

OTHER CLINICAL SCIENCES

ORAL PRESENTATIONS

AGGRESSIVE BEHAVIOR IN HOSPITALIZED PATIENTS

Aleksandar A. Todorov,
Petranka G. Chumpalova-Tumbeva,
Emiliya M. Dimitrova,
Maya Y. Stoimenova-Popova,
Georgi K. Georgiev

*Department of Psychiatry and Medical Psychology,
Medical University – Pleven,
Bulgaria*

Corresponding Author:

Aleksandar A. Todorov
Department of Psychiatry and Medical Psychology,
Medical University – Pleven
Storgozia, 113
Pleven, 5800
Bulgaria
e-mail: alex_9020@abv.bg

Summary

The potential danger, which psychiatric patients cause to community, has always been an object of many discussions. A considerable evidential material presumes that the behaviour of aggressive patients is not accidental, but psychotically motivated. In most of the cases, this behaviour could be predicted and is a rational consequence of irrational belief (delusion) and perception (hallucination). The nature of this relation is not yet clearly set. We investigated all patients, admitted to the General Psychiatry department of Dr. Georgi Stranski University Hospital - Pleven, Bulgaria between 2012 and 2018. We used data from medical histories, results from Aggression Scale and nurses reports on aggressive patient behaviour. During the observed period, we observed a stable frequency of aggression – 20% of the incidences involved patients with aggressive risk, and about 10% – patients, aggressive to medical staff, other patients and other people. About 70% of the patients with aggressive behaviour had schizophrenia, and

about 16 % had a bipolar affective disorder. The aggressive acts of patients, accomplished during hospitalization, represented a relatively low percentage of all treated patients. Based on that, we think that there is an increasing necessity for systemic staff education, pointed on specific regulated medical staff behaviour, when treating patients with psychiatric disorders.

Key words: aggression, psychiatry disorders, medical staff

CHRONIC PAIN MANAGEMENT BY VORTIOXETINE – A NEW ANTIDEPRESSANT IN NEUROLOGICAL PRACTICE

Ekaterina Turovskaia

*Lechebniy Centre,
Moscow,
Russia*

Corresponding Author:

Ekaterina Turovskaia
Lechebniy Centre,
9, Akademika Sakharova Prospekt
Moscow, 107996
Russia
e-mail: katetur@yandex.ru

Summary

The study aimed to explore the effectiveness of vortioxetine in chronic pain patients with different neurological diseases, of different age and sex. Twenty-four subjects (age range 26-79 years) with chronic pain (duration more than three months) were included in a 12-month vortioxetine 10 mg treatment. Of these, 54% (n=13) had low back pain, 8% (n=2) had radiculopathy, 8% (n=2) had spinal canal stenosis, 16% (n=4) had headache, and 8% (n=2) had trigeminal neuralgia. All patients had previously experienced a low efficacy of NSAIDs or anticonvulsants. The patients were divided into groups according to age, sex, duration of pain and the type of pain (neuropathic and nociceptive origin). The efficacy of vortioxetine was observed through 1-week, 3 and 12-weeks. Pain intensity was examined by Visual Analogue Scale (VAS). Comorbid (emotional disorder and insomnia) was assessed. Almost

all patients with chronic pain reported anxiety and insomnia, but these were less frequent in patients with neuropathic pain ($p=0.05$). There was a statistically significant reduction in the pain score from the baseline after one-week and three-week treatment in young patients. The mean pain relief was 1.1cm vs 0.16cm, $p=0.003$ after one-week treatment, and it was 2.35cm vs 1.7cm, $p=0.05$. There was no influence of pain duration, type of pain and sex on pain reduction. All patients had significant relief of pain after a 12-month treatment. Our findings demonstrated the efficacy of vortioxetine in chronic pain of different origin and different duration (less or more than one year). At an early stage of treatment, pain relief was lower in old patients (more than 65 years old).

Key words: chronic pain, central sensitization, antidepressant, vortioxetine

ASSESSMENT OF RATIONAL ANTIBACTERIAL DRUGS PRESCRIBING SKILLS OF MEDICAL STUDENTS - A PILOT SURVEY IN THREE BULGARIAN MEDICAL UNIVERSITIES

Andrey D. Petrov,
Galya T. Stavreva¹,
Diana I. Pendicheva¹,
Darina S. Dimitrova²,
Maria Georgieva-Kotetarova²,
Hristina I. Zlatanova²,
Emil M. Gatchev

*Department of Clinical Pharmacology and Therapeutics,
Medical Faculty,
Medical University – Sofia,
University Hospital "Tsaritsa Yoanna-ISUL",
Sofia,
Bulgaria*

*¹Sector of Pharmacology,
Department of Pharmacology and Toxicology,
Faculty of Pharmacy,
Medical University – Pleven,
Bulgaria*

²Department of Pharmacology and

*Clinical Pharmacology,
Medical Faculty,
Medical University – Plovdiv,
Bulgaria*

Corresponding Author:

Andrey D. Petrov
Department of Clinical Pharmacology and Therapeutics,
Medical University – Sofia,
University Hospital "Tsaritsa Yoanna-ISUL"
8 Byalo more Str.
Sofia, 1527
Bulgaria
e-mail: andro_p06@yahoo.com

Summary

The present pilot study aimed to evaluate the practical skills of medical students from three medical universities (MU's) - Sofia, Plovdiv and Pleven for rational antibacterial drugs prescribing and to compare this with their self-assessment rating and the duration of education in clinical pharmacology (CP) in each of these universities. The duration of education in CP amounts to 60, 45 and 30 academic hours in MU of Sofia, Plovdiv and Pleven respectively. Fifth-year medical students from the three universities were asked to voluntarily complete an anonymous self-assessment questionnaire on their knowledge of rational drug prescribing. Then, three simulated patient cases with infectious diseases were presented, and the students were and were asked to write appropriate prescriptions. The prescribing competencies of the medical students were assessed and classified by two clinical pharmacologists as adequate or inadequate, taking into account the appropriateness of the antibiotics chosen; drug doses and dosing regimens, and the competence to accurately write antibiotic prescriptions.

The adequate prescriptions, written by students at Sofia, Plovdiv and Pleven medical universities, were 83.9%, 79.2% and 59.0%, respectively. Their self-assessment of confidence for prescribing of antibacterial drugs rated as 93.75% (Medical University – Sofia), 100% (Medical University – Plovdiv) and 87.84% (Medical University – Pleven). The prescribing skills of Bulgarian medical students are in line with the literature data, with a tendency for overestimation of personal prescribing confidence. We found an

almost linear relationship between the duration of education in CP in the three universities and the prescribing competencies of the students.

Key words: antibacterial drugs, practical skill, rational drug prescribing

PRIMARY ACQUIRED NASOLACRIMAL DUCT OBSTRUCTION – EPIDEMIOLOGY AND SURGICAL TREATMENT

Krasina P. Valcheva,
Snejana V. Murgova

*Clinic of Ophthalmology,
UMHAT “Dr. Georgi Stranski”,
Medical University–Pleven,
Bulgaria*

Corresponding Author:

Krasina P. Valcheva
Clinic of Ophthalmology, UMHAT “Dr. Georgi Stranski”,
Medical University–Pleven
91, General Vladimir Vazov Str.
Pleven, 5800
Bulgaria
e-mail: krasina_valcheva@abv.bg

Summary

The study aimed to discuss the epidemiological aspects and the mode of surgical treatment in patients with primary acquired nasolacrimal duct obstruction (PANDO). Examination of the medical records identified 28 patients with PANDO who underwent external dacryocystorhinostomy (DCR) between 1995 and 2016 in the Eye Clinic- Pleven. All of them were included in a retrospective study. A controlled examination was done to evaluate the effect of surgical treatment based on a history of watery eyes and the patency of the tear drainage system. Only eight patients responded. The demographic profile of the evaluated patients was as follows: 18% males and 82% females; 79% of them lived in urban areas; in 82% cases one eye was affected, and 18% had bilateral PANDO. The mean age of the patients during the operation was 42.7±5.2 years (SD=14.1). All of them suffered from epiphora and discharge, 63% had redness on the skin in the region of the lacrimal sac, and 33% had episodes of acute dacryocystitis before

surgery. During the immediate postoperative period, there were no complications. The success rate of the external DCR was performed on nine eyes. In 56% it was successful, in 11% there was a questionable effect, and in 33% the result was unsuccessful. In conclusion, PANDO affects females predominantly. Unilateral cases are more frequent than bilateral. External DCR is performed in patients with epiphora and discharge. Complications are uncommon, and patient satisfaction is good. The success rate is high.

Key words: PANDO, epidemiology, external DCR

SYSTEMATIC APPROACH TO QUALITY ISSUES IN MENTAL HEALTH SERVICES

**Vladimir V. Nakov,
Monica-Laura Cara¹,
Mihail Cristian Pirlog¹,
Yordan Ganev²**

*National Center of Public Health and
Analyses,
Sofia,
Bulgaria*

*¹University of Medicine and Pharmacy of
Craiova,
Romania*

*²Medical Centre “Stimul”,
Sofia,
Bulgaria*

Summary

Mental disorders commonly lead to disability worldwide. On the one hand, these disorders are associated with a higher rate of comorbidities. On the other hand, they relate to an increased risk of mortality compared to the general population. Even though numerous studies have emphasized this high burden, the quality and outcome of mental health services for these disorders remain suboptimal and insufficient: there are still persistent gaps related to their accessibility. Quality of mental health care usually refers to the structural system of services and its influence on each level of clinical care processes as delivered by providers and the

reflection of the outcomes of these services on the patients' health. Based on these general indicators, the level of mental health quality care is low, with a slower improvement if compared to general medical care. One of the causes of this undesirable state is related to the lack of systematic methods for measuring quality in this field of healthcare. Building strategies will deliver solutions to solve these issues. Proposals will identify the population needs and expectation from mental health services. On the other hand, the implementation of decisions and strategies could improve the quality of provided services and reduce disparities in contemporary society.

Key words: quality, mental health care, systematic approach

HPV AND EBV INFECTION TESTING IN CARCINOMAS OF THE UTERINE CERVIX. COMPARISON OF THREE METHODS

**Vasil V. Kramolinski,
Boris V. Dinkov,
Viktoriya K. Vladova,
Simoneta K. Ivanova,
Iliyana I. Vacheva,
Angel D. Yordanov¹,
Tereza B. Dineva²,
Tihomir R. Rashev³,
Savelina L. Popovska⁴,
Ivan N. Ivanov⁴**

*Students, Medical University – Pleven,
Bulgaria*

¹ *Division of Gynecologic Oncology,
Medical University – Pleven,
Bulgaria*

² *Sector of Molecular Pathology,
Medical University – Pleven,
Bulgaria*

³ *Department of Anatomy, Histology and
Cytology,
Medical University – Pleven,
Bulgaria*

⁴ *Department of Patholoanatomy,
Medical University – Pleven,
Bulgaria*

Corresponding Author:

Vasil V. Kramolinski
Medical University – Pleven,
1, St. Kl. Ohridski Str.
Pleven, 5800
Bulgaria
e-mail: kramolinski.vasil@gmail.com

Summary

HPV and EBV infections are known to be associated with some carcinomas of the uterine cervix, although the incidence may vary between different reports. We aimed to examine the incidence of HPV and EBV infections in carcinomas of the uterine cervix and to compare results from immunohistochemistry, in situ hybridization and PCR. Eleven cases of warty and eight cases of lymphoepithelioma – like carcinomas of the uterine cervix were tested for HPV and EBV infection, using immunohistochemistry, in situ hybridization, and PCR. The results from immunohistochemistry and in situ hybridization were compared to results from PCR. Two of the warty carcinomas and four of the lymphoepithelioma – like carcinomas were PCR positive for HPV. Four of the warty carcinomas and six of the lymphoepithelioma – like carcinomas were PCR positive for EBV. Coinfection was found in two of the warty carcinomas and four of the lymphoepithelioma – like carcinomas. Discrepancies between immunohistochemistry and PCR for HPV were observed in three of the 19 cases, and between in situ hybridization and PCR – in two cases. Discrepancies between immunohistochemistry and PCR for EBV were found in eight of 19 cases and between in situ hybridization and PCR – in seven cases. Coinfections with HPV and EBV were relatively common in the studied group. Immunohistochemistry and in situ hybridization for HPV are suitable for primary screening, but confirmation with PCR is advisable.

Key words: HPV, EBV, uterine cervix cancer, testing

A MULTISTEP TRAINING APPROACH TO ESTROGEN STATUS EVALUATION IMPROVEMENT IN BREAST CANCER

**Simoneta K. Ivanova,
Iliyana I. Vacheva,
Gergana K. Tsvetanova,
Viktoria V. Vladova,
Mitko M. Kambitov,
Sharleen L. Mocek,
Tatyana M. Betova¹,
Savelina L. Popovska¹,
Ivan N. Ivanov¹**

*Student, Faculty of Medicine,
Medical University – Pleven,
Bulgaria*

¹ *Department of Patholoanatomy,
Medical University –Pleven,
Bulgaria*

Corresponding Author:

Simoneta K. Ivanova
Student, Faculty of Medicine,
Medical University – Pleven
1, St. Kl. Ohridski Str.
Pleven, 5800
Bulgaria
*e-mail: chess_gambler1@yahoo.com;
0877221129*

Summary

Estrogen (ER) status evaluation in breast cancer is essential for clinical practice. The study aimed to create an efficient training algorithm for ER status evaluation in breast cancer. Training for ER status evaluation in breast cancer was carried out in two rounds. In the first round, after basic instructions on ER status evaluation, 100 cases were evaluated by five trainees and compared to computer-assisted ER scoring (accepted as a standard). The observed discrepancies were analyzed and discussed with the trainees. One more trainee received basic instructions and additional instructions, based on the analysis of the attempts of the five trainees. The group of six trainees were asked to analyse 30 cases from the 100 cases already analysed in the first round. Concordance coefficient was calculated for the first and second evaluation rounds of each trainee and was compared and analysed.

After instructions, based on the results from the first round were given, concordance rates improved among the trainees, involved in both rounds of the training. The trainee, who received basic instructions and additional instructions, based on the analysis of data from the first round demonstrated a concordance level higher than the levels achieved by her colleagues during the first evaluation but lower than their results from the second round. During the second round, a misinterpretation of ER (3.34-6.67%) status was observed. A multistep training approach with an analysis of the errors and personalised instruction can improve ER evaluation performance among trainees.

Key words: estrogen status evaluation, training

THE THREE-DIMENSIONAL WORLD OF BREAST CANCER – A PRELIMINARY MORPHOLOGICAL STUDY

**Iliyana I. Vacheva,
Bilyana M. Mihova,
Vasil V. Kramolinski,
Boris V. Dinkov,
Sh. Mocek,
Sahid O. Shittu,
Vasil D. Nanev¹,
Savelina L. Popovska²,
Ivan N. Ivanov²**

*Student at Medical University – Pleven,
Bulgaria*

¹ *Department of Surgical Oncology,
UMHAT “Dr. Georgi Stranski”, Pleven,
Bulgaria*

² *Department of Patholoanatomy, Medical
University – Pleven, Bulgaria*

Corresponding Author:

Iliyana I. Vacheva
Medical University – Pleven
1, St. Kl. Ohridski Str.
Pleven, 5800
Bulgaria
e-mail: annie1710@abv.bg

Summary

Breast cancer and its stroma exist and function as

a complex system. A more detailed understanding of the structural changes that occur in breast tissues during cancer development and growth will improve breast cancer diagnostics and treatment. The study aimed to create a three-dimensional model of breast carcinoma, based on the immunoexpression in the tumour and its stromal components. We used tissue samples, routinely tested for vascular invasion and receptor status. Slides stained for HE, PAS, ER, PgR, HER2, Ki-67, E-cadherin, p63, D2-40, CD34, CD31 and vimentin, were used. Digital images of the slides were processed, and a three-dimensional model of the analyzed tissue was created with the software "Reconstruct". The analyzed tumour demonstrated infiltrative growth, and the front of the invasion was irregular. The tumour stroma demonstrated specific changes, including loss of CD34 expression in the stromal fibroblasts inside the tumour stroma and adjacent to the tumour. The vascular network inside the tumour and around it was also altered. Tumours induce recognizable changes in the breast parenchyma and stroma. Alterations in the tumour stroma can be useful when resection lines in quadrantectomy operations are evaluated since they represent a morphological and functional margin of the tumour. A simplified three-dimensional approach may prove useful for evaluation of resection lines in breast cancer.

Key words: breast cancer, tumour stroma, three-dimensional model

POSTERS

FACTORS DETERMINING THE RISK OF ACCIDENTAL INTOXICATIONS IN CHILDREN

Evgenia I. Barzashka,
Iskra Ts. Petkova,
Teodora D. Valova,
Olimpiada St. Atmazhova¹,
Pavel I. Petkov

*Medical College,
Medical University – Pleven,
Bulgaria*

*¹Department of Pharmacology and
Toxicology,*

*Faculty of Pharmacy,
Medical University – Pleven,
Bulgaria*

Corresponding Author:

Evgenia I. Barzashka
Medical College,
Medical University – Pleven
St. Kl. Ohridski Str.
Pleven, 5800
Bulgaria
e-mail: byrzashka@abv.bg

Summary

This study aimed to analyse the epidemiological data and systematize the group of factors determining the risk of accidental intoxication in children. A prospective clinical-epidemiological study of randomized intoxications was conducted, covering children aged 0 to 6 years and treated at the toxicology clinic of Dr Georgi Stranski University Hospital in Pleven in the period 2014-2018. A total of 303 patients aged 0 to 6 years, were treated. Those were 12.43% of the total toxicology pathology in the Clinic. The cases were divided into several age groups. The largest group included children between 1 to 3 years of age (54.45%). The intoxication cases in urban children were predominant (59.73%). Medications (42.24%) had a leading position among toxic nodules, followed by household preparations (21.45%). Analysis of the reasons for the accidents showed that 93.07% of the children had been left unattended. In 5.61% of the cases, toxic substances had been given by mistake. Based on these results, we differentiated the risk factors into three main groups that determine accidental intoxications in children: 1. Peculiarities of children at this age, expressed with innate curiosity; 2. Problems of the parents' behaviour (negligence and ignorance); 3. Characteristics of the social environment. The data results and the discussion gave us grounds to make a relevant conclusion and identify measures for prevention of accidental intoxication cases specific for children between 0 to 6 years of age. Preventive activity determines the necessity of implementing an integrated approach by a multidisciplinary team.

Key words: intoxications, children, parents, prevention

REFERENCE VALUES FOR SERUM ADENOSINE DEAMINASE IN HEALTHY PEOPLE

**Irena I. Gencheva,
Adelaida L. Ruseva,
Iren A. Angelova¹,
Juli I. Pastuhov**

*Department of Clinical Immunology,
Allergology and Clinical Laboratory,
Medical University – Pleven,
Bulgaria*

¹*Student at Medical University – Pleven,
Bulgaria*

Corresponding Author:

Irena I. Gencheva
Department of Clinical Immunology,
Allergology and Clinical Laboratory,
Medical University – Pleven
8A, Georgi Kochev Str.
Pleven, 5800
Bulgaria
e-mail: gencheva1677@gmail.com

Summary

The purpose of this study was to determine the activity of adenosine deaminase (ADA) in the serum of healthy people since there are significant differences in reference ranges published by different authors. In our study, we examined 160 healthy subjects aged 18 to 84 (64 males and 96 females). We determined adenosine deaminase levels in serum using a method, based on the ability of the enzyme adenosine deaminase to catalyze the deamination of adenosine to inosine and ammonia. The catalytic concentration was determined spectrophotometrically by the rate of reduction of NADH, measured at 340 nm. We found that normal serum ADA values among our healthy subjects were higher than the recommended reference range for the method we use, i.e. below 18 U/l. Using the percentile method, we worked out the following reference ranges of 14.53-25.73 U/l for women, and 18.46-33 U/l for men. In women, the mean value was 21.07 U/l, and in men – 21.3 U/l. At 95% CI, the serum ADA values of almost all subjects, included in the study, were within the range 11.5-25.0 U / l, recommended by other authors.

Key words: adenosine deaminase, reference range, spectrophotometry

DEPENDENCY BETWEEN ACNE VULGARIS AND PATIENTS' QUALITY OF LIFE

**Desislava D. Tsvetanova,
Ivelina A. Yordanova,
Petkana A. Hristova¹,
Dimitar K. Gospodinov**

*Department of Dermatology, Venereology
and Allergology,
Faculty of Medicine,
Medical University – Pleven,
Bulgaria*

¹*Department of Pharmaceutical Sciences
and Social Pharmacy,
Faculty of Pharmacy,
Medical University – Pleven,
Bulgaria*

Summary

Acne vulgaris is a common dermatological disease that affects the life quality of patients. This study aimed to assess the dependency between different grades of Acne vulgaris, duration of the disease, and quality of life of Bulgarian patients. The prospective study for four months included 49 female patients aged 16 to 40 (mean age 25±6 years) with different grades of Acne vulgaris and graded according to the Global Acne Grading System (GAGS). Cardiff Acne Disability Index (CADI), and Dermatology Quality of Life Index (DLQI) questionnaires were used to demonstrate correlations between severity of Acne vulgaris and its impact on the quality of life among the participants. According to the severity, 4% of the patients had mild, 14% moderate, 53% severe, and 29% had very severe Acne vulgaris. The mean CADI score was 9.16. Acne vulgaris lead to a medium impact on life quality. This impact correlated with the severity of the disease ($p<0.01$). According to CADI, there was a correlation between the duration of acne and life quality of patients ($p<0.05$). The values DLQI measured (vs. 9.18) indicated that the disease had a moderate effect on the patient's life. There was a dependency between DLQI values and the severity of the disease ($p=0.01$). This study was the first one in Bulgaria that used both CADI and DLQI to prove the negative effect on the quality of life of patients with the more severe forms of

Acne vulgaris defined according to GAGS.

Key words: acne vulgaris, Global Acne Grading System, quality of life

IMPORTANCE OF RELATIONSHIP BETWEEN SERUM HOMOCYSTEINE LEVEL AND OTHER VASCULAR RISK FACTORS FOR ACUTE ISCHEMIC STROKE

**Georgi Dimitrov,
Maya P. Danovska,
Irena I. Gencheva**

*Department of Neurology and
Neurosurgery,
Medical University – Pleven,
Bulgaria*

Corresponding Author:

Georgi Dimitrov
Department of Neurology and Neurosurgery,
Medical University – Pleven
8A, Georgi Kochev Str.
Pleven, 5800
Bulgaria
e-mail: georgi_cdimitrov@abv.bg

Summary

This prospective study aimed to prove the importance of the relationship between elevated serum homocysteine levels with other vascular risk factors for acute atherothrombotic ischemic stroke. The study was conducted among 52 patients divided into two groups: target 31 patients with acute ischemic stroke (IS) and control of 21 patients without IS. Inclusion criterion for the participants and controls was the presence of vascular risk factors: arterial hypertension (AH), diabetes mellitus (DM) and dyslipidemia. Serum homocysteine levels evaluated as normal, mild, moderate and severe hyperhomocysteinemia were examined. In the two groups which we compared, men were 29 (55.8%) and women – 23 (44.2%), age range 45-59 years. We found that 23 patients (74.2%) had mildly elevated homocysteine, and 8 (25.8%) had moderate hyperhomocysteinemia. In the control group, all patients had normal serum homocysteine (100%). In the patients with IS, however,

there was a significant correlation between concomitant vascular risk factors and elevated homocysteine ($p=0.002$ for dyslipidemia, and DM and $p=0.000$ for AH). These results make us conclude, that mild to moderately elevated serum homocysteine levels in patients with AH, DM and dyslipidemia increase the risk of atherothrombotic IS. Routine homocysteine testing may contribute as a reliable marker in predicting this risk in asymptomatic patients.

Key words: ischemic stroke, homocysteine, vascular risk factors

EPIDEMIOLOGICAL STUDY OF THE INCIDENCE OF HEARING LOSS IN CHILDREN UP TO 3 YEARS OF AGE AND ASSOCIATED RISK FACTORS

**Kremena K Atanasova,
Aleksandar V. Valkov,
Joana I. Simeonova¹,
Boris I Duhlenki**

*Department of Otorhinolaryngology,
Medical University – Pleven,
Bulgaria*

¹*Department of Pharmaceutical Sciences
and Social Pharmacy,
Medical University – Pleven,
Bulgaria*

Corresponding Author:

Kremena K Atanasova
Department of Otorhinolaryngology,
Medical University – Pleven
91, General Vladimir Vazov Str.
Pleven, 5800
Bulgaria
e-mail: kr_atanassova@abv.bg

Summary

Early diagnosis of congenital hearing impairment is of great importance to later development and social life of the affected newborns. Otoacoustic emission screening test (OAEs) is a useful tool for early evaluation of hearing in neonates and infants. Some specific risk factors associated with prenatal, birth and early postnatal periods may influence the first screening results and further diagnostic findings. A neonatal hearing screening of newborns was conducted for

two years (2014-2015) in Pleven. The study included newborns for the follow-up period, taking into account the presence of certain risk factors such as birth method, gestational age, birth weight, oxygen therapy conducted for 3 or more hours during the first days after birth, and laboratory results – serum bilirubin levels [85.5÷239.4 mmol/L]. In low birth weight children (<2500 g), and respectively born in an earlier gestation week (GW), i.e. before the 36th week, we found a deviation in the OAEs. The probability of a negative test result was higher in newborns who had been given oxygen therapy during the first hours after birth [15.5%], and also in newborns who had higher serum bilirubin value immediately after birth. Early diagnosis of congenital hearing impairment is of great significance for later development and social adaptation of affected children. Applying screening tests to all newborns will support this process. Screening results can also contribute to better observation of children in specified higher-risk groups and their periodical monitoring until the age of 6 months.

Key words: neonatal hearing loss, OAEs, risk factors, low weight, oxygen therapy, serum bilirubin value

3D MODEL OF THE MIDDLE EAR DESIGNED FOR STUDENTS, POST-GRADUATES AND OTOSURGEONS

**Stefan I. Mirchev,
Alexandar V. Valkov,
Mario P. Milkov¹,
Georgi N. Nikolov,
Boris I. Duchlenski,
Tsvetan L. Mladenov**

*Department of ENT,
UMHAT “Dr. Georgi Stranski” – Pleven,
Bulgaria*

*¹Faculty of Dental Medicine,
Medical University – Varna,
Bulgaria*

Summary

An anatomical model can be used for visualization, surgical interventions during medical training,

and specialization. There are anatomical zones which are difficult to visualize (ossicular chain, facial nerve, semicircular canals etc.) We aimed to create a 3D model of the processes mastoideus in a 1:1 scale, including the facial nerve passing through it. We used a cadaver temporal bone, on which transmastoid facial nerve decompression had been performed; plastic material and an elaborated silicone model. The facial nerve was represented in the section from the stylomastoid foramen to the geniculate ganglion. Its bone canal and the adjacent structures – semicircular canals, the oval window, and the mastoid air cells, with the mastoid bone marrow cells preserved, were visualized. The structures were coloured afterwards. The model presents: 1. the boundaries of process us mastoideus and its adjacent structures; 2. the facial nerve with mastoid segment and tympanic segment. This 3D model is on a scale of 1:1, and offers the following benefits: recreates the real dimensions of the process us mastoideus and the structures, located in, and adjacent to it; facilitates the perception of the microstructures of the middle ear and the facial nerve, the location of the adjacent anatomical zones, shows their relationship when a pathological process occurs; can be used for approximate measurements; it can be used for training students and post-graduates; it is suitable for basic training and training in otosurgery; can be used during talks to patients to obtain informed consent before upcoming interventions.

Key words: 3D model, middle ear, facial nerve, otosurgery

DOES IMPLEMENTATION OF THE CARDIOVASCULAR RISK SCORE IN PRIMARY CARE MEET OUR EXPECTATIONS AND PATIENTS' NEEDS?

Plamen N. Latev

*Individual Practice for Primary Medical
Care Mediana,
Pavlikeni,
Bulgaria*

Corresponding Author:
Plamen N. Latev

Individual Practice for Primary Medical Care
Mediana
15, Tsar Ivan Asen II Str.
Pavlikeni, 5200
Bulgaria
e-mail: latev@mediana.info

Summary

The study aimed to find out whether systematic coronary risk evaluation (SCORE) risk assessment of cardiovascular disease is relevant to the population in practice and the extent, to which additional risks not included in the SCORE assessment are related to the development of cardiovascular diseases (CVD). A systematic literature review was performed in PubMed and other sources. Several types of risk assessments were analyzed. For the SCORE risk calculation, five variables are required: gender, age, smoking status, total cholesterol level, and systolic blood pressure. According to the European Recommendations (2016) on Cardiovascular Prevention in Clinical Practice and ESC / ESH Recommendations 2018 for Arterial Hypertension, cardiovascular disease factors are significantly more than five. They also include the presence of diabetes mellitus, chronic kidney disease, obesity, immobilization, genetic predisposition, drug use, many laboratory markers such as CRP, uric acid, preclinical vascular lesions measurements, among others. The question arises whether the SCORE method for calculating cardiovascular risk in primary care is sufficient to identify individuals at risk and meets our expectations in practice. There will be a study of over 4,000 patients who will undergo a clinical review with a survey and a questionnaire. Then, we will assess the SCORE risk. One year later, the individuals at risk will be evaluated for CVD morbidity.

Key words: SCORE assessment, risk factors, cardiovascular disease

PRIMARY CAVERNOUS HEMANGIOMA OF THE SKULL: A CASE REPORT

Tatyana M. Betova,
Savelina L. Popovska,
Radoslav G. Trifonov¹,
Yordan D. Yordanov,

Krasimir T. Petrov,
Mladen E. Ovcharov²,
Nikolay V. Vasilev²

*Department of Patholoanatomy,
Medical University – Pleven,
Bulgaria*

*¹Student,
Faculty of Medicine,
Medical University – Pleven,
Bulgaria*

*²Neurosurgical Clinic,
UMHAT “Dr. Georgi Stranski”,
Pleven,
Bulgaria*

Corresponding Author:

Tatyana M. Betova
Department of Patholoanatomy,
Medical University – Pleven
8A, Georgi Kochev Str.
Pleven, 5800
Bulgaria
e-mail: betova@abv.bg

Summary

Primary intraosseous hemangiomas are benign tumours with vascular nature. They account for 1% of all bone lesions and 0.2% of all tumours of the skull. Toynbee was the first to describe a primary intraosseous hemangioma in 1845. We present a clinical case of a rare localization of a primary intraosseous hemangioma of the skull and the clinical and morphological management. We present a 50-year-old female patient with a history of headache and dizziness for two years. She reported two seizures that had happened in the past two months. An EEG and CT scan of the head with contrast were made, and a neurosurgeon consulted the patient. Parietal craniectomy with en bloc resection of the osseous lesion, followed by cranioplasty was performed. A titanium mesh was fixed in five points. The tumour was morphologically diagnosed by immunohistochemistry. Gross pathology revealed a well-demarcated, unencapsulated lesion with cystic red cavities. Microscopic examination of the tumour showed thin-walled vascular channels lined by a single layer of flattened endothelial cells interspersed among bony trabeculae. Immunohistochemical tests for CD34 and Factor VIII confirmed the diagnosis

of an intraosseous cavernous hemangioma. This case is a demonstration of a rare benign lesion of the skull with vascular nature. The key points for a good prognosis are the precise surgical method and the accurate morphological verification of the lesion.

Key words: cavernous hemangioma, skull, surgery, immunohistochemistry

TUMOR-TO-MENINGIOMA METASTASIS: A CASE REPORT

Yordan D. Yordanov,
Emil Ts. Marinchev¹,
Savelina L. Popovska,
Tatyana M. Betova,
Polina D. Dimitrova

*Department of General and Clinical
Pathology,
Medical University – Pleven,
Bulgaria*

*Department of General and Clinical
Pathology,
UMHAT “Dr. Georgi Stranski” – Pleven,
Bulgaria*

*¹Neurosurgery Clinic,
Heart and Brain University Hospital –
Pleven,
Bulgaria*

Corresponding Author:

Yordan D. Yordanov
Department of General and Clinical Pathology,
Medical University – Pleven
8A, Georgi Kochev Str.
Pleven, 5800
Bulgaria
e-mail: ydyordanov@gmail.com

Summary

Tumor-to-meningioma metastasis is a subtype of tumour-to-tumour metastasis. Some intracranial tumours, usually meningioma, may be the object of metastasis from malignant extracranial tumours with another primary location. We describe a case of suspected, and histologically confirmed for meningioma, but combined with an unusual metastasis from breast cancer. One case was clinically diagnosed, surgically evaluated and histologically confirmed. Routine histological,

histochemical and immunohistochemical methods /IHC/ were used, including HE, PAS+Alcian blue stain, IHC methods including ten different markers. A 77 years old woman with a preoperative CT diagnosis of meningioma was operated on, and the mass lesion was surgically evaluated. Macroscopically, the lesion was four cm in size, grey-whitish in colour, with a mixed colouration of the cut surface. Histologic examination showed a typical meningioma admixed with unusual glandular structures. IHC investigation, including proliferative Ki-67 marker, confirmed a benign meningioma, but additional glandular structures were cancer metastasis from previously diagnosed ductal carcinoma of the breast. Tumor-to-meningioma metastasis is very uncommon. A panel of IHC staining is used to distinguish meningioma from metastasis, but that panel may be short or long depending of possible information for the primary origin of another malignant tumour.

Key words: tumour-to-tumour metastasis, CNS tumour, histology

SENTINEL LYMPH BIOPSY IN MALIGNANT MELANOMA

Mihaela D. Dekova,
Veselin I. Kirov¹,
Miroslav J. Donchev,
Ivan M. Ivanov

*Center of Nuclear Medicine and Metabolic
Radiotherapy,
Medical University – Pleven,
Bulgaria*

*¹Dermatology Consulting Room,
Oncology Center,
UMHAT “Dr. G. Stranski” – Pleven,
Bulgaria*

Corresponding Author:

Mihaela D. Dekova
Center of Nuclear Medicine and Metabolic
Radiotherapy,
Medical University – Pleven
1, St. Kl. Ohridski Str.
Pleven, 5800
Bulgaria
e-mail: mihaela_dekova@hotmail.com

Summary

This study was conducted to determine the role and place of sentinel lymphoscintigraphy in sentinel lymph biopsy (SLB), a procedure used to identify, extract and examine a sentinel lymph node for metastases. It also helps to determine the spread of a tumour, stage the disease, make a prognosis and decide on additional treatment. Our study included 17 patients diagnosed with malignant melanoma at a high risk of developing lymph metastases without clinical manifestation. The lymphoscintigraphy was conducted on Dual Head SPECT gamma camera Toshiba CGA 7200 UI. The visualized lymph nodes were projected and marked on the skin via a radioactive point source under monitoring control. Also, the nodes were verified intraoperatively through patent blue colouring, extracted and examined histopathologically. In all the 17 patients, Lymphoscintigraphy visualized the sentinel lymph nodes (SLN), which were intraoperatively located directly under the skin markers and extracted. In SLNs of five patients, diffuse metastases were identified with clinically negative lymph nodes. There were no metastases in the sentinel lymph nodes of twelve patients. The technique for marking of SLN is a minimally invasive method and reliable for detecting metastases in the lymph nodes in high-risk patients with malignant melanoma. The SLB, including lymphoscintigraphy, should be applied as a standard for staging, prognosis and determining the behaviour of the clinician in malignant melanoma.

Key words: malignant melanoma; sentinel lymphoscintigraphy; sentinel lymph biopsy

VARIA

ORAL PRESENTATIONS

THE ACADEMIC LECTURER AS A CREATOR OF CREATIVE THOUGHT

Veselin Borisov

Corresponding Author:

Veselin Borisov

e-mail: vesbor.ph@abv.bg

Summary

The mission of the modern academic teacher is to create a new generation of professionals who are not just narrow specialists, but creative personalities with innovative creative thinking. Creativity in medicine is the key to its sustainable development. Creative thinking is based on a critical appraisal of existing ideas and stereotypes and the justification of new original ideas, methods and technologies. The student is not a storage device for a given volume of information, but a thinking person with an active perception and individual attitude to the learning material. In this respect, the academic lecturer is faced with the serious challenge of mastering and using the art of problematic lectures, learning dialogues, brainstorming and other effective approaches of modern interactive style in the learning process.

Key words: creativity, innovation, original ideas, interactive learning, problem lecture.

MARINE ALGAE: BENEFITS AND POTENTIAL HEALTH HAZARDS

D. Klisarova,

*Medical University – Pleven,
Bulgaria*

*D. Gerdzhikov,
Institute of Fish Resources – Varna,
Bulgaria*

Summary

Algae are a valuable marine resource which has been used for thousands of years. Traditionally