion,

the authors seek consensus among internists and surgeons about the methods of diagnosis and time suitable for surgical treatment in all diseases of the thyroid gland. A position is taken about the question where and by whom those patients have to be operated and what is the role of the express and permanent biopsy.

Key words: thyroid diseases, surgical intervention

FACTORS INFLUENCING THE ACCURACY OF PREDICTION OF POSTOPERATIVE VALUES OF FEV₁ AND D_{L,CO} IN PATIENTS WITH LUNG CANCER

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Summary

Aim: To determine the factors that influence the accuracy of prediction of postoperative alues of FEV₁ and D_{L,CO} in patients with lung cancer. **Patients and methods:** Forty one patients with non small cell lung cancer aged 62.8±7.5 years, 38.6±10.5 pack/years (mean±SD) referred for anatomical lung resection were studied. The patients were grouped with respect to their disease status and smoking history. They underwent comprehensive spirometry and diffusion measurements (MasterScreen Diffusion, E. Jaeger, Germany) and vibration response imaging (VRIxp, DeepBreeze, Or-Akiva, Israel) before and approx. 30 days after the resection. The calculation of the ppo values was carried out with proprietary software - O-Plan. **Results:** Thirty one lobectomies and 10 pneumonectomies were performed in the studied population (29 males/12 females). In the COPD group postoperative value of FEV₁ was predicted with greater accuracy (r=0.878; p<0.05) while the prediction of postoperative DL_{CO} was similar in both groups (r=0.908; p<0.05 in COPD

group and $r=0.935$; $p<0.05$ in non-COPD). In smokers ppo values were lower than actually measured FEV1 (58.9 ± 13.6 vs. 66.5 ± 10.9 ; $p<0.05$) and $D_{L,CO}$ (53.4 ± 17.7 vs. 59.7 ± 15.5 ; $p<0.05$) with a mean difference of $7.6\pm 2.7\%$ and $6.3\pm 2.2\%$, respectively. In non-smokers there was no significant difference between the ppo and actual values of both indices with a mean difference of $1.9\pm 0.9\%$ and $1.6\pm 1.2\%$, respectively. Conclusion: In patients with concomitant COPD the calculation of ppoFEV1 seems to be more accurate compared to non-COPD group. In current smokers VRI tends to underestimate the values of both FEV1 and $D_{L,CO}$ compared with non-smokers.

Key words: vibration response imaging, predicted postoperative values

LATE PROSTHESIS GRAFT INFECTION AFTER AORTO-ILIAC SEGMENT RECONSTRUCTIONS – CHOICE OF SURGICAL TREATMENT METHODS

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Summary

Introduction: The prosthesis graft infection is a fatal vascular complication. The high severity of the problem is defined by the high mortality and the significant percentage of limb loss, despite the low incidence of the complication. Aim: Our aim is to present our experience in the treatment of patients with intracavitary graft infections for a 12 years period. Materials and Methods: A retrospective analysis was performed on 15 patients with 19 episodes of late graft infection in aorto-iliac segment. The diagnosis was established through: clinical examination, lab tests, microbiology tests, ultrasonography, CT – in all patients, and scintigraphy, fistulography and fibrogastroscopy in a portion of them. The following surgical procedures were performed: explantation of the prosthesis without

revascularization, explantation of the prosthesis with revascularization using silver graft in part of the patients, or deep femoral vein (DFV) in the others. Results: From the 14 patients who underwent surgery – good results, eradication of the infection and successful revascularization was achieved in 50%. The overall mortality rate was 50%, and the procedure associated mortality was 14.28%. The mortality directly associated with the prosthesis infection and following sepsis was 35.71%. Conclusion: The best option in chronic prosthetic graft infection is explantation with revascularization using the DFV. In localized infection involving the distal anastomosis, good results can be achieved using silver graft prosthesis. In septic environment the method of choice is explantation of the prosthesis and its replacement with silver graft
Key words: prosthetic graft infection, aorto-iliac segment

LATE THROMBOSIS AFTER AORTO-ILIAC SEGMENT RECONSTRUCTIONS – POSSIBILITIES FOR ASSISTED PATENCY IN PROXIMAL LESIONS

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Summary

Thrombosis after aorto-iliac segment reconstructions are the most common cause of compromised reconstruction. Proximal anastomotic lesions leading to thrombosis, are difficult diagnostic and therapeutic problem, although their uniform nature. Aim. To analyze the capabilities of conventional operational methods and endovascular techniques in the treatment of this complication.

Materials and methods. Twenty patients with late thrombosis, who underwent 22 surgical procedures in the Department of Vascular Surgery at the University Hospital - Pleven for the period 2001 - 2013. We used the following surgical techniques: direct thrombectomy from

the corpus of the prosthesis, and the abdominal aorta (4); prosthesis resection and reanastomosis (2); thrombendarterectomy a modo Vollmar (3); dilatation and stenting of the proximal anastomosis (5); conversion of the reconstruction (8). Results. The average period of complications manifestation was 38.9 months after primary surgery. The incidence of complications expression was 18.03%, compared to the total number of late thrombosis. The relatively high incidence of proximal lesions as a cause of prosthesis thrombosis, and the good surgical treatment results, appear to require the use of all diagnostic opportunities for manifestation of complications. The variety in the operative techniques, gives the surgical team different possibilities for dealing with the complication. Conclusion. In unilateral lesions endovascular procedures are the method of choice because of the very good postoperative results and lower trauma. In lesions after bilateral reconstructions, the direct surgical reconstruction of the proximal anastomosis is the method of choice in young and low risk patients.

Key words: aorto-iliac segment, proximal anastomotic lesions, reoperations.

INITIAL EXPERIENCE AND IMPLEMENTATION OF THE ROBOTIC SURGERY IN BULGARIA FOR TREATMENT OF PATIENTS WITH RECTAL CANCER

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Summary

Introduction: The laparoscopic surgery is a standard procedure for treatment colon cancer.

Because of the different anatomy, treatment approach, and unsatisfying results after laparoscopic surgery, this technique is not a standard for treatment rectal cancer. In the last decade the robotic surgery widely entered in the practice with better technical possibilities. Aim: To present our initial experience and results of the first in Bulgaria robotic-assisted anterior rectal resections(RAARR) to rectal cancer patients. Materials and methods: In the period for 09.04.2014 - 29.05.2014. in the Department of Surgical Oncology and the Department of Coloproctology and Suppurative-Septic Surgery in University Hospital Pleven were performed 5 RAARR for rectal cancer patients by Da Vinci S system. The mid patient's age is 67,6 years. Three patients are females and two- males. Three patients were with tumor localization on the upper third of rectum, one with mid rectal cancer and one patient with low rectal cancer, 6th cm from dentate line. One patient has performed neoadjuvant radiotherapy.

Results: Mid operative time was 345 min. Mid docking time was 100 min. The patients were discharged on 4,8th postoperative day. No early postoperative complications registered. Abdominal drainages in 2 patients. The resection margins are negative in all cases. The average number of found lymph nodes is 9,6. Discussion: To the analysis of the first 5 RAARR and comparing the results with other authors we have similar parameters and we report for encouraging results. We confirm for steep learning curve which is lower from the laparoscopic surgery.

Key words: rectal cancer, Robotic surgery

SUBXIPHOID VIDEOPERICARDIOSCOPIA IN NONTRAUMATIC HYDROPERICARDIUM

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Summary

Introduction: Nontraumatic pericardial effusion may be a clinical manifestation of various diseases. Often the cause of cardiac tamponade and require urgent treatment and accurate diagnosis. Various techniques have been proposed drainage and evacuation. Each has advantages and disadvantages.

Objective: We report our clinical experience in the treatment and diagnosis of nontraumatic pericardial effusions by subxyphoid pericardiotomy combined with rigid videoscope of the pericardial cavity. Method: Retrospective review of all cases of non-traumatic pericardial effusion treated for a period of 5 years. An evaluation of operational access, type of anesthesia, the treatment and diagnostic success, morbidity and mortality during hospitalization. When all is done biochemical and cytological examination of the pericardial fluid and histology of the pericardium. Results: For the period 2009-2013 years for nontraumatic pericardial effusion were treated 30 patients. Of these, 16 held videopericardioscopi and they are subject to evaluation. Gender men are 6 and 10 are women. Age range is from 45 to 85 years, the average age was 59 years. Morphologically verified carcinomatous pericarditis detected in 5 (31%) patients. Mortality during hospital stay was 1 patient. Conclusions: Nontraumatic pericardial effusions of various etiologies can be safe, effective and quick to master with subxyphoid pericardiotomy. Videopericardioscopi contributes to adequately assess the status of local and accurate diagnosis. The incidence of recurrence is low.

Key words: pericardial effusion, pericardioscopy, subxyphoid pericardiotomy

PALLIATIVE HIFU TREATMENT AS A PART OF THE MULTIDISCIPLINARY APPROACH IN ADVANCED PANCREATIC CANCER PATIENTS

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Summary

Aim: Our aim was to evaluate the palliative efficacy of HIFU treatment as a part of the multidisciplinary approach in advanced PC patients. Material and Methods: Twenty-one patients (13 men, 8 women; mean age – 59 years) with PC underwent HIFU ablation from Jan.2013 – June 2014 in St. Marina Hospital - Pleven, Bulgaria. Locally advanced cases (LA) were 8, Metastatic cases (MC) – 13. Most common locations were in the head of pancreas - 9 cases, body – 6, tail – 3. One was a secondary metastatic lesion in a pulmonary cancer case. The instruments EORTC QLQ-C30 and QLQ-PAN26 were used to evaluate QL in the patients - before HIFU ablation, one, three and six months later. Data about CT results, L-amylasis and CA 19-9 levels, BMI, pain score, etc. was gathered. Survival was registered. Results: The physical condition and emotional status showed minimal changes. The global health status (GHS) increased in the first month in LAC from 50p before ablation to 67p after and in MC - from 25p to 47p after ablation. Results remained stable in the third and sixth month. Pancreatic pain was reduced in MC from 7 to 3 and in LAC from 4 to 2 from the visual analog scale. It remained improved in MC in the third and sixth month. The bowel habits worsened in MC: from 30p before to 42p and 48p one and three months after treatment. Digestive symptoms showed little to no change in both groups. Survival after ablation is 10.8 months in LA and 5.2 months in MC. In one of the locally advanced case 100% ablation was proven by PET-CT.

Conclusion: Our research approves of the HIFU treatment as a safe and feasible new technique for palliative treatment of advanced PC patients. The palliative results for the effects of HIFU on the QL are promising.

Key words: advanced pancreatic cancer, HIFU, multidisciplinary approach

EXAMINING THE TOPOGRAPHICAL CHARACTERISTICS OF BREASTS AND TUMOR IN DIFFERENT BODY POSITIONS

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Summary

Oncoplastic approach is the best one in treating patients with early breast cancer. Breast's topographical anatomy and tumor's location are different when changing body's positions. If we do not note this the aesthetic results may be unsatisfactory. The research's aim is to study the anatomical circumstances that lead to changes in the location of tumor and nipple-areola complex (NAC) in different body's positions. Materials and methods: 120 women have participated in the research. 70 parameters have been taken in different positions of the body and arms. The body's positions are: "standing", "half-lying (45°)", "lying on the back", "lying on the front". The arms' positions are: "hanging by the body", "on the hips", "lifted in 60°", "lifted in 90°" and "behind the head". For determining the breast cancer's topography and its changing in different body's positions we have measured the distances between the tumor and some anatomical points of the breast and body.

Results: The research has clearly shown that the shape and topography of the breast, NAC and tumor change together with the position of the body and the arms. When changing the arms' position from "hanging by the body" to "on the hips", "lifted in 60°", "lifted in 90°" and "behind the head" the position of the tumor and NAC changes logically. The change is meaningless (less than 5mm) by changing the arms' position from "hanging by the body" to "lifted in 60°" and to "on the hips". The change is meaningful (reaching 2cm) by changing the arms' position from "hanging by the body" to "lifted in 90°" and to "behind the head". The change of the tumor and NAC in "standing" and "lying" positions is important for the oncoplastic preoperative planning. Conclusion: The breast's shape and the

location of the NAC and tumor change together with the different body's positions. The surgeons should be aware of this in the oncoplastic preoperative planning.

Key words: breast, oncoplastic approach

GENETIC SCREENING FOR BRCA1/2 POINT MUTATIONS AND LARGE GENOMIC REARRANGEMENTS IN BULGARIAN WOMEN WITH BREAST CANCER

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Summary

Introduction: Germline mutations in BRCA1 and BRCA2 genes are responsible for the majority of hereditary breast cancer (BC). There are more than 3000 distinct mutations in both genes with population-dependent variations. The most reported disease causing genetic alterations are point mutations (including small deletions and insertions) detected by direct sequencing. The rate of mutation detection could be increased by the identification of large genomic rearrangements (LGR) with Multiplex ligation-dependent probe amplification (MLPA) method.

The aim of our study was to screen women with BC for mutations in BRCA1 and BRCA2 genes and to compare the prevalence of point mutations with that of large genomic rearrangements.

Material and methods: 86 women with BC were tested for five deleterious point mutations in BRCA1/2 and 65 of them - for LGR. The age at diagnosis was between 23 to 75 years.

Results and conclusions: We identified two carriers of point mutation (2.3%). In our study

we did not find any LGR, although these defects are significant fraction of all reported mutations in BRCA1 and BRCA2 in Northern Italian and Greek populations (genetically closed to our population). Based on these results we considered that MLPA may be not suitable tool for genetic screening in Bulgaria. The basic knowledge on the prevalence and type of genetic alterations could improve the detection rate and the efficiency of genetic screening for BC.

Key words: BRCA1, BRCA2, breast cancer

COMPARATIVE EVALUATIONS ON THE RESULTS FROM SURGICAL TREATMENT OF SCAPHOID BONE FRACTURES

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Summary

The purpose of this report is to make a comparative evaluation on the results from surgical treatment of scaphoid bone fracture. The factors leading to pseudoarthrosis of the scaphoid bone are: delayed or short immobilization period, untreated fractures, small proximal fragment and not repositioned primary dislocation. The assumption that the loss blood supply is the main reason for false joints had been rejected. Our materials cover a number of 117 patients with pseudoarthrosis on os scaphoideum who have been operated at the Department of Orthopedics and Traumatology at the Medical University of Pleven for the period between 1998 and 2013 (97 of the patients were male and 20 were female). The average age was 30y.o. Osteoplastics according to Matti-Russei has been carried out in 107 of them and AO screw and bone chips in the false joint zone were used for 10 patients.

The results were analyzed on the bases of the Meine, buck-Gramksa-Nigst table. During our 15 years study the following results were

obtained: for 97 of the patients (83%) – good, 19 patients (16%) – satisfactory and 1 person (1%) – bad.

Conclusion:

1. After applying the operative technique of Matti – Russei the highest rate of good results is obtained.
2. After applying the operative technique of Matti – Russei and after compressive osteosynthesis with AO screws or Herbert's screw in combination with autoplastics, if they are done comparatively, before any degenerative changes occurred, very good anatomic and functional result could be expected.

Key words: surgical treatment, scaphoid bone, fracture

IMPLANTATION OF RADIAL HEAD ENDOPROTHESIS IN FRESH AND OLD FRACTURES

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Summary

Radial head endoprosthesis are used in cases of breaking or diseases of the elbow joint. Their development started in 1941 when Speed reported about an endoprosthesis made by him from vitalium. In 1951 Greysel designed an endoprosthesis made of nylon. In 1953 – Cherry – endoprosthesis made of acrylite. In 1968 A. Swanson advanced a radial head endoprosthesis made of silicon – 370. In 1979 – I. Movshovich – endoprosthesis made of rubber grade (polyamide 12). In 1987 – D. Vassilev and E. Baltov advanced a qualitatively new endoprosthesis made of hyrolene. Kaplan's operative access is used. The radial head osteotomy is performed by oscillating cutter. The endoprosthesis is implanted by means of a spoon and a ram. The limb is immobilized for 25 days then active rehabilitation of the elbow

joint is started. Ninety-eight endoprothesis, made of hyrolene, were implanted at the Department of Orthopedics and Traumatology at the Medical University – Pleven. Men – 65 and women – 33. The mean age was 43.2 years old. The T. Wadsworth's classification for implantation of radial head endoprothesis was used along with the extended indications of I. Movshovich. In 75.5% the results were good, in 24.5% - satisfactory and in 6% the results were bad. Conclusion: The use of hyrolene endoprothesis implantation of radial head is recommended for treatment of bad traumas and diseases of the radial head and the elbow joint. This method allows recovery of the radial bone anatomic length. Thus a number of complications of the elbow and the distal radioulnar joint are avoided. The design of the endoprothesis ensures stability of the elbow joint giing good functional results.

Key words: endoprothesis, elbow joint, hyrolene

OSTEOCHONDRAL MOSAICPLASTY FOR THE TREATMENT OF FOCAL CHONDRAL AND OSTEOCHONDRAL LESIONS OF THE KNEE AND TALUS: INDICATIONS, TECHNIQUES AND RESULTS

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Summary

Introduction: The therapeutic approach to patients with symptomatic III - IV degree /ICRS/ chondral and osteochondral defects of the weight-bearing joints is still under discussion and experimental studies. The purpose of this communication is to discuss the indications for surgery, surgical techniques used and results obtained. Material and Methods: Between 2002 - 2012 in MU- Pleven "Mosaicplasty" conducted on 36 subjects /5 women and 31 men/ middle age 32 /23 to 47/ years and microfracture in 60 patients. Surgery "Mosaicplasty" is performed as

follows: medial femoral condyle - 27 cases, lateral femoral condyle - 1 case, tibial plateau - 1 case, thallus - 6 cases, patella - 1 case. The size of the osteochondral defect in 2-4 sq.cm and a depth of less than 10 mm. Term follow-up be 4 / 2-6 /years. In the evaluation of the results were used clinical tests /Lyscholm knee score/, Bandi score, MRI, diagnostic arthroscopy, histological examination of the recipient and the donor area. Results: Using the above methods of assessment and after 4 years follow-up, very good and excellent results were obtained in 87.5% of patients, good in 7% and satisfactory to 5.5% operated on a "mosaicplasty." Results after MF 35% very good, 45% good and 20% satisfactory at the same follow-up period. Conclusion: Based on the results and experience of larger studies, it can be assumed that osteochondral transplantation /Mosaicplasty/ is an effective method to restore focal hondral and osteochondral defects in the weight-bearing joints, especially of working age and athletes.

Key words: osteochondral transplantation, chondral and osteochondral lesions, knee

POSTERS

MIDDLE AND FAR RESULTS HOLEDODUODENOANASTOMOSIS. INDICATIONS AND CONTRAINDICATIONS

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Summary

Proposed T. Roth, and performed for the first time in O. Sprengel /1891/ holedochoduo-denoanastomosis /HDA/ was finally approved after the post F. Sasse /1913/. From a purely anatomical point of view all the HDA circumvent obstructive problems retroduodenalis, transpankreatic and intramural segments of hepatoholedoh and comes estuary of spontaneous

passage of any newly formed or residual gallstones. Key indications of HDA are: multiple concretions in extrahepatic bile ducts, ampulla stenosis, cholangitis, chronic pancreatitis, cystic and extended choledoch other. Important to be noted that in the majority of patients there is more than one indication.

Main disadvantages of the method are remote view results on the development of cholangitis, cholangiohepatites, forming a "blind sac" stenosis of the anastomosis, unreleased patency of the papilla, ie most often the result of technical errors. HDA is a safe, easy to implement and efficient surgical procedure with less /unit / post-operative complications, including tracked over an extended period of time.

Key words: choledochoduodenostomy; indications; contraindications

IMPROVING THE QUALITY OF LIFE IN A DAY SURGERY AT CHOLECYSTECTOMY, BY THE UPPER MIDLINE MINILAPAROTOMY

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Summary

Gallstone disease in Bulgaria affects between 4 and 8% of the population. Year in the country are approximately 5 to 6 thousand cholecystectomy. Cholecystectomy is - safest, most - effective, widely recommended and implemented a method for treating cholelithiasis. For this purpose, the three main methods: standard open cholecystectomy, laparoscopic cholecystectomy and cholecystectomy by minilaparotomiya. Relatively new to the world of visceral surgery and less popular in Bulgaria is a cholecystectomy through minilaparotomy. This innovative method is introduced in the school of Plovdiv surgeons by Dr. Momtchil Batselov 1991. The minilaparotomic cholecystectomy (MC) is the epitome of modern principles of minimal

invasive surgery. The methodology is attractive with its broad applicability and simplicity in terms of expensive equipment, available at appropriate technical skill, minimal postoperative stay, early hospital discharge and rapid recovery efficiency of the patient. Cholecystectomy by minilaparotomy was first described more than three decades by F. Dubois and B. Bortholet. In 1982, they reported good results from the application of the method in 1800 patients suffered the minilaparotomic cholecystectomy in the period 1973-1982 without any complications. The team authors use median minilaparotomy 5 cm from the xiphoid process, with a length of 3 to 4 cm, which is considered the most - less traumatic than other minilaparotomii used for cholecystectomy. Our chosen access ensures accessibility for dissection around infundibulum and previewing a.cystica, d.cysticus ekstahepatalnite and bile ducts. Retrograde cholecystectomy is performed. A retrospective study in the Department of Special Surgery Medical Plovdiv, from January 2008 to December 2013. This study included 90 patients with cholelithiasis: 76 women and 14 men. The average age was in 43 (18-77 years). All patients with chronic calculous cholecystitis. Compare this procedure with laparoscopic cholecystectomy performed in 76 patients, of which 62 women and 14 men. Their average age was in 48 (20-76 years). The comparison made on the basis of experience makes us the following conclusions:

1. Operational technique is conventional and accessible in relevant technical skill.
2. Possibility for easy manipulation on ekstahepatalnite bile duct and if necessary perform cholangiography and easy extirpation of cholelithiasis.
3. Early hospital discharge and no serious postoperative complications.
4. Meet modern principles of minimal invasive surgery and is applicable in terms of day surgery .
5. Commensurate with the laparoscopic method as miniinvasive method with better postoperative results.
6. Methodology does not require expensive tools and supplies.
7. Improves the quality of life of patients.

Key words: calculous cholecystitis, cholecystectomy, minilaparotomy quality of life

OUR EXPERIENCE IN SURGICAL TREATMENT OF HERNIA AMAYAND

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Summary

Hernia requiring emergency surgery are as trapped and hernia Amyand, in which hernialniya bag has fallen and appendix. The purpose of this study was to determine the number of these hernias over a 5 year period and to share our experience in the operative treatment. And to derive an algorithm for their treatment.

The study covered only 16 patients because of the rarity of this disease. In their treatment are mainly used methods of hernia repair and Shouldice-Kukudzhanov Bassini. Uncertainties in this type of hernia are: indications for appendectomy in the presence or not of chronic changes in the appendix, the accessibility criteria for appendectomy in existing hernia, and to expand or use other additional incision is not a common tactic in terms of making plastics in severe inflammatory changes in the appendix and surrounding structures. We operate 16 hernia Amyand, which are 6.81% of our sample complicated inguinal hernia and 2.76% of all hernias. These are the 15 men with an average age in '67 and 1 woman 71years old.

Preoperatively 14 patients had a history of hernia, with limitation of 10 meters to 12 years. When one of them is marked change in complaints after suffering flu - pain in the hernia and another is for hernia surgery more than 30 years and has a relapse. From his experience in the field of emergency herniotomii offer after our klasivikatsiya for hernia Amyand:

Type I hernialen bag containing healthy and Levitating appendix

Type II hernialen bag containing appendix with adhesions and sterkoliti in the lumen and dragging

TipIII hernialen bag containing altered

inflammatory appendix.

Type IV acute inflammatory changes of the bag and surrounding tissues of advanced inflammation of the appendix. The paper brought out four outlets, which we hope to aid colleagues in the face of this disease and to improve operational methods that will lead to long-term outcome of patients.

Key words: emergency surgery; hernia; algorithm.

CHRONIC PAIN AFTER INGUNAL HERNIA REPAIR

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Summary

The purpose of this article is to present trends in prevention of chronic postoperative pain after hernia repair. The hernia repair is one of the most frequently used operations in the world and represents nearly 25% of all general surgery operations. Chronic post-surgical pain is common and serious complication following surgical treatment. Regardless of the type of surgery and the type of anesthesia chronic post-surgical pain was observed in 5-45%. The high rate determines the relevance and importance of the problem. Chronic postoperative pain is associated with increased and prolonged intake of analgesics, restriction of daily activity, reduced quality of life and frequent doctor visits. The choice of an operating method for the treatment of inguinal hernias is important for the prevention of chronic pain. Economically, especially in a crisis, an early comprehensive approach to treatment - medical and physical for optimal therapeutic results. It is necessary to develop an effective strategy to deal with the burden of suffering, as well as develop a consensus on the issue. The multidisciplinary nature of the problem of chronic postoperative pain in hernia requires a team approach to treatment - a collaboration between surgeons, physiothera-

pists, physical therapists and other specialists.

Key words: hernia repair, chronic postoperative pain, quality of life, prevention

DAY SURGERY IN THE TREATMENT OF HERNIA ANTERIOR ABDOMINAL WALL

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Summary

Introduction: Hernia of the anterior abdominal wall are a often and current surgical pathology. Each year in the U.S. There are approximately 200 000 operations on the occasion of postoperative hernia. In 2008 in Europe are operated 230,000 and postoperative and ventral hernias (UK 25,000, Netherlands 4000). Over 20,000 operations for hernia anterior abdominal wall are performed annually in Bulgaria. Objectives of modern hernia surgery A. In purely surgical aspect they are summarized by Lichtenstein (1986) in formulating his concept "tension free" - free of plastic strain B. In the organizational aspect in recital includes concepts day surgery (one day surgery) and surgery with short stay stationary (short stay in surgery). **Material and methods:** Retrospectively studied the treatment of 975 patients with 841 inguinal hernias and ventral 134 operating in the University Hospital "St. George" surgical ward day and minimal invasive surgery from January 2008 to December 2011. **Results:** Total Department of-day and minimal invasive surgery were operated on 975 patients with hernias. The age of the patients was 51 (7-84) years. Men and women were 843 and 132. Ventral hernias total 134 distributed as follows: 91 postoperative, 23 umbilical, epigastric 16 4 Shpigel hernias. **Conclusion:** Surgical treatment of abdominal hernia in a day surgery with adequate selection of patients with excellent results in significant patient satisfaction and significant cost savings.

Key words: day syrgery, hernia, miniinvasive

KINEZIOTEYPING - NEW MODERN APPROACH IN REHABILITATION PROGRAMS IN LAPAROSCOPIC CHOLECYSTECTOMY PATIENT EXPERIENCES AND IMPROVING THE QUALITY OF LIFE

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Summary

Rehabilitation in patients after laparoscopic cholecystectomy (LCh or EMIS) is obstructed by postoperative pain. This is one of the main reasons for the slow recovery period, which significantly affects the efficiency and morale of the operated patients. The purpose of the present study was to evaluate the influence of Kinesiology tape (KT) on the level of pain by increasing tolerance to her patients suffered laparoscopic cholecystectomy (LCh). Materials and methods of the study included 63 patients after LCh. For the test group and the control group were selected volunteers. The control group consisted of 32 patients (26 women and 6 men), the test group consisted of 31 patients (22 women and 9 men). Both groups were subjected to complex rehabilitation. In the control group further applied and KT.Immediately after surgery did test pain when traveling 100 meters, which received their subjective assessment scale from 1 to 10 (VAS). Simultaneously, we did test the pain of the passing of the 100 meters, when the pain medication. We recorded dose for each patient. The level of statistical significance was set at $P < 0.05$.The results of the statistical analysis showed a significant reduction of the time needed to cover the 100 - meter test and reduce the sensation of pain, which the administration of lower doses of pain in the test group compared to the control group with raised KT.

Finally, we reached the conclusion that the improvement in the clinical condition reported in operated patients with KT attached shows their effectiveness in patients after laparoscopic cholecystectomy. The kinesiologytaping can

successfully present as part of the methods of postoperative rehabilitation programs.

Key words: rehabilitation; cholecystectomy; quality of life

LYMPH-NODE DISSECTION WITH TECHNICAL AND INSTRUMENTAL DEVICES – LOWER TRAUMA AND BETTER OUTCOMES

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Summary

Lymph-node dissection are often high volume, traumatic and complicated surgical interventions connected with many complications (lymphorrhea, lymphedema, lymph fistulisation, edem of the limbs etc.) For downstaging this complications we put some new devices –both technical and instrumental in our routine work. Our complex of devices is: light retractor with cold light – better view and manipulation of deepest lymph nodes in the area of dissection; Harmonic Ace – ultrascission device – saving time and better outcome, lower hospital stay; bipolar scissors and bipolar forceps – precise and fine haemo- and lymhostasis. Using this new complex of technical and instrumental devices is useful and less traumatic surgical procedures (less heamo- and lym secretion), lowering operative time, lower hospital stay leading to better outcomes.

Key words: lymph-node dissection, new technical and instrumental devices

KINESIOTHERAPY'S ROLE OF ELECTIVE PATIENTS WITH HIP AND TRANSTIBIAL AMPUTATIONS

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Summary

Aim: We can see it all over the world how after amputation of the lower limbs, wheelchairs give way to the so-called prostheses and thus returns belief in the patient for a full and normal life. Possible causes for amputation of the lower limb can be the following: diabetic foot infection or gangrene; malignant neoplasm of bone or soft tissues; severe trauma to the feet; deformities of the toes; bone infection; traumatic amputation. Nowadays artificial limbs are possible with any type of amputation and any form of residual limb (chattering). Prostheses ability to mimic natural movement of the human body is getting better; they are becoming more reliable and durable, easy to use and comfortable.

Methods: Pre-prosthesis preparation period starts from 3rd - 4th day after the amputation of the limb and continues until prosthetics. The ambition in the amputated period is the patient to become familiar with the structure of the prosthesis, to train alone putting it on and taking it off, and to master practical activities such as turning, going up and down stairs, dancing and more. **Results:** A timely and well-performed rehabilitation program motivates the patient prepares him/her for using the prosthesis and creates a higher adaptive capacity. **Conclusion:** Amputation is not the end but new challenge for new beginning. Applying the most advanced achievements in the field of prosthetics, enables people with amputated limbs to regain their liberty, social activity and a sense of dignity and self-respect in society.

Key words: prosthesis, amputation, rehabilitation

CHARACTERISTIC NON-APATITIC ENVIRONMENT OF THE NANOCRYSTALS CALCANEAL BONE

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Summary

The bioapatite crystals have a multilayer hydrate shell, which contains impurity ions. The qualitative and quantitative characteristics of non-apatitic environment of the nanocrystals remain unclear. We studied the surface of nanocrystals from trabecular bone in healthy rats and during the water efficiency. We used the calcaneal bone of adult laboratory rats. The specimen was burnt at 560 to 760°C and treated with ultrasound in distilled water. We determined content of calcium, magnesium, potassium and sodium in this solution by the atomic absorption method. Pyrolytic degradation of crystals surrounding at 680°C caused a rise of soluble Ca²⁺ concentration that was significant higher in case of dehydration. This effect showed a high Ca²⁺ concentration in the non-apatitic component and a defected structure of apatite crystals. Mg²⁺ ions at 700-750°C moved from the bound to labile state on the nanocrystals surface, which indicated increasing in size of the crystallites, disappearance of lattice microdeformations, and decomposition of carbonate biomineral complexes. The concentration of the “labile” Ca²⁺ at the same temperatures significant decrease that may indicates their transition from the surface layer to the apatite grate. Migration of Mg²⁺ and Ca²⁺ in the experimental samples began at a lower temperature than in the controls. Active mobility of K⁺ and Na⁺ in the samples with dehydration confirmed the proved that defective crystal structure. Thus, our research proved that the vacant places of water could be replaced by the trace elements. It could affect structural integrity of bone apatite.

Key words:, nanocrystals, calcaneal bone, non-apatitic environment

PEDIATRICS AND MEDICAL GENETICS

ORAL PRESENTATION

**SECTION OF MEDICAL GENETICS,
MEDICAL UNIVERSITY OF PLEVEN
BRIEF HISTORY AND FUTURE
OPPORTUNITIES**

**Maria N. Simeonova, Katya S.
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Summary

We present a brief history of the Section of Medical Genetics, Medical University and University Hospital of Pleven. One of the main activities of the Section is teaching medical genetics in the curriculums of medical students, nurses, midwives, lab technicians, post-graduate and PhD students. The curriculums have passed through several stages of extension and improvement over the years and a good working team of lectures and tutors has been set up. The research activity of the staff in the different fields of Clinical genetics (Cytogenetics, Molecular genetics, Dysmorphology, Genetic counseling, Prenatal diagnosis, Oncogenetics), results in four PhD degrees and a lot of articles in peer reviewed scientific journals. The clinical-diagnostic activities of the Genetic Unit include: Dysmorphological expertise and Genetic counseling; Postnatal cytogenetic analyses of bone marrow cells and lymphocyte cultures; Maternal serum screening for Down syndrome and other congenital anomalies; Registry of congenital anomalies (based on an active screening); Genetic Family Registry. The future opportunities of development of the Section are discussed.

Key words: medical genetics, section of Medical Genetics

**SOCIAL FACTORS –
CONTEMPORARY CHALLENGES
FOR THE STATE OF METABOLIC
CONTROL IN CHILDREN WITH
TYPE 1 DIABETES MELLITUS IN
PLEVEN DISTRICT**

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Summary

Introduction: Good metabolic control in Type I Diabetes mellitus (T1DM) is an important condition for the prevention of its long-term vascular complications. In the childhood it is more difficult to achieve good glycemic control and it is highly dependent on family social characteristics. Aim: To evaluate the current HbA1c level in children with T1DM from Pleven district, to analyze the meaning of the factors, related to the treatment, family social characteristics and parental education level, in order to make a decision for the next directions of therapeutic education. Materials and methods: This study included 110 children with T1DM (57 girls and 53 boys), aged 0-18 (mean age 12.5 ± 3.7), hospitalized at Pediatric Endocrinology Department of University Hospital Pleven, admitted for a period of one year (2013). Laboratory examination of a sample of blood is used to obtain HbA1c level as a criteria for T1DM metabolic control. A questionnaire is used to collect information about: duration of T1DM, insulin regimen and types, family social status and parental education level. Results: Mean level of HbA1c in the investigated subjects were $9.8 \pm 2.23\%$ without age-sex difference. There was good metabolic control (HbA1c < 7.5%) in 22.7% of the children, unsatisfactory control (HbA1c < 9%) in 28.2% and bad control (HbA1c > 9%) in 49.1%. Insulin analogues were used in 81% of the patients. Nevertheless there were high levels of HbA1c – $9.57 \pm 1.9\%$. The highest levels of HbA1c were found in adolescents with long-standing T1DM, in single-parent families, in children with unemployed and low-educated parents. Conclusion: Current metabolic control in children and adolescents with T1DM from Pleven district is bad despite contemporary treatment. Poor socio-economic status and low parental education level has a negative effect on metabolic control. Adolescents are at risk for worsened metabolic control. Therefore they need psychological support and reeducation.

Key words: diabetes, metabolic control,

children, social factors

PLEVEN REGISTRY OF CONGENITAL ANOMALIES IN THE EUROCAT NETWORK

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Summary

We aim to present the Registry of congenital anomalies (CAs) in the Pleven region and some results of its activity. The registry is established in 1988 and has started collecting data on CAs. Since November 2013, the Pleven registry is an affiliate member of the EUROCAT network. The registration of CAs is based on the criteria according to EUROCAT recommendations. The registry records all cases of CAs in live births, stillbirths (including fetal deaths of ≥ 20 weeks gestation) and terminations of pregnancy, following prenatal diagnosis. In the registry structure there are two sections: Registry of CAs - database of all registered CA cases; and Genetic family registry – database of families with CA. The main activities of the registry include: 1) Registration of CAs – based on an active screening of all births in the tree delivery hospitals in the city of Pleven; 2) Genetic counseling – provided to the families revealed through the registration process; 3) Follow up of the families and application of prenatal diagnosis in future risk pregnancies. Based on the collected data for period 1988-2012, the established overall total prevalence of CAs was 25.7 per 1000 births. Conclusions: The Pleven registry of CAs provides reliable epidemiological information on CA in Pleven region; gives opportunity to improve the diagnosis and to study the etiology of CA; provides complete genetic information on CA; ensures long-term support of the affected families; enables prevention of CAs and assessment the impact of prenatal screening programs.

Key words: congenital anomalies, registry, EUROCAT

MODERN TREATMENT OF CHILDHOOD ASTHMA

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Summary

Bronchial asthma is the most common cause for visits in ER, hospitalization and missed days at school. Asthma is chronic and variable disease. Complex therapy- sanitizing the environment, education and medicament treatment requires flexible approach, correlating with the severity of the disease. The Global Initiative for Asthma (GINA) define asthma control as minimal (in ideal case none) chronic symptoms, minimal (not frequent) exacerbations, no emergency visits at the doctor, minimal (best none) need of “saving” medicaments, no restriction of physical activity, circadian variability of peak expiratory flow (PEF)<20%, close to normal PEF and minimal (or none) side effects of the treatment. Two main groups of medicaments are used for treatment of asthma: 1. For control- used daily for a long period to achieve and maintain control of asthma. International standards define corticosteroids as a cornerstone in treatment of persistent asthma, regardless of its severity. Dosage and duration of corticosteroid treatment depend on severity and clinical manifestation of asthma. They are used for control of persistent asthma regardless of severity in order to reduce the need for use of systematic corticosteroids, improving pulmonary function and quality of life. Kromolin medicaments have anti-inflammatory effect, connected with stabilization of the mastocytic membrane. Adding antileukotriens is recommended in treatment of mild and moderate asthma. Their effect allows to have better control over asthma with lower dosage of inhalatory corticosteroids. β_2 -agonists with prolonged action have smaller role in treatment of children's asthma - they are added to inhalatory corticosteroids in some cases. Allergenic immunotherapy may be a part of complex treatment of mild and moderate asthma in children above 5 years age. 2. For coping with acute symptoms- they are used if needed and help for fast coping with bronchial spasm and

accompanying acute symptoms (wheezing, chest constriction, coughing). They are used in cases of exacerbation of all forms of asthma in childhood-selective fast β_2 -agonists in adequate dosage are the drug of choice. For maintaining good control of asthma in childhood it is very important to choose the right devices for administering the inhalatory drugs. Treatment of accompanying allergic rhinitis is done according to ARIA-antihistamines (local and per os), nasal corticosteroids. It is very important to maintain simple treatment regimen, consistent with patient's needs. Physical activity of children should not be restricted. Patients and their parents should be well trained and informed about asthma and its treatment.

Key words: bronchial asthma, treatment

NOT ALL CHRONIC COUGH IN CHILDREN IS ASTHMA – HYPER DIAGNOSTICS OF BRONCHIAL ASTHMA ON THE OCCASION OF A CLINICAL CASE

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Summary

Coughing is one of the main symptoms in children, which makes parents consult a doctor. Every persisting cough may be a sign of underlying disease. Most frequent causes of cough are asthma, gastro esophageal reflux, postnasal secretions, passive and active smoking, respiratory infections. During last years the incidence of asthma is “growing”, which sometimes comes from the desire to find the diagnosis of chronic cough fast. We present a case of 11-year old boy with arterial hypertension, obesity, one kidney (after nephrectomy) and pancreatic hyper function. Patient receives regular complex therapy including ACE-inhibitor. Because of persisting cough he is diagnosed with bronchial asthma. He has been treated with combined inhalatory drug (corticosteroid + long-acting bronchodilator) with no effect. The patient came to the clinic for

elaboration of the etiology of the cough. The clinical manifestation of the condition and the results of the pointed tests gave us reason to dismiss the diagnosis asthma bronchiale. We found normal pulmonary physical status, normal rentgenography, normal functional breathing tests, negative bronchodilatation test. There were no anamnesis for atopy, family history for asthma, nasal or serum eosinophilia. After consulting with cardiologist, the therapy with ACE-inhibitor was stopped. After that coughing also stopped. The connection between the coughing and the treatment for hypertension we suspected was confirmed.

Correct diagnosis of asthma bronchiale in children requires profound tests- detailed anamnesis and physical examination, functional breathing test, laboratory, imaging and specialized tests. This case is an illustration of the fact, that not all chronic cough in children is a sign of asthma bronchiale.

Key words: asthma, comorbidity, side effects

ANALYSIS OF THE INCIDENCE OF ACUTE MYOCARDITIS IN INFANTS AND ADOLESCENTS

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Summary

Acute myocarditis, an inflammation of the heart muscle, is a rare disease in pediatrics, which still remains an important cause of sudden death, which may be the 1st detectable sign in infants. Adolescents may present with nonspecific respiratory or gastrointestinal complaints, making proper diagnosis difficult. Myocarditis is often misdiagnosed because its presentation has a broad differential diagnosis. Aim: We analyze the clinical manifestations and treatment of children with acute myocarditis in Pediatrics department, UMHAT "G. Stranski" - Pleven, during the first half of the year 2014. Materials and method: Described are 16 infants and

adolescents treated for pneumonia with respiratory failure and diagnosed acute myocarditis. Diagnostic methods: history, laboratory tests, radiological tests, ECG and echocardiography. Results: Out of 510 children hospitalized with pneumonia, 3.14% were diagnosed with acute myocarditis. 93.8% of the children with acute myocarditis had complaints of dyspnoea, weakness - 81.2%, chest pain - 25% and 18.8% - gastrointestinal events. In all children we found typical ECG changes. 37.5% of children had radiological signs of cardiomegaly. Echocardiographic signs of impaired pump function was found in 75% of the children. 37.5% of the children required administration of diuretic and ACE-inhibitor, and 25% - treatment with digitalis, added to antibiotic and immunostimulatory therapy. Two infants (12.5%) were diagnosed with fulminant myocarditis, which presented in one with fatal arrhythmias and cardiogenic shock. Conclusion: Myocarditis requires a high level of alertness and understanding of the clinical presentation of this disease, in order to prevent the development of dilated cardiomyopathy and the occurrence of sudden cardiac death in childhood.

Keywords: myocarditis, pneumonia, children

VIT. D DEFICIENCY - A CURRENT PROBLEM FOR CLINICAL PRACTICE

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Summary

In recent years, vitamin D and its benefits to

human health generate great interest in scientific circle and clinical practice. The classical role of vitamin D as a main factor for calcium-phosphate homeostasis and the development and maintenance of the musculoskeletal system is well known. New studies on the metabolism of vitamin D provide important evidence for a broader spectrum of effects of this endocrine and paracrine hormone. It has also been found that it is responsible for a number of extraskelatal pathophysiological mechanisms. Until recently, vitamin D deficiency was associated mainly with disorders in its common endocrinological effects. Several studies on the extraskelatal effects of vitamin D indicate its deficiency is a major risk factor for the development of a number of diseases such as type 1 diabetes and other autoimmune diseases, obesity, hypertension, cardiovascular, neurodegenerative, malignant diseases and others. Recently, serum level of 25/OH/D has been accepted as the best functional indicator of vitamin D status worldwide and in Bulgaria. Value of 25/OH/D < 50 nmol/l is defined as mild deficiency, and < 25 nmol/l as severe deficiency of vitamin D. Recommendations for prevention and treatment of vitamin D deficiency in all ages have been established. Prevention is a key element for influencing the mechanisms, leading to vit. D deficiency. Creating precise regimens for its use in various diseases is still a subject of future discussions.

Key words: deficiency of vitamin D, extraskelatal effects, 25/OH/D, prevention

RENAL AGENESIS AND ACUTE RENAL FAILURE IN A CHILD WITH MARINESKO-SJOGREN SYNDROME

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Summary

Marinesco-Sjogren syndrome is a rare genetic disorder with autosomal recessive type of inheritance. The main symptoms formed characteristic triad: congenital bilateral cataracts, cerebellar ataxia and mental retardation. Additional possible features include short stature, dysarthria, developmental delay, nystagmus, convergent strabismus, weak or absent reflexes, muscle hypotonia, hypersalivation, X-ray findings of bone age retardation. A sixteen years girl with approved Marinesco-Sjogren syndrome, congenital renal malformation and acute renal failure is presented. Renal agenesis complicated with nephrolythiasis affecting single kidney was diagnosed and surgical removal of the kidney stone was performed.

Key words: Marinesco-Sjogren syndrome, renal agenesis, acute renal failure

ACANTHOSIS NIGRICANS AS A SCREENING TOOL AND PREDICTOR FOR INSULIN RESISTANCE IN CHILDREN AND ADOLESCENTS WITH METABOLIC SYNDROME AND POLYCYSTIC OVARY SYNDROME

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Summary

Insulin resistance occurs in a variety of physiological and pathophysiological states, including obesity, metabolic syndrome (MetS), polycystic ovary syndrome (PCOS) and type II diabetes mellitus. These conditions could be related to various long term cardiovascular and metabolic complications. As insulin resistance syndromes (IRS), MetS and PCOS can be associated with AN – a clinical marker for insulin resistance. The diagnosis of AN could play a key role in clinical practice to detect children at risk

for future cardiovascular and metabolic IRS complications. Aim: To assess the meaning of AN as a predictor for insulin resistance in children and adolescents with MetS and PCOS. To investigate distribution of AN among the children with MetS and PCOS and its correlation with anthropometric measurements and carbohydrate metabolic parameters. Methods: A retrospective analysis including a study population of 92 Bulgarian children aged 5-17 (mean age 13,84 ± 0,53). The children were separated into two groups: children with MetS and adolescent girls with PCOS including MetS. Sixty two of all children were with MetS, diagnosed on Criteria for MetS adapted for children and adolescents, proposed by IDF, WHO, NCEP and I DPAID. Thirty of the children were with PCOS, diagnosed on Rotterdam criteria for diagnosing PCOS in adults. The study was performed at the Pediatric Endocrinology Department, University Hospital Pleven, and involved patients admitted for a period of two years, from 2012 to 2014. In both groups we analyzed: body mass index (BMI), waist circumference (WC), immunoreactive insulin (IRI) – (0 min OGTT) and homeostatic model assessment (HOMA-IR-0 min) as criteria for insulin resistance. Results: We found AN in 59 (64.13%) of all children. Forty (64.51%) of the children with MetS had AN. Nineteen (63.33%) of the adolescent girls with PCOS and MetS were with AN. Both groups showed high intensity grade of abdominal obesity (mean rates BMI 31.74±1.97; 31.90±2.22; waist circumference 88.93±6.13cm; 88.75±9.19cm /> 97 percentile/), basal hyperinsulinemia (IRI 0 min 21.85±4.46µIU/mL; 25.79±13.96µIU/mL) and insulin resistance (HOMA-IR 4.53±1.12; 4.04±3.25), which are a part of the major components of MetS. There was no statistically difference between determined parameters in both groups (p>0.100). Conclusion: AN occurs in more than half of the children with MetS and in the girls with PCOS with approximately the same frequency. AN seems to be an easily accessible and leading marker for insulin resistance, requiring confirmation. In the presence of AN it is necessary to conduct further tests to assess insulin sensitivity status and to prevent eventual long term IRS complications.

Key words: acanthosis nigricans, insulin resistance

SHORT REVIEW OF THE CLINICAL AND GENETIC DATA CONCERNING DOWN SYNDROME

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Summary

Aim of the study was to present a short review of clinical and genetic data on the cases of Down syndrome (DS), established in the Section of Medical Genetics, Medical University of Pleven for the period (January 2006 - May 2014).

Materials and methods: During the study period, a total of 55 children with DS were diagnosed. The cytogenetic analysis was carried out using standard lymphocyte culture method and GTG banding technique. The clinical and passport data were taken from medical and genetic records.

Results: The most (90%) of patients were diagnosed before 1 year age (52% in the first week after birth), because of dysmorphic features for DS. The most (91%) of DS cases were standard trisomy 21, following of mosaic - 5.4% and translocation DS-3.6%. The disease-associated congenital anomalies (mainly heart malformations) were detected in 16 (29%) of DS individuals. Maternal age ≥ 36 ys at the time of birth had 40% of the women. In most 85% (47/55) of the mothers maternal serum screening test was not offered during pregnancy. About 73% (40/55) of children with DS were grown of their parents.

Conclusion: DS is diagnosed early after birth, mainly in the early neonatal period. Most 60% of DS children have young mothers (under 36 years old). About 1/3 of DS individuals have associated anomalies (mainly heart defects). There is an insufficiency in offering the screening test to

pregnant women that restrict their opportunity for early prenatal diagnosis of this condition and informed reproductive decision.

Key words: down syndrome, congenital anomalies, genetic prevention

POSTERS

RISK FACTORS FOR GENITAL INFECTIONS IN CHILDREN WITH TYPE 1 DIABETES

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Summary

Introduction: The higher risk for genital infections (GI) in children with type 1 diabetes (T1D) is based on genetically impaired immune response. High blood glucose level and the persistent glycosuria are also considered as risk factors for GI in diabetic patients. **Aim:** To identify the most common risk factors, contributing to genital infections in children and adolescents with T1D.

Materials: We studied 86 children (37 boys and 49 girls) with T1D under intensive insulin therapy at mean age of 11,6 +/- 0,8 years, hospitalized from March 2013 to June 2014 in the Endocrinology Unit, Department of Pediatrics at The University Hospital-Pleven. There were assessed age, gender, type of insulin (human/analogue), level of metabolic control and diabetes duration. **Methods:** Questionnaire about diabetes history; Inspection of external genitalia for signs of inflammation; Microbiological culture of genital discharge; Glycated hemoglobin (Hb_{A1c}) for assessment of metabolic control.

Results: Clinical signs of GI were found in 39 (45%) children (positive cultures – 30/39). Many

of the infected patients were pubertal (7-14 years) – 24/39. Vulvovaginitis had 23 girls, and balanitis – 16 boys. One half of them were treated with analogues, but the mean level of Hb_{A1c} was 11,35 +/- 0,64%.

The mean diabetes duration of the children with GI was 3,8 +/- 1,3 years. GI at onset of T1D was found by 11/39 children. **Conclusions:** Our study considers diabetes duration and poor metabolic control as risk factors for genital infections in children with T1D. GI could be found at any age with prevalence among teenagers and at the onset of T1D.

Key words: type 1 diabetes, children, genital infections, risk factors

OPHTHALMOLOGY AND OTOLARYNGOLOGY

ORAL PRESENTATION

FACTORS HAVING INFLUENCE ON VISUAL ACUITY IN PATIENTS WITH UVEITIS

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Summary

Purpose: To evaluate the changes of visual acuity during the course of hospital treatment in patients with uveitis. **Methods:** A retrospective study on patients with uveitis, treated in Eye Clinic – Pleven for the period of one year. Full ophthalmologic check up, specialized clinical, laboratory and imaging investigations were used as methods of characterization in combination with expert opinions of other specialists, and the conventional therapeutic schemes were applied. **Results:** Overall, 1180 patients were treated at Eye Clinic – Pleven during the calendar year of 2013 including 42 (4 %) with uveitis at the age ranging from 13 to 88 years, all of them given the diagnosis of anterior uveitis. 8 (19%) of these cases were related to recurrent iridocyclitis. At the time of discharge from the hospital improvement of the visual acuity of the treated eye was registered for 24 patients (57%), no

change or a change within one line of the test chart for 15 (36%) and a decrease in 3 cases (7%). The patients in the last group were at the age of 51 to 64 and in two of the cases recurrent iridocyclitis was involved, and in one – Bechterev's disease. Conclusion: The extent of improvement of visual acuity is determined by many factors - including age, associated eye and general pathology, etiologic agents, pre-existing complications, and last but not least, early referral and hospitalization of the patient.

Key words: visual acuity, uveitis, iridocyclitis

DRY AGE-RELATED MACULAR DEGENERATION – NEW APPROACH IN OPTICAL COHERENCE TOMOGRAPHY MONITORING AND QUANTITATIVE ASSESSMENT

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Summary

Purpose: To present ability of “Drusen analysis” software tool to measure drusen area and volume in patients with dry age-related macular degeneration (AMD). Materials and methods: Six patients with confirmed dry AMD aged between 59-74 years, were scanned with 3D OCT- 2000 Topcon “3D Macula” scanning protocol by a single operator. All subjects underwent a complete ophthalmologic examination including best corrected visual acuity, indirect biomicroscopy, tonometry and fluorescein angiography. “Drusen analysis” was performed on macula with 6.0 x 6.0 mm volume cube scans and 512x128 pixels scan resolution. The results were presented along with calculated values in two clearly arranged reports. Mean follow up period was 20 months (6-38). Results: Count, area occupation, volume of the drusen and 3D retinal pigment epithelium (RPE) elevation map were presented in Macula drusen analysis report.

With this software tool the status of RPE can be objectively and automatically examined in detail and can be followed over time. B - scan profile report includes horizontal tomogram showing RPE elevation segmentation line. Drusen count and volume in 3 patients were increased at the end of follow up period. Conclusions: OCT allows precise quantitative evaluation and study of microstructural changes in patients with dry AMD and provides three-dimensional information of macular pathology in situ and in real time. This could be useful for determining stages and monitoring the progression of AMD.

Key words: optical coherence tomography, dry AMD, drusen

SURGICAL TREATMENT OF EYELIDS MARGIN TUMOR. A CASE REPORT

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Summary

Purpose: the surgical treatment of a case with large benign tumor of eyelids margin is presented. Methods: a patient with large tumors involving superior and inferior eyelid margin of right eye was treated surgically with excision and free skin graft transplantation. There was suspicion for malignancy. A histopathological study was performed. Results: After surgical excision of the tumor of lower eyelid, histopathology findings showed a benign lesion – nevus. Reconstruction of the wound defect was done with transplantation of free skin graft obtained from preauricular area. The tumor of the upper eyelid was excised with closure of wound with transposition flap. The healing of the wound was normal and anatomical and the functional result was satisfying. Conclusion: The surgical treatment of eyelid margin tumor is difficult and need special surgical skills. The histopathologic result determines the extent of excision with the aim of keeping maximally surrounding health tissue.

Key words: eyelid tumor, nevus, tumor excision, free skin graft, transposition flap

CARCINOMA OF THE LARYNX AND HUMAN PAPILLOMA VIRUS

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Summary

Objectives: We present a study on dissemination of human papilloma viruses (HPV) and frequency of strains causing laryngeal cancer. New potential etiologic risk factors are considered in the sample group. **Methods:** Immunohistochemistry p16INK4a test was used to demonstrate the relationship between carcinogenesis and HPV infection of the larynx and hypopharynx. **Results:** Papilloma virus infection with high-risk oncogenic types of HPV was determined in more than 39% of surgically treated patients with histologically proven laryngeal cancer. **Conclusion:** It is necessary to extend the diagnostic methods for laryngeal and hypopharyngeal cancer with a routine search for high-risk oncogenic HPV strains.

Key words: carcinoma, larynx, HPV.p16INK4a

RETROORBITAL TUMOR OF SINUSOGENIC ORIGIN: A RARE CASE REPORT

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Summary

The cranio-orbital tumors with nasal communication are rare and challenging to treat because of their complicated anatomy, unclear primary origin, various histology and multimodal treatment. Surgical removal of tumors and secondary follow-up are subjects of neurosurgery, ophthalmology and otorhinolaryngology depending on the tumor location, penetration and extension. A 72-year old man patient was admitted to the Department of Ophthalmology, Otorhinolaryngology and Head and Neck surgery at UMHAT-Pleven with initial diagnosis of right cranio-orbital-nasal tumor and complains of right eye pain, irritation and diplopia, accompanied by right nostril light bleeding and altered sense of smell of one month duration. The X-ray and CT scanning showed an infiltrative retrobulbar mass with involvement of the right ethmoidal labyrinth. Intraoperatively, a retrobulbar tumor with nasal septum involvement and no violation of anterior cranial fossa was found. The tumor mass was surgically removed via enucleation of the right eye. No neurological and other complications did occur during the early post-operative period.

Key words: cranio-orbital-nasal tumors, retrobulbar tumors, ethmoid sinus lesions, surgical enucleation.

PHACOEMULSIFICATION IN COMPLICATED CATARACT CASES

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Summary

Aim: To present some aspects of phacoemulsification in complicated cataract cases. **Material and methods:** From January 2013 to December 2013 a total of 186 patients had cataract surgery by phacoemulsification method. All interventions were performed by the same surgeon. Local anesthesia was used in most cases. General anesthesia was used in individual cases. **Results:** In 18 cases the cataract was complicated by glaucoma. In 43 cases the eye had axial length less than 21 mm or greater than 24 mm. In 6 patients the pupil did not dilate enough after pre-surgical application of mydriatic. There were three cases with traumatic cataract. **Conclusion:** Phacoemulsification is one of the most complex surgical procedures in ophthalmology and in complicated cases the preliminary assessment and preparation are of great importance for the successful outcome.

Key words: phacoemulsification, cataract

PENETRATING KERATOPLASTY IN PATIENTS WITH BULLOUS KERATOPATHY

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Summary

Purpose: To analyze the results from penetrating keratoplasty in patients with bullous keratopathy. **Methods:** We retrospectively studied 58 cases of penetrating keratoplasty performed at the Eye clinic, Pleven, between 1990 and 2011, for aphakic and pseudophakic bullous keratopathy. **Results:** After keratoplasty, the visual acuities of patients were improved in 82.76%. The best corrected visual acuity in 26.92% was above 0.1. In early postoperative period, 79.31% of the patients had transparent corneal graft. By the time of suture removal (8-9 months on the average) corneal grafts were transparent in 55.88%. 14 cases were regrafted. **Conclusion:** Penetrating keratoplasty improved vision and

relieved the pain in patients with bullous keratopathy.

Key words: keratoplasty, bullous keratopathy

DOES GLAUCOMA CHANGE THE CORNEA?

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Summary

Introduction: Laser-scanning confocal microscopy allows non-invasive imaging and observation of all cellular layers of the cornea. This microscopic examination demonstrates dynamic observations of all cornea layers in microstructural level over time. **Purpose:** To demonstrate in vivo laser-scanning confocal microscopy as an option for precise diagnosis and monitoring of the cornea changes in patients with medically treated primary open angle glaucoma. **Materials and Methods:** The analysis included 27 patient examined by in vivo laser-scanning confocal microscopy (HRT II Rostock corneal module). This study was based on representative images from all cellular layers of the cornea of 12 healthy volunteers (aged between 41 and 65 years) and 15 patients with medically treated primary open angle glaucoma. All subjects were also examined by slit-lamp microscope and by TONOPACHY. **Results:** The mean values of average central corneal thickness were $547.20 \pm 5.76 \mu\text{m}$ in healthy and $539.85 \pm 13.2 \mu\text{m}$ in glaucoma group. All subjects were also examined by in vivo laser-scanning confocal microscopy and descriptive analysis was performed of the all layers of the cornea. The mean density in epithelium in eyes without pathological changes was $5058.23 \pm 5.52 \text{ cells/mm}^2$ and in glaucoma eyes the density was $3949.20 \pm 8.72 \text{ cells/mm}^2$. Stroma cell density anterior and posterior was also calculated. The most significant findings were on the endothelium level where the density of endothelium cells in glaucoma eyes was reduced to $2418.35 \pm 55.2 \text{ cells/mm}^2$ while those of healthy

eyes was 2837.40 ± 15.62 cells/mm². The results from TONOPACHY examinations did not show big difference between two groups in intraocular pressures values. Conclusion: In vivo confocal microscopy demonstrated basic microstructural changes in eyes with medically treated primary open angle glaucoma. This method provides wide range of options and useful insights at microstructural level.

Key words: confocal microscopy, cornea, glaucoma

MERKEL CELL CARCINOMA - CASE REPORT

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Summary

Merkel cell carcinoma is a very rare type of skin cancer that forms when Merkel cells grow out of control in the top layer of the skin. Merkel cell carcinoma develops most often in skin areas exposed to sunlight. It mainly affects people over the age of 65. Treatment is generally based on the disease stage. Materials and Methods: We present a 77-year-old patient admitted for two tumor masses on the neck with a several months history. The patient consented for elective surgical treatment. Results: Two lymph nodes (approximately 2 cm in diameter each) were carefully extirpated and sent for histological analysis. The result was metastases of Merkel cell carcinoma in both lymph nodes. The patient was referred for radiotherapy. Follow-up 1 year after surgery shows no evidence of new regional or distant metastases. Conclusion: Timely diagnosis of Merkel cell carcinoma and radical surgical treatment would prevent metastasing and improve the therapeutic outcome and prognosis.

Key words: Merkel cell carcinoma

PUBLIC HEALTH AND HEALTH CARE

ORAL PRESENTATION

INFORMATION TO HEALTH CARE PROFESSIONALS ABOUT THE LEGAL RELATIONSHIP WITH THE CARE OF PATIENTS

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Summary

Introduction: Care in the patient's home links him with a number of amenities - familiar people, familiar surroundings, psychological support from relatives, keeping the normal way of life, easier acceptance of the difficulties caused by the disease or condition, security in life. At the same time home care for patients with various diseases bring additional responsibilities and challenges for health professionals. Some patients have more than one disease, and in the group of elderly patients there is accumulation of dementia events and other age changes that the nurse must respect and knows well.

In the process of care are creating relationships between nurses and patients, based on trust and understanding, but also there are preconditions for admission of malpractices and crimes. The latter are referred to the PPC and other legal documents that health professionals need to know. Aims and objectives: The aim of this study was to determine the awareness of health care professionals about the legal and professional responsibility of caring for patients at hometasks:

1. Ascertaining the level of awareness of health care professionals regarding the rights and obligations that are in care of patients at home
2. Investigation of the familiar health care professionals with the regulations governing the relationship 'patient – nurse'.

Materials and Methods: A direct, anonymous survey of 160 nurses working in the ME in the city of Sofia. The study was conducted in the period March - May 2014 year. Processing results used statistical package SPSS 17.0. **Results and discussion:** From the study it was found that the majority of nurses surveyed have low levels of awareness of health care at home, and their legal regulation in this country. Observations also reported low level of knowledge on laws and legal relationships 'patient – nurse'. **Conclusions:** In health care professionals there is a real need to be raised awareness of the laws and regulations concerning the legal effect of the relationship between nurses and patients at home.

Key words: information, rights, nurse, patients, home

THE IMPORTANCE OF SPORT FOR ALL FOR THE DEVELOPMENT OF SPORTS AND HEALTH IN UNIVERSITIES

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Summary

Health is closely linked to your life style, attitudes and environment. Therefore, changing them can lead to new aspects of health. In modern society, the sharp increase in urbanization and the decreased movement in daily life have caused different health problems. Regular movement (exercise) is one of the most important factors for

prevention of diseases resulting from passivity. Sport contributes to the increase in work performance, the development of better self-esteem and empathy skills, the overcoming of stress and the establishment of community health care and sport awareness. Therefore, the overall aim of sport education is to increase the life quality of all people. Living actively, learning how to use your body properly, restraining from bad habits as alcohol and smoking, being in harmony with family and society are all considered vital for a healthier life style.

Keywords: health, sport, education

OVERWEIGHT, OBESITY, AND RELATED DISEASES AMONG WORKERS WITH DIFFERENT WORKLOAD

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Summary

A person's weight (commonly measured through the BMI value) is dependent on major factors like genetics, diet, and physical activity. Physical activity for the adult population is defined mainly by it's workload – light, moderate or heavy. **Purpose:** To explore associations between weight (BMI) and chronic non-infectious diseases in workers with different physical activity. **Methods:** Subjects of the study were 224 male (average age 44.511.9 years) and 249 female employees (average age 46.710.5 years), divided by workload based on their job description. BMI and disease incidence were calculated, and statistical analysis was performed. **Results:** The mean BMIs for all groups defined by sex and

workload were in the overweight range. The highest percentage of overweight and obese was observed in men with light workload. Mean BMI for men (27.434.85) was significantly higher than that for women (25.875.06), $p = 0.0007$. Analysis of the diseases associated with overweight showed that in workers with higher BMI are increased the incidence of endocrine disorders as well as the frequency of musculoskeletal and related neurological diseases. Diseases of the circulatory system were with high prevalence in employees with overweight and obesity as well as in the underweight group. Physical activity at work contributes to changes in BMI in the working population. Overweight-associated circulatory, endocrine and musculoskeletal diseases were with high prevalence in the groups with higher BMI. “The health index” - prevalence of employees without diseases - was in inverse relation to BMI.

Key words: overweight, obesity, workload, chronic non-infectious diseases

PROPHYLACTIC SCREENING PROGRAM OF CHILDREN'S VISION IN THE CITY OF PLEVEN

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Summary

To determine the frequency of decreased vision and determination of the type and degree of refraction abnormalities among children 3 to 6 years attending kindergartens in the city of Pleven. The screening was held for the period October 2013-January 2014. Children passed free prevention program are 2823. All of them were examined visual acuity, and those in which was revealed the same decrease were called for an objective examination of refraction in the Eye Clinic at the University Hospital “Dr. Georgi Stranski” - Pleven. During prophylactic medical examinations found deviations from normal vision at 236 children. Of children who have appeared in the clinic after cycloplegia was inscribed appropriate optical correction. In 20 of

them with the glasses had reached full visual acuity, and in 9 of them because available amblyopia, optical correction had no such a result. Of surveyed children, 1800 have not visited an eye doctor prior to the screening program. This defines the high risk of permanent amblyopia resulting from refractive errors. Early detection and treatment of low vision in children would lead to normal physical, neuropsychological and emotional development as well as quality of life in the future.

Key words: screening, children, refractive error

MUNICIPALITIES AND HEALTH - CITIZEN'S EXPECTATIONS ABOUT LOCAL HEALTHY POLICIES

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Summary

The aim of this study is to survey citizen's expectations about local health policies in order to create adequate strategy. Local authorities in many countries place health in the core of their strategic planning aiming to create and improve a health-supporting social and physical environment, as they usually have primary responsibility for planning and/or delivering many of the services that are crucial to addressing the social determinants of health: education, transport, housing and urban planning. Local health policies are created in consultation with local health services, NGO and citizens. The survey was conducted among 400 citizens of the Municipality of Pleven. Out of them 335 (83.75%) from have responded to the invitation. Information on the health problems and determinants of health was collected through direct inquiry survey. The majority of the citizens consider the impact of environmental, educational, cultural and economic factors as well as public security on their health. They expect more purposeful efforts from the local authorities to be directed for improving living conditions and inequalities in health.

Conclusions: Citizens consent to work together with municipalities in creation of healthy policies which reduce negative factors and increase positive ones. They are aware that local policies and decisions have a very significant impact on the economic, social and environmental factors affecting health and well-being and therefore municipalities play a key role in improving and protection the health of their citizens.

Key words: health, municipality, well-being, health policy, citizens

BEST PRACTICES FOR HEALTH WORKFORCE PLANNING – WORLD EXPERIENCE AND LESSONS FOR BULGARIA

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Summary

Workforce planning becomes an issue of high priority in all countries in terms of global crises in provision of human resources (HR) for health. It's ranked high on the political agenda of the EU with launching of the Green paper on the European Workforce for Health in 2008. Bulgarian health authorities are increasingly aware of HR issues too. The aim of this paper is to review and analyze the state of knowledge on the problem and the best world practices in order to suggest a model for assessing the future needs and planning of health workforce in Bulgaria. Material and methods: This paper is elaborated on the basis of profound literature review and comparative analysis of the experience of selected countries that are examples for applying good practices for HR for health planning. Results and discussion: Most of the countries do not have explicit HR for health strategy. The typical practice is to establish only the training numbers and related costs rather than elaborating a comprehensive strategy covering all relevant issues of workforce lifecycle. Still there are countries in whose practice workforce issues have larger scope (Canada, USA). Among the European countries

only few have developed HR strategies covering compensation, working conditions, recruitment and retention (Belgium, England, Germany). Conclusion: Sustainable health policies in Bulgaria should follow the best practices which see HR planning as a process that engages the main stakeholders in assessing needs for change and devising strategies to achieve them.

Key words: health, workforce, planning

WORKABILITY OF AGING TEACHERS

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Summary

The aim of the study was to estimate the work ability of teachers with aging and its relation to health status and mental resources. Methods: Workability was assessed in 424 teachers with Work Ability Index (WAI), 140 subjects of age < 44 years, and 284 subjects of age > 45 years. Chi-square tests and regression analyses were used to study WAI scales ratings, diagnosed by physician diseases and WAI determinants. Results: Our data showed comparatively high workability for both age groups, but WAI of aging teachers was significantly lower in comparison to their younger colleagues. 34.3% of the teachers < 44 yrs. reported 1 or 2 diseases and 21.4% - three or more than three diseases, but higher rates of aging teachers (41.2% and 37.5% respectively). The most frequently reported by teachers < 44 yrs. were respiratory, cardiovascular, neurological and sensory diseases, while by aging teachers - cardiovascular, musculoskeletal, respiratory and digestive diseases. The workability in relation to job demands was predicted by mental resources, the estimated score for the number of diagnosed diseases and negatively by neurological and sensory organ diseases, while the prognosis of workability for two-year period was negatively related to mental disorders, neurological and sensory organ diseases, age and positively to mental resources. Conclusion: Our data show high workability for both age groups of teachers, but significantly lower in aging teachers. The

main determinants of workability were the mental resources, health status and especially the diseases with psychosomatic origin.

Key words: workability, teachers, aging, chronic diseases

“HEALING” BY X-RAY EXAMINATIONS

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Summary

The aim of this study is to determine what percentage of the patients who undergo X-rays have chosen to do so themselves, and what percentage have been appointed X-ray treatments. Documentary method – Different literatures and online resources have been studied. Primary Research method – 38 patients from different city hospitals have been questioned using questionnaires. The results were then analysed and presented graphically using diagrams. From the results was found that 84.21% of the questionnaire respondents have been subjected to X-Ray scans in the last 5 years. 23.68% of them have had three to five X-Ray scans for this period, whereas 15.79% of them have had more than 6 scans. A high proportion of the respondents say that it is easy to be prescribed an X-ray scan, which therefore is prerequisite for the decrease in the self-appointed X-ray scans. The reassuring fact from the findings is that 68.42% of the respondents didn't know that they can self-appoint an X-ray scan, and moreover, they don't think that undertaking an X-ray scan will cure their illness, or lead to pain relief. The problem with the harmful effects of self-appointed X-rays is very relevant. In the cases where people resort to self-medication, it is most often caused due to the inability to access a doctor-specialist, which is combined with the increasing ability for patients to self-appoint different medical tests and scans. In this case, the self-appointment of unneeded X-ray scans leads

to unnecessary radiation exposure, as well as, avoidable use of resources which are used during these scans. Therefore people should be made aware that x-rays are not good for self-treatment, and could lead to harmful consequences if radiation exposure accumulates.

Key words: self-treatment, X-ray scans, patients

THE ROLE OF THE RADIOLOGIST TECHNOLOGIST IN AN ANGIOGRAPHY WARD

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Summary

The angiography ward is part of the medical diagnostic imaging department. There, minimally invasive image-guided procedures are performed. These procedures are utilized to diagnose and treat cardiovascular and other disorders. They are performed by a team that consists of interventional radiologists, specially trained in their field, nurses and medical radiation technologists. The purpose of the presentation is to acquaint the audience with the role and activities of the radiologist technologist in an angiography ward. Observation and documentary methods are used and an analysis of the activities of the radiologist technologists is made. Results: He/she assists, according to his/hers sphere of professional competence, before, during and after the examination. The radiologist technologist handles patients and informs them of the procedures. He/she prepares instruments and supplies prior to the manipulation, prepares the contrast injector, monitors the quality of the imaging, contacts, when necessary, other wards and clinics. As a part of a specially trained medical team, the role of the radiologist technologist is significant for carrying out quality minimally invasive procedures.

Key words: interventional radiology, angiography, team, role, radiologist technologist

METHODS OF DEALING WITH FATIGUE AND STRESS DURING EXAMS

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Summary:

Twice a year, there is a period with stress and panic for the students. The exam session starts and builds on students' stress, nerves, fatigue, studying. This leads to neuro-psychological stress and high emotional tension, which can adversely affect both the successful completion of the exam and their health. Objective: The purpose of this study was to establish if the students in specialty “X-ray laboratory” in MC “Y. Filaretova”, Sofia experiencing stress and fatigue during the session and with what methods they most effectively overcome it. Materials & Methods: A documentary and questionnaire method is used. A poll is made, through its own direct anonymous questionnaire, including 13 questions. The participants are 56 students from first and second course of specialty. The results are computed by mathematical and graphical analyses. Results: From the studies it can be argued, that tension and stress during a session accompany 83.92% of respondents, while fatigue is a significant by 58.92% of them. Students, that take breaks through learning /71.43%/, play sport /41.07%/ and have fun with friends /62.70%/ manage to cope effectively with fatigue. Conclusion: The results show, that recourse to various appropriate methods of relaxation, we will effectively manage fatigue and will feel more mild.

Key words: fatigue, students, exam session, relax methods

EPIDEMIOLOGICAL AND SOCIO - MEDICAL CONSEQUENCES OF PREMATUREITY

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Summary

Studies on prematurity are crucial to progress in the implementation of the fourth objective of the Millennium Development Goals and target 4 of the Health 21: the health for all policy framework for the WHO European Region. The study aims to explore, analyze and present the main epidemiological and socio-medical public health impacts of prematurity. The review is based on a critical analysis of more than 50 literary sources. There is a tendency to increase the proportion of children born with low birth weight of 6.1% in 1985 to 7.23% in 2011 in the European Union. In Bulgaria those indicator increased from 6.1% in 1985 to 8.4% in 2011 and it is more than twice as high as in Finland - 4.1%, where the index is stationed during the all observed period. Prematurity is the cause of death and in the long run for the loss of human potential. Its complications are the most important independent and direct cause of neonatal mortality and the second leading cause, after pneumonia, for deaths up to 5 years of age. Conclusion. The challenge for researchers and practitioners is to identify and implement interventions to prevent prematurity, leading to a reduction in morbidity and mortality of infants and lower postponed prevalence of preterm children.

Key words: prematurity, neonatal mortality, postponed prevalence of preterm children, prevention of prematurity

CHALLENGES OF FOOD HYGIENE NOWADAYS

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Summary

A healthy diet, the preservation of food by chemical and biological contaminants, the system control quality and safety and healthcare policy in this area are the main directions in science and practice of nutrition hygiene nowadays. They require very active and motivated action to maintain the leading role of medical professionals in these areas. In the field of nutrition, not without the assistance of the media, convincingly and aggressively are promoted the ideas, theories and dietary schemes for alternative nutrition models, which can cause serious health damages to large groups of people. At the same time, socio-economic environmental is a precondition for widespread obesity and its inevitable impacts at an early age among adolescents and also people at working age - hyperlipoproteinemias, hypertension, metabolic syndrome, diabetes and their cardiovascular and cerebrovascular vascular consequences. Another problem is that the leading responsibility for the safety of food is given to the manufacturer, but it creates a high risk of compromised quality, chemical and biological contaminants, misuse of food additives, GMOs in raw materials and ready-to-eat foods. These circumstances strengthen the importance of food safety control, increase the size and pressure in the activities of the health authority and responsibility of the professionals. Established in Bulgaria Food Safety Agency is departmental bound and does not have the legal independence and cannot be sufficiently effective in the realization of medically-founded food policy in the sphere of food and nutrition of the population. More Nutrition and Dietetics must be included in the curriculum of medical schools and colleges for more effective promotion of healthy eating and prevention of non-infectious chronic diseases.

Key words: food hygiene, healthcare policy

**VIOLENCE AND HEALTH - WHO
GUIDELINES FOR VIOLENCE
PREVENTION**

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Summary

Aim: Violence and child abuse is a significant problem for Europe. It accounts for a quarter of the severity of mental disorders such as depression, anxiety, eating disorders, suicide attempts and substance abuse. This results in lower educational attainment and fewer employment prospects, risky sexual behavior, obesity and development of other non-communicable diseases. Computerization determines much of the behavior, choice and education of children and increases the risk of cyber-bullying, pornography and internet addiction.

Methodological approaches presents:

1. Existing: Epidemiological data for Europe: 42 000 children die each year from unintentional injuries and 850 become victims of murder, while 18 million children of up to 18 years of age have been victims of sexual violence, 44 million of physical violence, and 55 million to psychological violence. 2. Summarized: WHO data from various studies about the prevalence of violence at international level and describes an environmental model of risk factors. 3. Approaches and strategies for the prevention of violence in the health sector are also discussed.

Results and conclusions: Causes of violence are multifactorial. Therefore, the impact on them requires sustained coordinated efforts of many sectors (such as health, education, employment, social welfare,). Prevention of violence must be part of the health, social and education policy. Economically, prevention is more effective than tackling the consequences of violence

Key words: violence, child abuse, prevalence, risk factors, prevention strategies

SUICIDE ATTEMPTS IN BULGARIA 2009-2013

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Summary

Aim: Presentation of data on suicide attempts and completed suicides in Bulgaria for a five year period. We present the information using statistical regions in Bulgaria that are most suitable for data comparability. Methodological approaches: There are standard forms "death notification" and "card for suicidal action" of the Ministry of Health. The information is collected by the regional health inspections and summarized by the National Center for Public Health and analyses.

Main results: In the six statistical regions in Bulgaria we observe the prevalence of suicide attempts and completed suicides among the rural population. Leading methods of suicide are poisoning with drugs and hanging. Financial reasons are not the leading cause of suicide. **Conclusion:** Each of the statistical regions in Bulgaria is characterized by features that allow specific preventive measures in this area.

Key words: attempts, suicide

CORRELATION BETWEEN SELF- RATED HEALTH AND SOCIOECONOMIC AND PSYCHOLOGICAL CHARACTERISTICS OF AMBULATORY AND HOSPITALIZED PATIENTS OVER 44 YEARS OF AGE

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Summary

Aim: To identify socioeconomic and psychological determinants of self-rated health among ambulatory and hospitalized patients. **Methods:** A cross-sectional study was carried-out in 2014. Two hundred and twelve patients over 44 years of age filled in a self-administrated questionnaire. Self-rated health (SRH) was measured by 5-point range scale. The level of well-being (WB), sources of social support, personal financial capacity, social status, etc. were studied as well. Data were processed by SPSS.v.19. Parametric and non-parametric statistical methods were applied. **Results:** Over 70% of the patients evaluated their health as fair and good. The persons with higher WB had higher SRH, that correlation was moderate ($r=0.452$; $p=0.001$). In regard to the social status the differences were significant - the unemployed, old age retirees or ill health retirees evaluated their health lower ($p<0.05$). A proportion of patients indicated two or more sources of emotional and instrumental support, but increased number of support sources had no effect on SRH ($p>0.05$). **Conclusion:** Identification of socioeconomic and psychological factors of self-rated health allows clarifying better their effect mechanisms and planning appropriate health services.

Key words: self-rated health, well-being, social support, social status, financial capacity

RISK SEXUAL BEHAVIOR IN STUDENTS AGED 12-18

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Summary

Aim: To identify risk sexual behavior in students

aged 12-18 in Veliko Turnovo region.

Methods: A cross-sectional study was carried-out in 2014. Three hundred and ten students attending seven schools filled in a self-administered questionnaire. The questionnaire included 48 questions, sixteen of which collected information about sexual behaviour, regarding contraception, casual sex with different partners, sexually transmitted diseases (STD), hygiene after sex, etc. Data were processed with SPSS.v.19. Parametric and non-parametric statistical methods were applied.

Results: Over 50% of students reported being sexually active, most of them since they turned 16. Almost half of the responders had had casual sexual partners and 46 percent had had sex within a week after initiation of a new relationship. Less than one third of students reported safe sex behaviour. Seven percent of the students had a history of STDs, and one in six did not practice proper hygiene after sex. **Conclusion:** Identification of all aspects of risk sexual behavior in students aged 12-18 provides an opportunity to study the problem systematically and in depth. Planning and implementation of effective health education programs at schools requires the application of an integrated approach with the participation of students, teachers, parents, health professionals and policy makers.

Key words: casual sexual partner, contraception, STD, after-sex hygiene

FAMILY FACTORS AND RISK SEXUAL BEHAVIOR IN STUDENTS AGED 12-18

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Summary

Aim: To identify family factors determining risk sexual behavior among students aged 12-18 in Veliko Turnovo region. **Methods:** A cross-sectional study was conducted in 2014. Three hundred and ten students were included in a

representative sample of students attending seven schools in Veliko Turnovo region. The respondents filled in a self-administered questionnaire, designed to collect data on family interactions, acts of sexual coercion, parental social status and their influence on sexual behavior of the students. Data were processed using SPSS.v.19. Parametric and non-parametric statistical methods were applied for the significant levels. **Results:** About one-fifth of the students were nurtured in incomplete families. History of a sexually transmitted diseases correlated with type of family ($p<0.05$). Poorer family interactions (rare family dinners and no conversations about sex) determined acts of risk sexual behavior – accidental contraceptive use during sex and postponing examination by an obstetrician ($p<0.05$). Students reporting sexual coercion had also had frequent casual sexual intercourse ($p<0.05$). **Conclusion:** Identifying family factors is of essential importance in planning effective sex education at school.

Key words: risk sexual behavior, sexual coercion, incomplete family, poor interaction

CURRENT CHALLENGES IN THE DEVELOPMENT OF COORDINATED POLICIES AND PRACTICES FOR PREVENTION OF CHILD ABUSE AND NEGLECT

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Summary

The last decade is characterized by major changes in the field of child protection. The prevention of child abuse and neglect is a key priority in the policy in that field. The aim of this paper is to present an overview of current tendencies in the policy, and practices for prevention of child abuse and neglect in Bulgaria, as well as to delineate the areas for changes. The possibilities for development of an unitary

register for children victims of abuse and neglect through minimal data set are discussed. The good practices in the frame of project “Coordinated Response to Child Abuse and Neglect via Minimum Data Set” (JUST/2012/DAP/AG/3250) are presented. The results show that despite serious changes in the legislation there still is a lack of an unified questionnaire for data collection and system for monitoring of child abuse and neglect cases at national and regional level.

Key words: child abuse, coordination, minimum data set, prevention

DATA ANALYSIS OF CHRONIC CARE MANAGEMENT IN GENERAL PRACTICE IN PLOVDIV REGION

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Summary

Introduction: Studies from the literature show that the prevalence of chronic conditions is expected to rise further. In Bulgaria the general practitioner (GP) is a gatekeeper who has a key role in coordinating all patients' health problems providing comprehensive care. Bulgaria has adopted a system of compulsory health insurance, so every patient has free access to the GP. The aim of the study was to analyse the data from the National Health Insurance Fund about GPs' activities for patients with chronic disease from Plovdiv region. Methods: A data analyses from the National Health Insurance Fund about GPs' activities in 2013. Results: We found that the GPs (N=390) from Plovdiv region take care for 706 283 patients, 25.32% of which is over 60 years. The data reveals that the total number of consultations in general practices were 166 3624. The relative share of consultation related to chronic disease management was 23.89%. The 10th most frequent diagnosis were diseases from 3 main classes - Diseases of the circulatory system, Endocrine, nutritional and metabolic diseases and

Diseases of the respiratory system. They represented 75.63% out of all registered diagnoses. Conclusions: Chronic diseases are real problem related to higher health care consumption. Detailed investigations must be done in order to improve long term health care in general practice. The research is supported by the intra-university grand № HO - 15/2014 Polypharmacy and multimorbidity among geriatric patients in general practice – implementation of patient-centred approach.

The research is supported by the intra-university grand № HO - 15/2014 Polypharmacy and multimorbidity among geriatric patients in general practice – implementation of patient-centred approach.

Key words: general practitioner, chronic disease

GENERAL PRACTITIONERS AND BALINT GROUPS

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Summary

Balint groups were first set up in the 1950s in London by the psychoanalyst Michael Balint, the son of a Hungarian general practitioner. Balint groups were designed to offer general practitioners a room to explore difficult interaction with patients. Case study aimed to present the Balint group, comprised of general practitioners, which have already been working for three years with monthly meetings. Results: In response to the Balint leader routine question as to who would like to present a case, one female general practitioner was keen to present a situation. The case was one of the most common - insisting on immediate consultation regardless the appointment. The patient was a deaf woman, for a long term in the physician list. The situation escalated to a noisy conflict in front of the medical office. The group members shared their feelings, ideas, associations and images. The

focus was on the patient and on the doctor, but as much on their relationship. The group succeeded in bringing out the hidden agenda as a key for avoiding unnecessary suffering, irritation and fruitless efforts both for doctors and their patients. Conclusion: In Bulgaria only a small minority of general practitioners recognizes the potential of Balint method, but the first steps have been made. Balint groups might help doctors to gain more control over their practice.

Key words: Balint group, general practitioners

INVESTIGATION OF THE INFLUENCE OF COMPLEX "EYE EXERCISES" ON THE VISUAL FUNCTION OF STUDENTS WITH VISUAL IMPAIRMENT

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Summary

Physical activity is an essential tool to achieve optimal humans performance and health. Students with visual impairment have serious difficulties in adapting to the environment - functional activity, communication, professional development. Education of students from disadvantaged health status is high priority area at the Medical College "Jordanka Filaretova" - Medical University - Sofia.

The aim of this study was to investigate the influence of the "Eye exercises" applied in program for physical culture and sport, on visual function and psycho-emotional state of students with visual impairment, and comply with their individual contraindications diseases. Object of the study were 20 people of both sexes in course of education in "Masseur with visually impaired." The complex included three successive modules: 1. Strengthening of viewers muscle. 2. Relax for the eyes. 3. Verification of

vision. The results were reported through surveys test containing 10 open and closed questions. Analysis of the results showed that 85.5% of students reported improvement in functional status after viewing the complex of exercises. In conclusion, we can recommend the regular use of "Eye exercises" system to permanently improve the ocular accommodation and subjective state of students with visual impairment.

Key words: eye exercises complex, impaired vision, visual function

GUIDELINES FOR IMPROVING SCHOOL HEALTH EDUCATION

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Summary

Background: Health education is a process of improving health knowledge and developing life skills which are conducive to individual and community health. Its objectives are to provide information about health-related problems of present interest, create positive attitude to health and guiding into healthy lifestyle.

The aim of this paper is to observe the characteristics of health education at schools in terms of the school nurses, teachers and students as participants in this process.

Methods: Data were collected by self-administered questionnaire among school staff, students and their families in the comprehensive study of health promotion at schools in the region of Pleven. Some of the questions examine the attitude of individuals and groups to the health education at school, their opinion for its efficiency and preferred topics and methods of conducting.

Results: All of the respondents consider that health education is an important part of school health promotion but there is different opinion about its quality in different groups under study.

Three quarter of school nurses versus only 25.6% of teachers assess it as systematic and adequate. Over 80% of health education at school is carried out by traditional and unattractive methods of health education or don't correspond with information needs of students. In 74.1% of cases they define themselves as a passive audience in this process. 60% of the respondents realize better effectiveness of team-work for health education. Conclusion: To reach its aims school health education should be more appropriate to user's interests and needs.

Key words: school health promotion, health education, school nurses, healthy lifestyle

COMPARATIVE ANALYSIS AND EVALUATION OF PROFESSIONAL STRESS IN CONTROL ACTIVITIES

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Summary

Psychosocial factors (PSF) are leading among the new risks and modern challenges in providing safe and healthy conditions at work. Due to the high mental strain the profession "inspector" is one at highest risk for stress at work. The aim of the present study was a comparative analysis of the control activities' PSF, their rating, and investigation of the subjective perception of stress at work. Contingent and Methods: Two exhaustive cross-sectional studies were conducted consecutively, involving 338 and 355 inspectors, respectively, working at two organizations with control activities – men and women, aged from 24 to 70. The statistical processing of data utilized the SPSS – v. 17, software version 17, at a significance level - $P < 0.05$. Results A number of common characteristics were found in the activities, composition and structure of the different groups

of government staff: the number of women was greater (58% and 62.6%), with people over 40 years of age prevailing (67.3% and 70.9%), and the group with specialized work experience from 6 to 10 years comprising the greatest number of people. We found reliable differences in the answers concerning task requirements and activity organization. Rating PSF, one of the groups of inspectors placed "insufficient time to perform the check-up" in the first place, whereas the other one reported "conflicts while performing the check-up". PSF exert an influence on the cognitive functions of inspectors, change their behaviour and emotional reactions and result in more frequent complaints of health deterioration. We found difference in the subjective stress perception depending on gender, age and duration of work experience as an inspector.

Key words: psychosocial factors; professional stress; early manifestation; cognitive functions; behaviour; emotions; somatic complaints; task requirements; organizational factors; working environment factors; labour inspectors and construction activities inspectors

ANALYSIS OF MORBIDITY WITH TEMPORARY INCAPACITY FOR WORK IN LABOUR INSPECTORS

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Summary

It is known that the increased morbidity with temporary incapacity for work (MTIW) is related to the stress level and psychosocial factors at work. Practices for stress management, conflict avoidance and optimization of working conditions are known to reduce MTIW level. The aim of the present study was to analyze MTIW and propose measures to optimize and reduce strain at work. Contingent and Methods: The study covered MTIW in labour inspectors, a total of 334 people, men and women aged from 24 to

69. The evaluation was based on 11 of the generally accepted indices. MTIW structure was analyzed. Results: MTIW was rated as high according to case frequency and as very high according to day frequency. The average duration of a TI case was 12.63, and the relative share of people who were frequently taken ill for a long period was 12.81. In the ITI structure, the first place was occupied by diseases of the respiratory system (42.0%), followed by diseases of the nervous system (18.8%), the digestive system (9.9%), CVS (8.3%) and MSS (7.2%). These 5 groups of diseases covered 86.2% of all diagnoses. The remaining 7 groups of diseases covered less than 14% of the diagnoses. The group of people most frequently taken ill for long periods included 28 inspectors who had used 42.5% of the total number of days. Two inspectors with 140 days' absence from work were cases of TI resulting from severe stress and adaptation disorder. Measures were proposed regarding the reduction of strain at work and the risk of stress.

Key words: psychosocial factors; professional stress; labour inspectors, incidence of temporary incapacitation; incidence structure

TEACHER'S WORK STRAIN AND WELLBEING IN AGE DYNAMICS

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Summary

The aim of the representative study on teachers was to reveal work conditions and intensity causing strain and their mental health effects to reveal their age dynamics based on the "P-E-fit" stress model. Methods: Study subjects were 490 teachers from 20 public schools, above 90% women, mean aged 47.8 with 64% > 45. Data were obtained on various job and sociodemographic characteristics and turnover intention, work intensity, perception of 29 work strain sources and 17 psychosomatic complaints. Composite job strain indicator was calculated and correlated with health indices and used as

independent variables in regression analyses on health complaints like age and perceived work stressors. Results: Age correlated low but significant with job strain and number of health symptoms. Job strain, stressors, and health complaints correlated negatively with job autonomy and control. Marked gender differences in age, stress and health confound the linear correlation. Therefore 4 age groups were formed and compared. Significant age difference) was found on rising of job strain consecutively from first to third age group with some decline in teachers aged >55. Regarding the number of perceived work stressors and health complaints this tendency preserved, reaching significance only between the group >35 and the 46-55 aged (42.4%). This 'follow-up' age development is more pronounced compared with our first teachers study 20 yrs ago. Regression analyses do not reveal age as significant predictor for tested dimensions. Health symptoms profiles differ between age groups with prevailing of fatigue, MSD and anxiety (more than 50%). Conclusion: Composite work stress measure rise uneven with teacher's age and experience. Data suggest what should be done for teachers to adapt better to the aging process to achieve a successful and positive older adulthood at work (ecological model of aging).

Key words: work strain in schools, stressors, psychosomatic complaints, gender, follow up

HEALTHCARE REFORM IN BULGARIA TO CONTINUE: IMMEDIATELY!

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Summary

Health reform in Bulgaria must to continue because: (1) The major health indicators of the population in our country over the years become more unfavorable in comparison with the countries of the European Union; (2) health care in this country do not satisfy the needs of citizens and doesn't match the resources spent. Construction and development of the health

system as a system that it means need a high degree of appropriate integration between its components to obtain systematic effect which must always exceed the sum of the effects of its various components. This cumulative effect is reflected in the health indicators of the population and is the main task of management. Modern health system in Bulgaria is disaggregated and disintegrated. Its major systematic defects consist mainly in damaged relationships and system-stabilizing balance, not in "not enough resources" or "corrupt" staff.

The most significant system failures are:

- the largest relation - between citizens and the health care system - is deformed;
- desperately needed relations, relationships and responsibilities in the health system are highly divided;
- relations and links between health system (as an organizational structure) and the staff who works in it;
- relationships and connections between the two basic functions of the health system - prevention and treatment.

Necessary reform of the health system must continue with the formation of a national health policy that is implemented consistently and purposefully throughout the health system.

Health policy reform should follow the four directions: (1) Policy of liberalization; (2) Balancing Policy; (3) Market policy orientation; (4) Policy of citizenship and responsibility.

Key words: health system; health policy reform

CARDIAC REHABILITATION AFTER CARDIAC SURGERY

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Summary

Purpose: Presentation of program of cardio rehabilitation after cardiac surgery - coronary

artery bypass surgery. Methodical approach: Complex physiotherapy includes passive and active exercises dosed walking and exercise activities in the active life. Main results: Cardiovascular mortality is significantly reduced in patients conducted cardio rehabilitation. Conclusion: Cardiac rehabilitation in patients after cardiac surgery improves functional capacity, relieves symptoms and reduces risk factors.

Key words: cardiac rehabilitation, exercises, cardiac surgery

KINESITHERAPEUTICAL APPROACH POSTNATAL PERIOD

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Summary

Purpose: In the postnatal period kinesitherapy provide general and local effects on the organs and systems of the body and increases its overall tone. The purpose of kinesitherapy in this period is more rapid and complete recovery of the physical activity of women. Methodical approach: The hold psychogenic condition is removed, physical exercises elevate mother's mood, which is important for her rapid recovery. Increasing mental tone of the mother improves metabolism, appetite, absorption of ingested food and others, which reflects favorably on lactation. Main results: The overall tone of the body and the blood circulation in the pelvic organs are enhanced, uterine contractions are improved for a full release of the lochia and its rapid involution. Adjust the emptying of the colon and the bladder. The abdominal muscles of and the pelvic floor are strengthened. Conclusion: Kinesitherapy can be applied to all mothers who have had a normal pregnancy and normal birth and postnatal period that occur without complications.

Key words: pregnancy, delivery, kinesitherapy

SIGNIFICANCE OF THE COMMUNICATION BETWEEN PATIENTS AND HEALTHCARE PROFESSIONALS IN HOSPITAL SETTINGS

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Summary

Communication between patients and healthcare professionals is an essential element of the treatment process. This element does not require financial resources but is of substantial importance for patients' satisfaction with the quality of hospital care. The aim of this paper is to analyze the specific characteristics of the communication process between patients and healthcare professionals in the course of hospital services provision. Material and methods: Data was collected with self-administered questionnaires distributed among 280 randomly selected patients in 14 hospitals in the North Bulgaria. All of 256 patients participated in the study (response rate - 91.4%). The survey was conducted in one year period from December 2011 to December 2012. The statistical analysis was performed with MS Office Excel 2003 and SPSS v.13. Results and discussion: Statistically significant differences were found concerning the number of hospitalization and patients' satisfaction with the communication with senior healthcare professionals ($\chi^2=21,412$; $df=8$; $P<0,05$ $\Phi=0,289$). Patients' appraisal of the ordinary healthcare professionals was not influenced by the number of hospitalization. There were no “unsatisfactory” appraisals of the ordinary staff members while 1.2% of the patients gave those for the senior healthcare professionals. The excellent appraisals were in favor of the ordinary staff members – 46.1% compared to 42.2% for the senior healthcare professionals.

Conclusion: Elaboration of the communication

skills in the course of health care services provision is a continuous process and a precondition for enhancing the patients' satisfaction and the quality of hospital health care services.

Key words: communication, patient, healthcare professionals

HOW TO INTEGRATE DOWN'S SYNDROME CHILDREN

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Summary

Down syndrome is the most frequently occurring chromosomal disorder. About a hundred children are born with this disease every year in Bulgaria. Having such kid in the family usually causes disturbance in the family and that is why many parents choose to leave their kid to be raised in an institution. However, families and their down syndrome children could be given hope for a more effective integration with the help of a multitask team that insures adequate health care. The aim: To interpret the problems that children with Down Syndrome face and the possibilities for integration with the help of the Re-PoD project at Special School “P. R. Slaveikov” in Pleven. Medium and Methods: The functions of the Re-PoD project have been carefully studied by parents and specialists, working with them during a study session called “Teach the teachers” organized by the school. Results: Based on the information, received by the Re-PoD project, we introduce the main components of effective therapy in motive, cognitive, behavioral and social aspect. The problems that children with Down syndrome face are mainly in those four aspects. Despite the deficits, there are still possibilities for effective integration. Conclusion: In case the health specialists,

educational institutions, family and society engage adequately, comprehensively and opportunely, the Down Syndrome child can really have perspective of self-dependent activity and thorough display of its potential.

Key words: Down syndrome, integration, Re-PoD project, effective therapy

GROWTH HORMONE-ARGININE – BIOLOGICAL ACTIVITY

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Summary

The wide range of action and synergy in the activities of growth hormone and arginine on the one hand, and insufficient information about their connection and mutual action - on the other, are a challenge to medical science and nutrition. The purpose of the study is to indicate the mechanism of action of growth hormone and arginine, their connection and influence on the human health. **Material and Methods:** The current scientific information on the topic in MEDLINE, for the past 10 years was analyzed. **Results:** The analysis of the scientific data shows that arginine activates growth hormone secretion by inhibition of hormone somatostatin activity. This fact is included in the “arginine test”, for checking-up the deficiency of growth hormone. **Conclusion:** Basic knowledge of the advanced biological role of growth hormone and arginine, in the light of their mutual reaction in the biochemical traffic in the body is necessary for creation of effective models for treatment and medical care in accordance with the individual requirements.

Key words: arginine, growth hormone, biological activity

PSYCHO-ANALYTIC APPROACH IN THE INTERPRETATION OF NEEDS AND REALIZATION ATTITUDES OF PERSONS, TRAINED IN THE HEALTHCARE SPHERE

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Summary

Identification of the needs of students in the healthcare sphere being trained pursuant professional lines is one contemporary necessity, which corresponds directly to the Plan for Overcoming the Crisis via Educational Policies for Flexible Security “flexicurity” (pursuant the Lisbon Strategy and Education and Training Frame “Europe 2020”). Its sole identification is an utterly insufficient act, as through it the presence or absence of problems in the course of academic training and interaction are being registered. What are the predictors that produce the needs, and how are the needs associated with the realization expectations, these are some of the questions which we set up at beginning of the survey. The target of this material is to execute an analysis of the needs and the attitudes of the persons trained in the healthcare sphere through application of the instruments of psycho-analytic theory. One hundred and fifty (150) students were questioned through a standardized questionnaire and a freely-structured questionnaire. For the processing of the received results has been applied a statistic program. The data are being discussed while applying the following instruments: Ego-structure, transactions and life scenario. The conclusions are aimed to clarify the formulated questions through “peeping” behind the glass of formal relations. In several cases, the problems within the academic environment are connected with the individual scenario-type decisions, which most probably would affect the future professional and personal realization of the trained persons.

Key words: needs, attitudes, students, Ego-structure, life scenario

STRESS FACTORS WITH PERSONS OCCUPIED IN THE TAILORING INDUSTRY

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Summary

During the last years the sector of medium- and small-sized companies, such as the tailoring ones, is more and more recognized as an important factor ensuring employment in the country. The tailoring industry is traditionally well developed and is one of the most popular production spheres.

The target of this survey is to identify the basic stress-factors with persons occupied in the tailoring industry. For this aim has been used a freely- structured questionnaire, which includes questions clarifying the presence or absence of stress, the work type, the harmful environmental factors and demographic data. Object of the survey were 70 persons occupied in small and medium-sized companies from the tailoring sphere. The acquired results permit to make conclusions about the specific nature of the stress factors, connected with the technologically-developed innovative working environment and the impact of the psycho-climate over the satisfaction from work.

Key words: tailoring industry, stress, harmful industrial factors

PHENOMENON OF SUICIDE IN FOUR SOUTH-EASTERN EUROPEAN COUNTRIES

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Summary

Suicide remains a most important issue in public and mental health with strong cultural, ethnic and socio-economic determinants. Our study represents a first step of a collective effort in four countries from South-Eastern Europe (Albania, Bulgaria, Romania and Serbia) towards discovering the common points and developing a joint prevention program. **Methods:** Retrospective analysis of national and international data and literature regarding suicide and socio-economic data between 2001 and 2012 in the countries mentioned above. **Results:** During the studied period, suicide has recorded various evolution in all the four countries, with a standardized death rate per 100.000 inhabitants which ranged between 10.5-13.6 in Romania, 9.3-14.3 in Bulgaria, 13.2-16.2 in Serbia, respectively 4.2-4.8 in Albania. By gender, the suicide rate had consistently higher values in males - three times higher than in females, on average, while the most spectacular decrease for both genders was recorded in Bulgaria, from a maximum of 14.3 in 2002, to 9.3 in 2010. In the other three countries, the rate remains relatively constant for the same period. The economic indicators such as Unemployment Rate or Gross Average Monthly Wages for the same period have a quite similar evolution, an element which supports the hypothesis of a relationship between economic status and suicidal behavior in this region of Europe. **Conclusions:** Suicide represents an important common problem for all the four countries from our study with deep connections to the socio-economic factors. A more comprehensive approach becomes necessary in order to obtain more accurate data.

Key words: suicide, gender differences, economic status

OVERVIEW OF THE CONCEPTUAL SHIFT IN MEDICINES REGULATION PARADIGM OF RX-TO-OTC SWITCHES

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Summary

Introduction: A new era of switch in regulatory status of medicines is commencing. Many governments around the world look to self-care to help carry the weight of the diseases burden and effectively manage the scarce public healthcare budgets. OTCs are being recognized as more than convenience products and coming into their own as an essential element in the countries' health strategies. Aim: This overview analyzes the conceptual shift in medicines regulation paradigm and highlights its importance for the OTC industry. The switches of the future are not easy, and a strong public health argument will be central to ensuring OTC availability and success. Materials and method: A literature review of researches that has been conducted, experiences from other countries, and publically available information from agencies in charge of regulating medications switches were analyzed. Results: Rx-to-OTC switches are undoubtedly among the largest opportunities in consumer healthcare and can change a business overnight. But switches are hard: every first-in-class switch is different and presents a new set of problems. In future, we will see switches for chronic, progressive, recurring or symptomless conditions, each with its own challenges. It must be remembered that not every great Rx brand becomes a great OTC brand; the consumer offering has to be built from the ground up, although it can (and should) build on the Rx heritage. Switches also come in many different forms in different countries, and strategies must reflect these differences. Conclusion: Performing the regulatory procedure of Rx-to-OTC switch is always about increasing access: successful switching may involve removing barriers one at a time until the medicine is freely available and consumer communication is visible and compelling to the target audience.

Key words: Rx – to – OTC, switch, alternatives, medicines, regulation

**PRACTICAL ASPECTS OF
TEACHING HOSPITAL HYGIENE OF
STUDENT NURSES IN MEDICAL
UNIVERSITY - PLEVEN**

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Summary

Training in hospital hygiene has an important role for acquiring of appropriate techniques for the prevention of nosocomial infections (NI) in hospitals. The purpose of the survey is to examine the practical application of knowledge and skills of students in "Nurse" on the prevention and control of NI. Material and methods: 1. Sociological methods: The survey was conducted based on data from the group anonymous questionnaire covering all 46 student nurses in fourth year – in the Medical University, Pleven. The tools of the study is a standardized survey conducted at the end of the summer semester of the academic 2013/2014 year. 2. Statistical methods: The survey data were processed with a computer statistical program STATGRAPHICS Plus for WINDOWS. Results: Healthcare-associated infections are transmitted most often by the hands of staff. Most students declare that they always performed when necessary hygienic disinfection of hands. But most of them are not familiar with the appropriate disinfectants, the amount of disposable disinfection and exposure time. Students receive sufficient help and support from lecturers and clinical tutors in the application of standard precautions during their Probation Practice. Negative is the fact that most of the students have cases of injuries with used needle after manipulation of the patient. Analysis of the data showed that most of the students are able to define NI and are aware of the role of hand disinfection both for patient safety and medical personnel protection. At the same time, only some of them were able to correctly identify the risk factors for NI transmission and almost all underestimated the importance of team work and responsibility in IC and prevention. Conclusion: Student nurses during their pre-graduation

internship reinforce the theoretical and practical training in the field of hospital hygiene. Before graduation, they must have acquired basic knowledge about the control of NI and to successfully apply standard precautions. The survey confirmed that there are gaps in the practical training of students in Hospital hygiene.

Key words: nosocomial infections, nursing students, education, questionnaire survey

COPYCAT SUICIDES AND MASS COMMUNICATIONS

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Summary

Objective: Suicide as a problem is a subject of study of many disciplines. The media are an important source of the formation of views and beliefs. The role of the media in suicidal behavior has been discussed for many years. In our literature, this problem is not considered. The aim of our study was to trace the relationship between media coverage of self-immolations in 2013 and completed suicides by months in 2013 in Bulgaria. Materials and methods: There are standard forms "death notification" and "card for suicidal action" of the Ministry of Health. The information is collected by the regional health inspections and summarized by the National Center for Public Health and Analyses. Made overview of media coverage of the self-immolations. Results: It was found a significant increase in death by suicide in the months following the massive coverage of the first self-immolations in Bulgaria. There is a second peak after the coverage of self-immolations in the summer of 2013.

Conclusion: Journalists need to be systematically taught how to present this special sensitivity information about suicide.

Key words: suicide, media, prevention

THE ROLE OF CLINICAL LABORATORY PARAMETERS IN THE PREVENTION OF OBESITY

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Summary

Overweight and obesity are becoming increasingly actual problem with significant health and social consequences. These topics are a subject of a number of scientific events. On that way 21st European Congress of Obesity was held from 28.05 to 31.05.2014 in Sofia, providing a wide range of scientific information on the issue. It is a challenge to the preventive medicine, requiring specification of parameters for assessment of the risk factors and for diagnosis precision. Purpose of this study is to provide current information on the importance of clinical-laboratory parameters to effective prevention and accurate diagnosis of obesity. Materials: Scientific information, published in three international journals over the past decade (Int. J. of Obesity, Am. J. of Epidem., Am. J. Clin. Nutr.), is analyzed on the problem as well as information provided by the 21st Congress of Obesity. Results: The analysis of the existing recent data showed that almost all researchers include the following indicators: total cholesterol, LDL-cholesterol, HDL-cholesterol and triglycerides in their prevention models against obesity. The indicators leptin and adiponectin, which are specific in preventive activities against obesity, are of interest. The role of Vitamin D deficiency, which is considered a risk factor, is discussed. Conclusion: Current scientific studies indicate the need of broadening and enriching the range of indicators used in both the prevention and the diagnosis of obesity.

Key words: obesity, clinical laboratory parameters, prevention, diagnosis

BUSINESS ETHICS AS PART OF THE TRAINING OF STUDENTS IN MASTER PROGRAMS OF THE FACULTY OF PUBLIC HEALTH AT THE MEDICAL UNIVERSITY OF PLOVDIV

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Summary

The objective of this study was to analyze the attitude of students towards the subject Business Ethics.

An inquiry was conducted among students in two Master programs of the Faculty of Public Health at the Medical University of Plovdiv. The study was conducted using the individual direct poll method during the Fall term of the 2013/2014 academic year. The study was exhaustive for the students in the Master programs Management of Health Care and Management of Medical and Social Activities.

The results from the study show that (75.8%) of the respondents expected the subject Business Ethics to be included in their training course. The students believe that the knowledge that they acquired in this subject could be applied in the following areas of their daily activities: communication with patients and their relatives (82.3%), communication with peers to improve ethical relationships within the team (70.2%), communication with superiors (62.1%), etc.

Key words: business ethics, master program, management of health care, public health

RESEARCH ABOUT THE CONSUMPTION OF OUTPATIENT MEDICAL CARE BY INSURED PEOPLE OVER 18 YEARS OLD IN THE REGION OF PLEVEN ACCORDING TO THE FREQUENCY OF THEIR PROPHYLACTIC MEDICAL EXAMINATION FINANCED BY THE NHIF

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Summary:

Introduction: Limited resources for health care are an undeniable fact. Prevention and early detection of diseases are part of the tools that should lead to lower costs and improve population health.

Objective: The aim of this study is to establish the use of outpatient medical care by the insured people over 18 years old in the Pleven region depending on the frequency of their prophylactic medical examinations. **Sources and Methods:** Official information from the databases of the National Health Insurance Fund and the Regional Health Insurance Fund – Pleven has been used. Data processing is performed with statistical methods. **Results:** For the period 2006 – 2012 y., with annual prophylactic medical examinations in the country are covered from 35.8% to 48.3% of eligible, as for the region of Pleven ranged from 33 to 45%. For the same period, only 6% of insured have gone regularly (annually) to a prophylactic examination, 65% have gone only in a few years, and 29% never went. Most regularly people over 65 years old go to a prophylactic medical examination. Men less often attend health check with a more significant difference between the sexes at a younger age. Women who

regularly go to a prophylactic examination have five times as many medical research as compared to those who have not gone even once on such examination, while for men the difference is even bigger - about seven times. The average cost of medical diagnostic tests for the attends of prophylactic examination in 2013 is 15.20 lv for men and 16.9 lv for women and 2.5 lv for men and 3.9 lv for women who have never been to such an examination. Conclusions: People that regularly go to a prophylactic medical examination are greater consumers of outpatient medical care.

Key words: health insured people, prophylactic examination, medical diagnostic tests

IMPORTANCE OF THE MEDICAL LABORATORY TECHNICIAN FOR THE DIAGNOSE OF NUTRITION TOXIC INFECTIONS

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Summary:

Intestinal infectious diseases – dysentery, salmonellosis, epidemic hepatitis, coli-enteritis, cholera and others are widespread even nowadays, despite the progress in the medical technologies and sciences. They can grow into heavy toxic infections soon after origination in an individual. The timely and accurate diagnosis, which depends to a great extent on the laboratory analyses, partly microbiologic ones, is of a great importance for the prevention of development of infectious diseases and dissemination. Main performers of these analyzes are The Medical Laboratory Technicians of professional direction “health cares”. Aim of this study is to be shown the role and importance of the medical laboratory technicians in diagnosing of nutritional toxic infections. Analyses of the functions of these specialists, as well as a review of available information about this problem, are performed for its achievement. Results: The main stages of the function of Medical laboratory technicians on

analyzing nutritional infections are presented as a result of the investigation and the importance of the laboratory analyzes in their diagnosis. Attention is paid to the importance of sanitary and microbiological monitoring for prophylaxis and prevention of the emergence and dissemination of infectious pathogens.

Key words: Medical Laboratory Technician, laboratory diagnosis, nutrition toxic infections

INNOVATIVE APPROACHES TO INTRODUCTION OF ETHICS IN CLINICAL PRACTICE

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Summary

Bioethics as an academic discipline appeared in the USA in the 1970^s. The current stage of development of bioethics is focused on its effective application in clinical practice. The aim of this report is to present three innovative approaches to introduction of ethics in clinical practice – ethics café, students' clinical ethics committee and daily-dose-of-ethics. Methodology: Review and comparative analysis of the three approaches outlining their advantages and drawbacks. Discussion. Ethics cafes are organized as a discussion forum for the staff on every-day basis. Such experience applied in geriatric care settings was shared by the Schwage award winner 2014. The café offers supplementary service to the ethics committee in more informal background. Similar activities exist in many universities encouraging interaction about ethical issues pertaining to clinical practice. Students' clinical ethics committees create opportunity for timely discussion of real ethical problems, encountered during education, thus increasing ethical sensitivity and improving moral reasoning of future health professionals. The daily-dose-of-ethics method is in the form of pop-up multiple choice questions which appear at the first time logging of the computer in the clinical shift. Brief rationales for every choice, reference links and contact information are provided as well as

certificates after completing a level. Conclusion. Busy daily routine and insufficient ethical knowledge hinder effective addressing of ethical issues in patient's care. Traditional ethics teaching methods of short term courses, conferences and discussion sessions in hospitals are time consuming. Ethics cafes and daily-dose-of-ethics approaches offer step-by-step model of acquiring ethical knowledge while doing the actual clinical work.

Key words: bioethics, daily-dose-of-ethics, ethics café, students' clinical ethics committee

DEVELOPMENT OF THE IDEA OF JUSTICE AND ITS APPLICATION TO THE DEBATE ON THE ALLOCATION OF HEALTHCARE RESOURCES

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Summary

Resource allocation in health services is continually evolving problem and a matter of ongoing debate since the mid 20th century. Health professionals, legislators and philosophers have been reflecting over the question what the fairest way to allocate resources is. The aim of this report is to analyze the theories of justice, namely the utilitarianism, libertarianism and John Rawls theory, and their application to the allocation of resources in health services. Methodology. Review, analysis and philosophical reflection of literature sources. Discussion. The utilitarian understanding of morality is that morality consists in weighing costs and benefits and maximizing happiness. However, how can we set a value on the human life? The center point in the libertarian theory of justice is the right of liberty understood as the right to do what you want with the things you own. In the field of resource allocation in health services this means that the one who owns the resource has the obligation to make the just decisions. John Rawls understands justice as fairness. He constructs his view on two principles: equal basic liberties for all citizens and socio-economic equality, but only those who

work for the least well off member of the society. Rawls theory is applicable to the waiting list theory. Conclusion. Despite that justice is an abstract notion and the society tends to attribute subjective meaning to it, the theories focused on justice can be beneficial to the development of policies and strategies for resource allocation in health care.

Key words: ethics, theory of justice, resource allocation, medicine, health service

SIGNIFICANT OTHERS AND SOCIAL ALCOHOL USE IN ADOLESCENTS

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Summary

Introduction: The association between adolescent drinking and drinking of significant others is well known but underlying mechanisms are still not well understood. Purpose: To investigate the association between social drinking in adolescence and drinking patterns of their significant others. Methods: We conducted a survey using self-completed questionnaire about alcohol drinking habits. From 903 students (aged 15-19) 279 (30.9%) were found to be abstainers (NDA) and 455 (50.39%) – social drinkers (SDA). These two groups were compared statistically about drinking patterns of their significant others. Results: It was found that SDA were more likely to have fathers (OR=0.26, 95%CI =0.19-0.37), mothers (OR=0.26, 95%CI =0.19-0.37), friends (OR=0.26, 95%CI =0.19-0.37) and lovers (OR=0.26, 95%CI =0.19-0.37) that drink socially than NDA, but there were no significant differences in regular drinking of their fathers, friends and lovers. Only SDA mothers were more likely to drink regularly (OR=0.26, 95%CI =0.19-0.37). SDA were also more likely to receive alcohol offers from all their significant others, except lovers. Conclusions: The social drinking in adolescence seems to be strongly

socially motivated by drinking modeling and social pressure. The SDA mothers' regular drinking is hard to explain in terms of social learning and social control theory and needs alternative explanation.

Key words: parental behavior, significant others, behavioral modeling

RISK CLUSTER ASSOCIATED WITH SOCIAL DRINKING IN ADOLESCENCE

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Summary

Introduction: Recent scientific evidence show that risk behaviors tend to form risk cluster, but less attention is paid to clustering ability of light forms of risky behavior like social drinking. **Objective:** To analyze the risk clustering ability of social drinking. **Material and Methods:** We conducted a survey using a self-completed questionnaire. From 903 students (aged 15-19), 279 (30.9%) were found to be abstainers (NDA) and 455 (50.39%) – social drinkers (SDA). These two groups were compared statistically concerning smoking and drugs use among them and their significant others. **Results:** SDA were more likely to smoke (OR 3.29, 95%CI 2,35-4,59) than NDA but not more likely to use soft drugs. Their fathers (OR 1.4), friends (OR=1.78) and lovers (OR 2.01) were also significantly more likely to smoke, but only friends were more likely to use soft drugs (OR 1.75). SDA were also more likely to start smoking in order to be closer to their peers (OR 1.84) and to smoke when communicate with peers (OR 2.12). **Conclusions:** Risk clustering in social drinking adolescents is limited to smoking and does not expand to drug use, nevertheless the provocation of the friends. The heavy smoking among SDA significant others might contribute for SDA smoking. So SDA seem to be resistant to the psycho-social mechanisms adding drug use to

drinking, but sensitive to psycho-social mechanisms adding smoking to drinking.

Key words: risk cluster, parents, friends, significant others, adolescents, alcohol

THE PRESENCE OF BEHAVIORAL MODEL "NON-DRINKING PARENT" IN FAMILY PREVENTS ADOLESCENTS FROM SOCIAL ALCOHOL DRINKING

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Summary

Introduction: Parents alcohol drinking is associated with an increased risk of alcohol consumption among adolescents and social drinking often is first step to regular alcohol consumption. **Purpose:** To investigate the association between social drinking in adolescence and parental alcohol consumption. **Methods:** We conducted a survey using self-completed questionnaire about alcohol drinking habits. From 903 students (aged 15-19) 279 (30.9%) were found to be abstainers (NDA) and 455 (50.39%) – social drinkers (SDA). These two groups were compared statistically about drinking patterns of their parents. **Results:** It was found that SDA are fourfold less likely than NDA to have two alcohol abstaining parents (OR=0.26, 95%CI =0.19-0.37) and fourfold more likely to have two alcohol drinking parents (OR=3,89, 95%CI =2,77-5,45). There were no significant differences between SDA and NDA about probability to have one abstaining and one socially drinking parent and SDA were less likely to have one abstaining and one regularly drinking parents (OR=0.54, 0.37-0.8). **Conclusions:** The social learning theory explains well adolescent drinking patterns when there is no contradiction in parental modeling. It seems however that the presence of contradicting patterns of parental alcohol drinking needs other explanation. As contradicting parental modeling prevents

adolescents from social drinking, it could be considered in health prevention intervention.

Key words: adolescence, social drinking, parents, social learning theory

POSTERS

KINESITHERAPY FRACTURES CLAVICULAR-PRESENTING CLINICAL CASE

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Summary

The most common mechanism of clavicular fracture is a fall directly onto the shoulder. Fall on the outstretched hand actually causes fractures in only 6% of cases. The present clinical case is of a 28 year old patient with a fracture of the clavicle treated conservatively by dressing type "Dezo". Kinesitherapy was held in the early period after immobilisation. Purpose of kinesitherapy of the clinical case is full recovery of functional movements of the upper limb. Tasks after patch removal in the early period after immobilisation: Improvement of the general condition of the patient, reduce pain, preserve and maintain range of motion in joints, restore muscle tone of the shoulder girdle and upper limbs, prevent contractures. Kinesitherapy funds to achieve the goal and run goro-postavenite tasks include, generally developing exercises for free from the trauma limbs, passive movements of the shoulder girdle, active exercises to horizontal level for the shoulder girdle, active movements to the horizontal level, active-assisted exercises for abduction, minimal isometric contractions.

Key words: clavicular fracture, kinesitherapy

REHABILITATION ACTIVITIES IN PATIENTS WITH CEREBRAL STROKE

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Summary

Stroke is the most common cause of severe disability and death. Bulgaria is one of the first places on morbidity, mortality and morbidity of SMBs. It is the third leading cause of death in the 40 industrialized countries in the world after ischemic heart disease (IHD) and neoplastic diseases. Its outstanding medical and social significance is determined not only by its high frequency and relatively high mortality, but also from severe disability of the majority of survivors requiring special care. Therapeutic activities include a great therapy drug therapy, physical therapy consisting of electrotherapeutic procedures. electrostimulation with low frequency currents, paraffin, cryotherapy, wet wraps in Kennu and hydro procedures. The concept of neuromuscular reeducation refers to sensory motor reactivity of patients with spastic they hemiparesis. With a good therapeutic result enjoy a number of specific techniques kinesis, previously removed the functional deficits of patients to formulate goals and tasks of kinesitherapeutic program. In the application of multi-Co-ordination approach, patients with stroke significantly improve state functionality and quality of life.

Key words: cerebral stroke, rehabilitation activities

JOINT ACTIVITY OF THE CLINIC OF PHYSICAL AND REHABILITATION MEDICINE AT THE UNIVERSITY HOSPITAL – PLEVEN, WITH THE „GORNA BANYA” NATIONAL CENTER FOR PROSTHETICS AND REHABILITATION

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Summary

Introduction: Amputation is a life-saving operation, and the consequences have negative influences on man not only regarding his physical abilities, but in all other life aspects – social, mental and emotional, professions and family life. The purpose of this announcement is to popularize the joint activity of the Clinic of Physical and Rehabilitation Medicine at The University Hospital – Pleven, with the Gorna Banya National Center for Prosthetics and Rehabilitation, for development of a specialized sector for training of patients with amputated lower limb to walk with prosthesis. Materials and methodology: In the beginning of 2014, after signed agreement for joint activity, the Centre provided all necessary equipment (auxiliary walker, therapeutic staircase and a trestle, an uneven surface flooring and moving surface flooring), for training of patients with prosthesis. Main obligation of the Clinic is to admit patients with prosthesis from the National Centre, in the Rehabilitation Ward, in compliance with clinic path № 237, and to train them walking with prosthesis on various surfaces and to get over obstacles. Results: The admitted patients with amputated lower limb are provided with transportation from their homes to the University Hospital and back, as well as with specialized rehabilitation programme that accelerates and assists the training for using prosthesis. Conclusions: The amputation of limbs almost always leads to severe stress state and depression that can be surmounted with the help of suitable rehabilitation and ergotherapy. The complete physical and rehabilitation programme shall be started on time, and necessary means and methods for supporting and facilitating the daily activities of people with permanent disabilities shall be applied.

Keywords: amputation, prosthesis, rehabilitation, occupational therapy

RECOVERY FUNCTIONS OF SHOULDER COMPLEX AFTER ARTHROSCOPIC ADJUSTMENT OF BANKART LESIONS

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Summary

In this report, we analyzed one of the most common reasons for the development of ventral shoulder instability - Bankart bone lesion, its surgery and postoperative rehabilitation. The purpose of this study was a comprehensive analysis of patofactors for development of ventral shoulder instability after avulsion of glenohumeral capsule-ligament complex of the ventral edge of the labrum, and structuring of complex rehabilitation approach after arthroscopic correction. Clinical health behavior. At present, due to its many advantages (minimal trauma, shorter recovery period, minimal residual dysfunction, etc.) in clinical practice is increasingly used arthroscopic capsular correction in the treatment of Bankart lesions. In recent years, significant progress in arthroscopic surgery allows this type of operation, and development of appropriate elements for reinsertion and strengthening of avulsion. Complex rehabilitative behavior. This report offers a comprehensive rehabilitation approach builds on the base of differential, patokinesiologiyal analysis of pre-clinical states and dysfunctions in different phases of the postoperative period after Bankart lesion.

Key words: Bankart lesion, rehabilitation

STATISTICAL ANALYSIS OF THE FORENSIC AUTOPSIES, PERFORMED IN THE DEPARTMENT OF FORENSIC MEDICINE OF UMHAT-PLEVEN FOR THE PERIOD 2009-2013 (PRELIMINARY REPORT)

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Summary

The present study analyses statistically the dynamics and structure of the forensic autopsies performed on dead bodies and body remains in UMHAT "D-r G. Stranski" – Pleven. The study was based upon forensic autopsy records database and forensic autopsy reports for the period 2009-2013r. A total of 976 cases, including forensic autopsies, exhumations, examination of bone remains and inspections of dead bodies at the site of death (without following forensic autopsy) were analyzed. The studied data was coded and processed with MICROSOFT EXCELL software. A detailed data analysis of the number of autopsies, frequency of death by cause, distribution of death by gender, age, residence, place of death and its' forensic category is presented. According to our results, the deaths due to diseases comprised 35% of all forensic autopsies. The most common cause of violence death was damage by mechanical factors (53%), followed by asphyxia (24.7%). The most common mechanical factor was vehicle crash trauma, followed by falling (22.5%). Accidents were the most common cause of death 62%, followed by suicides (31%) and homicides 7%. Fifty-nine percent of the suicides are done by hanging. The preliminary analyses of the studied data lead to several conclusions. The number of forensic autopsies was found to be progressively decreasing, but the road traffic death rate remained unchanged. Most of the forensic autopsies were performed in July. The highest death rates by age was observed in the age group between 51 and 60 years, with predominance of males over females (3.3 males: 1 females).

Key words: forensic autopsy report, violence death, statistical analysis

RESEARCH ON SATISFACTION OF PARENTS ABOUT THE CARE QUALITY IN REFERENCE TO RAISING AND EDUCATING CHILDREN IN THE NURSERIES ON THE TERRITORY OF PLEVEN CITY

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Summary

Aim: To establish the satisfaction of the parents with the +care quality in relation to raising and educating children, offered in the nurseries on the territory of Pleven city. Methodological approaches: Individual anonymous survey held among parents of 77 children who are visiting different nurseries in Pleven city. Results: 60% of people who have been interviewed claim that their child has adapted to the conditions of the nurseries for less than two weeks, as 85% of the parents think that the whole personnel cooperated for that. 88% of people who participated in the research give the highest valuation of the proposed scale for evaluation of the attitude of the personnel towards their child'. The share of the interviewed is high 84%, they think that the conducted activities and initiatives are enough for the development and education of their children. Conclusion: The parents are satisfied with the care quality in relation to the raising and educating their children in the nurseries in Pleven city.

Key words: satisfaction, quality, cares, nursery

NURSING CARE PLAN – REALITY AND PERSPECTIVES

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Summary

Introduction: In the base of the modern nursing

care are the patient-focused cares, where the patient is an active participant in the treatment process. Nursing process is scientifically grounded method to provide nursing care, where the nurse discover and assess the problem of patient, sets objectives and implement them through nurse interventions. The nursing care plan is a means to implement the nurse process. We distinguish standard from individual nursing care plans. The notions „nursing care plan“, „nursing process“ and „nursing diagnostics“ are being studied at the initial training stage by students of „qualified nurse“ since 1996. Objective: The objective of the scientific report is to analyze the differences between standard and individual nursing care plans. Material and methods: The survey is based on systematic analysis of scientific reports and scientific specialized glossaries and magazines.

Results: It was established that the standard nursing care plan, elaborated in compliance to diagnosis serves as reference in developing the individual nursing care plan that is considered with the psychological, physical and ethnic particularities of the patient. That provides the opportunity to implement individual plan in hospital and pre-hospital aid. Conclusion: The elaborated standard and individual nursing care plans complement one another and guarantee comprehensiveness, preciseness, continuity and evaluation for the results of rendered health cares.

Key words: nursing care plan, nursing process, patient

MANAGEMENT OF CONFLICT SITUATIONS IN NURSING PRACTICE

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Summary

In the context of a reformed health system, which expanded the autonomous functions of the nurse and she gained a central role in the holistic approach to the patient the reasons for the

emergence and development of conflict situations increase significantly. Objective: To analyze the causes leading to the occurrence of conflict situations in nursing practice and outline the main approaches for their prevention. Material and Methods: The study was conducted in six rehabilitation hospitals, affiliated to "Specialized Hospital for Rehabilitation - National Complex" located in the towns of Kyustendil, Sandanski, Momin passage, Velingrad, Hisar and Varshetz during the period december 2011 - december 2013 . Through direct individual opinion survey studied 126 nurses. Data were processed with statistical computer program SPSS v. 19.0. Results: In 65.9% of nurses in the workplace conflicts arise, which is a major cause one third of the nurses (34.9%) are dissatisfied with the psycho-climate in the workplace. Significant share of the causes of conflict situations those covering organizational (68%), followed by reasons of financial (54%) and individual in nature (29%). Most often, conflicts arise in the relationship doctor - nurse (20.6%) and nurse - patient (1.3%) as the main approach to preventing conflict determine effective communication. Conclusion: Before today's nurses are facing the challenge of acquiring knowledge and skills for proper management of conflict situations in order to convert the conflict into a positive source of energy and creativity.

Key words: conflict, nurses, management

PROFESSIONAL ADAPTATION OF NURSES

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Summary

The question of the optimal matching between the requirements of the profession and the professional level of adaptation is a highly complex process requiring predict the further development of the individual under the influence of exercising professional work. Objective: To investigate and analyze the

professional satisfaction of nurses at various stages of professional development as an important prerequisite for adaptation to the profession. Material and Methods: are sociological and statistical methods. Data were collected through an anonymous survey through face-to two types of questionnaires - for students majoring in "nurse" and active nurses then processed with statistical computer program SPSS v.19. Respondents were 48 students enrolled in the Branch "Prof. Dr. Ivan Mitev "Vratsa and 72 nurses working in the hospital" Hristo Botev "Vratsa. Results: The average age of students was 23.5 years and the average age of existing nurses was 42.3 years. Study desire and motivation to make a professional choice shows that 76% of all respondents are chosen profession alone, suggesting a clear positive career choice. However, 68% of nurses in their job have encountered difficulties in adapting to the workplace. Conclusion: The discrepancy between the educational ideas of professional conduct and overt behavior in the work environment is a prerequisite hampering the integration of newly graduated population nurses to staff, professional responsibilities and organization of work. So professional adaptation is a significant source of satisfaction of nurses, ensuring the provision of continuity, systematic and comprehensive health care for the population.

Key words: professional adaptation, nurse satisfaction

SPECIFIC ASPECTS OF NURSING CARE IN HOSPITALIZED ELDERLY PEOPLE WITH CARDIOVASCULAR DISEASES

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Summary

To identify and analyze specific aspects of nursing care for geriatric patients suffering from cardiovascular disease during hospitalization. Methodological approaches: Sociological method - conducted anonymous individual

questionnaire containing 21 questions with 55 patients aged 65 years and older hospitalized in Hospital Cardiology - Pleven. The results were processed by the statistical program StatGrafWin. Results: nursing health of the elderly a significant proportion of the work of nurses, nutrition, hygiene, medications, communication, physical regime. The analysis of basic and specific care and their organizational, informational, psychological and social aspects demonstrates the seriousness of the health needs in the period of aging. Conclusion: The study confirms the need for a post specially trained and qualified staff to provide targeted and effective health care in geriatric patients.

Key words: nursing, elderly people, cardiovascular diseases

HELICOBACTER PYLORI – A CAUSE OF GASTRIC INFECTIONS

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Summary

Bacteria of the species *Helicobacter pylori* have been isolated from stomach specimens of nearly two-thirds of people. They are main cause of gastritis and ulcers, including gastric cancer. Aim of this study is to present the etiologic features of this most common causative of gastric infections and the contemporary laboratory methods for its diagnosis. Available literature sources – scientific books and published articles on this problem in the internet - are used for its achievement. As a result of the survey contemporary culture, microscopic, serology and molecular-genetic methods are presented. Ways of prevention of diseases, caused by these infections, are reviewed. Conclusion: Most suitable for the purposes of screening analyses are rapid radio-isotopic urease tests. Culture and serology methods are applied for diagnostic purposes. Molecularly-genetic analyses, which are used for specifying the causative agent and also of the genes that determine antibiotic resistance, are

applied only in specifically equipped laboratories. Despite the widespread carriage of these bacteria, timely laboratory diagnosis of the causatives is a main preventive measure to improve the health status of the society.

Key words: *Helicobacter pylori*, gastric infections, laboratory diagnosis

NOSOCOMIAL INFECTIONS – LABORATORY DIAGNOSIS AND PREVENTION

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Summary

Nosocomial infections still remain a challenge in medicine even nowadays. The damages they cause and the costs for the treatment of severe and multi-drug resistant forms of the causative agents are significant. This requires detailed knowledge of their characteristics and methods for early diagnosis, measures for prophylaxis and prevention of infections caused by them. Aim of this study is a deeper awareness with the epidemiological and etiological features of the causative microorganisms, current methods for laboratory diagnosis and prevention of these diseases. Proper scientific literature sources on this issue are analyzed for its achievement. Results: Current epidemiological and etiological characteristics of the most common nosocomial infections in the country are presented. The methods for laboratory diagnosis, sanitary-microbiological control and ways of prevention are described. Conclusion: The strict hygiene and the control over its implementation are of a great importance for the prevention of nosocomial infection with multi-drug resistant causative agents of infections. A significant factor in reducing the morbidity is the timely and accurate diagnosis.

Key words: nosocomial infections, laboratory diagnosis, prevention

THE PERSONALITY OF SIGNIFICANT OTHERS IN ASSOCIATION WITH REGULAR DRINKING IN ADOLESCENCE

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Summary

Introduction: It is well known that some psychological features of adolescents are positively associated with alcohol drinking, but less attention is paid to the psychological features of their significant others. Purpose: The aim of the study is descriptions of a common psychological profile of significant others of regularly alcohol drinking adolescents. Methods: We conducted a survey using an original questionnaire, classifying alcoholic drinking as regular, social (incidental) and abstinence. From 903 students (aged 15-19) 169 identified themselves as regular drinkers (RDA) and 279 - as abstainers (NDA). The significant others of these two groups were compared statistically in terms of wide range of psychological features. Results: It was found that RDA were significantly more likely to have: 1) fathers (OR 1.94), friends (OR 1.55) and lovers (OR 1.94) that tend to avoid obligations in favor of pleasure; 2) extravert friends (OR 1.55) and lovers (OR 1.72); 3) impulsive lovers (OR 1.76) and lazy (OR 1.72), but obeying (OR 1.95) friend; 4) conventional fathers (OR 2.17) and 5) dependent mothers (OR 1.75). Conclusions: It seems that significant others of RDA are less likely to expose models of rational reactions in everyday life that prevent adolescents to develop rational personality and this might increase the probability of regular drinking in adolescence.

Key words: significant others, personality, alcohol, adolescence

**ATTITUDES OF REGULAR
ALCOHOL DRINKING
ADOLESCENTS ABOUT
INTERSUBJECTIVE RELATIONS
AND EVERYDAY LIFE**

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Summary

Introduction: It is well known that some psychological features of adolescents as extraversion, risk-taking and impulsivity are positively associated with substance abuse. **Purpose:** The aim of the study is a description of psychological features of adolescents associated with regular alcohol drinking. **Methods:** We conducted a survey using an original questionnaire, classifying alcohol drinking as regular, social (incidental) and abstinence. The adolescents were asked to evaluate their own patterns of drinking. From 903 investigated students (aged 15-19) 169 identified themselves as regular alcohol drinkers (RDA), and 279 - as abstainers (NDA). These two groups were compared statistically in terms of wide range of self-described psychological features. **Results:** It was found that RDA were more likely to strive for dominant positioning in intersubjective relations (OR 1.8, 95%CI 1.22-2.65), more likely to avoid academic obligations (OR 1.61, 95%CI 1.08-2.39), and more likely to postpone their duties in everyday life (OR 1.81, 95%CI 1.23-2.67). **Conclusions:** It seems that regular drinking associates positively with retardation of psychological maturity and problematic social integration in adolescence. It seems that the adolescents need help in personality development that could have positive secondary effect on alcohol prevention.

Key words: significant others, attitudes, alcohol, adolescence, psychology

**COMPARATIVE SOCIOMETRIC
PROFILE OF THE REGULAR
ALCOHOL DRINKING
ADOLESCENTS**

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Summary

Introduction: Jacob Moreno defined sociometry as "the inquiry into the evolution and organization of groups and the position of individuals within them." Every person compose its own group of significant others and the social relations in this dominated by the person group of the most important people in its live we call sociometric profile. The sociometric profile gives opportunity for revealing social bonds, dependences and influences that impact ones' behaviour. **Purpose:** The aim of the study is a description of sociometric profile of the regularly drinking adolescents, revealed in result of comparison with sociometric profile of no drinking adolescents. **Methods:** We conducted a survey among 903 students (aged 15-19), by means of self-completed questionnaire about relations with father, mother, friends and lover. 169 students identified themselves as regular drinkers (RDA) and 279 - as abstainers (NDA). We compare these groups to reveal the comparative sociometric profile of drinking adolescents. **Results:** It was found that RDA were significantly more likely to be: 1) highly dependent on their lovers (OR 1.6); 2) detached by their mothers (OR 4.55) and 3) in ambivalent relations with their friends, but 4) without significant differences in relations with their fathers. **Conclusions:** It seems that the Stars of RDA are their lovers, the Isolates are their mothers and friends are their ambivalent Mutual Choice. This comparative sociogram suggests that lovers are likely to be the most influencing person among RDA significant others and intimate relations might be the main target in alcohol prevention programs.

Key words: sociometry, significant others, adolescence, alcohol

ANAESTHETICS, OBSTETRICS AND GYNECOLOGY

ORAL PRESENTATION

ANAESTHETICS – LITERATURE REVIEW AND NEW DATA

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Summary

Aim: Nowadays the anesthesiologist has a very rich choice of anesthetic drugs. For all of them, which are found and put in the practice in a different time, which have a specific chemical properties and ways of action, there is no significant theory which can explain the effects of their use.

Methods and results: This is the reason, why this presentation is about to show and explain the specifics in the pharmacokinetics and the pharmacodynamics of the most frequent used anesthetics in Bulgaria and Europe (for intravenous and a few inhalatory).

Conclusion: There is given a short base of the most important complications of use. The no longer use of nitrous oxide decreased the serious complications during the anesthesia and the postoperative period.

Key words: anesthetics, history data

COXIBS OR NONSTEROIDAL ANTIINFLAMMATORY DRUGS?

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Summary

Aim: NSAD and coxibs are important part of the multimodal therapy, especially in the ambulance and one – day surgery. They do not only provide control of the pain syndrome, but also reduce the application of opioid analgetics and short the patients' stay in the hospital.

Methods: Nowadays we do not have enough confident literature data to answer the question “Are the coxibs more safety and more effective in the clinical practice than the nonsteroidal – antiinflammatory drugs?” The coxibs decrease the risk of haemorrhagia and undesirable effects from the gastrointestinal system. We should not also forget the risk of undesirable effects from the cardiovascular system, but they can occur when the use of these medicaments is brief. **Results:** The higher dose of coxibs, used in a short course of use, can provide better rehabilitation profile and can decrease the pain in compare with the traditional NSAD.

Conclusion: The main purpose of putting coxibs in the reanimation postoperative period, is due to decreasing the undesirable effects, connected with the blocked of cardiovascular system, gastrointestinal system and urinary system.

Key words: NSAD, coxibs, effects, pain

EFFECT OF OVARIAN STIMULATION ON FUNCTION OF THE THYROID GLAND

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Summary

To evaluate the effect of ovarian stimulation and subsequent rapid hyperestrogenemia on the function of thyroid gland both in case free of

disease and in case of autoimmune thyroid disease. Methods: The study will be prospective, observational. Five women during ovarian stimulation were investigated and changes in TSH (thyroid stimulating hormone) were recorded. Temporary results: We recorded change in the function of hypothalamic-pituitary-thyroid axis as a result of rapid hyperestrogenemia during ovarian stimulation. There is statistically significant difference in the thyroid function in both groups with higher change of TSH in second group. Conclusion: Ovarian stimulation has negative effect on the normal function of thyroid gland and the compensatory response of thyroid gland is impaired in autoimmune thyroid diseases.

Key words: ovarian stimulation, thyroid gland, autoimmune thyroid diseases

HYMEN IMPERFORATUS AND BILATERAL HYDRONEPHROSIS IN 16-YEAR OLD GIRL - CLINICAL CASE

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Summary

The hymen is the embryologic septum between the sinovaginal bulbs above and the urogenital sinus proper below. It is not derived from the Muellerian ducts. The normal hymen can have multiple configurations including annular, crescentic, and fimbriated/redundant. However, failure of the hymen to perforate completely in the perinatal period can result in varying anomalies including imperforate, microperforate, cribiform, navicular, or septated. Imperforate hymen has an incidence of 1 in 1000 and may present in the neonatal period as hydrocolpos or mucocolpos. Most hydro/mucocolpos is asymptomatic. However, large hydro/mucocolpos may obstruct the ureters, resulting in hydronephrosis or even respiratory distress. The most common presentation of imperforate hymen is in a pubertal girl with

cyclic or persistent pelvic pain and an abdominal mass or perineal bulging with a translucent bluish-tinged hymen secondary to significant hematocolpos, and in severe cases, additional hematometra.

We present a clinical case of hymen imperforatus in 16-year old girl complaining of primary amenorrhoea and chronic pelvic pain since 2 years. The girl presented with distended abdominal wall, enlarged uterus (28-30 weeks pregnant) secondary to severe hematometra, perineal bulging and hypertrophic distended hymen secondary to hematocolpos, and anuria with persistent lower abdominal pain. She had nausea. During ultrasonographic examination bilateral hydronephrosis and overdistended uterus were found. Laboratory studies showed increase in the creatinine level. After hymenotomia 6 liters of dark, chocolate-like fluid was expelled. The uterus contracted 3 cm. below the umbilicus.

Key words: hymen imperforatus, primary amenorrhoea, severe hematometra, hematocolpos

ILEUS AND PREGNANCY IN SECOND TRIMESTER

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Summary

Ileus occurs from hypomotility of gastrointestinal tract with rapidly increasing intoxication. Because of increasing rate of caesarean section nowadays there is a subsequent increase in the rate of ileus. We present a clinical case of ileus in second trimester of pregnancy and describe some guidelines including collaboration between the obstetrician and the surgeon, specific features of ileus during pregnancy, diagnosis and specifics in treatment.

Key words: ileus, pregnancy, diagnosis, management

LOSS OF ARID 1A PROTEIN EXPRESSION IN ENDOMETRIOMAS – A PRECURSOR FOR DEVELOPMENT OF ENDOMETRIOSIS-ASSOCIATED OVARIAN CARCINOMAS

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Summary

To establish loss of ARID 1A protein expression in ovarian endometriomas. Material and Methods: Immunohistochemical investigation of ARID 1A was carried out on samples from the study group, consisting of benign endometriomas and control group, consisting of clear-cell and endometrioid ovarian carcinomas. The study group included samples from 72 patients with endometrioid ovarian cysts operated on laparoscopically in St. Marina Specialized Hospital between 2011 and 2014. The control group included 15 patients: 11 operated on in the Clinic of Oncogynaecology and 4 patients - in St. Marina Specialized Hospital between 2011 and 2014. Of the control cases, 8 were with histologically diagnosed with clear-cell carcinoma, and 7 – with endometrioid carcinoma. Results and Discussion: In the group investigated, one sample (1.4%) showed complete absence of reactivity and was defined as ARID 1A deficient. In the control group, 5 samples (33.3) were defined as ARID 1A deficient. In 7 (46.7%) of the controls, along with the malignant component, closely located endometriosis was diagnosed. Two of these were atypical, with ARID 1A protein (-) expression.

Conclusion: It proved by histochemistry, the loss of expression of the protein coded by ARID 1A can be considered as a biomarker indicating increased risk of endometrioid ovarian cysts. Whether immunohistochemistry for ARID 1A protein expression could be applied effectively as a screening method in view of individualized approach for observation or further treatment remains to be elucidated by further studies.

Key words: ARID 1A, endometrioma, endometriosis-associated ovarian carcinomas

MODERN TREATMENT FOR VULVAR CANCER: MAIN TRENDS AND PRINCIPLES

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Summary

Aim: To present the development, main trends and principles of modern surgical treatment for vulvar cancer established during the last 20-30 years. Methodology. Based on analyses of surgical treatment for vulvar cancer from the early 1900s to present, the authors present their own experience in the context of new practices and changes in the treatment of patients with squamous vulvar cancer. They present 113 cases of vulvar cancer which were diagnosed, operated on and followed up at the Clinic of Oncogynaecology, University Hospital – Pleven for a 10-year period. Results: The authors report 5-year survival rate in 73% of the patients, and disease-free 5-year survival - in 57%. Models of algorithms for clinical approach to vulvar cancer are presented. Conclusion: Individualized approach and surgical staging are crucial for modern treatment of vulvar carcinoma.

Key words: surgery, staging, vulvar cancer, individualized approach, survival

FACTORS THAT INFLUENCE THE PSYCHO-SOCIAL FUNCTIONING IN PATIENTS WITH MALIGNANT NEW-FORMATIONS

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Summary

The prognosis in our country concerning new cases of malignant new-formations for 2014 is nearly 40 thousand new cases, and amongst men the lung cancer prevails, while with women - breast cancer. In order a certain therapy to be effective, it has to a complex one and to "attack" more than one as well as different spheres of functioning of the diseased person – physical, social, personal etc. The target of this survey is to specify the factors that influence the psycho-social functioning in patients with malignant diseases. Methodological approaches: The subject of this survey are 150 patients with oncologic diseases. The applied instrument for this survey is a questionnaire, which contains also demographic data. To 62 of the patients has been applied an appraisal scale for the general level of anxiety. Results: After the statistic processing of the data there were established factors which influence the psycho-social functioning of the patients having new formations: type, complexity and prescription of the disease, trust/distrust filter, attitudes and expectations concerning the disease, inclusion of the family in the problem, attitude towards the other important ones and employability. Conclusion: The holistic approach in the therapeutic work with persons having oncologic diseases requires an analysis of the trinity between body, spirit and consciousness.

Key words: oncologic patients; factors influencing the psycho-social functioning; complex therapy

CHANGES IN SYSTEMIC IMMUNE-INFLAMMATORY RESPONSE IN ROBOTIC AND OPEN ONCOGYNECOLOGICAL OPERATIONS

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Summary

Introduction: Technological advances in medicine, changes surgical practice today. Laparoscopic and robotic interventions showed their advantages over conventional surgery, namely: small traumatic, a good view of the operative field, minimal pain in the postoperative period, a good cosmetic effect, are economical and shorter patient recovery. The last decade has seen the publication of many studies on the impact of both traditional surgical methods: open and mini-invasive operations on various immune function parameters. From them it was concluded that major operations leading to a period of cell-mediated immunosuppression, which may affect the patients, recovery. Although there are conflicting data between studies in terms of some immune parameters there is general agreement with respect to other variables. Purpose: To prove the role of the immune-friendly mini-invasive surgical techniques compared with the conventional oncogynecological diseases. Material and methods: An overview of the scientific literature and a documentary method is attached. Results: Surgical intervention causes profound changes in the neuroendocrine, metabolic and immune systems, which together reflect the "stress response" of the body. These reactions have been implicated in the development of a number of postoperative complications such as postoperative delirium, cognitive dysfunction, infection and relapse in cancer patients. Conclusion: Conventional (Open) operations occur with greater emotional and physical stress on the organism, longer duration of anesthesia at - large blood loss and need for transfusion respectively. All this leads to significant changes in the immune system, - long

recovery and frequent postoperative complications. In the mini-invasive surgery postoperative cell-mediated immunity is well preserved compared to open surgery, which makes them suitable in immunocompromised cancer patients.

Key words: robotic surgery, immune system, oncogynecological operations

OTHER CLINICAL SCIENCES

ORAL PRESENTATION

DENGUE INFECTION: MODERN CLINICAL, DIAGNOSTIC AND EPIDEMIOLOGICAL ASPECTS

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Summary

Aim: To review the clinical classifications and to present the modern epidemiological characteristic of the disease. Methods: Literature references reflecting the WHO classifications were used, as well as data on the epidemiological significance and specificity in the spreading. Results: The introduced in 1997 general classification was updated in 2009. The new version classified the disease as dengue fever and severe dengue. The second one incorporates dengue shock syndrome and dengue hemorrhagic fever. Hospitalization of those groups is mandatory. Contemporary complex diagnosis is carried out at the regional and national/reference level. It includes microbial culture methods, hemagglutination inhibition assay, serology techniques, blood laboratory tests. The accepted clinical phases (febrile, critical and recovery) as well as severity of the clinical course are determined by unified clinical and laboratory criteria. The modern epidemiological aspects are: rapid increase in the growth of incidence in endemic areas in recent

decades and expanding the area of additional vector *Aedes albopictus* in new geographic regions. The outbreaks with involvement of EU and U.S. citizens were established after a stay in such places. Conclusions: The 2009 classification provides an opportunity for more correct approach to the treatment of cases. The intensification of dengue infection in endemic countries is a function of increasing and uncontrolled urbanization; improper waste management; inefficient insect control. For the manifestation of epidemic process outside the endemic areas contribute: globalization, and in particular, international trade of used tires; travel to risk areas; climate changes coupled with high ecological adaptability of the mosquito.

Key words: dengue, clinical classification, epidemiology, tendencies

HYPERTENSIVE DISORDERS IN PREGNANT WOMAN WITH EPILEPSY

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Summary

Purpose: To determine the frequency and the course of hypertensive disorders in pregnant women with epilepsy (PWWE). Materials and methods: The survey is prospective and covers 206 PWWE during the period 1997-2012 year, monitored and treated in Risk Pregnancy Clinic of University Hospital – Pleven. All the patients (PWWE) are with clinically established etiology and prescription of epilepsy, type of seizures and their frequency. EEG studies, ultrasound of fetus and cardiotocograph monitoring were conducted. Eleven of PWWE were with Praeclampsia – Eclampsia (PE-Ecl).

Results and discussion: The frequency of PE-Ecl is 5.33%. Praeclampsia and Eclampsia were found (monitored) during two consecutive pregnancies in one of the PWWE. Six patients

were with severe Preeclampsia and one of them was with data of HELLP syndrome. There were three cases with Eclampsia. Delivery by surgery was made in 8 cases, (7 patients, but for one of them twice). The other 4 pregnant women with moderate Preeclampsia got delivery per vias naturales. Epileptic seizures during pregnancy were recorded for 5 of PWWE. One patient was with generalized clonic-tonic seizures and 4 other were with partial seizures. During the period 24 hours after delivery seizures were noted for 4 patients. Six PWWE were without therapy with AEM. Three of them started monotherapy with AEM during pregnancy. One other patient with pharmacoresistant symptomatic epilepsy (meningiomas of the brain with two neurosurgical operations) was on polytherapy with 3 AEM during the whole pregnancy. The EEG study showed focal activity predominantly occipital, occipito-temporal and parieto-occipital. Conclusions: The detection of arterial hypertension and proteinuria in PWWE should pay attention to PE-Ecl. The united active clinical monitoring and treatment by a neurologist-epileptologist and obstetrician is the most accurate clinical behavior.

Key words: epilepsy, pregnancy, preeclampsia-eclampsia, AEM

EPILEPSY OF PREGNANT WOMEN AS AN INDICATION FOR DELIVERY BY OBSTETRICAL SURGERY

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Summary

Despite the great progress in diagnosis and treatment of epilepsy, the questions about the way of delivery in pregnant women with epilepsy (PWWE) are still discountable. Purpose: To determine the frequency and the main indications for Sectio Caesarea (SC) in PWWE. Material and methods: The survey is prospective and covers a period of 16 years (1997-2012), 283 PWWE are

tracked over time during this period. 195 of them got delivery in Risk Pregnancy Clinic of the University Hospital-Pleven, 77 in other hospitals and for the rest 11 PWWE the pregnancy finished with abortion. In all the PWWE clinically is determined the etiology and the prescription of epilepsy, the type and frequency of the seizures, EEG studies, ultrasound of fetus and cardiotocograph monitoring were made.

Results and discussion: The frequency of SC for the whole group is 33.83%. Partus Normalis (PN) is assessed in 65.07% and vacuumextractio and forceps (VEF) - in 1.10%. In PWWE who got delivery in Pleven the frequency of SC is 38.46%, PN-60.00% and VEF-1.54%. In 76 cases with delivery by SC for 56(74.76%) the indications were obstetrical and in 19(25.33%) the major indication was epilepsy. It was the main indication for SC for pregnant women with frequent and pharmacoresistant epileptic seizures. The higher frequency of SC in PWWE who got delivery in the University Clinic is explained by the fact that there are concentrated the more complicated cases. Conclusions: The good collaboration between the neurologist – epileptologist and the obstetrician, planning and supervising the delivery of PWWE, may contribute to the selection of the most appropriate way of delivery, leading to a favorable outcome for the mother and the newborn.

Key words: epilepsy, pregnancy, delivery, Sectio Caesarea, Partus Normalis

URTICARIA AND ANGIONEUROTIC OEDEMA IN PATIENTS WORKING IN AGRICULTURE

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Summary

Urticaria and angioneurotic edema are system reactions that are developed by allergic as well as non – allergic mechanisms. They could also be

professionally determined and mediated by IgE or without its mediation. People working in different agricultural fields are often exposed to various factors that are able to unlock the manifestation of different in their pathogenesis and clinical course allergic reactions. Publications of cases of urticaria and angioneurotic edema in patients occupied with agricultural work are almost lacking in specialized medical literature.

Key words: urticaria, angioneurotic edema, professional contact, agriculture

THE PLACE OF DISEASES OF THE HEARING AND VESTIBULAR ANALYZERS WITHIN THE FAMILY OF PROFESSIONAL DISEASES – LEGISLATIVE REGULATION AND DIAGNOSTIC - EXPERT DECISIONS

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Summary

According to the National Social Insurance Institute, the professional ORL diseases rank second in frequency among professional diseases. ORL diseases fall in the category of conditional professional diseases – their professional nature is accepted subject to certain conditions and requirements.

The aim of this paper is acquaintance with the legislative requirements pertaining to the registration and documental processing of cases of professional ORL. The need is clarified for fast processing by the doctor making the diagnosis, whenever there is any doubt that the disease in question is of a professional nature. Analysis of professional hearing-vestibular disorders in individuals subjected professionally to noise and vibrations. Material and method: screening of ORL and otoneurological examinations of 341 workers exposed to above-norm noise and vibrations, grouped according to specialized

length of service, age and sex. Results: In 46.8% of the cases there is significant hearing deterioration. In 18.2 % of cases professional hearing neuritis was diagnosed. Long-term exposure to above-norm noise and vibrations most often results in the lowering of the excitability threshold of the vestibular receptor. Conclusion: Attention of the experts is drawn to the most common physical factors from the work environment leading to professional ORL diseases. Issues relating to diagnostic-expert decisions are accentuated.

Key words: professional ORL diseases, hearing analyzer

RISK OF LEAD INTOXICATION IN EXPOSED WORKERS

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Summary

A clinical observation of 15 workers exposed to lead, engaged in recycling of lead accumulators, was carried out. The exposition to lead aerosols varied from 2 months to 14 years.

All followed up workers were with high level of lead absorption and excretion after applied antidote therapy. There were not expressed clinical signs and symptoms in 7 workers and it was accepted, that they were lead carriers. Anemia was diagnosed in 8 of the investigated persons. Severe form of intoxication, including paresis of both radial nerves, was established in one worker. Subacute lead poisoning, manifested with lead colic, anemia, toxic hepatitis and toxic polyneuropathy, was diagnosed in three persons with only several months intensive lead exposure. Association between lead exposure, metal absorption and clinical symptoms in investigated persons were discussed.

Key words: risk, lead intoxication, antidote therapy

OCCUPATIONAL HAZARD AND DISEASE POINT PREVALENCE IN HEAT ENERGY PRODUCTION WORKERS

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Summary

A health status assessment of 1515 workers in energy production was carried out in order to establish the impact of occupational risk factors as vibrations, noise, dust, metal aerosols, irritants, overstrain of musculoskeletal system, unfavourable microclimate, organic solvents, oils on welders, chemists, drivers, fitters, operators and crane-operators. The biggest prevalence rate in the structure of the registered internal diseases was that of the cardiovascular diseases – 37.4%, especially of arterial hypertension (35.5%) and ischemic heart disease (1.9%). The most frequently diagnosed lung diseases were chronic bronchitis (4.4%) and chronic obstructive pulmonary disease (2%) with a tendency of a higher prevalence rate among the groups exposed to dusts, metal aerosols and irritants. Toxic pneumofibrosis was established in 31 welders and chemists. Toxic exposure to irritants (pharyngitis, anaemia and bronchitis) was diagnosed in 7 chemists. Bilateral acoustic neuritis was registered in 5% of investigated workers. A cause-effect association was discussed in 1% (crane-operators and fitters). Recurrent pain syndromes in lumbar (19%) and cervical (15%) spine regions among workers above 41 years old with length of service above 10 years were commonly found probably due to degenerative spinal disorders combined with systematic static and dynamic overload and vibration exposure at work. Distal autonomic neuropathy of the upper limbs with neurovascular disorders was established in 2.2% of the investigated workers.

Further investigation is needed to better estimate the association between hazardous risks at the energy production workplaces and the diseases of

the workers exposed to different occupational risk factors.

Key words: risk factors, energy production, prevalence, occupational diseases

LONG –TERM NEGATIVE PREDICTIVE VALUE OF CT ANGIOGRAM

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Summary

A negative coronary CTA is known to have a good negative predictive value for major adverse cardiovascular events in short term. The data on the long-term outcomes of negative coronary CTA are lacking. We aim to investigate the long-term prognostic value of negative coronary CTA in the evaluation of chest pain. Methods: This was a retrospective observational study involving 200 cases of coronary CTA on our registry from July 2010 to July 2012. All coronary CTA were performed with 320-row CT Aquillion ONE. A negative coronary CTA was defined as no single coronary segment with stenosis $\geq 50\%$ based on American Heart Association 16-segment model. The end point of the study was defined as a composite of major cardiovascular events such as myocardial infarction, myocardial death or revascularisation. Results: Seventy cases of 200 on the registry were diagnosed as negative studies. Mean follow-up period was 2.64 ± 0.6 years (range from 1.6 to 4 years). Of these negative studies, only one patient suffered from the end point during the follow-up. Thus, the negative predictive value of a negative coronary CTA for a long-term major cardiovascular event was 0.986 (95% confidence interval: 0.92-0.99). Conclusions: A negative coronary CTA in patients with a low or intermediate pretest probability for significant coronary artery disease predicts a low rate of major cardiovascular events within a 5-year period.

Key words: CTA, long – term outcome, negative predictive value, major cardiovascular events

MULTIVESSEL DISEASE AS PROGNOSTIC FACTOR FOR MORTALITY IN STEMI PATIENTS

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Summary

The main objective of this analysis is to define the influence of multivessel disease involvement compared to single vessel disease on mortality rates in STEMI patients. Methods: We retrospectively included 549 patients, hospitalized with STEMI in UH “Saint Ekaterina” (age 62.66+- 12.56 women 31.3%) from 1.06.2008 to 30.06.2011. One vessel disease was found in 232 patients – 44% as compared to two vessel disease in 165 patients - 31% and multivessel in 130 patients -25%. There was LM stenosis (>30) in 2% (11pts); ostial lesion in 6,3% (33pts); presence of Ca in 7% (37pts). Stent was implanted in 91.8% (484pts), GP IIb/IIIa was used in 75.9% (400pts). Results: There was significant increase in mortality rates in patients with multivessel disease: 15,6% - 46 pts, compared to one vessel disease - 6,5% 15 pts. ($p \leq 0.01$). Both early (30 days) and late mortality (one year) rates were higher in the multivessel group (6,8% vs 2,6% , $p \leq 0.05$) and (,2% vs. 3,9% $p \leq 0.0510$) respectively. Conclusions: Multivessel disease is associated with higher mortality rates in STEMI patients, which may further alter clinical course and decision making.

Key words: STEMI, mortality, multivessel disease

UP TO DATE PROBLEMS IN EARLY DIAGNOSIS AND REVEALING OF CHRONIC INTOXICATIONS WITH PESTICIDES

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Summary

Pesticides are a various in their chemical characteristics group including a lot of broadly used in agriculture preparations for agrochemical protection. Unlike acute poisonings, which etiology, pathogenesis, clinical presentation, diagnosis and treatment are familiar, the problem with chronic intoxications is still an object of study in specialised toxicologic literature. Chronic intoxications with pesticides are registered more rarely than acute ones for various reasons. One is the clinical manifestations of acute poisonings and their specific organic toxicity. The single use of toxic dosage determines the fast development of the symptoms, that makes the diagnosis easier. Chronic intoxications with pesticides are usually occupationally determined. This is because occupational exposure is maintained over a longer amount of time and in lower concentrations, it occurs in open areas with seasonal outbreaks and in combination with other pesticides. A fuller and more accurate analysis of this type of pathology on a national level could be conducted if data from the register of occupational diseases was available. On the other hand the analysis of data from other European countries and countries from all over the world is difficult because of the few conducted studies.

The registration of actue intoxications with pesticides is conducted in specialised toxicologic centres for treatment of acute poisonings, where patients are hospitalized for treatment and diagnosis.

The current study is trying to open the curtain for such a hidden type of morbidity, to set the phactors and reasons that contribute to the insufficient diagnosis of chronic pesticide

poisonings.

Key words: professional exposure, pesticides, chronic intoxications

LEVELS OF ANTI-COLLAGEN TYPE IV IgG ANTIBODIES ARE ASSOCIATED WITH HIGH RISK OF ATHEROSCLEROSIS IN DIABETICS WITH ESSENTIAL HYPERTENSION

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Summary

Background and Aims: Thickening of basement membrane in capillaries and small vessels is a well-known finding and important in the progression of diabetic microangiopathy. Patients with diabetes mellitus and arterial hypertension are at higher risk for development of atherosclerosis. Material and methods: Serum levels of antibodies to collagen type IV (ACIV) IgG, IgM and IgA were measured using an ELISA method in 93 patients with type 2 diabetes mellitus and arterial hypertension (AH) (mean age 61,4±11,3 years, diabetes duration 9,88±3,12 years; hypertension duration 9,28±4,98). These values were compared to serum antibodies to CIV in 42 age and sex matched controls. Diabetics were divided in two groups according to presence- Group 1 (n=67) or absence- Group 2 (n=26) of microangiopathy. Results: Group 1 (patients with microvascular complications) showed significantly higher levels of ACIV IgG in comparison with Group 2 0,323 (0,2430,391) vs. 0.241 (0,2070,291) (KW=7,66; p=0,006) and control group 0.210 (0,1490,262) (KW=17,52; P<0.0001). Patients from Group 2, were with higher ACIV IgG levels than controls 0,176 (0,1510,202) vs. 0.142 (0,1180,173) (KW=6,15; p=0,01). ACIV IgG showed correlation duration

of diabetes (r=0.49); (p=0.01), retinopathy (r=-0.20); (p=0.04), BMI (r=-0.24); (p=0.05), systolic blood pressure (r=0.16); (p=0.05), total cholesterol (r=0.20); (p=0.03), tryglicerides (r=0.31); (p=0.01). Serum ACIV IgM and IgA levels in patients with T2DM and AH were lower than these in controls, but the differences are not statistically significant. Conclusion: Our study showed a relationship between elevation of serum levels of ACIV IgG in diabetics and development of vascular changes. The elevation of ACIV IgG can be related with later clinical manifestation of atherosclerosis. We suggest that ACIV IgG can be useful method for identifying a high atherosclerotic risk in diabetic patients.

Key words: collagen type IV, arterial hypertension, diabetes mellitus

POSTERS

FATAL OUTCOMES WITH DATA OF METHADONE ABUSE IN SOFIA FOR THE PERIOD 2012-2013

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Summary

Methadone is a synthetic opioid commonly used as medication in the therapy of heroin addiction. It also is used as an illegal drug by addicts. Aim: To establish the consequences of illegal use of methadone. Material and methods: Forensic medical examination of cadavers of drug addicts for the period 2012-2013, establishing the cause

of death, toxicological analysis, histological examination. Results: In 2012 and 2013 1971 autopsies were performed in The Department of Forensic Medicine and Deontology Sofia. In 80 of the cases there were data for drug abuse. The toxicological analysis showed presence of methadone in 19 of the cases as only drug or in combination, which is approximately 25% of the examined deceased drug addicts for the period. The gross and histological examination showed a variety of pathological changes, mostly non specific but characteristic for drug abuse. Conclusion: Abuse of methadone alone or in combination may lead to death by various mechanisms, including acute poisoning, and pathological changes due to drug abuse. In approximately 25% of the cases of fatal outcomes of drug addicts for the period 2012-2013 the toxicological analysis showed presence of methadone. The latter refers to the need to reconsider the benefits and harms of methadone treatment. The medical use of methadone should be strictly monitored. An assessment of the importance of non-medical use of methadone for the morbidity and mortality rates among drug users is required.

Key words: drug abuse, methadone

METABOLIC DISTURBANCES IN THE PATIENTS WITH ACUTE ISCHEMIC STROKE

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Summary

The objective of the present communication was to study the disturbances of lipid, glucose and protein metabolism in the patients with acute

ischemic stroke (IS). Materials and methods. The study covered 258 acute IS patients, 129 males and 129 females at a mean age of $70,59 \pm 7,22$ years (range, 49-92 years). They were hospitalized in 2007-2013 in the First Clinic of Neurology, St. Marina University Hospital of Varna. The following parameters were examined: blood glucose, triglycerides, total cholesterol, HDL-cholesterol, LDL-cholesterol, creatinine, and urea. The results were statistically processed by descriptive, variation and correlation analysis. Main results. Our results demonstrated abnormal values of the examined laboratory parameters in a considerable number of acute IS patients during this period. The mean values of triglycerides, total cholesterol, and LDL-cholesterol were higher in females while these of blood glucose were higher in males, especially in the age group between 76 and 80 years. Pearson's correlation coefficient was highest between the variables 'total cholesterol' and 'LDL-cholesterol' ($r=0,797$) but moderate - between the variables 'total cholesterol' and 'triglycerides' ($r=0,565$), between 'creatinine' and 'urea' ($r=0,575$), between 'total cholesterol' and 'urea' ($r=0,428$) and between 'triglycerides' and 'urea' ($r=0,370$). Conclusion. The metabolic disorders are relatively common among the patients with acute IS. These parameters play a specific role as a risk factor for IS. They should regularly be controlled in advanced age within the outpatient clinical practice. In this way, the effective prevention of this severe disease could be warranted.

Key words: acute ischemic stroke, blood glucose, lipids, creatinine, prevention

MYOCARDIAL INFARCTION AND ISCHEMIC HEART DISEASE AMONG THE PATIENTS WITH ACUTE ISCHEMIC STROKE

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Summary

Purpose. Myocardial infarction and ischemic heart disease are considered risk factors for acute ischemic stroke (AIS), the most common cerebrovascular disease worldwide. The aim of this investigation was to analyze the correlation between myocardial infarction and ischemic heart disease, on the one hand, and AIS, on the other hand. Materials and methods. We studied 258 acute IS patients, 129 males and 129 females at the average age of $70,59 \pm 7,22$ years. They were hospitalized in 2007-2013 in the First Clinic of Neurology, St. Marina University Hospital of Varna. The diagnosis of AIS was confirmed by Doppler sonography and computed tomography of the cerebral circulation while that of the myocardial infarction and ischemic heart disease was established by electrocardiography and routine laboratory parameters. The results were statistically processed by variation, correlation and cluster analysis. Main results. Our results proved a relatively strong correlation between the myocardial infarction and coronary atherosclerosis (Pearson's coefficient $r=0,604$) among AIS patients. There was a stronger correlation between the ischemic heart disease and effort angina pectoris (Pearson's coefficient $r=0,667$). The well-known risk factors for these two cardiovascular diseases such as obesity, tobacco smoking, low physical activity and alcohol abuse are common among the patients with AIS, too. Conclusion. Both myocardial infarction and ischemic heart disease are strongly associated with the development of AIS. The patients with these severe diseases require strict and regular control by the general practitioners. They should observe an appropriate diet and adhere to a healthy life-style.

Key words: acute ischemic stroke, myocardial infarction, ischemic heart disease, mutual dependence, cluster analysis

CORRELATIONS BETWEEN THE ACUTE ISCHEMIC STROKE AND THE ASSOCIATED CARDIOVASCULAR DISEASES

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Summary

Purpose. The aim of this investigation was to analyze the association between some cardiovascular diseases (CVD) and the ischemic stroke (IS). Materials and methods. A total of 258 acute IS patients, 129 males and 129 females averagely aged $70,59 \pm 7,22$ years and hospitalized in 2007-2013 in the First Clinic of Neurology, St. Marina University Hospital of Varna were investigated. The presence of the following CVD was analyzed: arterial hypertension, hypertensive heart, atrial fibrillation, ventricular tachyarrhythmia, myocardial infarction, ischemic heart disease, effort angina pectoris, coronary atherosclerosis and heart failure. The results were statistically processed by correlation and cluster analysis. Main results. It was established that single IS patients presented with a different number of CVD. There were four accompanying CVD in most male and female patients (in 27 or 20,93% and in 31 or 24,03% of the cases, respectively). The correlation analysis revealed two groups of four variables each - with a relatively strong and a moderate as well as with a weak dependence ($r < 0,4$) to the presence of acute IS in the corresponding patients. Ischemic heart disease was strongly associated with effort angina pectoris ($r=0,667$) and to a lesser extent - with coronary atherosclerosis ($r=0,470$). Myocardial infarction was strongly related to coronary atherosclerosis (0,604) and to a lesser extent - to ischemic heart disease ($r=0,378$). Arterial hypertension was moderately related to hypertensive heart ($r=0,300$). Conclusion. These CVD are relatively closely associated with IS. Such patients require strict and regular control by the general practitioners and improved

individual healthy life-style.

Key words: ischemic stroke, associated cardiovascular diseases, cluster analysis

CORRELATIONS BETWEEN FUNCTIONAL IMPAIRMENT AND RELAPSE IN SCHIZOPHRENIA

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Summary

Background. Schizophrenia is characterized by marked impairments in occupational, social and family functioning. Functional impairment represents an important outcome of schizophrenia, but also it may serve as a risk factor for relapse. Functional deficits may persist after remission and have been shown to worsen over time. Methods. Our study was performed in the University Clinic of Psychiatry Craiova, Romania. We selected a sample of 72 inpatients (28 female, 44 male) with schizophrenia. Patients were recruited during an acute episode. Symptom's severity and social functioning assessments were conducted at inclusion, then monthly until the end of study (6 months). The instruments used were PANSS for schizophrenia symptoms and PSP for functional impairment. Results. Low scores (below 50) on PSP scale at inclusion were linked to high values on the positive subscale of PANSS, especially for items P2, P4, P6. Age of onset were significantly associated with the number of relapses during study period. Number of prior episodes and presence of comorbid Axis I disorders were also correlated with lower scores on PSP at the end of study. Overall, women evidenced a lower level of functional impairment at all-time points and higher values on the general subscale of PANSS. A higher functional impairment at baseline was associated with higher scores on PANSS at follow-up. Otherwise, greater functional impairment may be linked to chronicity. Conclusions. Functional impairment may be a reliable marker for the severity of schizophrenia and for the risk of relapses. Of course, future

studies could use more complex assessments, including assessment of premorbid functioning.

Key words: schizophrenia, functional impairment

CLINICAL AND EPIDEMIOLOGICAL DIAGNOSIS IN SCARLET FEVER

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Summary

Purpose. The aim of this study is to make clinical and epidemiological characteristics of scarlet fever, highlighting typical laboratory abnormalities that contribute to placing the complex diagnosis. Material and Methods. We performed a retrospective clinical-epidemiological and laboratory analysis of data from the hospital records of 88 patients diagnosed with scarlet fever treated in the Clinic of Infectious Diseases, University Hospital "Dr. G. Stranski"-Pleven in the period 1995-2013. Results. The results show that the scarlet fever primarily affects children (94.32%). Dominated diseased urban origin (69.32%) belonging to organized groups (93.18%). Scarlet fever in modern conditions occurs significantly milder while keeping the typical clinical manifestations of the disease. Accelerated sedimentation rate and leukocytosis with a left shift were set at 79.55% and 73.86% of the patients. In leukocyte formula with the following deviations: neutrophilia (73.86%), expressed eosinophilia (59.09%), lymphopenia (45.45%). Elevated CRP and fibrinogen were set at 76.47% and 31.75% of the patients studied. Modern scarlet fever is characterized by a predominance of light (23.86%) and moderate forms (69.32%), severe clinical forms are 6.82%. Conclusion. Objectivity of the diagnosis of scarlet fever is determined by the totality of the epidemiological data, clinical and laboratory abnormalities. Research laboratory changes allows for dynamic tracking

and objectifying the course of the disease process and for predicting the prognosis and the impact of treatment.

Key words: scarlet fever, laboratory parameters

CLINICAL AND EPIDEMIOLOGICAL STUDY OF HERPES ZOSTER IN HOSPITALIZED PATIENTS

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Summary

Purpose. The aim of the study was to made clinical and epidemiological characteristics of herpes zoster in hospitalized patients. **Material and Methods.** We performed a retrospective epidemiological, clinical and laboratory analysis of data from the hospital records of 12 patients diagnosed with herpes zoster treated in the Clinic of Infectious Diseases, University Hospital "Dr. G. Stranski" - Pleven in the period 2010-2014. **Results.** During the study period predominate women (75%) among hospitalized. The age of infected ranged from 17 to 78 years (\bar{x} = 59.08; sd = 18.66). The study on the seasonality of herpes zoster showed the highest proportion of sufferers in the spring; 83.33% of cases are primary forms. Topographical distribution of the infection showed mainly involvement area of □□a dermatome according to the course of thoracic nerves (33.33 %) or the upper branch of n. trigeminus (zoster ophthalmicus - 25%). Clinical forms are defined as moderate and severe in 33.33% and 66.67% of the patients respectively. In 75% of patients are established comorbidities - diabetes, chronic cardiovascular and renal diseases, arthrosis, neoplasms. **Conclusion.** A major risk factor is increasing age and comorbidities (immunocompromised and patients with chronic diseases). Early treatment with the antiviral drugs reduces the likelihood of

developing postherpetic neuralgia as late complication.

Key words: herpes zoster, herpes zoster ophthalmicus

CERVICAL DISK HERNIATION OR SUBARAHNOID HEMORRHAGE?

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Summary

Introduction: Subarachnoid hemorrhage (SAH) is a type of stroke and a medical emergency, which can lead to death. It can be traumatic or spontaneous (most of cases are due to ruptured cerebral aneurism). **Material and methods:** We presented a case report of 51 years old man with one-year history of behavioral and cognitive changes, presented at emergency department with severe cervical pain with 6 days duration and without nausea or vomiting. The patient had been treated with dexamethason and nonsteroid antiinflammatory drugs for big cervical disc herniation during the previous 5 days, developed with computer tomography (CT). Full somatic, neurological examination, laboratory data, double head CT and CT-angiography were done. **Results:** The patient was with light nuchal rigidity, cervical radiculopathy, behavioral changes and executive dysfunctions. Because of cognitive and personal changes native brain CT and CT angiography were done, which revealed SAH due to ruptured aneurism. The patient was delayed 6 days because of wrong diagnosis of cervical disc herniation. Although Nimodipine treatment, the patient died because of severe ischemic stroke on the basis of vascular spasm at the third day after the hospitalization. **Conclusions:** This case is an illustration of diagnostic difficulties. In every case with behavioral, personal and executive changes should be done brain CT and angiography for exclusion of cerebral aneurism.

Key words: subarachnoid haemorrhage, differential diagnosis

CLINICALLY RELEVANT GRAM-POSITIVE COCCI AMONG DIALYSIS PATIENTS

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Summary

To investigate colonization and infection rate with *Staphylococcus aureus* and vancomycin-resistant enterococci (VRE) among dialysis patients. Methods: One day prospective study was conducted in June 2012 among patients of dialysis center affiliated to University Hospital Pleven, Bulgaria. Bilateral nasal and fecal specimens were obtained from each patient in order to screen for colonization with *S. aureus* and VRE, respectively. Active surveillance of all colonized patients was performed for a period of 1 year (2012-2013). Screening for methicillin-resistant *S. aureus* (MRSA) was done by using 3 methods: oxacillin disc (1 mcg), cefoxitin disc (30 mcg) and salt agar containing oxacillin (6mcg/ml). Fecal samples were cultured directly and after enrichment onto selective azide agar (HiMedia, India) supplemented with 6 mcg/ml vancomycin. Minimal inhibitory concentrations of glycopeptides were determined by E test method (Liofilchem, Italy). Results: Nineteen of the 114 patients (16.67%) were colonized with *S. aureus*. Only one of the *S. aureus* isolates was identified as MRSA. Intestinal colonization with VR *Enterococcus faecium* was established in 5 (4.38%) of the patients. None of the patients was co-colonized or infected with both pathogens. Two (10.52%) of the patients colonized with *S. aureus*, subsequently developed bloodstream and soft-tissue infections respectively. None of the patients colonized with VRE developed infection during the study period. Conclusions: The results show moderate incidence of colonization and low rate of infection with *S. aureus* among our dialysis patients. Intestinal colonization with VRE was studied for the first time in Bulgaria. We found relatively high rate of fecal

colonization with VR *E. faecium* that was not associated with development of subsequent infections. Although coexistence of MRSA and VRE was not found, implementation of aggressive infection control measures is required in order to prevent further development and transmission of vancomycin resistance in chronic dialysis patients.

Key words: colonization, infection, dialysis patients

CLINICAL DESCRIPTIONS OF PATIENTS WITH EPILEPTIC STATUS AND WITH DIAGNOSTIC AND DIFFERENTIAL DIAGNOSTIC ALTERNATIVES

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Summary

The aim of the current investigation was to describe the clinical history of four patients; treated at the Clinic of Neurology of UMHAT „D-r G. Stranski” – Pleven. They were admitted from the emergency department with symptomatic epileptic status. Material and methods: The patients were admitted from the emergency department of the University Hospital – Pleven in the Clinic „Neurology and Neurosurgery”. They were at severe condition, at epileptic status. Complete anamnestic data were taken. Double brain MRT and CT scan, ECG, Ultra sound of the abdomen and heart, X-ray and CT of the lungs, EEG, biochemical, microbiological, immunological, serologic and genetic tests, lumbar puncture were applied. The patients were discussed with neurologist, neurosurgeon, cardiologist, ophthalmologist, anesthesiologist and infectionist. Coagulation tests were complied. The fibrinolytic and antiepileptic treatment was continued successfully. The

patients were discharged in good condition without motor deficit and epileptic symptoms. Results: The analysis of the received results and data of the dynamic clinical neurological examination, laboratory investigations, revealed therapeutic challenges and alternatives concerning the clinical interpretations, diagnosis and differential diagnosis. Conclusions: It's necessary to be provided more investigations in the Genetic and Molecular pathology and microbiology laboratories for the correct final diagnosis.

Key words: epileptic status, venous brain infarctions, risk of thrombophilia, factor II (Protrombin) – mutation G/A 20210, differential diagnosis

ANTIPSYCHOTICS IN PHARMACOTHERAPY OF SCHIZOPHRENIA: A REVIEW

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Summary

Schizophrenia is a chronic mental disorder characterized by cluster of positive, negative, cognitive, disorganization and mood symptoms. Antipsychotics are primary pharmacologic treatment of schizophrenia. Current scientific data regarding efficacy for positive and disorganization symptoms do not show significant differences among available antipsychotics except for clozapine's better efficacy in treatment-resistant cases. Efficacy for negative, depressive/mood and cognitive symptoms seems to be determined by (1) the extent to which reduction in positive symptoms (delusions and hallucinations) conduces to improvement of these co-occurring manifestations of the illness and (2) the extent to which extrapyramidal side effects (EPS) as well as anticholinergic effects (of the antipsychotics and drugs used to treat EPS) worsen them. Therefore, medications with potent

antipsychotic effect in the absence of EPS and need for concomitant anticholinergic therapy offer superior therapeutic benefit. Contrary to the overall similar efficacy, antipsychotics differ substantially in their proclivity to induce various side effects. Although second generation antipsychotics (SGAs or “atypical” antipsychotics) as a group are considered less risky for causing EPS but with higher risk of metabolic adverse events than first generation antipsychotics (FGAs or “classic” antipsychotics), significant variation of the incidence of these and other side effects among medications in both classes suggests that FGAs-SGAs distinction is not clinically plausible. In choosing antipsychotic agent, clinicians should take into account individual preferences, history for previous treatment response and tolerability, side effects profile, medical history and risk factors and patient's compliance with medications.

Key words: schizophrenia, antipsychotics

ENDOCRINE RESPONSE IN THE INTRAOPERATIVE PERIOD IN PATIENTS WITH ONCOGYNECOLOGICAL DISEASES, OPERATED BY A CONVENTIONAL METHOD AND BY THE ROBOTIC SYSTEM DA VINCI S

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Summary

Introduction: The Operative trauma leads to a number of hormonal and metabolic changes. This is a part of the systemic response to an injury, which covers a wide range of endocrine, immunological and haematological effects. Aim of the study: To study the levels of the “stress” hormone, cortisol, TSH, fT3, fT4, ACTH and CRP in patients undergoing open and robotic oncogynecological operations, of which the total intubation and inhalation or combined anesthesia (spinal block + general inhalation anesthesia and

intubation). Material and Methods: There were studied 40 patients, who were divided into two groups according to the choice of surgical approach (open and robotic) and four subgroups according to the choice of surgical technique. Results: It was found that for open surgery, performed with a general inhalation anesthesia, there is a statistically significant increase in serum levels of intraoperative serum cortisol ($t = 3,55$; $p = 0,006$). This dependency also exists in the level of TSH ($T = 3,94$; $p = 0,003$). In fT3, and ACTH is not proved statistically significant difference from the norm. In the robotic surgery with general intubation, inhalation anesthesia is established again a statistically significant increase in cortisol $t = 4,2$; $p = 0,002$ at TSH $t = 4,2$; $p = 0,002$. Proved to be straight correlation between the intra- and post operative TSH values in both groups surgery ($p = 0,0001$). Such a correlation is reported in the following operational levels of ACTH and cortisol ($p = 0,005$). In robotic and open surgery, which was held balanced anesthesia cortisol serum and ACTH tend to reach normal values. In terms of fT3, fT4, TSH and CRP are not reported statistically significant changes in both treatment groups. Conclusion: In the open and oncological robotic operations, conducted by a general inhalation, intubation anesthesia level of the operational stress in the intra-operative period was significantly higher than in the same surgery, performed with a balanced (combined, multi-anesthesia). This makes a balanced anesthesia drug of choice to perform robotic operations to reduce the Neuroendocrine Response to oncogynecological patients, who have expressed co-morbidities, increased pain threshold, and immunosuppressed.

Key words: robotic surgery, multi-anesthesia, general inhalation, intubation anesthesia, “stress” hormones

DIAGNOSTIC AND DIFFERENTIAL DIAGNOSTIC POSSIBILITIES OF A PATIENT WITH IDIOPATHIC FAMILY DYSTONIA (case report)

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Summary

Introduction: The term dystonia is used when the movements are so sustained that they are better regarded as abnormal postures. The aim of the current investigation was to describe the clinical history of a patient; treated at the Clinic of Neurology of UMHAT „D-r G. Stranski” – Pleven. She was admitted from the neurological office of polyclinic with severe extra pyramidal symptoms. **Material and methods:** The patient was admitted in the Clinic „Neurology and Neurosurgery”. She was in severe condition. Complete anamnestic data were taken. ECG, Ultra sound of the abdomen and heart, EEG, biochemical, immunological, serologic and genetic tests was applied. The patient was discussed with neurologist, ear, nose, throat specialist. The treatment with benzodiazepines, myorelaxants, anti cholinergic drugs was continued successfully. The patient was discharged in good condition without motor deficit and reduced hyperkinesias. **Results:** The analysis of the received results and data of the dynamic clinical neurological examination, laboratory investigations, revealed therapeutic challenges and alternatives concerning the clinical interpretations, diagnosis and differential diagnosis. **Conclusions:** It's necessary to be provided more investigations in the Genetic and Molecular pathology laboratories for the correct final diagnosis.

Key words: idiopathic family dystonia, extrapyramidal syndromes, clinical variations, differential diagnosis, botox treatment

LIVER INVOLVEMENT IN LEPTOSPIROSIS

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Summary

Liver involvement is a common feature of leptospirosis. It is variable from mild to severe hepatic dysfunction. The aim of this study was to analyze liver involvement and to assess its prognostic value in leptospirosis. Material and methods: We performed analysis of 100 consecutive leptospirosis cases treated in Clinic of Infectious Diseases at University Hospital – Pleven (1976-2012) (90 male, mean age 37±18 years, lethal outcome in 13%), followed by comparative analysis of group with liver involvement ($n_1=71$) versus group without liver involvement (controls: $n_2=29$). Results: Fever (100%), hepatomegaly (92%), myalgia (86%), nausea and vomiting (84%), splenomegaly (74%), oliguria (69%), headache (67%), jaundice (63%), hypotension (49%), abdominal pain (41%), and hemorrhagic diathesis (37%) were the characteristic manifestations. Headache, myalgia, abdominal pain, oliguria, hemorrhagic diathesis, myocarditis, acute respiratory failure and pancreatitis had had a significantly higher prevalence in the group with liver involvement. Increased levels of total bilirubin (mean $157.8 \pm 71.5 \mu\text{mol/L}$) with prevalent direct fraction, ASAT (mean $112 \pm 18 \text{ IU/L}$), ALAT (mean $96 \pm 78 \text{ IU/L}$), hypoproteinemia and hypoalbuminemia were the main laboratory parameters that expressed hepatic dysfunction and that were significantly different in the comparative groups. Conclusions: The most affected liver functions are bilirubin metabolism and protein synthesis. Liver involvement in leptospirosis is important factor for severity, in combination with acute renal failure has severe course and requires early diagnosis and prompt intensive treatment.

Key words: acute renal failure, hepatic dysfunction; leptospirosis; liver involvement

VARIA

ORAL PRESENTATION

IMPLEMENTATION LYMPHATIC DRAINAGE IN ANTI-AGING SKIN CARE

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Summary

The lymphatic system is a vital component of the immune system. This body system has three main functions: to maintain fluid balance by the removal of excess fluids from body tissues; to absorb fats and transport them to blood; and to protect the body against disease. The lymphatic system consists of a complex network of lymphoid organs including lymph nodes, lymph ducts, lymphatic tissues, lymph capillaries and lymph vessels that produce and transport lymph fluid from tissues throughout the circulatory system. This system doesn't have a pump like the circulatory system, and may slow down for a variety of reasons, such as poor lifestyle choices, injuries and autoimmune disorders that can result in swollen lymph nodes, edema, poor circulation, illness and disease. The aging of the skin brings about an array of mechanical, structural, and immunological failures. In addition to immune-related effects, the vasculature and lymphatic drainage deteriorate in old age, alongside the thinning of the epidermis. Besides hindered skin nutrition, these alterations further contribute to the reduced defense and healing abilities of the skin. Objectives: To review the current state of the mechanism of the manual lymphatic drainage and to present our protocol for the implementation of MLD as part of cosmetic procedures for aging skin. Discussion: Manual lymphatic drainage massage is not a typical massage of the skin and muscles; it is a very complex process. The pressure is extremely light-softer just the opposite

of deep tissue massage, during which firm pressure is used. If the pressure is too hard, the lymph system will likely not be affected, because it lies directly beneath the skin. When lymphatic drainage is performed, all movements must be applied in the direction of lymphatic flow toward the right lymphatic duct and the thoracic duct—these both drain lymph into the circulatory system at the right and left subclavian veins. During the lymphatic drainage techniques, this area is worked on first to initiate the process of draining lymph back into the circulatory system. This is followed by movements, including smooth, circular, pumplike strokes in areas where lymph nodes commonly exist. Upon completion of anti-aging skin care, the lymph flow through the lymphatic vessels is stimulated. Conclusion: The combination of the facelift massage and lymphatic drainage of the face can multiply the effects of facial work. When performed on a regular basis, the facial lymphatic drainage can greatly reduce puffiness, hyperpigmentation and rejuvenate the skin's appearance. Moreover, the effects of lymphatic drainage are seen fairly rapidly, and the cost to the client is far less than invasive procedures and many anti-aging products on the market.

Key words: skin, manual lymphatic drainage, massage, lymph capillaries, lymph nodes, skin aging

SOEBYE MESSAGE AS PART OF ROSACEA SKIN CARE REGIMEN

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Summary

Rosacea is a chronic skin disorder that adversely affects patients' quality of life. Current studies focus on the therapies that treat the clinical signs and symptoms of rosacea, but the impact of the altered lymphatic flow is often overlooked. Rosacea is triggered by sunlight, physical

exercise, mental stress, hot liquids, spicy foods, extremes in temperature and alcohol that is either topically applied or orally consumed. The classic rosacea symptoms are patchy flushing, edema and inflammation, particularly on the cheeks, nose, forehead and chin. These are relatively less mobile zones compared to the skin around the eyes and mouth, which are normally not affected by rosacea. Objectives: To review the current understanding of the disease' pathogenesis, to describe the mechanism of action of Soebye' massage for rosacea and to elaborate a training records of self- massage according Soebye as a part of a daily rosacea's skin care.

Discussion: The facial skin manifestations of rosacea have significant implications on patients' well-being and social and emotional health. Patients with rosacea have reported a negative burden of their disease, such as low self-esteem, low self-confidence, and decreased social interactions. Improvement of the clinical symptoms of rosacea improves the emotional well-being and quality of life. So it's important to treat rosacea in as many ways as possible. Those who modify their lifestyles, eating habits and reduce their level of stress often experience a much greater degree of rosacea clearing. The Soebye' massage as a rosacea treatment relaxes the muscles giving the edema a chance to smooth out and allows the restricted blood to flow resulting in improvement for the rosacea sufferer. The mechanism of action is the accelerated lymphatic drainage with reduction of redness shortly after the massage and in the future if the rosacea treatment massages continue. Conclusion: Although no cure exists, effective treatment options aid in the management of signs and symptoms of rosacea. The massage technique is easy to apply and the client can be trained through precise protocol. We believe that the Soebye's massage can improve the management of rosacea's signs and symptoms and it is interesting to monitor the improvement of patients' quality of life.

Key words: skin, rosacea, massage, Soebye, lymphatic drainage

APPLICABILITY OF THERAPEUTIC MASSAGE ACCORDING TO POSPELOV-JACQUE ON OILY SKIN CARE REGIMEN

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Summary

Oily skin, or seborrhea is a common condition affecting men and women, typically between puberty and about 60 years of age. Oily skin is caused by overactive sebaceous glands that are affected by a variety of stimuli such as hormones, humidity, heat and even stimulation by aggressive scrubbing or washing. Often a chronically oily skin has coarse pores and other embarrassing blemishes. It is prone to blackheads. In this type of skin the pores are enlarged and the skin has a coarse look. The consequences of excess sebum may be associated with adverse psychological and social effects resulting from associated acne and the appearance of skin oiliness and shine. That can cause a significant negative impact on quality of life.

One way to control the oily skin is with a therapeutic massage. The report examines the physiological effect of therapeutic massage according to Pospelov and Jacque and applicability of the method for oily skin. The aim of Pospelov's massage is to remove the contents of subcutaneous glands and to resorb infiltrates. At the base of the massage according to Pospelov are stroking and pinching actions which are carried out with the tips of the thumb and index fingers in a certain direction; this massage is performed on a dry face. Massage according to Jacque is based on strong and frequent pinches with gripping of not only the skin but also the subcutaneous fat. The movements are carried out with the thumb and index finger, taking the direction of the massage lines into account. The main difference of Pospelov-Jacquet massage technique is the character of its kneading movements. These are very intense and

rhythmical light pinching, which is alternated with vibrations and stroking. With these movements, there is a deep influence exerted both on the skin's superficial layer, and on derma and subcutaneous fat, normalizing oil secretion. The massage should be performed by a qualified aesthetician. It is an excellent opportunity to solve problems, improve oily skin and prevention of aging.

Key words: oily skin, acne, therapeutic massage, subcutaneous glands, Pospelov, Jacque

FREE SOFTWARE AND ITS APPLICATION IN MEDICAL UNIVERSITIES

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Summary

Aim: To present different aspects of the usage of free software in medical universities and the associated economic and other benefits. Material and methods: Free software applications used in Medical university – Pleven from 2005 to 2014 were reviewed and analysed. Results: More than 15 free software products were used. Their application was in different fields – database management, browsers, office automation, file archivers, file converters, etc. Conclusion: Wide distribution and free of charge usage of free software are great advantage over the purchase of commercial software under the conditions of restricted budget in medical universities.

Key words: software, GNU, GPL

SHORT RUSSIAN-BULGARIAN MEDICAL DICTIONARY AS A HANDBOOK FOR STUDENTS AND SPECIALISTS

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Summary

Abstract. The article presents a thematic study Russian-Bulgarian medical dictionary. The dictionary reflects the difficulties for Bulgarians reading medical text in Russian. It includes 16 topics from anatomy, physiology, clinic, pharmacology and contains three groups of vocabulary: 1) own medical terms; 2) general science and general language vocabulary as part of term combinations and 3) general language vocabulary, which gained importance in medical terminology text. The terms, that are identical in form and meaning with their Bulgarian counterparts or are readily and unmistakably recognized by Bulgarians in the text, are not included.

Key words: Russian-Bulgarian Medical Dictionary

HIDDEN CURRICULUM IN ANATOMY: THE PLACE OF DEMONSTRATORS IN INTRODUCTION OF THE MEDICAL PROFESSIONALISM FOR FIRST-YEAR STUDENTS

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Summary

A hidden curriculum is a side effect of an education, aspects which are learned but not openly intended such as transmission of norms, values and beliefs conveyed in the classroom and the social environment. Learning anatomy is not only necessary as a base for clinical disciplines. It could be used to introduce the first-year students some elements of medical professionalism. Anatomy demonstrators are prominent students with concern of the field of anatomy, surgery,

orthopedics etc. They serve as co-tutors in the dissection course and so help students in mastering practical skills or content. Beyond these the demonstrators are models for first-year students in implementing aspects of medical professionalism. The aim of our study was to assess the contribution of demonstrators in introduction the medical professionalism from the point of view of the first- and second-year medical students. 132 second-year students thought in the Anatomy department in 2011 – 2013 feel questionnaire form with 12 questions concerning different aspects of medical professionalism.

The results show that students highly assess the anatomy expertise of the demonstrators and the easy way they associate the anatomy knowledge with clinic. In addition to the help for studying the demonstrators in informal way present some aspects of professionalism: team working, subordination one's own interests to the interests of others, social responsibility, commitment to scholarship and to advancing the field, dealing with high level of complexity and uncertainty, continuing commitment to excellence, responsibility for actions and decisions.

Key words: hidden curriculum, demonstrators

APPRAISAL OF THE PROFESSIONAL COMPETENCIES OF FUTURE SOCIAL WORKER

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Summary

Introduction: Social work is a complex of assisting activities and in this connection the basic professional competencies include: knowledge, communicative and organization skills. Target: To determine the level of the acquired professional skills within real, practical situation. Method of the Survey: A rating-scale study has been carried out for the appraisal and self-appraisal of students during the pre-diploma

practice within four social services. Four criteria have been developed with the respective five indicators for each one of them. Each indicator is being assessed with values from 2 (“poor”) to 6 (“excellent”). Results: The results from 41 appraisal cards of the tutor and 27 appraisal cards of the student were examined. Generalized average values from all appraisals and self-appraisals of the respective indicators for each criteria were presented. For criteria “knowledge” there are NO values with assessment “poor”. The tutors have given assessment “excellent” to 20.77% of the students, and the self-appraisals are 28.15% for this criteria. With criteria “communicative skills with client” are seen values of “poor” assessments (3.42%) within the tutors' assessments. Within the self-appraisals, the students have indicated higher values of the “excellent” assessment (64.44%) in comparison with the tutors' assessment (35.61%). This tendency is preserved in the results for criteria “communicative skills with the social service team”. For criteria “organization skills” the students demonstrate a more critical attitude. They have values for “poor” assessment (3.70%) for the indicator “Participation in the organization of scheduled appointments for the client”, and lower values for 'excellent” assessment for all indicators (19.26%). Conclusion: The practical activity of the students in real working environment is a condition to effectively master the professional competencies within the sphere of knowledge, communicative and organization skills.

Key Words: appraisal, self-appraisal, skills, knowledge, competencies

ORGANIZATION, TACTICS AND LOGISTICS OF THE PSYCHIATRIC CARE OF DISASTERS, ACCIDENTS AND CRISES

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Summary

Aim: In the event accompanied by sudden loss of life such as disaster and terrorist acts less attention is paid to the mental effects mainly due to lack of organizational guidelines and resources to work in the field of mental health in many countries. In developed countries there are ongoing efforts to elaborate affordable, community-based practices that are effective against the low financial security. The need for differentiation and organization of the psychiatric care in the disaster, accident or crises event is the foundation of modern security of the population. Methodological approaches: Presents an analysis of existing literature and database of approaches in psychiatric care to its population in terms of disasters, accidents and crises. Results and conclusions:

1. Explores the available algorithms for medical care in the context of situations involving mass medical loss and traumatism.
2. Presents self-rating methodologies for the level of burnout and its correlation with the severity of experiences at the time of stress.
3. Reviews opportunities in terms of material and human resources available in the emergency rooms.
4. Studies existing algorithms in terms of opportunities for admission and maintenance of multiple sudden traumatic event.
5. Explores resources and mobility of the emergency teams as outposts for triage at the scene and/or the possibility of deployment of medical care in full - on the spot.

Key words: disaster, crisis, burnout, traumatism

INTEGRATING WEB-BASED LEARNING INTO TEACHING ENGLISH FOR MEDICAL PURPOSES

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Summary

Aim: The aim of the paper is to describe the opportunities and challenges of combining traditional teaching of English for medical purposes (EMP) with the advantages provided by modern information technologies. **Methodology.** Opportunities and challenges of combining traditional and web-based teaching and learning are discussed. Observation in support of distance learning as an additional opportunity and concerns about its efficacy in both students and teaching staff are presented.

Results: More than 50% medical students of the master degree program showed interest in the new form of learning as compared to about 30% of those in bachelor degree programs. Half of the medical students (50) completed the course (including lexical and grammar exercise, assignments and a final test), while the number of such students in the bachelor programs was very modest - 15 students altogether. **Conclusion:** Introducing a new form of teaching and learning is a long process necessitating the joint efforts of both students and teaching staff. Further experience in course design, teaching and learning in a changing environment is needed to better evaluate the opportunities of combining traditional and web-based learning and teaching.

Key words: english for medical purposes (EMP), web-based learning, students

PROSTHETIC TREATMENT OF CHILDREN AGE

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Summary

This is method of prosthetic treatment of dental row limited defects of children aged 12-18 with extensible dental prosthesis with a Bulgarian mechanical horizontal sliding joint as support element.

The mechanical horizontal sliding joint has two degrees of movement freedom. It is made exactly

of stainless steel in three sizes. They are used with frontal support teeth, premolars and molars of the upper and lower jaw. The extensible dental prosthesis includes the mechanical horizontal sliding joint. When the child's jaw grows, the dental prosthesis becomes longer through the movement of the joint elements – the matrix and the patrix. In this way the jaws grow normally and the support teeth keep their natural position and side mobility.

Key words: extensible dental prosthesis, mechanical horizontal sliding joint, matrix, patrix

DEFENSE OF THE PHYSICIAN'S REPUTATION

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Summary

At the owners of small-sized business including also the owners of medical institutions is observed dependence between personal and professional identity. The physicians are extremely sensitive regarding their professional authority and high reputation in the society. The article presents the American experience for legal defense of the professional reputation as well as the involvement of so called “Anti Defamation Clause” in the agreements which are signed by the patients. The author investigates the possibilities for legal defense of the physician's reputation in the conditions of Bulgarian legal system.

Key words: physician's reputation

POSTERS

MORINGA OLEIFERA - NATURAL ADAPTOGEN WITH UNIVERSAL PROPERTIES

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Summary

The interest in natural plant sources, boosting the protective functions of the body and its adaptation to the increased requirements of life, is not declining. The *moringa oleifera* plant is a perennial tree of the Moringaceae family and can be found in the foothills of the Himalayas in northern India. Grown in Central and South America and Africa, the plant thrives in tropical and subtropical areas equally well. It is also called the "Tree of Life" - because of its exceptional healing properties it is very popular in folk medicine, having a high nutritional value. Last but not least, it is used for water purification. All its parts are usable. Objective: The article aims at demonstrating the capacity of *Moringa oleifera* to serve as an adaptogen and a means of improving the quality of life, with an extremely powerful antioxidant and antibacterial, hypoglycaemic, antidyslipidaemic effect, and to justify its place in the treatment regimen of socially significant diseases such as diabetes and cancer. An interesting point is that *Moringa* shows its multiple effects through interaction with the non-linear system of the living human organism. Method: Our method of choice is documentary. We have researched indexed articles in PubMed and ScienceDirect databases, as well as various internet sources from 2010 onwards.

Results: The review of the indexed literature data convincingly demonstrates the effects and place of *Moringa oleifera* in the treatment of diabetes with marked hypoglycaemic effect and of cancer, its potent antioxidant properties. We have found data for neuroprotection in Alzheimer and a pronounced antibacterial effect. The plant has shown low toxicity. *Moringa oleifera* is a natural phenomenon and deserves to be presented and used in practice.

Key words: *Moringa oleifera*, antioxidant, hypoglycaemic, antibacterial, neuroprotection

**EXTRAORDINARY PRESENTATION
OF PYODERMA GANGRENOSUM IN
A PATIENT WITH CHRONIC
LYMPHOCYTIC LEUKEMIA**

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Summary

Pyoderma gangrenosum (PG) is a sterile neutrophil dermatosis because of observations of skin ulceration with neutrophil infiltration. PG is a rare dermatological disease with estimated incidence of 3-10 cases per million people/year. Disregulation of the immune system is often evoked, characterised by altered neutrophil chemotaxis and epidermal infiltration, resulting in tissue necrosis. In approximately half of cases, PG is associated with neoplasm, drug intake or system inflammatory illnesses. In the setting of Chronic Lymphocytic Leukemia (CLL), combined with atypical presentation such as genital involvement, it is sometimes difficult to be correctly diagnosed. Vulvar PG is extreme rare and easily misdiagnosed as a sexually transmitted disease or vulvar malignancy.

We present a case of 70 year-old woman with CLL followed and treated according to standard protocols including Fludara-based regimen. At the end of a chemotherapy cycle, she complained of abrupt appearance of painful vulvar lesions. Pathological skin changes involved the mucosa of the vulva and presented by multiple oval and shallow erythematous ulcerative lesions, covered with a purulent coating, that contained no pathogenic microorganisms. To rule out malignancy, biopsy was undertaken. Ulcerated mucosa was found to overlay dense cellular infiltrate, composed of mature lymphocyte (predominantly CD3 positive T-cells) and numerous granulocytes including a lot of eosinophiles. Systemic treatment with methylprednisolone was initiated and that led to a significant and rapid improvement in local skin

status of the patient. Based on our observations, vulvar presentation of PG is only infrequently reported but should be considered in the differential list especially in patients with concomitant haematological or other malignancy.

Key words: vulvar pyoderma gangrenosum, CLL

ASSESSMENT OF THE TRAINING IN COMMUNICATION SKILLS OF MEDICAL STUDENTS AND STUDENTS OF HEALTH CARE

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Summary

Objective: This study aims to investigate the views of students in specialty of "medicine", "nurse" and "midwife" associated with their training in communication skills as a free chosen discipline. Materials and methods: The participants of this research are 126 students from the three subjects. The method of gathering the information used in the research is direct individual anonymous survey. Results: The results show motivation for participation, desired and achieved communication skills, assessment of training. Conclusions: The respondents show certainty in the benefits of such training for the future work of all medical professionals, high self-assessment of communication skills and considerable satisfaction of course.

Key words: communication skills, students of medicine, nurses, midwives

WORK SATISFACTION, PROFESSIONAL IMAGE AND LOYALTY TO THE CHOSEN SPECIALITY BY GENERAL PRACTITIONERS

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Summary

Introduction: Changes of healthcare system influence life and attitude towards profession of more and more physicians everyday. The present day raises concern of more physicians being disappointed by the state of the chosen specialty. Many Bulgarian and international publications put accent on these processes analyzing their reflection on work satisfaction, engagement to work and staying in it. The Aim of the present study is to investigate individual adjustments and opinion of GPs towards professional image and specialty practiced. Material and methods: 225 general practitioners from 5 Bulgarian municipalities are covered in this study via a direct individual anonymous inquiry, and is part of an extensive study concerning business ethical aspects of professional work of general practitioners. Results and discussion: Such opinion among physicians prevails (70.2±3.64%), that GPs in Bulgaria do not have the necessary social and professional prestige. Substantial part of respondents (48.0±4.81%) share increasing disappointment from practiced specialty and lack of satisfaction from working in general medical practice (38.7±5.22%). Indicative is the fact, that more than one half of the physicians inquired pronounce their wish for changing work, and that they would not recommend this specialty to colleagues who want to commence a practice of general medicine. Conclusions: Negative trends reported here concerning professional self-confidence, satisfaction from work and loyalty to chosen specialty suggest adequate interventions by the side of the government and public institutions for turning the general medicine into an attractive

and desired carrier for working and graduating medics.

Key words: general medicine, general practitioners, professional image, loyalty towards specialty, satisfaction of work

TOXICOLOGY

ORAL PRESENTATION

ACUTE POISONING WITH CEREBROTOXIC TREATMENT – EPIDEMIOLOGY

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Summary

Acute poisoning with medicine is related to the use of accessible means of self-treatment or to suicidal actions. Presently, such poisoning has a leading role (over 65%) among the household “chemical” disease in most countries around the globe. We have made a retrospective examination of acute exogenous poisoning with cerebrototoxic medicine for the period 2011-2013 in the Pleven region.

253 clinical cases have been examined in the last three years and all of them have been analyzed according to the following criteria: age, sex, residence, social belonging, causes, medical treatment, dose of the medicine, degree of consciousness alternation, diseases as a result of the poisoning, outcome. There has been made a comparative epidemiological analysis of this pathology in different states.

Key words: acute exogenous poisoning

METHADONE AND ACUTE INTOXICATIONS

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Summary

Methadone (6 - (dimethylamino) -4,4-diphenyl-3-heptanone) is a synthetic narcotic agonist of μ -opioid receptors, which influences both subtypes, with a powerful analgesic effect, which is used for treatment of opioid (heroin) dependence. Differing chemically from the natural opiates, the methadone influences the same opioid receptors in the same way as morphine and heroin, but its impact is much longer (24-36 hours). Methadone has a weak euphoric effect than the one of the other opioids in doses sufficient enough to effectively suppress the abstinence syndrome and the narcotic hunger. The abstinence syndrome of methadone passes much more seriously compared to other drugs. Upon an acute exogenous intoxication a cerebrototoxic syndrome is developed - to coma, cardiotoxic syndrome - to cardiac arrest, pulmonary toxic syndrome - inhibition of breathing, pulmonary edema, acute renal failure.

We present a clinical case of OEI (acute exogenous intoxication) with methadone of a patient at the age of 21 with chronic abuse of psychoactive substances, that has developed cerebrototoxic disabilities with a change in consciousness - to coma.

Key words: methadone, opiates, poisoning, coma

EXOGENOUS INTOXICATION WITH CARBON DIOXIDE (CO₂)

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Summary

Poisoning with carbon dioxide (CO₂) is a pathological condition, arising as a consequence of its irregular excretion from the body and its increased pressure in the tissues which leads to severe hypoxia. The exogenous cause for the intoxication is the accumulation in the body of carbon dioxide and it occurs when the aspirated gas mixture is with an admixture of carbon dioxide (CO₂) by more than 3% of the partial pressure. Under normal atmospheric pressure, the partial pressure of the carbon dioxide equals to 0.23 mm of mercury, and in the tissues of the body, it reaches 60 mm of mercury.

We present two clinical cases of OEI with carbon dioxide (CO₂) which has occurred in an enclosed space as a result of alcoholic fermentation. The alcoholic fermentation is a process whereby the sugar is converted into an alcohol and carbon dioxide, heat and some other by-products are released.

One of the described cases has resulted in a rapid exitus (strangulation syndrome), and in the second case a clinical spectrum of ARF (acute respiratory failure) with severe hypoxia, hypoxemia, hypercapnia, and later acute toxic myocarditis were developed.

Key words: carbon dioxide, hypoxia, alcoholic fermentation

ACUTE METHADON INTOXICATIONS

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Summary

A retrospective analysis of all the acute methanol intoxications in Varna and Varna district has been done for the period 1991-2013. 72 patients with this diagnosis were treated at the department during the period. 56 of them, 77.8%, were men and 16, 22.2% - women. Methanol intoxication was significantly more frequent in men. The proportion between male and female patients was 4.5:1. Patients in active age prevailed: 88.9% of all were between 25 and 59 years old. Lethal cases were 29, 40.3%. From those, who survived, 3 patients, 4.2% had a total loss of vision and 2 patients, 2.8%, were discharged in a chronic vegetative state.

Key words: methanol intoxications

TWO CASES OF LITHIUM INTOXICATION DURING CHRONIC TREATMENT WITH NORMOTHYMIN

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Summary

Subacute and chronic lithium intoxications are not frequent, but sometimes can create significant diagnostic and therapeutic difficulties. Two cases, one of them lethal, of considerable lithium toxicity during a chronic treatment with therapeutic doses Normothymin are described. Both patients, a 64-years old woman and a 73-old man, were initially treated with other diagnoses. Lithium serum level was 2.21 mmol/l in the first case and 3.71 mmol/l in the second case. Clinical presentation was dominated by neurotoxic syndrome-medium severe in the first case, severe- in the second case. Clinical and laboratory data of hypothyroidism and light toxic nephropathy were established too.

Intensive conservative treatment was done in both cases. Urgent extracorporeal depuration of the blood was not done because of refusal in the first case and in the second case was postponed because of medical contraindications. The female patient was discharged with normal lithium level without toxic symptoms. The male patient developed toxic coma, respiratory and cardio-circulatory failure and had a lethal exit. The described cases confirm the necessity of regular control of lithium levels during lithium treatment, especially in old patients.

Key words: lithium intoxications, normothymin

COOPERATIVE WORK BETWEEN CLINIC OF TOXICOLOGY AND SOME NON GOVERNMENT ORGANIZATIONS (NGO) AND THEIR BENEFIT

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Summary

Design of interaction and benefit consequences are demonstrated after 7 years experience of interaction between Clinic of toxicology in Naval Hospital Varna and NGO. Matherial: Documentation of hospital and NGO (Foundation "Tolerance" with 3 projects, including 70 patients; Foundation "Suicideprevention" with 3 projects, including 200 patients; Association „ Life without alcohol" with 3 projects, including 100 patients; METHOD: Analyze of literature and documents, self investigation and estimation, professional training and education. Results: Nine original projects have been realized between Clinic of toxicology and NGO. The original method has been demonstrated and field of interest, design of interaction, NGO activity in hospital are described. Satisfaction of patients, their relatives, personal, manager and financial organization have been estimated. Conclusion: The model of

interaction between Clinic and NGO is useful to manage the changing in hospital and successful social marketing. This model has been realized real particular medicine and integrates care for specific groups of patients. The patients and their relatives, the health workers and the financial organization have been satisfied more than before and the hospital get high authority in society.

Key words: NGO, clinic of toxicology

ACUTE INTOXICATION WITH PETROLEUM DERIVATIVES – KEROSENE AND MOTOR OIL

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Summary

Petroleum derivatives (kerosene and mineral motor oil) are a complex mixture of volatile hydrocarbons widely used for household and industrial purposes. They are extracted from crude oil by cracking and fractional distillation / rectification. The obtained petroleum distillate is highly flammable, oily, water-insoluble liquids with a specific odor of organic solvents. Oral poisoning with them is characterized by gastrointestinal, cerebrotoxic syndrome and toxic damage of parenchymal organs. Acute intoxications as a result of deliberate self-poisoning with petroleum products are not commonly seen but they are truly related to a life-threatening condition of the patient.

We present two clinical cases of severe acute peroral intoxication with Petroleum derivatives that have lethal outcome. In the first case a lonely living 77-year-old woman with recurrent

depressive disorder has carried out self-poisoning by ingestion of an unidentified amount of kerosene. In the second case - 44 year-old man with paranoid schizophrenia, is committed suicide as ingested about 2000 ml mineral motor oil. Clinic in the both cases is manifested by coma, toxic pulmonary edema, severe dysmetabolic syndrome, chemical pneumonia, toxic gastroenterocolitis and acute renal failure. The thanatogenesis of the poisoning is determined by the taken lethal dose of the toxic noxa, the later search of medical help, as well as the severe pulmonary and gastrointestinal complications, which all led to the fatal outcome.

Key words: intoxication, kerosene, mineral motor oil, hydrocarbons, self-poisoning, petroleum derivatives, toxic pulmonary edema

VIPERA AMMODYTES BITES - IS THERE A RELATIONSHIP BETWEEN SEVERITY OF THE CLINICAL PICTURE AND COAGULATION

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Summary

Snakebites are rare medical emergency cases, but may sometimes be severe and lead to complications. Bitten by poisonous snakes in Bulgaria are widespread in our country *Vipera ammodytes* and *Vipera berus*. Snake venom is a complex mixture of proteins, enzymes, and various other substances with toxic properties. The venom glands of poisonous snakes secrete a highly concentrated mixture of toxins including anticoagulants, coagulants, neurotoxins, cardiotoxins, cholinesterase, hyaluronidase, metalloproteinases. Some of the enzymes damage the vascular endothelium. Venom usually demonstrates affinity for a particular system, but a spectrum of effects often occurs. The venom of snakes changes over time and in different populations. Three cases of *Vipera ammodytes* bites are presented. The clinical

effects and current recommendations for the treatment are described. The local findings of envenomation were edema of the bitten limb with associated extravasations. In two cases the haemorrhage areas spread to the trunk. Mild coagulation disorders were present in the cases, uncorrelated with the severity of the clinical picture. Probably the main components in the toxins are metalloproteinases and the mechanism of observed swelling and hemorrhage is the increased permeability of the vessel wall. Treatment included the administration of specific antivenom and symptomatic treatment applied in all cases. No fatal outcome and no adverse reactions after antivenom administration were reported.

Key words: snakebites, snake venom, coagulation, metalloproteinases

POSTERS

PSYCHOLOGICAL SUPPORT TO PATIENTS WITH SUICIDAL ATTEMPT ADMITTED IN HOSPITAL (CLINIC OF TOXICOLOGY-VARNA)

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Summary

The World Health Organization defines the suicidal attempt as one of the most serious medical disorders, and recommends to all its member states to give priority to this problem. We demonstrate design of interaction between Clinic of Toxicology - Varna and Foundation 'Suicide Prevention' to realized a psychological support to patients with suicidal attempts and their relatives.

Material and method: There are four projects between Clinic of Toxicology - Varna and Foundation 'Suicide Prevention' (2009-2014) to realized post-traumatic and secondary prevention of the autoaggressive behavior of patients from different age and social groups, in

order to avoid further suicidal attempts and to reintegrate these people in society. Results: Over 250 young people, their parents, and other close relatives, have been consulted during the projects. The target groups were persons at risk – young people who had made a suicide attempt and their relatives; parents who had made a suicide attempt and their children. The following activities were carried out: medical rehabilitation - consultations with a toxicologist and a psychiatrist; psychosocial support – consultation with a psychologist for the people who had made a suicide attempt, their parents, and other close relatives. The initial consultations began during the hospital period. Conclusion: Interaction between Clinic of Toxicology - Varna and Foundation 'Suicide Prevention' is very useful for person with suicide attempts and their relatives to make real psychological support which is following of further consultations after the discharge from hospital.

Key words: suicidal attempt, psychological support

A STUDY DRUG (ACE-INHIBITOR) EDEMA FREQUENCY AMONG ADMITTED IN HOSPITAL PATIENTS

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Summary

Patients with chronic cardiovascular diseases sometime need to be hospitalized because of severe drug allergic reaction and soft tissue edemas. Aim of this investigation is to be made analysis of the part of edemas caused by drugs of group of ACE-inhibitors. Material and methods: A retrospective analysis was made for three years period (2011-2013). There were investigated 761 patients with acute allergic drugs reactions, 123 of them with edemas of soft tissue. Results: The same frequency of tissue edemas was estimated in the period of three years. 72% of all drags edemas had been caused by drugs of group ACE-

inhibitors. Other more 16% of other patients had taken ACE-inhibitors and sartans together. Finally only 12% of edemas had been caused of other medicines. Conclusions: If patients have taken many medicines for treatment some chronic disease the drugs of group ACE-inhibitors are the most suspected to cause soft tissue edemas.

Key words: ACE-inhibitors, acute allergic drugs reactions

EXOTOXIC SHOCK, CAUSE TO ANTIHYPERTENSIVE MEDICINES POISONING – A CASE REPORT

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Summary

Patients with acute poisoning from antihypertensive medicines represent a large proportion of all patients, received with acute poisoning in the Clinic of Toxicology "Pirogov". We report a case of acute poisoning with antihypertensive medicines, occurs with the picture of exotoxic shock. Twenty-four year old woman with suicidal ideation took 20 tablets - 80 mg verapamil and 20 tablets of lozap - 50 mg. She was admitted for treatment at the Clinic of Toxicology, two hours and 20 minutes after the drugs administration – in somnolence, with picture of exotoxic shock. The clinical characteristic, the course of the shock, the therapeutic management of severe poisoning and complications were discussed. The outcome of intoxication was favorable - the result of adequate hospital care.

Key words: antihypertensive medicines, poisoning, exotoxic shock

INTERNAL MEDICINE

POSTERS

THE DIFFUSE SCLEROSIS VARIANT OF PAPILLARY THYROID CANCER- THE WAY TO THE DIAGNOSE.

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Summary

Introduction: The diffuse sclerosis variant of papillary thyroid cancer/DSVPTC/ is a rare subtype, representing about 2% of all PTC. It affects children and young people, involving the gland and neck lymph nodes. Being treated aggressively It doesn't affect the life expectancy. Objectives: To prove, that the typical ultrasound signs of the cancer, supported by fine needle aspiration cytology are preoperative diagnostic predictors. Case report: We present 19 years old lady, complaining of neck swelling; no information for a pain and compression. Euthyroid state; normal hormonal levels. The thyroid is enlarged and hard on palpation. Thyroid ultrasound: Decreased echogenicity and marked inhomogeneity of the parenchima are present on the right. Numerous microcalcifications forming a „snowstorm appearance“. Pathologic lymph nodes seen on

the neck. FNA cytology: Small papillary tumour deposits; classic papillary nuclear features, numerous psammoma bodies; focal lymphocytic infiltration. Intraoperative observation: An ill-defined solid tumour, with, yellow –red, granulated surface, in right. The left lobe isn't involved. Histology: Right lobe: Papillary cell nests diffusely spread; multiple psamoma bodies; dense fibrosis; involvement of the capsule; tumor emboli in the lymphatic channels. Left lobe: Macrofollicular structure with scattered tumour cells and psamoma bodies. Diagnose: DSVPTC. pT3N1Mx G1. The young age, typical ultrasound sign of scattered microcalcifications, the lymph node involvement determine the search for typical cytological and histological criteria of the DSVPTC. After its morphological verification the patient is submitted to aggressive treatment and strict follow up.

Key words: DSVPTC, ultrasonography, FNA, scattered microcalcifications

EFFECTS OF GLUCOSE AND BILIRUBIN ON TWO METHODS FOR SERUM CREATININE ASSAY

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Summary

An enzymatic method for the determination of serum creatinine is accepted as one of the most accurate methods in clinical laboratory. This method was used on Biochemistry auto analyzer - Cobas Integra 400, for the determination of serum creatinine, in Clinical laboratory in UMHAT “Dr. Georgi Stranski” – Pleven. Characteristics and practicability of enzymatic method for creatinine were compared with kinetic Jaffe - based method. Effects of some interfering substances like bilirubin and glucose on the kinetic Jaffe's and the enzymatic methods were compared. Glucose and bilirubin inhibit the reaction between creatinine and alkaline picrate. Glucose reduces slowly picric acid to picrate, while bilirubin the

existing is oxidized to biliverdin, under alkaline conditions. This leads to a decrease in absorbance at 520 nm. We measured serum creatinine with enzymatic method and kinetic Jaffe - based method in 3 groups: I group – serums without interfering substances (bilirubin and glucose); II group – serums with high level of glucose; III group - serums with high level of bilirubin. Methods comparison between the enzymatic creatinine method and Jaffe's kinetic method gave the following equation for the normal group and the correlation coefficient $R = 0.98$. There was very good agreement between both methods as correlation coefficient, when in sample probe presence high levels of glucose or bilirubin.

Key words: creatinine, enzymatic assay, kinetic Jaffe's, glucose, bilirubin

THE STUDY OF MECHANICAL PROPERTIES AND ELECTROCARDIOGRAPHIC CHANGES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE ASSOCIATED WITH CORONARY HEART DISEASE

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Summary

According to population studies, risk of cardiovascular death is 2–3 times higher in patients with COPD and amounts to approximately 50% of all deaths. Parallel course of coronary heart disease (CHD) and COPD aggravate a patient's condition leading to earlier morbidity and mortality. Our aim was to study the mechanical properties of arteries and analyze the electrocardiographic changes in patients with COPD associated with CHD. The study involved 56 patients who were divided into 2 groups: group 1 – patients with COPD (stage 2–3); group 2 – patients with COPD associated with CHD; group 3 (control) consisted of 20 healthy volunteers without pathology of the

cardiovascular and respiratory systems. Among patients with COPD 20% of them didn't smoke at all. 80% of patients (group 1) and 84% of patients (group 2) smoked. According to the history the average number of pack-years was 42. The study revealed that the mechanical properties of arteries were affected in both groups and the severity changes directly correlated with comorbid pathologies. The difference in stiffness index in patients of both groups was 15.6%; in reflectance index was 5.3%. Endothelial dysfunction was found in 35.7% of patients (group 1) and in 53.6% of patients (group 2). Endothelial function reduced in 50% of patients with COPD and in 46.4% of patients with COPD associated with CHD (group 2). ECG detected the ventricular extrasystoles in 4.6 % and 10.7 % of patients; disruption of repolarization in 35.7 % and 39.3 % of patients group 1 and 2 respectively. In patients with COPD associated with CHD were also recorded: atrial fibrillation, incomplete block left bundle branch block, and atrioventricular block 1 degree. The stiffness index and reflectance index correlate strongly with severity of disease and its systemic manifestations. Changes of the mechanical properties of arteries and electrophysiological changes are most evident in patients with comorbid disorders. Timely correction of hemodynamic disorders in the early stages of COPD may possibly depress the rate of progression of both diseases and improve quality of life and prognosis.

Key words: coronary heart disease, COPD, electrocardiographic changes

PROLONGED SURVIVAL WITH EVEROLIMUS IN PATIENT WITH METASTATIC RENAL CELL CARCINOMA

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Summary

Introduction: Primary kidney cancers comprise

approximately 3.8% of all malignancies. Until recently, immunotherapy has been the standard of care for patients with metastatic renal cell carcinoma (RCC), but this kind of therapy is associated with a low response rate and significant toxicity. Agents targeting vascular endothelial growth factor receptors or the mammalian target of rapamycin now have become standard therapies for patients with metastatic RCC because of their ability to prolong overall survival. Case presentation: We present a case of a 57-year-old Caucasian man with metastatic clear cell RCC treated with bevacizumab and interferon- alpha and subsequently with the mammalian target of the rapamycin inhibitor everolimus, achieving significant clinical benefit and prolonged survival of 37 months. Conclusions: This case illustrates the potential for everolimus as a second- line treatment in a patient with clear renal cell carcinoma and lung metastases to derive long-term survival.

Key words: case, renal cell carcinoma, survival

OUR EXPERIENCE WITH DACARBAZINE IN THE TREATMENT OF PATIENTS WITH INOPERABLE SKIN MELANOMA

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Summary

The standard treatment of inoperable skin melanoma is chemotherapy. The aim of this study was to explore the efficacy and safety of treatment with dacarbazine in patients with advanced melanoma. Twenty- seven consecutive patients with inoperable stage III or IV skin melanoma were treated with chemotherapy. Treatment schedule consists of dacarbazine 150 mg/m² days 1-5 administered every 3-4 weeks. Overall response rate was 14.8% with four partial remissions. The main toxicity were neutropenia

and vomitus. These data confirm that advanced skin melanoma is resistant of chemotherapy.

Key words: dacarbazine, skin melanoma, chemotherapy

DOES IMATINIB MESYLATE (GLIVEC®) AFFECT INFLAMMATION AND PROLIFERATION IN AMIODARON-INDUCED PNEUMOTOXICITY IN RATS

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Summary

Amiodaron (AM) administered intratracheally, induced inflammatory response and activation of fibroblasts, and subsequent fibrosis. This study was designed to investigate the effect of imatinib mesylate (IM; Glivec®), given during inflammatory or fibrotic phases in the prevention of AM-induced pulmonary fibrosis in a rat model. AM was instilled intratracheally on days 0 and 2 (6.25 mg/kg). IM, as an emulsion, was applied orally during inflammatory (from day 0 to day 10) or fibrotic phase (from day 10 to day 28). Rats were sacrificed respectively on days 3, 5, 10 and 28 when biochemical, cytological and immunological assays were performed. The results obtained from our study showed AM led to moderate interstitial and perivascular fibrosis, thickening of interstitial spaces and cellular infiltration. IM, given during inflammatory phase was ineffective in preventing initial inflammatory response and subsequent pulmonary. IM, given during fibrotic phase could have a protective effect against the accumulation of collagen, respectively fibrosis associated with intratracheal amiodarone administration in rats.

Key words: imatinib mesylate, Glivec®, amiodarone, pneumotoxicity, rats

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Second page

Summary. A concise and factual summary is required (not more than 200 words). The abstract should briefly state the purpose of research, principal results and major conclusions. References should therefore be avoided, but if essential, they are to be cited in full. Abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

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