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ВАРНЕНСКИ МЕДИЦИНСКИ ФОРУМ

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РЕДАКЦИОННА КОЛЕГИЯ

MEDICAL UNIVERSITY
PROF. DR. PARASKEV STOYANOV
VARNA, BULGARIA

ABSTRACTS

OF THE

THIRD BLACK SEA SYMPOSIUM FOR YOUNG SCIENTISTS IN BIOMEDICINE

March 26-29, 2015, Varna, Bulgaria

Varna, 2015

PROGRAMME

26.03.2015 THURSDAY

10:00 – 17:00 – Registration (MU-Varna lobby)

17:30 – 18:30 – Opening Ceremony in Medical University Varna

20:00 – Cocktail Party (Captain Cook restaurant)

27.03.2015 FRIDAY

9:00 – 11:00 - Session I - Cardiovascular diseases

1. TOTAL PROXIMAL OCCLUSIONS OF LEFT RENAL AND SUPERIOR MESENTERIC ARTERIES WITH STENOSIS OF THE CELIAC ARTERY IN A YOUNG WOMAN – Annika Wahl, Josefin Staske, Dragostina Tsocheva, B. Kanazirev
2. THE ADULT PATIENT WITH NATIVE COARCTATION OF THE AORTA – K. Tsochev, J. Staske, D. Tsocheva, A. Wahl, B. Kanazirev
3. FORMATION OF UNIDENTIFIED ORIGIN IN LEFT ATRIUM OF A FEMALE PATIENT WITH A KNOWN RHEUMATIC VALVULAR DISEASE – R. Hristova, Y. Yotov, R. Yordanov
4. SELECTING A RATIONAL ANTIHYPERTENSIVE THERAPY - D. Ovnarska, M. Krasteva, D. Ivanov, I. Malenov, A. Andonov
5. CASE REPORT ON STRESS INDUCED CARDIOMYOPATHY – T. Stefanova, S. Shishkov
6. SUDDEN CARDIAC DEATH IN YOUNG ATHLETES – S. Georgieva, G. Hristov, G. Semovski, T. Dimitrova, K. Proevski
7. ARTERIAL PULMONARY HYPERTENSION: WHAT HAVE WE LEARNED? – S. Morfov, T. Vasileva, M. Radeva, B. Todorova, K. Bratoeva
8. THROMBOPHYLIA IN A YOUNG WOMAN WITH PORTAL VEIN THROMBOSIS AND ACUTE MYOCARDIAL INFARCTION – C. Yilmaz, A. F. Mimoso, M. Dimova, D. Konstantinova

11:00 – 11:20 - Coffee Break

11:20 – 12:50 - Session II - Pharmacology and Oncology

1. EFFECTS OF CHRONIC MELATONIN TREATMENT ON THE DIURNAL VARIATION OF NOCICEPTION IN WISTAR AND SPONTANEOUSLY HYPERTENSIVE RATS – G. Kolev, Z. Nenchovska, D. Pechlivanova
2. HPLC ANALYSIS OF FAT-SOLUBLE VITAMIN CONTENT OF PHARMACEUTICAL PRODUCTS – K. Tonev, S. Stoeva, G. Dimova, T. Topalova
3. TOXICITY AND PHARMACOLOGICAL ACTIVITY OF NEW L-VALINE PEPTIDOMIMETICS – V. Vezirov, L. Tancheva, S. Abarova, D. Tsekova
4. DENDRITIC CELLS, SMAD7 AND IMP3 - THE GOOD, THE BAD AND THE UGLY IN THE GASTRIC CANCER – J. Ananiev, B. Koleva, K. Georgiev, B. Brahomov, E. Kyazimova

5. CASE REPORT OF A HER2-POSITIVE BREAST CANCER, TREATED WITH DUAL HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR 2 (HER2) BLOCKADE WITH TRASTUZUMAB AND PERTUZUMAB – T. Popov, D. Stoilova, D. Kalev
6. CASE REPORT: DRAMATIC RESPONSE TO DABRAFENIB IN A PATIENT WITH BRAF (V600) MUTATED METASTATIC MELANOMA AT ST. MARINA UNIVERSITY HOSPITAL − VARNA – P. Petrova; N. Tsonev
7. PERIORBITAL FOREIGN BODY − CLINICAL PRESENTATION, VISUAL APPEARANCE AND MANAGEMENT – S. Nikolaeva, T. Dobreva, D. Tonkova, D. Kyuchukova, Y. Manolova

12:50 – 13:30 - Lunch

13:30 – 14:00 – Avene Presentaions
14:00 – 14:30 – Bulgarian Pharmaceutical Union Presentaion
14:30 – 14:45 – Expand Health Presentation

15:00 – 16:30 - Session III – Surgery I

1. NEW METHODS OF INGUINAL HERNIA REPAIR - I. Minev, G. Boyapati, V. Zhelezova, D. Ivanova, A. Tonev
2. ACUTE APPENDICITIS IN PREGNANCY - DIAGNOSTIC PROBLEMS - S. Ivanova, V. Slavcheva, E. Kovachev
3. ANTERIOR ABDOMINAL WALL RECONSTRUCTION FOLLOWING RADICAL EXCISION OF CARCINOMA: A REPORT OF TWO CASES - Y. Dimova, B. Petrov, L. Todorova, S. Todorova, A. Yancheva, D. Yankov
4. SUBDURAL EMPYEMA FROM ACUTE PANSINUSITIS DUE TO PREVOTELLA - A. Andonov, A. Zaekova, I. Penev, D. Ovnarska, M. Krasteva, V. Atanasov, R. Popov
5. CUSTOM MADE TOTAL HIP REPLACEMENT - V. Grigorov, G. Ivanov, I. Myumyun, A. Petkov, V. Grigorov
6. ENDOVASCULAR THERAPY OF PERMANENT VASCULAR ACCESS IN PATIENTS WITH CHRONIC RENAL DISEASE - M. Miteva, N. Yordanova, M. Tomov, G. Georgiev

15:00 – 16:00 - Poster session I

1. BIOCOMPATIBILITY OF THE MATERIALS USED IN DENTAL IMPLANTOLOGY - D. Rachev, D. Dobrev, D. Dimov, B. Valkov, O. Spanov
2. EVALUATING THE MANIFESTATION, SYMPTOMS AND RISK OF DEVELOPMENT OF ORAL NEOPLASMS AND PRE NEOPLASTIC LESIONS IN A THREE YEAR STUDY - P. Stefanov, S. Chokanov, N. Frantsov, T. Marinov, A. Gencheva
3. DETERMINING THE LINK BETWEEN THE CONDITION OF THE FIRST MOLARS AND AGE AND GENDER IN ADULTS USING THE DMFT INDEX AS A CRITERIA - P. Stefanov, S. Chokanov, T. Marinov, N. Frantsov, R. Anastasova
4. 3D PRINTERS IN DENTISTRY – O. Spanov, B. Valkov, D. Dimov
5. DIGITAL IMAGING TECHNIQUES AND ERRORS – D. Dimov, O. Spanov, B. Valkov
6. AMELOGENESIS IMPERFECTA HERIDITARIA − A SCIENTIFIC REVIEW - T. Marinov, I. Bonchev, M. Yordanova; S. Angelova, T. Targova
7. CASE REPORT ON A 17-YEAR OLD BOY WITH ALAGILLE SYNDROME AT ST. MARINA UNIVERSITY HOSPITAL – C. Shirokova, S. Shishkov, M. Georgieva, N. Zgurova
8. ACHONDROPLASIA - SYMPTOMS, DIAGNOSIS AND TREATMENT – V. Kerekovska, S. Zhivkova, L. Nikiforova, P. Iliev, B. Todorova, D. Konstantinova
9. A CASE OF RARE DISEASE: TANATOPHORIC DYSPALSIA - M. Shivarova, Angelova, Stoyanova

10. RESPIRATORY INFECTIONS, ATOPY AND CHILDHOOD ASTHMA - R. Grigorova
11. THYROID HORMONE RESISTANCE (REFETOFF SYNDROME) – M. Dimitrova, K. Vasilev, D. Doichev
12. LESCH-NYHAN SYNDROME – D. Doichev., K. Vasilev, M. Dimitrova, L. Ilieva, D. Rachev
13. FREQUENT URINARY TRACT INFECTIONS IN A PEDIATRIC PATIENT WITH CONGENITAL CNS ANOMALIES – D. Tonkova, D. Kyuchukova, S. Nikolaeva, C. Dobreva, R. Yotsova
14. DIAGNOSTIC OF A RARE CONGENITAL IMMUNODEFICIENCY - I. Malenov, M. Krasteva, D. Ovnarska, D. Ivanov, I. Oprova
15. TELEGENETICS OR HOW TO INCLUDE ELECTRONIC AND COMMUNICATION SYSTEMS IN EVERY DAY MEDICAL PRACTICE – S. Chausheva, M. Hachmeriyan, L. Angelova
16. ACUTE PYELONEPHRITIS IN CHILDHOOD - CASE REPORT - D. Tsocheva, K. Tsochev, H. Nikov, M. Bliznakova, D. Bliznakova

28.03.2015 SATURDAY

9:00 – 10:30 - Session IV - Psychiatry

1. HOW THE BRAIN CONTROLS THE HEART? – S. Ralovska
2. HOW THE BRAIN CONTROLS BEHAVIOR? – G. Radkova
3. HOW THE BRAIN CONTROLS HUMAN EMOTIONS? – S. Dimitrova
4. NICOTINE AS A GATEWAY DRUG TO THE USE OF COCAINE – R. Dimitrova
5. PROCRASTINATION – a byproduct of impulsivity – S. Ralovska
6. AGGRESSIVE AND PARANOID SCHIZOPHRENIA – A. Todorov, N. Dimitrova, D. Stoykova, R. Ilieva, I. Veleva, P. Dimitrova, P. Radeva, M. Valkova, E. Angelova

10:30 – 10:50 - Coffee Break

10:50 – 12:30 - Session V - Surgery II

1. SKIN CANCER OF THE NOSE. CLINICAL PRESENTATION AND SURGICAL MANAGEMENT - I. Nedkova, A. Mutisheva, P. Stanimirov
2. THE INFLUENCE OF DIFFERENT "SKIN GRAFTS" IN BURN PATIENTS - E. Domuschieva, S. Ivanova
3. ALLOPLANTS − THE DEAD TISSUE TRANSPLANTS - B. Georgieva, A. Boyadzhiev, B. Adamski, D. Stoykova, F. Vutov, P. Panayotov
4. FACIAL RECONSTRUCTION FOLLOWING DEEP CHEMICAL BURN − COMBINATION OF DIFFERENT SURGICAL METHODS: A CASE REPORT - B. Petrov, A.Yancheva, L. Todorava, Y. Dimova, S. Todorova, Y. Zayakova
5. OSTEOMA IN THE FRONTOORBITAL REGION - INDIVIDUAL CRANIOPLASTICS - D. Dimov, O. Vardanyan, D. Stoilova, D. Yahya, A. Drockur, Y. Enchev, B. Iliev, Kondov
6. ROBOTIC SURGERY- ARE ALL PROBLEMS SOLVED? - M. Tsvetkova, I. Ivanov, R. Radushev, T. Ivanov, H. Feradova, D. Dimitrov, T. Deliyski
7. PERIORBITAL FOREIGN BODY – CLINICAL PRESENTATION, VISUAL APPEARANCE AND MANAGEMENT – S. Nikolaeva, T. Dobreva, D. Tonkova, D. Kyuchukova, Y. Manolova

10:50 – 12:20 - Session VI - Pediatrics and Genetics and Otorhinolaryngology

1. CASE REPORT ON A CHILD WITH B-THALASSEMIA MAJOR COMPLICATED WITH CHOLELITHIASIS - M. Bliznakova, D. Ivanov, V. Kaleva
2. DIFFERENTIAL DIAGNOSIS OF PATIENT WITH STAPHYLOCOCCAL MENINGOENCEPHALITIS AND SEPSIS WITH MENINGOCOCCEMIA - T. Vasileva, S. Morfov, M. Radeva, V. Vasilev, M. Gospodinova-Bliznakova, I. Todorov
3. A SCIENTIFIC TRANSLATION FOR THE FAMILIES OF CYSTIC FIBROSIS PATIENTS – S. Monev, K. Georgieva, G. Naskovska, G. Kirisheva, R. Panchevay
4. LAPAROSCOPIC TREATMENT OF ACHALASIA - E. Eneva, G. Ganchev, A. Zdraveski, A. Julianov
5. HISTOLOGICAL TYPES OF LARYNGEAL CANCER IN THE BULGARIAN POPULATION - L. Nikiforova, P. Iliev, I. Krasnaliev, N. Zgurova, D. Malinova, N. Sapundzhiev
6. IMPACTED CERUMEN: A GENETICALLY DETERMINED CONDITION OR SELF-INFLICTED INJURY - H. Iwata, M. Shinozaki, R. Haboub, D. Konstantinova, N. Sapundzhiev

12:30 – 13:00 - Lunch

13:00 – 15:00 - Session VII - Neurology, Haematology and Immunology

1. PULMONARY CEMENT EMBOLISM AFTER VERTERBROPLASTY - D. Yahya, T. Dobreva
2. IMPLANTED LOOP-RECORDER HELPS THE DIAGNOSIS OF A PATIENT WITH MULTIPLE SYNCOPES AND COMBINED NEUROLOGICAL AND CARDIAC PATHOLOGY – R. Rachkov, N. Pancheva
3. AMYOTROPHIC LATERAL SCLEROSIS – H. Hernandez, M. D. Franco, S. Nikolova
4. MEDITATION AND NEUROPLASTICITY – A. Boyadzhiev, B. Adamski, B. Georgieva, D. Stoykova, P. Vutov, M. Zhelezov
5. WILSON'S DISEASE – EYE CHANGES, CASE REPORT - T. Marinova, V. Sheherov, C. Grupcheva
6. SHEDDING LIGHT ON CONTROL OF HIV INFECTION USING HEMATOPOIETIC STEM CELL TRANSPLANTATION – Z. Kasimova, M. Avdzhiyska, D. Ivanova
7. DIAGNOSTICS OF EXTRAMEDULLARY HAEMOTOPOESIS – G. Ivanov, V. Grigorov, A. Petkov, I. Myumyun, B. Balev
8. STREPTOCOCCUS DYSGALACTIAE SUBSPECIES EQUISIMILIS AN INSIDIOUS MIMIC (CASE REPORT AND REVIEW OF LITERATURE) - T. Mladenov, Y. Rangelova, D. Nguen, Nedyalkov K.L, V. Edreva

15:00 – 16:00 - Poster session II

1. DEVELOPMENT AND COMPLICATIONS OF OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY-CASE REPORT - Y. Stoyanova, V. Dimitrova, L. Ilieva, M. Kosturkova
2. HYPERTROPHIC CARDIOMYOPATHY - THE SILENT KILLER - L. Ilieva, Y. Stoyanova, D. Rachev, C. Vasilev, D. Doychev, M. Kosturkova
3. OBSERVING THE COMMONLY OCCURRING COMBINATION OF GALLBLADDER DISEASE AND PANCREATITIS IN WOMEN - D. Ivanov, D. Ovnarska, M. Krasteva, I. Malenov, A. Andonov
4. GASTRIC AND DUODENAL ULCER. PHARMACOTHERAPY AND CARE – A. Havalyova, O. Kostov, D. Kehayov
5. IRRITABLE BOWEL SYNDROME – „DIAGNOSIS OF EXCLUSION" OR „DIAGNOSIS OF INCLUSION" - K.Bachvarova, H. Rankov, I. Ivanova
6. A CLINICAL CASE REPORT OF MALIGNANT HYPERTHERMIA – N. Hamdan, G. Kulchev; V. Platikanov

7. DIABETES TYPE II – PROTECT OUR FUTURE - D. Mihalev, N. Yordanova, M. Miteva, E. Zlatanova, D. Stoyanova
8. MICROCOCCUS KRISTINEA IN THE GENESIS OF A FATAL CASE OF GALLSTONE DISEASE – R. Habboub, H. Iwata, I. Kobakova
9. PULMONARY SARCOIDOSIS - CASE REPORT – H. Rankov, K. Bachvarova, V. Kostadinova, Y. Radkov
10. IMPACT OF PAIN IN PATIENTS WITH OSTEOARTHRITIS ON THE QUALITY OF LIFE - E. Mihaylova, T. Stefanova, S. Hristova
11. METABOLIC SYNDROME - CHALLENGE FOR THE PHYSICIAN AND PATIENT-CASE STUDY - V. Dimitrova, Y. Stoyanova, V. Zlateva
12. SPONTANEOUS RESORPTION OF SUBDURAL HEMATOMA – CASE REPORT – M. Valcheva, S. Shishkov, B. Petrov, I. Mindov, B. Petrov
13. HAEMOPHAGOCYTYS LYMPHOHISTIOCYTOSIS - K. Kirilova, H. Hristozova
14. ACUTE RUPTURE OF RECTUS FEMORIS MUSCLE – CASE REPORT - I. Marcheva, M. Adilov, A. Tsvetkov, K.Mihov, M. Zagorov, S. Dobrilov, A. Tabakov
15. PARIETAL SUBDURAL EMPYEMA AS COMPLICATION OF ACUTE MAXILLAR SINUSITIS – AN INTERESTING CLINICAL CASE – A. Andonov, I. Penev, D. Ersan, D. Ovnarska, M. Krasteva, V. Atanasov, R. Popov
16. EXRA-ANATOMIC BYPASS – ALTERNATIVE OPERATIVE TREATMENT OF CHRONIC ARTERIAL INSUFFICIENCY OF THE LOWER EXTREMITIES. A CLINICAL CASE - N. Yordanova, M. Miteva, M. Tomov, G. Georgiev, M. Tomov
17. THE ROLE OF HONEY IN THE TREATMENT OF CHRONIC WOUNDS (A REVIEW AND CASE REPORT) – R. Georgieva, A. Kerenski
18. MALIGNANT PLEURAL EFFUSIONS - CONTEMPORARY DIAGNOSTIC ASPECTS - K. Marinova, T. Latunova, B. Petrov, R. Radev, R. Nenkov

21:30 - Social program (club Planet)

29.03.2015 SUNDAY

9:00 – 10:30 - Session VIII - Varia

1. TRIGEMINAL NEURALGIA AND LOW LEVEL LASER THERAPY - D. Trufcheva, S.Velikova, A. Ivanov, D. Nikolov, D. Grozdeva
2. CLASSIFICATION OF MATERIALS AND THEIR BIOACCESSIBILITY USED IN CONTEMPORARY PROSTHETIC DENTISTRY - D. Dobrev, D. Rachev, D. Dimov, B. Valkov, O. Spanov, M. Abadjiev
3. DENTAL IMPLANTS - GOOD OR BAD? – I. Georgiev A. Ivanova M. Mehmedov, E. Sabeva, I. Vandev
4. DOES BREASTFEEDING WORK AS BIRTH CONTROL? THE INHIBITORY EFFECT OF PROLACTIN DURING OVULATION - I. Karatsoli, J. Alexandrova, S. Nizorkova, R. Pancheva, M. Radanova, S. Nikolova
5. METABOLIC SYNDROME, DIABETES AND THE KIDNEY – THE ROLE OF AMYLOID - G. Stoyanov, K. Moneva, T. Stefanova, K. Bratoeva
6. KETOGENIC DIETS AS A POTENTIAL THERAPY FOR IMPROVING ALZHEIMER'S DISEASE CONDITION – D. Stoilova, T. Popov, D. Ivanova
7. MUSIC AND THE HEART - V. Dimitrova, I. Politova, P. Angelova, P. Angelova

10:45 – 11:00 - Coffee Break

11:00 – 12:00 - Poster session III

1. PHARMACOTHERAPEUTIC APPROACHES IN THE TREATMENT OF AUTOIMMUNE DISEASES - L. Grigorov, S. Georgieva, A. Havalyova
2. INFLUENCE OF PROTON PUMP INHIBITORS (PPIS) ON THE ANTIPLATELET ACTIVITY OF CLOPIDOGREL - T Topalova, G. Dimitrova, D. Staeva, K. Tonev, S. Stoeva, S. Georgieva
3. INULIN: BENEFICIAL PHYSIOLOGICAL EFFECTS, PHARMACEUTICAL AND NUTRITIONAL APPLICATIONS - G. Dimova, S. Stoeva, T. Topalova, K. Tonev, I. Zhelev
4. DETERMINATION OF CAFFEINE, THEOPHYLLINE AND THEOBROMINE IN COFFEE AND TEA PRODUCTS BY HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY – S. Stoeva, K. Tonev, G. Dimova, T. Topalova, M. Stancheva, D. Dobreva
5. GINKGO BILOBA − ACTION, EFFECTS AND PHARMACEUTICAL APPLICATIONS – P. Bekyarov, P. Georgieva
6. THE DANGERS OF FRUCTOSE A COMMON SWEETENER - M. Krasteva, D. Ovnarska, I. Malenov, D. Ivanov, A. Andonov
7. A REVIEW OF MEDICINAL PLANTS WITH POTENTIAL ANTIDIABETIC ACTION – O. Vardanyan, D. Dimov, M. Avdjiyska, O. Tasinov
8. FAILURE OF ACUTE CORONARY SYNDROME THERAPY CAUSED BY CLOPIDOGREL RESISTANCE - B. Todorova, S. Jivkova, S. Morfov, M. Eftimov, S. Valcheva-Kuzmanova
9. CONCEPT MAP ON OCULAR EXAMINATION TECHNIQUES - PSYCHOPHYSICAL TESTS – A. Mitev
10. AMNIOTIC MEMBRANE TRANSPLANTATION FOR SEVERE CHEMICAL EYE BURN - M. Radeva, D. Grupchev, C. Grupcheva
11. THE "CROCODILE TECHNIQUE": A NEW OPHTHALMIC SURGICAL TECHNIQUE TO REMOVE SUBRETINAL PROLIFERATIVE TISSUE ASSOCIATED WITH RETINAL DETACHMENT - Vasilev. K, M. Dimitrova, D. Doichev, L. Ilieva, D. Rachev
12. BREAST CANCER AWARENESS AMONG FEMALE POPULATION IN VARNA REGION - S. Shishkov, K. Tsochev, D. Tsocheva, C. Shirokova
13. ANTHRAX AS BIOLOGICAL WEAPON - T. Koehnke, A. Herzog, M.Panteleeva
14. MOLECULAR MARKERS AND NEW METHODS FOR DIAGNOSTICS OF COLORECTALCANCER – M. Avdzhiyska, Z. Kasimova, D. Ivanova
15. CHRONIC RENAL FAILURE AND ITS MARKERS AS A PREDICTOR OF DEATH – Z. A. Ahmed, N. Malik, A.a Lehnhoff, B. B. Gutiérrez
16. POLYCYSTIC OVARY SYNDROME AND INFERTILITY - I. Oprova, M. Krasteva, D. Ovnarska
17. HARMONIC SCALPEL USE IN PARATHYROID ADENOMA - T. Latunova, K. Marinova, B. Petrov -

12:00 – 13:00 - Closing Ceremony

TOTAL PROXIMAL OCCLUSIONS OF LEFT RENAL AND SUPERIOR MESENTERIC ARTERIES WITH STENOSIS OF THE CELIAC ARTERY IN A YOUNG WOMAN

Annika Wahl, Josefin Staske, Dragostina Tsocheva, B. Kanazirev

Medical university of Varna

Background: *The obstruction of the renal artery and development of renovascular hypertension together with stenosis and obstruction of mesenteric circulation with chronic mesenteric ischemia is a rare combination in young individuals.*

Methods: *We describe a case of a young woman with severe resistant hypertension, systolic abdominal bruit and total occlusions of the left renal and superior mesenteric artery together with high grade stenosis of the celiac artery. Doppler ultrasound examination of abdominal vessels, together with angiography of abdominal aorta and selective angiography of renal arteries were performed. Magnetic resonance imaging of the abdomen, kidneys and abdominal vessels was performed too. Plasma concentration of renin and angiotensin were measured. Echocardiograpy with Doppler imaging of transmitral flow was done as well.Patient was treated by percutaneous intervention-baloon angioplasty with stenting and was followed by Doppler ultrasound to evaluate final result. Total proximal occlusion of the left renal artery was found on selective renal angiography together with elevation of renin and aldosterone. Total proximal occlusion of superior mesenteric artery together with high grade stenosis of the celiac artery were found. The formation of large collateral visceral artery circulation was visualized between the celiac artery and inferior mesenteric artery, but no clinical signs of mesenteric ischemia were present.Stenting of occluded celiac trunk was performed with an exccelent result.*

THE ADULT PATIENT WITH NATIVE COARCTATION OF THE AORTA

Kaloyan Tsochev, Josephine Staske, Dragostina Tsocheva, Annika Wahl, B. Kanazirev

Medical university of Varna

We present a case report of a 23 years old girl admitted to the Department of Medicine with history of elevation of blood pressure up to 180/110, precordial systolic murmur and Coarctation of the aorta treated with balloon angioplasty.

Material and methods: *Suprasternal Echocardiography, 2D CT and 3D CT before and after stenting. Baloon in baloon stenting was undertaking with an excellent result on follow-up.*

Suprasternal Echocardiography revealed of coarctation of descending aorta just after left subclavian artery with a flow velocity through the coarcted segment of 4, 5 m/s and a gradient of 81 mm Hg and an exaggerated diastolic flow of 1, 8 m/sec. Coarctation of the aorta and prominent collateral circulation on 2D CT and 3D CT were visualized with 2 mm diameter of the aorta at the level of coarctation and 7 mm aortic diameter at diaphragmatic level. An interventional procedure was performed with implantation of 39 mm covered metal stent on 12 mm balloon in balloon (BiB) device setting. Transcoarctation gradient after the procedure was 25 mm Hg u 7.5 mm patency and upper extremities BP decreased to 110/80/90 and lower extremities increased to 105/80/88 just after the procedure. Doppler gradients after the procedure from supraclavicular and sub xiphoidal approach decreased to peak 36-38 mm Hg. BP pressure of upper limbs was 140/90 and a short trial with beta-blocker was started which was stopped within 30 days with normalization of BP to 130/85.At 12 months CT of descending aorta showed reduction of collateral circulation and patency of the stent with reduction of diastolic Doppler velocities and no change of peak gradients at the area of stenting. At 22 months gradients on Doppler examination gradients were the same and BP was 130/85 at rest and 170/100 on exercise with no beta blocker treatment.

1. The frequency 3/100 000 or 5-8% of all CHD

2. Indications for interventional stent on BiB placement and surgical treatment of potential lethal complication.

3. Beta-blockers are indicated for hypertension before and after intervention and anticoagulation does not apply.

4. AB prophylaxis is indicated only six months after the intervention if no other indications exist like prior endocarditis or residual defects after the intervention.

5. Complications may be re-coarctation requiring re-intervention, aneurysm of the ascending aorta or aneurysm of the intervention site and cerebral aneurysms.

6. After successful intervention normal life is fully possible without excessive physical efforts and pregnancy will most probably be uneventful.

7. Follow-up every second year including check for exercise-induced hypertension.

FORMATION OF UNIDENTIFIED ORIGIN IN LEFT ATRIUM OF A FEMALE PATIENT WITH A KNOWN RHEUMATIC VALVULAR DISEASE

Rositsa Hristova, Y. Yotov, R. Yordanov

Medical University of Varna

The clinical case describes a 73 year old woman hospitalized over the years in the department of cardiology as in this particular time with the clinical presentation of acute decompensation of congestive heart failure. The patient has had rheumatism in her adolescence involving mitral valve and leading to mitral valvular stenosis due to which a commisurotomy took place in 1975. Renewal of the complaints is observed as a consequence of mitral restenosis at this point.

Transthoracic echocardiography revealed a mobile formation in left atrium attached to the interatrial septum on a wide area. Size of the formation 31/52 mm and 15 cm².

The symptoms of the congestive heart failure were reducued due to medicamentous treatment, but the patient refused cardiothoracic surgery.

The tumorous formations of the heart are found only after the exhibit of clinical symptoms or incidentally, most often through echocardiography.They vary from non-neoplastic to malignant lesions and could manifest at different age. Their treatment in most of the cases requires a surgical intervention.

SELECTING A RATIONAL ANTIHYPERTENSIVE THERAPY

D. Ovnarska, M. Krasteva, D. Ivanov, I. Malenov, A. Andonov

Medical University of Sofia

Introduction: *Arterial hypertension is a socially relevant chronical disorder. The onset of old age, sedimentary lifestyle and unhealthy diet are major risk factors associated with the development of the disorder.*

Material and Methods: *The standard medications for treating arterial hypertension are ACE inhibitors, AT1-blockers, diuretics, beta blockers and calcium channel blockers. All of them have been evaluated by four main points- effectiveness, safety, convenience and price. Certain indicators that are generally kept under track are valuable in assessing the effectiveness of the therapy such as the reduction of the arterial blood pressure in mmHg, lowering the mortality rates and risk of vascular events, influencing the left ventricular hypertrophy, lipid and glucose tolerance, the frequency of adverse drug effects and interactions.*

Results: *The five classes of medications are aligned considering the most important indicator (their effectiveness). ACE inhibitors, sartans(AT1-blockers) and beta blockers also express an effect influencing the left ventricu-*

lar hypertrophy. Beta blockers as a monotherapy do not possess a significant effect in diminishing the cardiovascular risk. Some Calcium channel blockers and beta blockers exhibit a bradicardic effects. Calcium channel blockers and ACE-inhibitors are indifferent towards lipid and glucose metabolism.

Conclusion: *The most appropriate medication for the treatment of arterial hypertension is difficult to be exactly determined, and therefore when choosing a suitable therapy it's important to take into consideration all accompanying factors and the influence of the drugs on the individual patient.*

CASE REPORT ON STRESS INDUCED CARDIOMYOPATHY

T. Stefanova, S. Shishkov

Medical University – Varna

Introduction: *The stress induced cardiomyopathy (Tako-Tsubo disease) is a disease with unclear pathogenesis, presenting with a transient systolic dysfunction in the apical and middle segments of the left ventricle, imitating a myocardial infarction but lacking data for coronary artery disease.*

Material and Methods: *Case report*

Results: *Description of the problem: A 70-year-old woman presented to the cardiology department with acute substernal chest pain at rest after emotional stress. Her medical history included paroxysmal atrial fibrillation, hypertension and asthma. She had undergone electrocardiography (ECG) and echocardiography 3 months before, without evidence of ischemia. At admission she was with RR 110/70 and a heart rate of 90 bpm. The haematology and biochemistry tests were normal except a slightly elevated Troponin I 2.35…1.88 (normal upper range 0.2). ECG revealed deep negative T-waves with QT prolongation in the precordial leads. Transthoracic echocardiography showed left ventricular ballooning in the apical segments. Cardiac catheterization found unremarkable coronary arteries. The patient was treated with antiagregant, anticoagulant, statin, angiotensin-receptor blocker, nitrate and ivabradine. On the follow-up examination 10 days later she was asymptomatic. ECG was similar to the one, performed 3 months before. Echocardiogram showed restored left ventricle kinetics. Discussion of diagnosis: The differentiation between Takotsubo cardiomyopathy and an acute coronary syndrome is often difficult at initial presentation.*

Conclusion: *This cardiomyopathy is a rare condition with a good prognosis after certain treatment. Further studies are needed to clarify its etiology and pathogenesis.*

SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

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Introduction: *Sudden cardiac death (SCD) according to WHO "can be caused by many mechanisms". SCD in young athletes are rare cases, but those cases drag huge media attention and bring a questions like: is there proper prevention?*

Aims: *The aim of this report is to study the case-reports of sudden cardiac death in young athletes and to explor the best practices on screening.*

Methods: *the literature research has been done in different databases - ScholarGoogle, ResearchGate, ScienceDirect, PubMed, with keywords "sudden cardiac death", "young athletes", "cardiovascular screening".*

Result: *Most of the articles published between 2009-2015 concludes that further researches are needed to understand the exact cause of SCD. There are still no certain practices that are considered being the best are prevention strategic. An article from Italy shows that incidence of SCD in young athletes have declined after applying screening with electrocardiogram (ECG). However, a research from USA shows that due to false-positive findings*

the method should not be considered as best practice. In addition, research from February 2015 shows proves that patients who had died from SCD has been with structurally normal heart.

Conclusion: ***T****he topic is still to be cleared by further researches. Moreover, further researches are needed as well for standardization of the best prevention method which is cost-efficiency evaluated.*

Keywords: *sudden cardiac death, young athletes, cardiovascular screening*

ARTERIAL PULMONARY HYPERTENSION: WHAT HAVE WE LEARNED?

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Aims/Objectives: *Pulmonary arterial hypertension is defined as a sustained elevation of pulmonary arterial pressure to more than 25 mm Hg at rest or to more than 30 mm Hg with exercise, with a mean pulmonary-capillary wedge pressure and left ventricular end-diastolic pressure of less than 15 mm Hg, leading to shortness of breath, dizziness, fainting, leg swelling and other symptoms. Pulmonary hypertension is usually classified as primary (idiopathic) or secondary. It is now clear, however, that there are conditions within the category of secondary pulmonary hypertension that resemble primary pulmonary hypertension in their histopathological features and their response to treatment. Better understanding them will assist identify therapeutic targets to improve this condition.*

Methods: *Meta-naliz based on publications connected with arterial pulmonary hypertension*

Results: *The cause of pulmonary arterial hypertension is heterogeneous and include specific heritable and environmental factors. Molecular genetic studies have shown that mutations in the gene encoding bone morphogenetic protein receptor type II (BMPR2) are present in approximately 70% of patients with familial pulmonary arterial hypertension, as well as in 10 to 25% of those with idiopathic pulmonary arterial hypertension. The main vascular changes in the lung vasculature are vasoconstriction, smooth-muscle cell and endothelial-cell proliferation, and thrombosis. These findings suggest the presence of perturbations in the normal relationships between vasodilators and vasoconstrictors, growth inhibitors and mitogenic factors, and antithrombotic and prothrombotic determinants, which are probably consequences of pulmonary endothelial-cell dysfunction or injury.*

Among the environmental factors associated with an increased risk of the development of pulmonary arterial hypertension, three — hypoxia, anorexigens, and central nervous system stimulants — have plausible mechanistic underpinnings.

Conclusions*: We provide evidence that pulmonary arterial hypertension predisposing genes interact with the environment and influence the response to treatment relevant to disease prediction. There is no cure for pulmonary arterial hypertension. Treatment, however, has improved dramatically during the past decade, offering both relief from symptoms and prolonged survival. The mainstays of current medical therapy fall into several classes, including vasodilators, anticoagulants, antiplatelet agents, anti-inflammatory therapies, and vascular-remodeling therapies. Many of the most effective agents have pleiotropic effects. Lung transplantation cures pulmonary arterial hypertension, but leaves the patient with the complications of transplantation, and a post-surgical median*

THROMBOPHYLIA IN A YOUNG WOMAN WITH PORTAL VEIN THROMBOSIS AND ACUTE MYOCARDIAL INFARCTION

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Thrombophilias may play a crucial role in elucidation unexplained venous and/or arterial thrombosis in young individuals finding out that some of these patients carry in fact special genetic patterns related to a predisposition for hypercoagulation and increased risk of reproductive failure.

We report a case of a young woman with a history of reproductive failure and previously diagnosed portal hypertension, hepatosplenomegaly, esophageal varices secondary to portal vein thrombosis with cavernous transformation back in 2012. Recently she suffered an acute MI with stent insertion and dual antiplatelet therapy upon hospital discharge. She was found genetically to be a homozygote carrier for PAI (Plasminogen Activator İnhibition-type 1- 4G4G) and with acquired increased anti-phospholipid antibody titers. Genetic consultation with genetic testing for most important genes of thrombophilia was performed. Results were positive for - Plasminogen Activator İnhibition-type 1 and anti-cardiolipin IgG and negative for the other responsible genes of thrombophilia - Factor V Leiden, prothrombin gene, MTHFR gene. This was the explanation of the combination of reproductive problems and venous and arterial thrombosis in the same individual. It is necessary to have in mind the possibility of thrombophilia in such cases and also that a combination of genetical predisposition and an acquired state of antiphospolipid syndrome may coexist.

EFFECTS OF CHRONIC MELATONIN TREATMENT ON THE DIURNAL VARIATION OF NOCICEPTION IN WISTAR AND SPONTANEOUSLY HYPERTENSIVE RATS

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Introduction: *Melatonin is the major hormone synthesized and secreted from pineal gland into the bloodstream, and it is widely accepted as an antioxidant and a regulator of the circadian rhythms with a wide range of behavioral and physiological effects. There are substantial data for antinociceptive effect of hormone melatonin in variety experimental models. Melatonin is widely used in treatment of sleep disorders related to disturbed circadian rhythms and as an antioxidant adjuvant. In the present work we aimed to study the effect of a chronic treatment with melatonin on the diurnal pattern of nociception in normotensive Wistar and spontaneously hypertensive rats (SHR s).*

Material and Methods: *The experiments were performed on male young-adult Wistar and SHRs using an analgesimeter (Ugo Basile, Italy) for multiple assessment of acute phasic pain with equal intervals between the measurements of six hours. Melatonin was administered in drinking water at a dose of 10 mg/kg of body weight for two months*

Results: *The results showed that normotensive Wistar rats possessed significant diurnal variations in nociception with lower pain threshold during the dark phase, whereas SHRs have disturbed circadian pattern without aberrations of nociception in the particular time pointts.*

Conclusion: *Chronic melatonin treatment increased the pain threshold during the dark phase in Wistar rats and aligning their nociception with the daily values but did not affect the nociception of SHRs.Taken together our data showed that chronic treatment with hormone melatonin induced a phase-dependent antinociceptive effect in normotensive Wistar rats but was inefficient to influence the disturbed circadian rhythm of nociception in SHHRs.*

HPLC ANALYSIS OF FAT-SOLUBLE VITAMIN CONTENT OF PHARMACEUTICAL PRODUCTS

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Introduction: *Vitamins play an important role in various physiological and biochemical processes in the human body and their deficiency or complete lack often leads to serious medical conditions. Considering their importance, the World Health Organization advises for daily vitamin supplementation. Dietary standards for fat-soluble vitamins in the European Union are close to those adopted in Bulgaria. Taking into account the ever-rising number of pharmaceutical preparations, containing water- and fat-soluble vitamins, a need for qualitative and quantitative analysis of vitamin content of pharmaceuticals arises to insure the correct dosage regimen. The aim of the presented work was to determine fat-soluble vitamin content in several pharmaceutical products, available on the market in Bulgarian pharmacies.*

Material and Methods: *Three fat-soluble vitamins were analyzed simultaneously using an HPLC system with UV (vitamin A and D3) and fluorescence detection (vitamin E), equipped with a RP analytical column Nucleosil (25 cm x 0,46 cm). Chromatographic separation was achieved with a mobile phase, comprised of 100% methanol, and a flow rate of 0.9 ml/min, at column temperature of 30˚C.*

Results: *The described HPLC method showed good separation of the three vitamins and is applicable for their quantification in pharmaceuticals. The results revealed that the multivitamin supplements contained the declared amount of analytes with only minor differences within the accepted range.*

Conclusion: *The analysis of the selected pharmaceutical products revealed that they can be used as a reliable source of fat-soluble vitamins, providing a large per cent of the recommended daily allowance.*

TOXICITY AND PHARMACOLOGICAL ACTIVITY OF NEW L-VALINE PEPTIDOMIMETICS

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Four newly synthesized peptidomimetics were studied as potential pharmacological agents. Aminoacid L-valine is bounded with nicotinic (m-pyridinic) acid – [M] or isonicotinic (p-pyridinic) acid [P] from one side and with alkyl spacer containing 3 or 6 methylene groups from the other side.

The purpose of the study: To evaluate their toxicity and pharmacological activity (in vitro and in vivo).

Methods: T*oxicological studies- in vitro toxicity (on cell cultures) and in vivo in Albino mice. Antiviral activity (against Virus simplex) and chellating activity to Fe (III) were evaluated. In single doses 125 and 250 mg/kg b.wt. i.p. on Albino mice the effects of compounds on learning and memory (step down test) and the nociception (acetic acid test) were studied. Their interaction with CNS- active compound (hexobarbital-HB) also were evaluated. For statistical assessment t-test of Student Fisher and ANOVA were used.*

Results and discussion: I*n vivo and in vitro experiments showed very low toxicity of the compounds (intraperitoneal and oral- over 2 000 mg/kg and citotoxicity lower than this of vitamin C). In the same time they had good therapeutic index (over 8). The antiviral activity against herpes simplex was moderate and probably is related to established chellating activity toward Fe (III). Stronger chellating activity in vitro of the compounds with 6 spacers correlated with their better activity (in comparison to the compounds with 3 spacers). Applied on Albino mice two of compounds (M6 and P6) increased processes of learning and memory in mice. Effects are more pronounced for compounds with 6 methylene groups. The high lipid solubility of compounds probably is responsible for their CNS-affinity. Compounds M6 and P6 had higher log P than M3 and P3 (in system octanol/water). Compounds had ability to modified the effects of some CNS-drugs (HB). In acute treatment HB narcosis was prolonged by P-6 and M-6 but after 5 day treatment they shorten it significantly. This demonstrated that the interaction is not only on CNS level, but probably on the metabolic level- on hepatic P-450- monooxygenases. The isomer position (meta and para) also had significance for the variations in their pharmacological activity and probably determines the differences in their pharmacokinetics*

Conclusion: *Our results show that the compounds are neuropharmacologically active agents (especially 6-isomers). The differences and varieties in their activity obviously are due to their positional and structure isomery. Comparison of data in vivo and in vitro allow us to assume that their lipo-solubility and chellating ability probably are important for their pharmacological effects.*

DENDRITIC CELLS, SMAD7 AND IMP3 - THE GOOD, THE BAD AND THE UGLY IN THE GASTRIC CANCER PATHOLOGY

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Trakia university

Gastric cancer (GC) is still the most prevalent neoplasia in many countries. Therefore, besides the clinicopathological factors known to be prognostic markers, new independent parameters are being investigated.

We investigated 13 patients with GC(7 male and 6 female) aged between 47 and 79 years (median 64,9 years). It was performed immunohistochemistry analysis with antibodies against IMP3, SMAD7 and CD83, and correlated the result with the clinicomorphological data of the patients.

We found moderate expression of SMAD7 in the cytoplasm of tumor cells in six patients, in other four patients it has found intense expression of protein IMP3. The median density of mature CD83-positive dendritic cells (DC) was 3.35+/-1.9 in the tumor stroma and 5.61+/-4.1 in the tumor border. We have found that patients with a higher density of CD83+DC in the tumor and in border have smaller tumor size, and have no lymph node metastases (p=0.031 vs. p=0.044). The tumors who shown expression of SMAD7 and IMP3 to had lower infiltration of CD83+DC.

Our results suggest that the markers SMAD7 and IMP3 are linked with negative development of the disease, as well as with disease in antitumor immunity, and the tumors that express them also showed a lower infiltration of mature DC.

CASE REPORT OF A HER2-POSITIVE BREAST CANCER, TREATED WITH DUAL HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR 2 (HER2) BLOCKADE WITH TRASTUZUMAB AND PERTUZUMAB

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HER2 amplified breast cancer represents about 20-25 percent of all breast cancer cases. Once it becomes metastatic, this subtype of breast cancer has poor prognosis and outcomes. Treatment of HER2-positive metastatic breast cancer remains a clinical challenge in medical oncology. The introduction of biological agents such as the monoclonal antibodies Trastuzumab and Pertuzumab, selectively targeting HER2 receptor, has changed the course of HER2-positive breast cancer, assigning them as key therapeutic agents in every line of the treatment of HER2 breast cancer. A case report of apremenstrual 44-year-old woman with a HER2-positive breast cancer is discussed. She was diagnosed and first treated in 2009. First metastatic relapse of the disease occurs during her third pregnancy in 2014. Four cycles of chemotherapy by Docetaxel with dual HER2 blockade with Trastuzumab and Pertuzumab was prescribed as first line treatment with subsequent assessment of the tumor response post 4 cycles.

The result of the evaluation of the therapeutical response by CT shows stable disease. A survey of the literary was conducted regarding the currently available knowledge about the mechanism of action and the biological importance of the signal transduction through different pathways - EGFR, MAPK, PI3K/Akt and the mTOR pathways.

The concept for activation of the pathways in the cancer cell is discussed as well as the new and innovative agents, specifically targeting and inhibiting key participants of the signal transmission.

CASE REPORT: DRAMATIC RESPONSE TO DABRAFENIB IN A PATIENT WITH BRAF (V600) MUTATED METASTATIC MELANOMA AT ST. MARINA UNIVERSITY HOSPITAL – VARNA

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Introduction: *Malignant melanoma is an aggressive, therapy-resistant malignancy of melanocytes. Exposure to solar UV radiation, fair skin, dysplastic nevi syndrome, and a family history of melanoma are major risk factors for melanoma development. In 2012, 4050 people in Bulgaria were diagnosed with melanoma, according to the National Statistical Institute. Metastatic melanoma is the least common and the most deadly skin cancer.*

Materials and methods: *We present a case report of a 59-year-old male patient with malignant melanoma and metastases in the liver, right adrenal gland and L4. He presented with right upper quadrant pain, pain in the right shoulder and weight loss. The patient was admitted to the Endocrinology Department. A review and discussion of the case was held by the multidisciplinary tumour board.*

Results: *As a result the patient was started on Dabrafenib. It is a drug for the treatment of cancers associated with a mutated version of the gene BRAF. Dabrafenib acts as an inhibitor of the associated enzyme B-Raf, which plays a role in the regulation of cell growth.*

Conclusion: *Dabrafenib, as compared with other conventional targeted therapies, significantly improves the overall survival rate in patients with BRAF(V600) mutated metastatic melanoma, without increasing the overall toxicity.*

NEW METHODS OF INGUINAL HERNIA REPAIR

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The main topic of the presentation is the leading methods of laparoscopic inguinal hernia repear:
- TAPP trans-abdominal pre-perotenial repair
- TEP Total extraperitoneal repair.

The first method is called TAPP trans-abdominal pre-perotenial repair. This is a surgical laparoscopic technique which consists of making three small incisions above the umbilicus- one for a camera and other two, biliterally located to either side of the camera for the surgical instruments.The method requires creating pneumoperitoneum with CO2 by the surgeon.

The second method is TEP- Total extraperitoneal repair.Extraperitoneal space is created by surgeon using balloons. Ports placed below camera port, along midline.
Both methods use mesh as a main surgical material.

Both techniques aim to repair hernial deffect.
The advantages of these techniques are:
- less invasive
- smaller scars
- faster recovery
- they give a better opportunity for abdominal organs visualisation.

ACUTE APPENDICITIS IN PREGNANCY – DIAGNOSTIC PROBLEMS

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Appendicitis is infrequent but 90% of cases of acute abdomen in pregnancy occurring in about 1:1500 pregnancies. It has been associated with premature labor, fetal and maternal death particularly when perforation with peritonitis occurs. The diagnosis is challenging because of the relatively high prevalence of abdominal discomfort, anatomic changes related to the enlarged uterus, and the physiologic leukocytosis of pregnancy. Appendiceal rupture occurs more frequently in pregnant women, especially in the third trimester, possibly because reluctance to operate delay diagnosis and treatment. A literature review of the investigation and management of suspected appendicitis in pregnancy was undertaken.

There remains no consensus on the best diagnostic pathway in these cases.

Acute appendicitis during pregnancy is a complex clinical problem. Lack of prominent symptoms and laboratory results could be misleading. When it is observed, early surgical intervention in less than 24-hour has shown to be vital in minimizing both maternal and fetal morbidity and mortality.

ANTERIOR ABDOMINAL WALL RECONSTRUCTION FOLLOWING RADICAL EXCISION OF CARCINOMA: A REPORT OF TWO CASES

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Surgical resection of extensive malignant carcinomas of the anterior abdominal wall results in prominent defects and therefore an effective single-stage plastic reconstruction is needed. The aim of the following discussion is to present the surgical management of two patients suffering from different type of carcinomas. Each one of them was treated via radical resection of the neoplasm, located on the anterior abdominal wall. This was immediately followed by a reconstruction with vertical rectus abdominis myocutaneous flap (VRAM) nourished by superior epigastric vessels.

Subsequent post-operative follow-ups of five and twelve months for Case 1 and 2, respectively, revealed no recurrences. Overall, optimal functional and aesthetic outcomes were achieved using the aforementioned approach.

The presented cases demonstrate a useful alternative in abdominal wall plastic and reconstructive surgery.

SUBDURAL EMPYEMA FROM ACUTE PANSINUSITIS DUE TO PREVOTELLA

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Acute infections of the CNS are among the most important medical problems. This is due to the fact that the disease outcome is directly dependent on early diagnosis, adequacy of decisions and immediate initiations of treatment.

We present a case of acute subdural empyema as a complication of acute pansiuit in 12 year old boy. The child enters the pediatric ENT clinic with signs of acute pansiuitis. His condition worsened and appears neurological symptoms, it is therefore conducted CT – data of pansinuitis with no evidence of involvement of intracranial structures. There are right-sided hemiparesis, weakened reflexes and Babinski (+) on the right, bilaterally symmetrical sensory, spoor. Four days later emergency pansinusectomia and pumbar puncture cloudy fluid were done.

After discussion emergeny surgery was conducted. First left-sided craniectomia was done. After incision of the dura it leaked high pressure odorless white pus. Parietal parasagittal trepanation hole was done, and then it was extended osteoclastic to 3 sm. We did lavage and took material for microbiological examination – it showed anaerobic flora Prevotella Oris, Prevotella Micros and Prevotella Magnus. Three days after operation the septum of the eyelid perforated and leaked pus containing Str. viridans.

Child's condition has been stabilized and the patient has been directed towards children's ENT clinic with right hemiparesis, heavier foot. Subdural empyema is a serious complication in the course of many diseases in the head, leading to a severe disability of patients. That's why it is so important to think for symptoms before occurrence of severe neurological deficit.

CUSTOM MADE TOTAL HIP REPLACEMENT

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Hip arthroplasty has been around for over 75 years, but with the advancements in modern medicine and 3D imaging it has never been at such a high level – preserving the quality of life, range of motion and physical ability of the patient. These improvements have been made possible in the last decade thanks to custom made total hip replacement.

There are several steps involved in the process of creating a custom hip joint - Noble index calculation; traditional preoperative planning; 2-D computerized planning; CT scanner examination, and 3-D preoperative planning. After applying these methods a custom prosthesis, consisting of an intramedullar and extramedullar part, is manufactured using Titanium and hydroxyapatite as coating. In our research 12 clinical cases have been reviewed of patients who have undergone total hip replacement of one or both hip joints.

Importantly none of the patients suffered any complications typically related to conventional hip arthroplasty such as: metal poisoning, severe joint pain, osteolysis, implant dislocation or loosening. According to a study conducted by Symbios – one of the lead manufacturers – patients under 50 have an average life expectancy of 96.7% over a period of 10 years, and 85% over 15 years.

These results clearly demonstrate the advantages of custom hip arthroplasty over the conventional methods. It preserves the normal functional anatomy of the joint, while optimizing the osteotomy level and preventing osteolysis. This procedure is especially suitable for young patients, looking to retain their range of motion, mobility and physical capacity.

ENDOVASCULAR THERAPY OF PERMANENT VASCULAR ACCESS IN PATIENTS WITH CHRONIC RENAL DISEASE

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Introduction: *According to the statistics 300 to 400 of 1 million people annually develop terminal chronic renal disease (CRD) and commence hemodialysis worldwide. CRD in Bulgaria is nearly twice higher than the average for the EU - almost 26%. Permanent vascular access (PVA) includes all methods of realizing an artery-venous anastomosis (AVF). Life expectancy and quality of life of hemodialysis' patients depend on realizing an optimal PVA and the duration of its exploitation. The most severe complication of AVF leading to its elimination is thrombosis. In this article we discuss endovascular treatment as a method of treating inadequate capacity of blood flow preceding thrombosis and anastomosis loss*

Material and Methods: *Endovascular treatment is a safer alternative of the operative one. It increases the duration of primary patency of the AVF and excludes the need of secondary operative treatment for realizing a new one. It can be accomplished by angioplasty, stenting, thrombolysis, endovascular thrombectomy or combination of these. It is a method of choice when stenosis is significant and combined with clinical-physiological indicators of dysfunction: increased static or dynamic venous pressure, increased recirculation of urea, edema of the extremity and central venous thrombosis or decreased thrill and pulsations. Endovascular treatment is less traumatic than operative treatment, requires local anesthesia, it is minimally invasive and percutaneous.*

Results: *Angioplasty is expected to have at least 50% primary patency rate at 6 months, thrombectomy – 40% at 3 months and graft thrombectomy - an immediate rate of at least 85%. Surgical therapy for dialysis access dysfunction should be thought of as complementary and not competitive to percutaneous intervention. Surgical revision is indicated for endovascular treatment failure.*

Conclusion: *Endovascular therapy is safe, minimally invasive and sparing for the patient but it is highly specialized. It requires qualified medical team and adequately equipped for the purpose operating room. This is the main reason why endovascular treatment is not routinely used.*

BIOCOMPATIBILITY OF THE MATERIALS USED IN DENTAL IMPLANTOLOGY

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Introduction of the abstract: *Biocompatibility is the capability of materials to coexist with the organism without causing harm and being rejected, which ensures post-surgery success for the materials used in dental implantology. They can be classified as bio-inert, bio-active and bio-tolerant. The aim of the research is to systemize the information about the biological properties of biomaterials used for dental implants.*

Material and Methods: *A search was conducted in the electronic database of PubMed and Google scholar supplemented by hand searching of information in medical books. Articles were selected according to inclusion and exclusion criteria.*

Results: *After the first screening 534 abstracts were found and 10 articles were included in the research. Studies examining the biocompatibility of dental implant materials showed that titanium can cause allergy and cell reaction due to the ability of corrosion. In comparison with titanium, ceramics are resistant to corrosion, but they show slight delay in osseointegration. Titanium alloy Ti-6Al-4V can be slightly cytotoxic. Porous tantalum is highly biocompatible, resistant to corrosion and shows superior results in osseointegration and osseoincorporation. Bio-active glass and hydroxyapatite can be used as a coating for implant due to their ability to promote osseointegration. All elastomer impression materials are cytotoxic in different degree. All types of bone grafts induce slight inflammatory process in comparison with the control. Collagen membranes show excellent biocompatibility.*

Conclusion: *This research systemizes the biological properties of biomaterials used in dental implantology. It shows their advantages and disadvantages, which promotes the use of methods for modification of their biocompatibility to ensure and to increase the post-operative success of dental implants.*

EVALUATING THE MANIFESTATION, SYMPTOMS AND RISK OF DEVELOPMENT OF ORAL NEOPLASMS AND PRE NEOPLASTIC LESIONS IN A THREE YEAR STUDY

P. Stefanov, S. Chokanov, N. Frantsov, T. Marinov, A. Gencheva

Summary: *The evaluation of the manifestation, symptoms and risk of development of oral neoplasms and pre neoplastic lesions is a key process for the treatment of the disease. By doing a three year study with a cross sectional survey in over 250 patients, we discovered some of the most common lessions – leucoplakia, hairy tongue, linea alba, etc. Most of the patients reported that they smoke and about 30-40% of them drink alcohol. Our results show that despite of the low percent of lesions found, our patients are exposed to a variety of factors, that contribute to the progress of the pre neoplastic lesions and oral neoplasms. We conclude that there is a need of a prophylaxis of this type of diseases and quiting the bad habbits our patients have.*

Introduction: *By doing the study in three consecutive years our goal was to find out not only if there is an increasing number of oral lesions in the mucosa, but if there was a correlation and link between them and the bad habbits patients have, the state of their oral hygiene and how often they visit dentists for prophylaxis*

Aim: *To link the bad habbits, oral hygiene, regular visits to the dentist and the genetical predispositions with the manifestation of oral cancer and pre neoplastic lesions.*

Materials and Methods: *A cross sectional study was conducted in the end of November 2012, 2013 and 2014. Alongside the oral examination a questionnaire was conducted. It`s main purpose was to show the habbits of the patients, the visits to the dentist, quality of life, etc.*

Results: *The results show that a 1/3 of the patients visit their dentist at least once per year. Another 1/3 visit their dentist once in 6 months. Some of the patients report visits once in 3 months. A very small number of them visit their dentist rarely (once in 2 years or even more rare) (Tab. 1).*

The other part of the questionnaire shows the last time the patients visit to the dentist. Our results show that 90% of the patients have visited their dentist in the last year (Tab. 2).

Based on these results we cannot say that there is a direct relation between the brushing of the teeth and the condition of the mucosa (Tab. 3).

The part of the results in the questionnaire for the extra tools (as mouthwash and dental floss) show, that around 40% of the people don`t use such tools. The results lead us to the fact, that if we could teach our patients the benefits of using these things, they can contribute to their oral health (Tab. 4).

The bad habbits section reveals some disturbing facts – around 30% of the patients smoke and drink alcohol. A combination of "heavy" smoking and "heavy" drinking results in odds ratios (ORs) for oral cancer of up to 38 for men and 100 for women (Tab. 5).

When asked if the patients eat healthy, in ther opinion, around 60% of them say yes, but without knowing what exactly is healthy eating and dieting. The public has to be teached what is the exact meaning of healthy eating. We think that in long term relation some of the ingredients may contribute to some type of lesions (2). It is very important that the diet should be balanced, including micro- and macronutrients, vitamins, etc. (Tab. 6).

Genetic predisposition was found in only 3% of the examined patients. There are researches in that aria, that are trying to link specific genes with the development of lesions (Tab. 7).

Conclusion: *Concluding the results our main goal is to educate the society, benefiting and developing its oral hygiene habbits, try to explain them about the risks of smoking, drinking and all the other risk factors. There is also a great need of prophylaxis in order to lower the overall cases of oral pre neoplasms and cancer.*

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DETERMINING THE LINK BETWEEN THE CONDITION OF THE FIRST MOLARS AND AGE AND GENDER IN ADULTS USING THE DMFT INDEX AS A CRITERIA

P. Stefanov, S. Chokanov, T. Marinov, N. Frantsov, R. Anastasova

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With aging the factors, that contribute for the decay and destruction of the teeth grow. Some of the most important are foods and drinks rich in refined sugar, sticky foods, bad habbits like smoking, alcohol and drugs and so on. The status of the structure of the teeth is also changing. The enamel is being reduced due to mechanical and chemical factors. The pulp also is changing in the course of time, most commonly by fibrosis, resulting in a low metabolism and malnutrition of the tissues. All these separate factors combined are the reason of raising the percentege of tooth decay, but also in its complications.

A cross sectional study was carried out involving adults from the ages of 18 to 82 years. The criteria of the DMFT index was used and a questionnaire to assess the quality of life. The patients were divided into 5 different age groups – group 1 : until 20; group 2 : 20-40; group 3 : 40-60; group 4 : 60-80; group 5 : over 80 years). The criteria of the DMFT index were used and a questionnaire to assess the quality of life was used for statistical analysis - descriptive, correlate and comparative analysis.

The overall number of patients surveyed is 86. From them 35 were men and 51 were women.

In the male subjects the percentage of tooth decay is 5.71%, most significant in numbers in group 2 (5 teeth). The missing teeth are 15.7% with significant numbers in group 4 (16 teeth). The percentage of filled teeth is 52.85%, most significant in numbers in group 2 (50 teeth). The intact teeth are only 25% (Fig. 2).

In the female subjects the percentage of tooth decay is 2.45%, most significant in numbers in group 2 (4 teeth). The percentage of missing teeth is 41%, most significant in numbers in group 4 (50 teeth). The filled teeth are 49.51%, most significant in numbers in group 2 (63 teeth). The intact teeth are only 10% (Fig. 3).

The results show that despite being less as a number the men are with more intact teeth and less lesions that women. The survey also shows that the group 2 both in men and women show the biggest number in filled teeth. This leads to the conclusion of an early problem with dental caries. Group 4 both in men and women also shows that there are the most extracted teeth. The conclusion is that in time the problems with dental caries and its complications lead to the extraction of teeth. This means that despite of knowing about the problems with their teeth many of the patients dont face them and dont take any precautions about them. Eventualy that leads to extractions and missing teeth, that are replaced with bridges, implants or dentures. Caries progression and aging are linked. With aging the teeth get more or less nonresistant to the factors that lead to dental caries. In time its complications lead to late treatment or extractions. This survey shows that the most of the extractions are made in the years between 60 and 80, but in many of the patients the extractions were even earlier. The early detection of caries is the only way to stop and prevent its complications in time.

3D PRINTERS IN DENTISTRY

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Three-dimensional printing is a revolutionary technology that is transforming a variety of industries even dentistry. 3D printers can use to create different products. Glass, plastic, concrete, liquid polymers, ceramics, titanium powder, porcelain and live tissues and cells have all proven to be effective materials. This means that skeletal implants, organ transplants,instruments and much more can be made with a single machine.

Related articles were gathered and selected and reviewed. After systematic and objective collection of data current status of application of 3D printers in dentistry is described.

The use and different applications related to 3D printers and present potential applications of 3D printers in dental practice are evaluated. 3D printing takes the efficiencies of digital design to the production stage. By combining oral scanning, CAD/CAM design and 3D printing, dental laboratories can accurately and rapidly produce crowns, bridges, stone models and a range of orthodontic appliances. Camera scans the patient's teeth. The digital scan is then sent to an on-site milling machine that carves the crown directly from a small cube of porcelain. About 15 minutes later, the crown is complete and ready to be implanted. The future possibilities everything from scheduling to finished restoration to be achieved digitally and automatically is presented.

3D printing technology has reduced the long process to a single, hour-long procedure.3D printing capability has encouraged many labs to transition to a digital workflow because this technology is a precise, powerful and affordable manufacturing tool. Dental labs can increase part production while improving quality and precision with a single machine.

DIGITAL IMAGING TECHNIQUES AND ERRORS

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Digital radiography is a promising technology with new diagnostic procedures not available with traditional film-based imaging. Prior to the acquisition of intraoral digital images, the clinician must create the patient's record and select a template for the intended survey. As in film-based radiography, digital imaging requires x-ray in-

teraction with a receptor, latent image processer and image viewer. The receptors (sensors) used in digital imaging are faster, and more sensitive thus requiring less radiation than film.

Related articles were gathered and selected and reviewed. After systematic and objective collection of data current correct technique and proper patient management skills are presented.

The information obtained from digital radiographic images, while at the same time minimizing patient radiation exposure. Clinical errors occur as a consequence of improper patient preparation or management, technique and exposure. The advantages of this technology include a lower radiation dose to the patient and almost instantaneous availability of images without the need for chemical film processing. Identification and correction of common errors that occur in digital intraoral and panoramic imaging and proper patient management skills are presented.

This study describes the digital imaging techniques in dental medicine and the most common clinical errors that occur as a consequence of improper patient preparation or management, technique and exposure. A substandard radiographic image is worse than no image at all because it does not provide the necessary diagnostic information and retakes increase radiation exposure to the patient.

AMELOGENESIS IMPERFECTA HERIDITARIA – A SCIENTIFIC REVIEW

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Amelogenesis Imperfecta Heriditaria (AIH) is a group of inherited disorders which affect the structure and clinical appearance of the hard dental tissues, namely enamel. It is caused by mutations in genes that control amelogenesis and is based on patterns of autosomal dominant, autosomal recessive, sex-linked and sporadic inheritance.

Related articles were gathered and reviewed. The data were objectively analyzed. A systematic review of the most discussed and cited articles was made.

Results: *The prevalence of these conditions has been studied only among few populations and reported to range from 0.05 out of 1000 to 1.30 out of 1000. The most widely applied classification of AI has been created by Witkop. According to it, this teeth structural disturbance is divided into four sub-classes: hypoplasia, hypomaturation, type of hypocalcified enamel, hypomaturation-hypoplastic type. AI can result from mutations in certain genes that are related to syndrome or non-syndrome forms of the disorder. In condition of hypoplasia the defect concerns the quality and/or quantity of the secreted enamel organic matrix. The state of hypo-mineralization is characterized with insufficiency of inorganic compounds into building-up enamel tissue. Hypo-maturation is a disturbance of enamel formation with impact upon the process of maturation.*

More studies should be focused on the issues of prevalence, pathogenesis and etiology factors of AI. Possible oro-dental and/or systemic conditions and syndromes should be considered for proper treatment approaches and secondary and tertiary prophylaxis. The various forms of AI increase the risk of caries and this relation should not be underestimated. We should take into consideration the fact that there are many disorders that have similar phenotype as AI and therefore have to be discussed in the context of differential diagnosis.

Keywords: *Amelogenesis Imperfecta Hereditaria, patterns of inheritance, genes, enamel*

CASE REPORT ON A 17-YEAR OLD BOY WITH ALAGILLE SYNDROME AT ST. MARINA UNIVERSITY HOSPITAL

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Alagille Syndrome is a rare genetic disorder that affects primarily the liver, but can also damage the heart, eyes and can lead to pulmonary stenosis. The condition is caused by a gene mutation, inherited in an autosomal dominant pattern and present in infancy and early childhood. Clinically, it can manifest itself from unnoticed symptoms to severe signs of liver dysfunction – jaundice, itching and xanthomas. A suspected Alagille Syndrome can be proven by a liver biopsy, when there is complete absence of bile ducts or a very reduced number of them.

In the Pediatric Clinic of St. Marina University Hospital – Varna, there is a present case of a 17-year old boy, repeatedly admitted for planned interventions and tests. The patient was diagnosed with Alagille syndrome at the age of 3 and has family history of an affected mother.

The patient's last admissions were regarding to pain and heaviness in the right hypochondrium and severe itching on the lower limbs. Tests showed no pathological conditions such as viral hepatitis, Wilson's disease or alpha-1-anthitrypsin deficiency. However, a blind liver biopsy was planned and performed. The histological picture, combined with typical for the disease morphological features and "butterfly vertebrae" changes confirmed Alagille Syndrome.

The condition is managed by medication and supplement intake and an adequate diet. In conclusion, the patient is discharged with reducing of the complaints and with a scheduling for further discussion on the liver condition with a gastroenterology specialist.

ACHONDROPLASIA - SYMPTOMS, DIAGNOSIS AND TREATMENT

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Introduction: *Achondroplasia is an autoisomal dominant genetic disorder. It is caused by a mutation in FGFR3 gene, located at 4p16.3. This gene stimulates the expression of a protein - receptor for fibroblast growth factor 3. The isoform, located in bone cells, regulates the growth of the bones by influencing the cartilage conversion to bone, especially in long bones. Other phenotypes, caused by mutations in FGFR3, include: hypochondroplasia, FGFR - related craniosynostosis, tanatophoric dysplasia (types I and II), SADDAN (severe achondroplasia with developmental delay and acanthosisnigricans). Achondroplasia is one of the oldest known congenital disorders. It occurs in 1 in 10 000 newborns in Latin America to 12 in 77 000 in Denmark. Worldwide it occurs in about 1 in 25 000.*

Material and Methods: *Characteristic features of achondroplasia include: short stature, short limbs, limited range of motion at the elbows, macrocephaly, stenosis of the foramen magnum, which is accompanied by compression of the passing vessels and nerves. People with achondroplasiagenerally have normal mental development. Health problems commonly associated with achondroplasia include: abnormal curvature of the spine (lordosis and kyphosis), joint hypermobility, recurrent infections of the middle ear and decreased hearing, episodes of apnea, obesity, spinal stenosis.*

Results: *Growth hormone is currently used to augment the height of patients with achondroplasia. The greatest acceleration of growth rate is seen during the first year of treatment in the patients with the lowest growth rates previous to the treatment. For maximum benefits it is recommended that the therapy starts at an early age (1-6 years).*

The surgical treatment includes lengthening of the upper and lower limbs, correction of genu varum, the thoracolumbar kyphosis, the spinal stenosis, decompression of the foramen magnum.

Conclusion: *Case report:We present the case of a girl (R.A.) at the age of 8, who has visited genetic counseling in Saint Marina Hospital - Varna. The proband has facial dysmorphism (midface hypoplasia, relatively enlarged mandibula, prominent forehead), disproportionate low stature (105 cm, height at birth - 48 cm), short limbs, genu varum. On the basis of the objective status and the diagnostic imaging it was concluded, that the patient suffers from achondroplasia, caused by a de novo mutation. The risk of a de novo mutation increases with the increase of the father's age and in this case the father is 53 years old. The genetic riscks for the family and the proband are discussed.*

A CASE OF RARE DISEASE: TANATOPHORIC DYSPALSIA

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Introduction: *Tanatophoric dysplasia is a severe skeletal disorder charachterized by short limbs and folds of extra skin on the arms and legs. There are two types of tanatophoric dysplasia, type 1 and type 2. Type 1 is more common than type 2. Infants with thanatophoric dysplasia are usually stillborn or die shortly after birth from respiratory failure. Mutation in the FGFR3 gene cause this disease. It is considered to be autosomal disorder.*

Aim: *To represent a case report of a child with tanatophoric dysplasia, type 1, born on 3.12.14 in 32 gestational weeks after hydramnion and foetus malformations were diagnosed by fetal morphology. The child is born from first IVF pregnancy. During pregnancy hydramnion and foetus malformations are diagnosed. The newborn had caput quadratum, saddle nose, hypertelorism. The diagnosis is based on clinics and rentgenography. The child had died soon after birth. The family has been consulted that it was possible to diagnose the disease before death, by molecular genetics method.*

Conclusion: *Ultrasound research is very important as prenatal screening of early diagnosis of bone-muscular anomalies, many of which are severe and with early lethality.*

RESPIRATORY INFECTIONS, ATOPY AND CHILDHOOD ASTHMA

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Introduction of the abstract: *Respiratory viruses may increase the risk of asthma through several pathways and a growing body of evidence suggests that respiratory viruses interact with atopic responses in asthma exacerbations. Both host factors and virus factors may contribute to asthma inception after a respiratory virus infection. Advances in detecting respiratory viruses have provided important insights into the relationship between viruses and asthma. The newly discovered viruses have also been linked to wheezing illnesses and asthma exacerbations.*

Material and Methods: *The parents of 563 children (7-10 year old) completed questionnaires about respiratory infections, asthma, atopic diseases, family history of atopy and asthma, and others.*

Results: *According to parents data 22 children have doctor diagnosed asthma, 130 have family history of allergic diseases and 172 have repeated upper respiratory infections. The parents of the asthmatic children reported the highest prevalence of repeated respiratory infections. The children with family history of allergic diseases according to parent`s data suffer more frequently from repeated respiratory infections.*

Conclusion: *Asthma is a heterogeneous disease that is influenced by multiple factors including the environment, genetics, pollution, infection, and diet. Atopy, defined as a predisposition to developing allergic sensitization, is a strong predisposing factor for the development of asthma. Respiratory viruses cause asthma exacerbations and are associated with an increased risk of developing asthma. Further research is needed to elucidate the relationship between respiratory viruses and asthma inception, to characterize the clinical significance of respiratory viruses in asthma.*

THYROID HORMONE RESISTANCE (REFETOFF SYNDROME)

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Resistance to thyroid hormone syndrome (RTH) is a rare disorder, usually inherited as an autosomal dominant trait. RTH is variously as 1 in 50,000 or 1 in 40,000 live births. The first report of the condition appeared in 1967. A new term "impaired sensitivity to thyroid hormone" was suggested in March 2014 by Refetoff (Bulgarian scientist in University of Chicago).

Results from a mutation in the thyroid hormone receptor beta gene causing an amino acid substitution in or a partial or complete deletion of the thyroid hormone-binding domain of the receptor. Refetoff syndrome is characterized with generalized resistance of pituitary and peripheral tissues to thyroid hormone. The levels of thyroid hormone are increased, but there is euthyroid.

The most common symptoms are goiter and tachycardia. Yet, since discovery of resistance to thyroid hormones in the absence of thyroid hormone receptor beta mutations, lack of a mutation in a patient does not rule out resistance. It has also been linked to some cases of attention deficit hyperactivity disorder (ADHD), but it can be associated with depression also.

RTH is rare disease and there're no treatment therefore the patients can take only a synthetic version of thyroxine given to replace the sub-optimal level of thyroid hormone recognizable for receptors

LESCH-NYHAN SYNDROME

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Introduction: *Lesch-Nyhan syndrome is discovered in 1964 by Michael Lesch, who was a medical student, and his mentor William Nyhan, who is a pediatrician. That disease is extremely rare-1 of 380 000.*

Material and Methods: *Lesch-Nyhan syndrome is an X-linked recessive disease. Sometimes may be sporadic. Females, who are heterozygous, are carrier. LNS is associated with a mutation in the HPRT1 (HGPRT) gene. Because of that, there is totally deficiency of the enzyme hypoxanthine-guanine phosphoribosyltransferase. That enzyme catalyzes salvage pathway of synthesis of purines. The consequences are increasing of phosphoribosylpyrophosphate (PRPP). PRPP stimulate de novo synthesis of purines. Purine nucleotides is going up. That will initiate intensive catabolism of purines, which leads to overproduction of uric acid (hyperuricemia). Although female's carrier is healthy, they have high levels of uric acid.*

Results: *LNS is characterized with the triad of gout, neurological dysfunction and behavioral disturbances. Neurological dysfunction is related with decreased muscle tonus, lack of speech, crawl and walk, (opisthotonus), (choreoathetosis), extrapyramidal damages, (hyperreflexia), Extensor plantar reflexes, cerebral palsy. Individuals are aggressive and they tend to self-injury. Children injure their tongue, lips, cheeks, fingers.*

Conclusion: *Prognosis is poor. Death is usually due to renal failure and complications from hypotonia in the first or second decade.*

FREQUENT URINARY TRACT INFECTIONS IN A PEDIATRIC PATIENT WITH CONGENITAL CNS ANOMALIES

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Introduction: *The purpose of this report is to show the significant role of recurrent urinary tract infections in the pathogenesis and the development of nephropathy. The often bacterial infections and febrile conditions lead to cicatrisation of the renal tissue, thus, disrupting its function.*

Material and Methods: *We present a case of a 4-year old boy from a pathological pregnancy due to gestational hypertension that resulted in intrauterine retardation of the fetus. The patient is born at 34 weeks gestational age, breech delivery and has the following comorbidities: hydrocephaly associated with sympthomatic epilepsy and spastic paralysis. The problem of primary importance for the patient is his CNS anomalies which had him undergo 12 neurosurgical interventions. Since his birth until now the child has suffered multiple infections of the urinary tract. Taking the already established CNS anomalies into account, we put congenital kidney malformations under consideration to be connected with these persistent infections*

Results: *With the abdominal ultrasound being negative for anomaly, MRI and a scintigraphy were conducted. The results showed hypofunction of the left kidney and compensatory hypertrophy of the right one.*

Conclusion: *The pathological changes in the renal parenchyma were then interpreted to be a consequence of the recurrent infections.*

DIAGNOSTIC OF A RARE CONGENITAL IMMUNODEFICIENCY

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Introduction: *The X- linked agammaglobulinemia (XLA) also called Bruton's syndrome is a disorder that develops because of a mutation in the Bruton's tyrosine kinase (Btk) gene, which mediates B cell development and maturation through a signaling effect on a B cell receptor (Bcr). The disorder typically presents itself in male newborns after the 5-6th month, at the time of exhaustion of the motherly IgG antibodies. The patients present themselves with recurrent, hardly susceptible to antibiotic therapy, pyogenic infections: Bronchitis, Pneumonia, Meningitis and Otitis.*

Material and Methods: *The case involves a 5 year old patient. Symptoms developed at the age of six months. Since then the patient has suffered from infections of the respiratory tract and the middle ear. Adequate and successful treatment, with extended antibiotic courses, has been prescribed. At the time of admission the boy is suffering from a left-sided pneumonia with an isolated causing agent Streptococcus pneumoniae.*

Results: *Lab tests of White blood cell count and differential show 12,4x106/L WBC, B-lymphocytes were not found, T-cells measured 98% of all White blood cells, with prevalence to the CD8 subgroup.The results from the Radial immunodiffusion show total absence of IgG, IgM and IgA antibodies.*

Conclusion: *The patient is undergoing antibiotic treatment, but is also suitable for i.v.IgG administration. The objective of this therapeutic cycle is reaching the target values of above 6 g/L IgG. At a later stage of the treatment a gene therapy method could be proposed.*

TELEGENETICS OR HOW TO INCLUDE ELECTRONIC AND COMMUNICATION SYSTEMS IN EVERY DAY MEDICAL PRACTICE

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Telemedicine is a modern stream in medicine providing specialized genetic services using telecommunication, combining clinical practice with electronic communication systems for medical diagnostic. A well-known form of telemedicine is the so called telegenetics. It provides medical healthcare at a distance being low cost and easily accessible. It can be applied as a diagnostic approach, as well as educational tool in variety of specialties. A review of different studies and journals has been performed, helping us identify telegenetics as a modern tool for a common approach in the field of rare diseases, discovering telemedicine in the use of clinical genetic services. This research proves that telegenetics is an effective way of providing prenatal genetic counselling, via videoconferencing and it is a good alternative to "face to face" conversation. The public should be informed that there is no difference in the quality of the consultation. Using telemedicine in the genetic fields reduces the limits that rural populations face in accessing genetic services and allows broadcasting of consultations between genetic professionals. The articles concerning telegenetics reveal that technologies such as video conferences and interactive imaging can allow genetic services to patients obstructed by distance and increase the level of knowledge of rare genetic diseases. The Department of Medical Genetics, Varna, Bulgaria meets the need of developing a new approach to rare diseases. Based on European practice and driven by the need of education for new specialists, telegenetics is evaluated as a possible methodology for everyday work.

ACUTE PYELONEPHRITIS IN CHILDHOOD - CASE REPORT

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Urinary tract infections (UTIs) are common in childhood and can occur in the bladder (cystitis) or in the kidney (pyelonephritis). Nearly all UTIs are caused by bacteria that enter the urethral opening and move upwards to the urinary bladder and sometimes the kidneys. Mycobacterium and viruses such as adenovirus can also cause urinary tract infections. During infancy, boys are more likely to develop UTIs, unlike girls, who suffer more during their teenage years and adultory. UTIs are more common among girls because their short urethras make it easier for bacteria to move up the urinary tract.

We present a case report of a 15-year old girl with acute pyelonephritis and abdominal pain, which makes the diagnose difficult to recognize. The history of the disease dates back to 5 days ago, as the girl had the typically symptoms of pyelonephritis : pain and discomfort with urination, also stinging sensation when peeing, fever, malaise, nausea, vomiting, headache, hematuria and high temperature up to 39.8 C, not responsive to antipyretic drugs. In the emergency department she reported to feeling weak, febrile, with painful and frequent urination and acute abdominal pain.

After physical examination and kidney ultrasound, the doctors find out that the acute abdominal pain is suffer from acute pyelonephritis. Laboratory studies showed bacteriemia, leukocytosis and high levels of C- reactive protein. The diagnosis of acute pyelonephritis often can be based on patient's history, physical examination and simple laboratory studies obtained at the time of the initial clinical encounter.

The case raises the interest as its debut presents with intoxication syndrome and syndrome of pain. This causes differential diagnosis difficulties, regarding to elimination of acute abdomen, mesenteric thrombosis and acute appendicitis.

HOW THE BRAIN CONTROLS THE HEART?

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Neurocardiology is a study of the connection between the brain and the heart and the ways they interact. Neurocardiology inlcludes three categories- the heart's effects on the brain, the brain's effects on the heart and neurocardiac syndromes.

The brain communicates with the heart by humoral and neural regulation which is a key part of homeostasis. The psyche has an imporatant influence on these mechanisms. There is a variety of ways by which this connection presents itself. Perhaps the most extreme way the brain controls the heart are the experiences of death from fright. For a long time it was believed that such cases are limited to societies which are more superstitious and ignorant. However, it has been proved that these events can occur in all cultures and classes of society as cases of sudden cardiac death after disruptive life events.

Chronic strees, depression and anxiety can have a chronic influence on cardiovascular function. Depression is an independent factor for morbidity and mortality attributable to cardiovascular events, especially if there is a history of such an event in the past.

Data from our study of depresion and anxiety among people suffuring from cardiovascular disease will be presented. The study was conducted in 1st Clinic of Cardiology at "St. Marina" University Hospital in Varna for the period March- September 2014.

HOW THE BRAIN CONTROLS BEHAVIOR?

Galina Radkova

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Conduct disorder: *Throughout most of human history, people had absolutely no idea of the relationship between the brain and behavior. They believed that the various mental functions such as thinking, memory, and emotions were controlled by other body organs, or by fluids circulating within the body. One of the great scientific achievemens of the last 200 years was the realization that the brain is involved in every aspect of behavior (beyond a simple spinal reflex). Humans are more than brains - but without a brain, we wouldn't be able to do very much!*

Conduct or behavior *is the range of actions and mannerisms made by individuals, organisms, systems, or artificial entities in conjunction with themselves or their environment, which includes the other systems or organisms around as well as the (inanimate) physical environment. It is the response of the system or organism to various stimuli or inputs, whether internal or external, conscious or subconscious, overt or covert, and voluntary or involuntary.*

The most complex functions of human behavior are linked to the most highly developed part of the brain , the cerebral cortex . This is the "newest" part of the human brain, in the sense that is the most different from the brains of other animals. Researchers have discovered that many areas within the cortex are "wired" for the primary processing or control of a specific aspect of human behavior. Main structures , involved in shaping behavior, are the amygdala, striatum and ventromedial prefrontal cortex.

The term "conduct problems" refers to a pattern of repetitive rule-breaking behavior, aggression, and disregard for others. Conduct disorder is identified in about 5% of children aged 5-10 years. It is more common in boys than girls, and in inner city areas compared to country areas.

Current research on conduct problems focuses heavily on psychopathic traits, labeled as "callous–unemotional" when referring to such traits in youth, which include reduced guilt, callousness, uncaring behavior, and reduced empathy. The goal of the research is to identify neurocognitive functions, for which the brain mechanisms are understood, such as deficient empathy, heightened threat sensitivity and deficient decision making, in two subgroups

of children with conduct disorder, one with callous – unemotional traits and other – without. That may predict the course of the disorder and identify threatment for individual patients.

HOW THE BRAIN CONTROLS HUMAN EMOTIONS?

Savina Dimitrova

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What would life be without emotions? Emotions color our everyday experiences and inform us of the events we find significant. Emotions play important role in our lives. They direct attention, enhances memory, define and control behavior, drive social approach and avoidance, define moral development and help us to adapt to certain circumstances.

Emotions are response to external and internal stimuli in humans and animals. When an emotion is not relevant to a situation that we encounter or it is extreme, psychiatric disorders are expected and often seen phenomenon.

Emotions define our mood. The mood is a longer and more permanent state than the emotions but it is not a constant- it changes with the situations we face.

Psychologists, psychiatrists and neuroscientists have begun uncovering the functional architecture of emotional processes and underlying brain circuits.

People have different emotions which manifests itself in changes in brain circulation and specific functional areas. This changes are significantly presented within the limbic system. It is known that emotional life is largely housed in that system. The amygdale appears to be a critical gate through which internal and external stimuli are integrated. The amygdale mediates and control emotions. That is why we can assume that mood disorders, affect and motivation have a strong bond with alterations in that part of human brain.

Within the limbic system , the hemispheres, the temporal and frontal lobes (especially the prefrontal cortex) and the cortex play a crucial role in emotions. For this reason lesions in this areas may cause psychiatric disorders.

Scientists now know that bipolar children and adults have too much activity in a part of the brain called the amygdala, which regulates emotions, and not enough in the prefrontal cortex, the seat of rational thought.When you are upset - anxious, depressed, angry - these regions of the brain (the amygdala and the right prefrontal cortex) become very active.

Recent studies have shown that there is a deficit connectivity between the amygdale and OFC (orbitofrontal cortex) in patient with Bipolar disorder and their unaffected relatives.

Significant changes in the brain are found in patients with MDD, such as prefrontal dysfunction, reduction in grey matter in amygdale, dorsolateral prefrontal cortex, anterior cingulated region.

This two-way link between human brain and human emotions is the base of mood disorders and reveals a better understanding of their appearance.

NICOTINE AS A GATEWAY DRUG TO THE USE OF COCAINE

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It is a known fact that young people become involved with drugs in stages and sequences. This has led to the development of the "gateway" hypothesis, where drug abuse starts from legal and proceeds to illegal drugs. Marijuana has been termed a gateway drug, but what about nicotine? Research was done to study the effects of nicotine on mice brains and how it increases the risk of progressing to the use of other drugs, specifically cocaine. Drug addiction has been described as a form of learning due to the molecular effects of nicotine on the striatum. It was discovered that the same molecular steps which underlie memory are involved with drug abuse: activation of certain genes (ΔFoSB) and expression of certain binding proteins (CRE The experiments carried out focused on a num-

ber of behavioral and molecular markers for the priming effects of nicotine on mice brains, which were then administered cocaine. The results showed that priming with nicotine enhanced the effects of cocaine in mice brains. The enhanced expression of genes, due to nicotine use, is done by decreasing deacetylation on a widespread scale throughout the striatum.

All this data supports epidemiologic studies that show that most people begin using cocaine while still using nicotine, which enhances the physiological effects of cocaine.

PROCRASTINATION – A BYPRODUCT OF IMPULSIVITY

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Procrastination *is the practice of carrying out less urgent tasks in preference to more urgent ones, or doing more pleasurable things in place of less pleasurable ones. While it is regarded as normal for people to procrastinate to some degree, it becomes a problem when it impedes normal functioning. Procrastination may result in stress, anxiety, a sense of guilt and crisis, health problems, and severe loss of personal productivity, as well as social disapproval for not meeting responsibilities or commitments.* **Impulsivity** *is a multifactorial construct that involves a tendency to act on a whim, displaying behavior characterized by little or no forethought, reflection, or consideration of the consequences. Procrastination is strongly related to impulsivity.*

The prefrontal cortex (PFC) is an area of the brain responsible for executive brain functions such as planning, impulse control, and attention, and acts as a filter by decreasing distracting stimuli from other brain regions. PFC and the underlying limbic system are the brain regions most implicated in impulsivity and procrastination.

Recent studies found that the two traits stem from similar evolutionary origins and there seems to be a complete genetic overlap between them. From the genetic point of view that finding suggests that procrastination is an evolutionary byproduct of impulsivity — one that likely manifests itself more in the modern world than in the world of our ancestors.

AGGRESSIVE AND PARANOID SCHIZOPHRENIA

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Medical University of Pleven

The violence and aggression in everyday activities of psychiatric units are a real, although not fully recognized, occupational risk. Becoming a victim of assault is a professional risk in all mental health departments. Not all aggressive individuals are mentally ill, nor overall violence in psychiatric patients is a product of their disease. A big part of the aggressive behavior observed in patients with Schizophrenia is not accidental, but is motivated by psycho-pathological symptoms. The relationship between psycho-pathological symptoms and manifestation of violence is not fully clarified. Systematic evaluation of the degree of risk in any threatening situation is a basic clinical skill in emergency care and is critical in regard to the selection of an appropriate response to the aggressive patients diagnosed with Paranoid Schizophrenia.

We studied all patients diagnosed with Paranoid Schizophrenia entering the First Psychiatric Clinic /males/- UMHAT "D-r Georgi Stranski"- Pleven during 2012, 2013 and 2014. The diagnosis was determined according to the criteria of International Statistical Classification of Diseases and Related Health Problems (ICD-10). The risky behavior factor was monitored on the basis of low regulations and the Medical Standards in Psychiatry scale for assessing aggressiveness. The risk of aggression in patients with Paranoid Schizophrenia showed association with psycho-pathological mechanisms of occurrence and reflects the disease experiences. It is related to the course of

psychosis and its syndromologic base as the leading factor is the delusional mechanism of implementation combined with self-defensive and symbolic motives.

Of all hospitalized patients in 2012 -2014, diagnosed with Paranoid Schizophrenia, 25% have been admitted with the assistance of the police in the condition of psycho-motor agitation and data for aggressive and disruptive behavior in the community. For 2012 the psychiatric clinic registered 93 cases of risk of aggression, 10 cases of aggression towards psychiatric staff and 7 cases of aggressive actions towards other patients. In 2013 have been recorded 107 cases of risk of aggression, 13 cases of aggression towards the staff and 11 cases of aggressive actions towards other patients. The data for 2014 show 89 cases of risk of aggression, 11 cases of aggression towards the staff and 9 cases of aggressive actions towards other patients.

The Psychiatric Clinics team should periodically analyze its experience, define the problems, discuss and revise /if it is necessary/ the procedures for proper solution of cases of violence caused by patients with Paranoid Schizophrenia.

SKIN CANCER OF THE NOSE. CLINICAL PRESENTATION AND SURGICAL MANAGEMENT

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Sofia University

Carcinoma located on the skin of the nose is amongst the most common cancers on the facial surface. Squamous and basal cell carcinoma are usually observed, rarely malignant melanoma may be encountered. In our practice clinical presentation of the lesions is supervised, which in certain cases correlates with the histopathology of the tumor. Recommended treatment is interventional with a single reconstruction of the defects. Anatomic specificity, extensive surgical defects and high aesthetic expectations predispose the surgery to complications and critical acceptance.

Clinical cases of melanoma and non-melanoma skin cancer of the nose are presented. The distinction between diverse clinical forms of basal cell carcinoma and squamous or malignant melanoma for the differential diagnosis is reported. Methods of surgical management and reconstruction for skin cancer of the nose are demonstrated.

Results and conclusion: *Non-melanoma carcinoma located on the skin of the nose is successfully treated with radical ablation. The repair of the defects follows primary reconstruction including various flap techniques or free skin graft. Significant issues occur in cases of cancer recurrence. Favorable prognosis depends remarkably on the excessiveness of the primary excision.*

THE INFLUENCE OF DIFFERENT "SKIN GRAFTS" IN BURN PATIENTS

Elena Domuschieva, Stanislava Ivanova

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This study was conducted to determine feasibility, safety, and efficacy of a new strategy for skin grafting based on harvesting small columns of full-thickness skin with minimal donor-site morbidity. In the process we display a variety of innovative skin grafting techniques depicting the broad spectrum of alternative methods in front of burn victims.

The swine model was used for this study as well as some other ingenious techniques further illustrated throughout the presentation.

Wounds grafted with skin columns resulted in accelerated reepithelialization compared with ungrafted wounds while avoiding the "fish-net" patterning caused by conventional split-thickness skin grafts.

Full thickness columns of skin as well as 'Living Bandage' skin grafts can be applied directly to skin wounds to enhance wound healing.

ALLOPLANTS – THE DEAD TISSUE TRANSPLANTS

Boryana Georgieva, Alexander Boyadzhiev, Bogdan Adamski, Denica Stoykova, Filip Vutov, Plamen Panayotov

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Alloplant is chemically processed biomaterial, taken from dead bodies, which is used for transplantation. Most immunogen structures of tissue are extracted while it has its collagenic and elastic skeleton kept. Due to the skele-

ton, this kind of transplantation stimulates regeneration of tissues of the recipient. Alloplants has been successfully used for the last two decades in different areas of medicine like plastic surgery, ophthalmology, stomatology, etc.

Keeping in touch with the founder of alloplant, prof. Ernst Muldashev, we regularly receive information about the development of the method. Our group made a literature review of the recent performance of this method in order to summarise its success. The research showed that alloplants have some advantages before traditional tissue transplants. The first one is that it has low antigen features and as a result it is usually accepted from the human`s body. Moreover, the zone of the transplantation is prevented from scarring. In comparison with the normal tissue regeneration, which ends with cicatrization, the allopant method restores the function of the organ in a significantly short period of time. Last but not least, the normal cells possess a strong biofield which suppress the potential tumor growth.

Considering all results, it is reasonable that the alloplant becomes a part of the regeneration surgery and gives the opportunity to thousands of people for bringing their normal life back.

FACIAL RECONSTRUCTION FOLLOWING DEEP CHEMICAL BURN – COMBINATION OF DIFFERENT SURGICAL METHODS: A CASE REPORT

Petrov B., Yancheva A., Todorava L., Dimova Y., Todorova S., Zayakova Y.

Medical University of Varna

Chemical burns are primarily associated with damage to the skin surface. The following case report, however, presents a complex surgical treatment of a deep chemical damage.

This approach utilizes several reconstructive techniques aimed at correcting a skin defect located in the left lateral eye area, extending to the underlying zygomatic bone. The first step involved reconstruction of the tarsus. Following that, the area was covered with a temporoparietal fascial flap and a full-thickness skin graft was then used to complete the reconstruction. A subsequently developed functional inferiority, which presented with ectropion, indicated the necessity for a second surgical intervention.

When ectropion correction took place, full functional activity of the affected area was obtained.

Combining different operative techniques in treatment of deep burns is essential for the achievement of optimal functional and aesthetic outcome.

OSTEOMA IN THE FRONTOORBITAL REGION - INDIVIDUAL CRANIOPLASTICS

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Medical University of Varna

Introduction: *Osteomas are benign cranial tumors, which left untreated can cause multiple complications, such as headache, brain complications, infections and other.*

Material and Methods: *Case Report: 36 years old man with a bone deformation in the skull from a tumor formation (osteoma) in the left frontoorbital region. CT examination of the head is used for preoperative diagnostics. 2 stage operation with an extirpation of the tumor formation and followed by cranioplastics.*

Results: *Craniectomia and extirpation of the tumor formation with histological result: osteoma. Through CT images with 3D reconstruction of the cranial defect was made an individual bone implant, with which cranioplastics with an excellent cosmetical effect was realized.*

Conclusion: *Operative treatment followed by cranioplastics with individual implant is a treatment choice for osteomas with excellent results.*

ROBOTIC SURGERY - ARE ALL PROBLEMS SOLVED?

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Introduction: *Robotic surgery (RS) is minimally invasive technology with high potential. This technique has much advantages compared to conventional surgery, but there are still some unsolved problems. Some of them are probably associated with technical difficulties, due to collision between instruments inside and outside the abdominal cavity, that need good preoperative planning of port position.*

Description: *The aim of our study is to find the optimal position of the ports using anthropometric measurement of anatomical landmarks for the needs of robotic surgery.“*

Materials and methods: *Anthropometric research of anatomical landmarks on 100 randomly selected patients was made. We researched 34 anatomical landmarks and 16 of them were studied in several variants due to their ability to change in position of pneumoperitoneum.Results: By the anthropometric researches we found that xiphopubic line is average 30cm, as xiphoumbilic and puboumbilic line are highly variable. Distance between midline and midclavicular line is average 7,5cm and it is broadly constant while distance to the mamillar line is quite variable. Average length of umbilical horizontal is 28cm. We found several anatomical landmarks, such as the medial axillary line, that don't change in state of pneumoperitoneum.*

Conclusion: *The anatomical landmarks based on bone structures don`t change in pneumoperitoneum, and can be used for preoperative port position planning. The landmarks as navel, mammary line, etc. may not be appropriate for port position landmarks because of their individual variety.*

Keywords: *robotic surgery, anthropometrics, anatomical landmarks*

PERIORBITAL FOREIGN BODY – CLINICAL PRESENTATION, VISUAL APPEARANCE AND MANAGEMENT

Simona Nikolaeva, Tsvetomira Dobreva, Dilyana Tonkova, Diyana Kyuchukova, Yana Manolova

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A foreign object in eye is something that enters the eye from outside the body. Periorbital foreign bodies usually occur after a high velocity injury such as gunshot or industrial accidents. A retained body can give rise to serious complications, the worst of which is loss of vision and loss of the eye. This retrospective case report reviews the clinical features of a Caucasian patient who presented at Specialized Eye Hospital, Varna with periorbital foreign body after a play with a gunshot.

An 8-year-old Caucasian boy with no history of previous diseases and with no serious general condition presented at the Hospital with vision loss, acute pain in the left eye and hematemesis. The examination showed severe periorbital edema, injection, conjunctival chemosis and protrusion of the eyeball. The patient presented straight after a fire at a point-blank range with a pellet gunshot. The pellet was localized in the occipital brain lobe.

The patient was hospitalized in neurosurgery in severe general condition and found to have a periorbital foreign body right next to the optic nerve that was documented clearly by MRI scan of the orbit.

After a consultation with Eye Hospital - Varna and Eye Hospital Zora, Sofia, the decision was that the vision could not be saved.

CASE REPORT ON A CHILD WITH B-THALASSEMIA MAJOR COMPLICATED WITH CHOLELITHIASIS

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Thalassemia major (Cooley's anemia) is a rare condition, found most commonly in the Mediterranean region. Due to its low frequency, some of its complications, such as cholelithiasis, which are rarely seen in younger patients, may not be well known by many practitioners.

We present the case of P.K.G., 8 years old male, third child of a mother who had anemia – Hb 87 g/l. Due to the first symptoms appearing the child was admitted in the Pediatric Clinic of St. Marina University Hospital – Varna at an age of two and a half years old. Blood tests showed low Hemoglobin results – 70 g/l. In order to diagnose the apparent anemia electrophoresis of Hb was ordered and carried out in The National Specialized Hospital for Active Treatment of Haematological Diseases in Sofia with data about a change in proportion of Hb types, distinctive of β-thalassemia. Furthermore, a DNA analysis was carried out and compound heterozygote genotype was confirmed (IVS–1-6 IVS 1-110). Monthly blood transfusions began, resulting to a chronic iron overload when the child was 4 years old, requiring a chelation therapy with Exjade.

When the patient was 6 years old an echography was performed, due to abdominal pain complaints. Results showed a hyperechoic zone of 1- 1,5cm of the gallbladder leading to a diagnosis of cholelithiasis. A medicamentous treatment began.

Because cholelithiasis is a rare disease in childhood, it may often be overlooked, but in patients with hemolytic anemias there is a possibility of bilirubin gallbladder stones to be formed, due to the chronic hemolysis in the main disease of β-thalassemia.

Keywords: *β-thalassemia major, cholelithiasis*

DIFFERENTIAL DIAGNOSIS OF PATIENT WITH STAPHYLOCOCCAL MENINGOENCEPHALITIS AND SEPSIS WITH MENINGOCOCCEMIA

Tsvetina Vasileva, Stanislav Morfov, Mila Radeva , Vasil Vasilev

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Introduction: *S. aureus is a ubiquitous bacterium that causes infection in all age groups. Meningitis due to S. aureus accounts for 1-9% of cases of bacterial meningitis and is associated with mortality rates of 14-77% .S. aureus causes significant disease in the paediatric population 6/100 000 children older than 1 year of age. This frequency is not small and is not negligible because infections associated with S. aureus can be successful medical influenced and to be avoid complications even death. In 1-2 % of the cases with Staphylococcal meningoencephalitis and bacteriemia occur hemorrhages rash which required to be made differential diagnose with Meningococcemia.*

Materials and methods: *A case report of three years old patient hospitalized at the infectious department of the University hospital in Varna . The presented case based on information about the patient. Includes the information, given from the relatives of the patient, clinical features , symptoms and laboratorial data from examinations which were made at the relevant laboratory at St. Marina hospital .*

Results: *We are presenting a case of 3-years old child, who came in the clinic febrile and in impaired condition with headache and vomiting. Skin rashes such as petechial hemorrhages and sign and symptoms of central nervous system involvement and nuchal rigidity were developed. Leukocytosis, thrombocytopenia and elevation in the CRP*

in the blood and albuminicytologic dissociation in the CSF (cerebrospinal fluid) were implemented. S. aureus was isolated from blood culture. The laboratory, microbiological examination and lumbar puncture confirmed the diagnosis staphylococcal meningoencephalitis and staphylococcal sepsis.

Conclusion: *Based on our clinical and laboratory results we diagnosed the patient with Acute stapholococcus meningoencephalitis and sepsis. The early started etiological and pathogenetic treatment lead to a favorable development for our patient. Because of this the mentioned causative agent has to be part of the differential diagnostic plan of the neuro infectious especially meningococcemia.*

A SCIENTIFIC TRANSLATION FOR THE FAMILIES OF CYSTIC FIBROSIS PATIENTS

Stoyan Monev, Katerina Georgieva, Galina Naskovska, Gabriela Kirisheva, Rouzha Pancheva

Medical University of Varna

Introduction: *Cystic fibrosis is a disease, caused by various autosomal recessive mutations and is the most common genetic life-limiting illness in Europe. Patients in Bulgaria do not always have access to modern and expensive life-prolonging and life-saving methods of medical treatment. The role of additional literature and practical information for those patients and their families is of highest importance. Germany is state with the most mucoviscidosis patients in Europe, the info-materials, written in German are being read by the greatest number of target persons in the EU. We did an interpretative translation from German into Bulgarian of the 44 pages leaflet about the correct nutrition of cystic fibrosis patients. The target group of the leaflet is the Bulgarian patients and their parents and families. It explains in a common language the genesis of the disease, the normal physiology and biochemistry and the methods of correct handling of nutrition issues. The translation itself was done by: Katerina Georgieva, Galina Naskovska, Gabriela Kirisheva and Stoyan Monev. Stoyan Monev is a state recognized translator for German, Bulgarian and English by the Foreign Ministry of the Republic of Bulgaria. Scientific editor of the translation is Assoc. Prof. Dr. Rouzha Pancheva, paediatrician at the St. Marina University Hospital in Varna.*

Material and Methods: *Book „Bei Mukoviszidose gut ernährt von Anfang an“*

Results: *A translation*

Conclusion: *See introduction*

LAPAROSCOPIC TREATMENT OF ACHALASIA

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Achalasia is a primary motility disorder of the oesophagus characterized by loss of effective esophageal peristalsis and insufficient lower esophageal sphincter relaxation due to loss or reduction of ganglionic cells in the Auerbach's plexus. The estimated prevalence of achalasia is 0.5-1.0/100,000 population per year. Hereditary, degenerative, autoimmune and infectious factors are commonly discussed as a causes of achalasia, the latter two being the most widely accepted possible etiology.

Case Report: We report a case of a 66-year-old woman, referred for surgical treatment for achalasia after tree previous balloon dilation procedures. Barium esophagography showed marked dilatation of oesophagus proximal to obstruction with smooth wall and regular, smooth tapering all the lower end.

The patient underwent laparoscopic Heller's myotomy. Her postoperative course was uneventful and the symptoms were relieved.

Although the ultimate goal of the treatment of esophageal achalasia should be the restoration of esophageal peristalsis and lower esophageal sphincter relaxation, at present there is not known therapeutic option addressing this goal. Whereas medical therapy has poor if any results, Heller's myotomy is clinically effective in 70-90% of patients in the first year and this rate slowly declines with time. Recently the POEM (Per Oral Endoscopic Myotomy) procedure gained acceptance as a promising and less invasive treatment option for achalasia.

HISTOLOGICAL TYPES OF LARYNGEAL CANCER IN THE BULGARIAN POPULATION

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The aim of this study was to evaluate the incidence of different histological types of laryngeal cancer, treated in the ENT Clinic, "St. Marina" Hospital, Varna

A retrospective study of the medical documentation of the patients, treated in the ENT Clinic, "St.Marina" Hospital, Varna between 2006 and 2012.

A total of 257 patients with cancer of the larynx were identified. The percentage of squamous cell carcinoma (SCC) is 98% (252 of 257 cases). Of the patients with SCC 8 (3,2%)\ were basaloid SCCs (an uncommon SCC subtype). The other 244 (96,8%) were conventional SCCs with different stage of differentiation(G1- 50, G2-141, G3 -31, CIS – 7). There were 5 cases with rare histological types (2% of all cases). These included small-cell carcinoma (1), papillary transitional cell carcinoma (1), adenocarcinoma (1), haemangiopericytoma (1), mucoepidermoid carcinoma (1).

Our findings correspond to the data from the medical literature - over 90% of all laryngeal neoplasms are conventional SCCs. However, a lot of uncommon SCC subtypes and other histological types of tumors have been reported to occur in the larynx. All of the uncommon histological types and subtypes that we observe have been previously reported in literature and are with debatable etiology, biological behaviour and treatment.

IMPACTED CERUMEN: A GENETICALLY DETERMINED CONDITION OR SELF-INFLICTED INJURY

H. Iwata, M. Shinozaki, R. Haboub

Medical University of Varna

Introduction: *Impacted cerumen is a common disorder in otorhinolaryngology. The aim of this review is to provide physicians with theoretical and practical information on this problem and discuss its clinical aspects, patients' attitudes, cultural differences as well as the treatment approaches.*

Material and Methods: *The literature was systematically searched fo published articles. These were identified using a key word search of electronic databases (Medline/PubMed, EMBASE and Google Scholar). Results There are two main types of cerumen - dry and wet. The wet type is predominant (about 98.5% of the world's population). Dry type is predominant in Chinese, Korean and Japanese and also seen in Native Americans. The type of cerumen is determined by ABCC11-gene on the chromosome 16. Impaction of the wet type is rare and usually due to mistreating ones ears, called in the public „cleaning". The dry type shows a natural tendency of impaction and so cleaning is recommended, and region of the world with this trait has a wealth of inventions to meet the needs of sub types of dry cerumen. Cerumen characteristics may vary in concomitant skin disorders. Conclusion Eachcerumen type has its own mechanism and it is important to understand the difference for optimal treatment, cure and care of the ear. With the globalization of the world and increase in interracial population, especially children, awareness is needed of the different „normal" traits to ensure best treatment in the event of disease and best care for prophylaxis.*

PULMONARY CEMENT EMBOLISM AFTER VERTERBROPLASTY

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Nowadays vertebroplasty is a very common procedure that is used in cases of osteoporotic fractures or vertebral malignant tumors. However pulmonary embolism is a complication of this procedure that should not be underestimated.

We present the case of a 73-year-old woman who presented with dyspnea and severe local pain. She previously had a percutaneus vertebroplasty because of bone fracture. The patient also presented with moderate hypertension.

She underwent X-ray and computed tomography of thorax, ultrasound of heart and abdomen and multiple analyses of blood including coagulation.

The diagnosis was made based on visualization of zones with ground glass opacities and parenchimal consolidations in right middle and upper lobe subpleural; also hyperdense collections in segmental and subsegmental branches of inferior right lobe . Here, we describe the CT findings of bone cement in the pulmonary arteries.

It is clear that the migration of bone cement was not recognised during the vertebroplasty.

Her treatment consisted of management of the pain and dyspnea, physical activity and optimization of the protrombin time. She was released from hospital with recommendations for home therapy and secondary examination to monitor herprogress.

This case illustrates the potential for a serious complication after a procedure that is common enough to be discussed and evaluated when chosen. It is highly recommended to take this under consideration before the procedure is done. Also early recognition of this condition might be critical for the patient's status.

IMPLANTED LOOP-RECORDER HELPS THE DIAGNOSIS OF A PATIENT WITH MULTIPLE SYNCOPES AND COMBINED NEUROLOGICAL AND CARDIAC PATHOLOGY

Radoslav Rachkov, Nadya Pancheva

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We present a case of 34 years old female with history of multiple syncopes since 2000 and unclear etiology. The episodes start with chest discomfort, followed by sudden loss of consciousness, perioral cyanosis, and were without typical seizures.The ECGs after the events were always with normal sinus rhythm (SR). EEG tests showed no certain focal or generalised paroxysmal activity proving epilepsy. Antiepileptic treatment was started. For several years the patient had no syncopes and stopped the treatment. In 2011 syncopal episodes started again.

Many additional 24-hour holter-monitorings of heart rhythm were performed but no any conduction or rhythm disturbances were registered. Further cardiac tests (Echocardiography, coronary angiography and CT) showed normal coronary vessels, normal heart structure and function except presence of small persistant ductus arteriosus (PDA) but without clinical significance according to functional oxymeteric measurements. The brain-MRI founded subependymal heterotopia - a rare condition due to genetic anomaly that may cause such symptomatic episodes.In October 2014 a loop-recorder Medtronic device (Reveal DX) was implanted in order to rule out any cardiac reason for the syncopes. The device was programmed to record all episodes with HR<40 bpm and HR>150 bpm, as well as 15 min heart rhythm record when patient "event" button is pressed.

During 3 consecutive syncopal episodes the device recorded normal SR without any tachy- or brady-disturbances. Artefacts of muscle fibrillations superimposed upon SR suggest possible seizures of chest musculature. The records after the event button was pressed due to near-syncopal state were again with normal SR. These findings excluded cardiac reason and proved neurologic etiology of syncopes in this patient.

AMYOTROPHIC LATERAL SCLEROSIS

Helena Hernandez, Maria Dolores Franco

Medical University of Varna

Introduction: *Background: Amyotrophic Lateral Sclerosis [(ALS]) known colloquiallyasorLou Gehrig's disease is a neurodegenerative autoimmune disease affectingthat affects pyramidal motor neuronscharacterized by muscle atrophy and degeneration of corticospinal tractsthat lead to paralysis.It is one of the most common neuromuscular diseases worldwide affecting people of all races and ethnic backgrounds.*

Material and Methods: T*he disease occurs in 90 to 95 percent of the cases randomly; just 5 to 10 percent are due to inheritance and one third of the researched cases result from gene mutation(National ALS Registry). The disease is progressive; profoundly impacting patients'physical and psychologicalwell-being andquality of life. The average duration of survival is three to five years (Rowland &Shneider, 2001).Early signs and symptoms include difficulty walking and doing normal daily activities; hand weakness and clumsiness; difficulty holding head up and keeping a good posture; slurring of speech and trouble swallowing. The clinical results are overactive tendon reflexes, Hoffmann signs, clonus, and Babinski signs (Rowland &Shneider, 2001).*

Results: *Diagnosis: The diagnosis of ALS is based on the presence of typical clinical findings in conjunction with research analysis excluding "ALS-mimic" syndromes such asCervical radiculomyelopathy, Multiple sclerosis, West Nile virus, Lyme disease, Kennedy disease, Human T-cell leukaemia virus (HTLV), Postpolio syndrome among others (Traynor et al., 2000). Patients are diagnosed with ALS after a sophisticated medical observation in the symptoms and signs of ALS disease using a series of tests such as electromyography, nerve conduction study, andmagnetic resonance imaging.*

Conclusion: *Treatment and Implications:The purpose of this study is to sophistically comprehend the Lou Gehrig's diseasein its different levels of disease performance and to discuss the effectiveexperimental treatments held nowadays. One of the most common treatment of ALS is with riluzole, a drug used to slow the progress and prolong patients' survival, but not curing the ALSdisease. More ALS research is needed to enable scientist to study this disorder more intensely.*

MEDITATION AND NEUROPLASTICITY

Alexander Boyadzhiev, Bogdan Adamski, Boryana Georgieva, Denitsa Stoykova, Phillip Vutov

Medical University of Varna

Introduction: *Neuroplasticity – the change of brain structures as a result of experience – is considered to be one of the most important discoveries of neuroscience. Over the last ten years evidence has been growing that meditation practice can lead to significant changes to brain structures. We aim to present the benefits of daily practice.*

Material and Methods: *Review of the current literature in Pubmed using keywords:meditation, plasticity, prefrontal cortex, hippocampus.*

Results: *Research has shown that an active meditation/mindfulness practice fosters attentional and emotional self-regulation, as well as behavioral flexibility, altogether promoting well-being.*

Conclusion: *Although the systematic study of meditation is still in its infancy, findings in clinical populations suggest that meditation is effective in reducing a number of psychological and physical symptoms, and even biological markers of disease progression. Meditation practice has been demonstrated to affect higher functions of the central nervous system, reflected in increased performances and altered brain activity.*

WILSON'S DISEASE – EYE CHANGES, CASE REPORT

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Wilson's disease is an autosomal recessive genetic disorder known also as hepatolenticular degeneration. It manifests as neurological or psychiatric symptoms and liver disease. To demonstrate in vivo laser scanning confocal microscopy diagnostic effectiveness of eye changes in patient with Wilson's disease.

The case presented here is of a 20-years old woman represented for the first time in the eye clinic. The patient has Wilson's disease and she has been surveyed from her gastroenterologist for 3 years. The patient was examined in order to estimate the state of eye changes. In vivo laser scanning confocal microscopy (HRT III Rostock corneal module), optical coherence tomography of anterior segment (Topcon 2000), non-contact tono/pachymetry (TONOPACHY) and slit-lamp examination, visual acuity were performed.

On slit-lamp we found presence of Kayser-Fleischer ring. This is the brown ring on the edge of the iris, common in Wilson's disease, especially when neurological symptoms are present. In vivo confocal microscopy showed deposits of copper in a ring around the cornea. Qualitative analysis of all cornea layers cell densities did not demonstrate significant difference compared to results of healthy corneas. The measured ocular tonus was normal. Reported ocular surface and visual function abnormalities were correlated to the Wilson's syndrome.

In vivo laser scanning confocal microscopy can effectively demonstrate the morphological changes of the cornea on all layers. This new noninvasive technology is useful as a diagnostic and a monitoring cornea changes and eye-related diseases such as Wilson's disease.

SHEDDING LIGHT ON CONTROL OF HIV INFECTION USING HEMATOPOIETIC STEM CELL TRANSPLANTATION

Zekie Kasimova, Milena Avdzhiyska, Desislava Ivanova

Medical university of Varna

Acquired immunodeficiency syndrome (AIDS), caused by human immunodeficiency virus (HIV) kills millions worldwide every year. Vaccines against HIV still seem an impossible task to achieve. Pharmaceutical treatments exist, but these are not always effective, and there is increasing prevalence of viral strains with multidrug resistance. However, new studies show that a progress, toward curing HIV infections with hematopoietic stem cell transplantation, has been made.

Material and methods: *genotyping, transplantation, flow cytometry, immunohistochemistry.*

This review collects and summarizes data from recent studies on long-term control of HIV by CCR5 Delta32/Delta32 stem-cell transplantation. The "Berlin patient" was diagnosed with HIV infection and acute myeloid leukemia. The viral replication remained absent in his body despite discontinuation of antiretroviral therapy after transplantation with CCR532/32 stem cells. Transplant from an HLA-matched, unrelated donor who was screened for homozygosity for the CCR5 delta32 deletion was used. A successful reconstitution of CD4 T cells was reported. The patient is considered to be cured of HIV. Other attempts of "replicating" the same success have not given such appealing results.

HIV remains a major problem due to its high mutation rate, latency, unknown HIV reservoirs etc. Thus, the development of treatments and vaccines depends not only on knowledge of the complex life cycle of the virus, but also on understanding the intricate choreography of the immune system. The results of the "Berlin patient" strongly suggest that cure of HIV has been achieved in this specific case. However, without understanding the "intimate communication" between virus and host, the application of the same treatment might not be so efficient.

DIAGNOSTICS OF EXTRAMEDULLARY HAEMOTOPOESIS

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Extramedullary hematopoiesis is a rare condition caused as a response of erythropoiesis failure in bone marrow. The most common causes include thalassemia, haemoglobinopathies, myeloproliferative disorders and others.

The condition is usually diagnosed via Computer Tomography or Magnetic Resonance Imaging but evidence of it can be discovered using conventional X-ray Imaging. The latter method can often lead to misdiagnosis of the extramedullary haematopoiesis with neoplasms of the organs involved in the process due to their irregular shape. The spleen and liver are enlarged, the flat bones are thickened and occasionally growth of the regional lymph nodes is observed. The two patients selected for this research have presented symptoms of anaemia and kidney insufficiency. Computer Tomography scans revealed different findings in the separate cases.

Scans of the first patient indicated multiple round lesions in the paravertebral, pararectal and pelvic areas. The other presented typical findings associated with extramedullary haematopoiesis like thickened ribs and sternum with hypodense bone marrow and hepatosplenomegaly.

The difference in these two cases demonstrates the variation between extramedullary haematopoiesis manifestations in different patients. For example in an X-ray image the lesions found in the second patient can be misinterpreted as sarcoidosis, lymphomas or other malformations. This is why when considering extramedullary haematopoiesis as a diagnosis, one should cross reference the clinical data with Computer Tomography and Magnetic Resonance Imaging instead of simply relying on X-rays.

STREPTOCOCCUS DYSGALACTIAE SUBSPECIES EQUISIMILIS AN INSIDIOUS MIMIC (CASE REPORT AND REVIEW OF LITERATURE)

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Streptococcus dysgalactiae ssp. equisimilis (SDSE) consists of beta-hemolytic Lancefield C and G groups streptococci. As of recently it was recognized as a causative agent of infections in humans. It is rarely as aggressive as in the case presented and subsequently a few cases of such degree are reported in literature. To address the rising significance of these bacteria we have described a case of SDSE infection in an immunocompromised patient. Case presentation: A 35-year old male with underlying hematologic disease. The patient is admitted into Department of Hematology with pain, edema, and erythema of the lower third of the left calf, nausea and vomiting and fever. The patient informs of a wound (with edema and erythema) and itching in the same area 2 days prior to admission. An empiric treatment was started and an incision was performed. Microbiological examination was performed with VITEK 2 resulting in SDSE with an excellent level of identification. After 10 days the patient was discharged with improvement. Ten days later he was admitted in Septic Surgery with the same symptoms and worsened general condition. Final diagnosis: Phlegmonacrurisetfemorissinistra, Lymphangitisacuta, Erysipelas femorissinistra. Microbiological examination reveals the same bacteria. Despite the adequate antibiotic therapy and immediate surgical intervention the patient was readmitted with necrotizing infection of the left calf, but microbiological examination revealed different bacteria. Later performed skin graft was rejected. These severe infections, affecting the skin and soft tissue, are clinically identical with the infections caused by Streptococcus pyogenes. We are presenting this case due to the steady increase of immunocompromised patients, resulting in the rise of infections, caused by SDSE. Key words: Streptococcus dysgalactiae, immunocompromised patient, soft tissue infections.

DEVELOPMENT AND COMPLICATIONS OF OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY-CASE REPORT

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Medical University of Varna

Hypertrophic cardiomyopathy is a genetic disease affecting the proteins of the cardiac sarcomere, thus causing myocyte and myofibrillar disarray. This disease is characterized by thickening of the left ventricular wall or more precisely the interventricular septum. Hypertrophic cardiomyopathy can be obstructive and non-obstructive. Obstruction in hypertrophic cardiomyopathy can be due to subaortic stenosis or mesoventricular obstruction.

The aim of this report is to present a typical clinical case of a 53-year-old patient with hypertrophic cardiomyopathy, underwent various therapeutic modalities and survived many complications of the disease itself and its pharmacological treatment to gain better understanding and awareness of the difficulties in managing such patient.

The patient underwent alcohol septal ablation, AV node ablation and an application of an artificial pacemaker. Over the years the patient developed a list of complications including tricuspid insufficiency, absolute arrhythmia, atrial fibrillation, NYHA class III heart failure, hypertensive heart disease. In 2008 the patient was diagnosed with thrombosis of the central retinal vein, ischaemic brain stroke and a resulting cerebrovascular disease. In 2010 and 2012 the patient was diagnosed with erosive gastritis and gout.

Hypertrophic cardiomyopathy is a disease leading to a number of complications and creating obstacles for physicians all around the world in the process of treatment.

HYPERTROPHIC CARDIOMYOPATHY - THE SILENT KILLER

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Hypertrophic cardiomyopathy – the silent killer of young people. This heart disease is considered the common cause for sudden death among young people. But what exactly are the changes taking place in the heart's structure due to this condition?

Hypertrophic cardiomyopathy (HCM) is a genetic disorder that has a variable presentation and carries a high incidence of sudden death. Its hallmark is myocardial hypertrophy which is inappropriate and often asymmetrical and that occurs in the absence of an obvious inciting hypertrophic stimulus. HCM could be obstructive or non-obstructive. The symptoms of the hypertrophic cardiomyopathy include chest pain (angina), arrhythmia, dyspnea, tiredness, fainting, palpitations, dizziness, syncope. Some people live a normal life and do not have any symptoms. The therapy includes treatment with beta-blockers, calcium antagonists, antiarrhythmic drugs or surgical intervention. The sudden and early death in young people is more likely to occur during exercise because of ventricular fibrillation (4-6%).

The aim of the research is to represent the characteristics of HCM.

The research conducted using articles and medical books without any constriction in the years of publishing. The scientific poster represents literature research describing the characteristics of the disorder.

The literature research showed that HCM could proceed with symptoms or asymptomatically. The disease is one of the major causes of unexpected sudden death in young adults. The correct medical treatment can lower the risk of death.The conducted research shows the importance of HCM's treatment and prophylaxis due to its inherent risks of increased morbidity and lethality.

OBSERVING THE COMMONLY OCCURRING COMBINATION OF GALLBLADDER DISEASE AND PANCREATITIS IN WOMEN

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Acute pancreatitis is an inflammatory disease of the pancreas. The leading etiological factors for its development are gallbladder disease (in 55% of the cases) and alcohol consumption abuse. Further predisposing factors for gallbladder disease are the 5 F's: female, at age of over forty years, fair skinned (Scandinavian), fat and fertile.

The study is based on7 clinical cases of female patients, at age between 42 and 66 years, all of which admitted to the clinic with abdominal discomfort. All patients have undergone a set of examinations including Complete blood count (CBC), abdominal ultrasound and endoscopic exam.

The outcome of the group examinations indicates that the endoscopic sphincterotomy has the best influence on the symptoms of the acute phase of the biliary pancreatitis and the development of recidives. The patients have been put on a low calorie diet and instructed on the regular conduction of prophylactic examinations.

GASTRIC AND DUODENAL ULCER. PHARMACOTHERAPY AND CARE

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Introduction: *Ulcer is a socially significant disease. It is found in 6 to 11% of the population- males are affected more often than women. Peptic ulcer is a chronic recurrent disease with formation of a peptic defect in the duodenal or gastric mucosa.*

Objectives: *Presenting treatment and care, which health professionals must provide in case of patients with ulcer.*

Materials and methods: *survey of the available scientific literature on the issue.*

Results: *The prevalence of peptic ulcer requires that various health professionals should be well acquainted with its nature, the possible rapidly occurring complications, the prevention and care, which patients with this disease should receive. Nurses are directly involved in the whole treatment process and care of patients with peptic ulcer disease, as they do not only monitor the general health condition of patients when they visit their doctor, but also take an active role in educating the patient and his relatives in regard to the proper treatment, possible emergencies, preventive measures of certain complications of peptic ulcer. Conclusions and Recommendations: The provision of high-quality health care for patients with peptic ulcer disease leads to an improvement in their quality of life .Because of this the interaction between various health professionals and the formation of a healthcare team, whose main goal is the well-being of patients, is of great importance. Keywords: Ulcer, pharmacotherapy, healthcare.*

IRRITABLE BOWEL SYNDROME – „DIAGNOSIS OF EXCLUSION“ OR „DIAGNOSIS OF INCLUSION“

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Irritable Bowel Syndrome (IBS) is a functional gastrointestinal disorder, characterized by altered bowel habits and abdominal pain in the absence of detectable structural abnormalities. The pathophysiology of IBS includes a 3-part complex of altered gastrointestinal motility, visceral hyperalgesia and psychopathology. The Rome III criteria for the diagnosis of IBS requires that patients have had recurrent abdominal pain or discomfort at least 3 days per month during the previous 3 months that is associated with two or more of the following: relieved by defecation; change of stool form and frequency; mucorrhea; abdominal bloating.

This report is aimed at presenting a patient with a suspicion of Irritable Bowel Syndrome, its clinical manifestations and diagnosis.

This case concerns a patient (female, aged 49), having a recurrent abdominal pain and bloating, mild chronic diarrhea and mucorrhea. All diagnostic methods - blood and urine tests, abdominal ultrasound, colonoscopy with histology, microbiology and serology for bacterial and helminthic infections, exclude inflammatory bowel disease, gluten enteropathy, infections of GIT and neoplasma. According to Rome III diagnostic criteria our patient was classified as IBS-D type (IBS with diarrhea).

IBS may be a lifelong condition. For some people symptoms are disabling and interfere with reduce work, travel and social activities. In the past IBS has been considered a diagnosis of exclusion. However, nowadays IBS must not be a 'diagnosis of exclusion' but part of the differential diagnosis for bowel diseases.

A CLINICAL CASE REPORT OF MALIGNANT HYPERTHERMIA

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Malignant hyperthermia (MH), an anesthetic related disorder of skeletal muscle calcium regulation, is triggered by succinylcholine and volatile anesthetics. It is characterized by hyperthermia, tachycardia, acidosis, and muscle rigidity. Susceptibility to MH is often inherited as an autosomal dominant disorder for which 6 genes are responsible. The defect is typically located on the long arm of chromosome 19 (19q13.1) involving the ryanodine receptor (RYR1). The typical symptoms of malignant hyperthermia are due to a hypercatabolic state, which presents itself as a very high temperature, an increased heart and breathing rate, increased carbon dioxide production, increased oxygen consumption, acidosis, rigid muscles, and rhabdomyolysis. The symptoms can develop any time during the administration of the anesthetic triggering agents. It is difficult to find confirmed cases in the postoperative period more than several minutes after discontinuation of anesthetic agents. A 25-year-old man, presented with a fracture of angulus mandibulae undergoing general anesthesia with Sevorane, within an hour develops an episode of hypercarbia up to 70 mmHg, tachycardia up to 129 BPM, hyperthermia up to 39,1°C , hyperkaliemia up to 6,8 mmol/l. Immediate treatment, including discontinuation of the triggering agent, Dantrolene administration, diuretic administration and cooling measures were applied. The patient experienced no postoperative complications.

This case report illustrates the importance of rapid reaction time when dealing with this life threatening condition and the potential for full recovery when timely treatment is administered.

DIABETES TYPE II – PROTECT OUR FUTURE

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Diabetes is socially and economically significant illness, which has turned during the last years from epidemic to pandemic. This statistic research is unique of its kind for Bulgaria and is conducted only in Varna. It is of great importance because we used it to bring the problem to the public and to develop prophylaxis measurements for those risk groups of people who are likely to become diseased and those who already live with diabetes.

Materials:

- 535 tested people, 80 volunteers;

- Glucometers – 25;

- Poll blanks;

Informational campaign of diagnostics took place in Varna (14/11/2014). The volunteers tested citizens by measuring their levels of blood glucose, biometric measurements and filling in their data in the polls. A statistic summary was developed showing the distribution of the rates of the measured blood glucose and BMI among a group of 535 people.

In comparison to the results from 2012 to 2014, a conclusion can be made - there is a significant raise in the number of people at risk, who has developed the disease or are likely to do so. The tested individuals that were included in some of the risk groups were directed to the Clinic of Endocrinology and Metabolic Diseases (University Hospital – Varna).

We focused mainly on implementing tuitions for the risk groups teaching them how to prevent developing diabetes. We also started elaborating the educational courses for patients suffering diabetes which take place in the Clinic of Endocrinology and took it on a larger scale. A tender of what should be included as a national politic strategy concerning the disease was developed.

MICROCOCCUS KRISTINEA IN THE GENESIS OF A FATAL CASE OF GALLSTONE DISEASE

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Introduction: *Kocuria previously classified into the genus of Micrococcus, is commonly found on the human skin, oral mucosa and outer ear canal .The major two species are Rosea and Kristinea , etiologically associated with catheter related bacteremia and infections in immunocompromised and patients with severe underlying disease .Recently emerging cases were discovered of Kristinae participating in the pathogenesis of acute cholecystitis ,and it's complications .*

We present here a case of a forty two year-old male, who had a longstanding hypertensive disease and cardiac insufficiency. Recently suffered chest and abdominal pain attacks with abdominal wall rigidity. Two weeks after these complaints he presented with disorientation, shivering, vomiting green-yellowish materials too. Afterwards he was brought the emergency without cardiopulmonary function, where he departed.

Material and Methods: *Macroscopic and Histologic examinations of the organs affected. Microbiological diagnosis of samples obtained. Including culture and gram stain.*

Results: *The autopsy showed that the patient suffered from acute pancreatitis, as sequence of the pancreatic duct obstruction by small pigmented calculi produced by the inflamed gallbladder. This resulted in acute respiratory distress syndrome, ensued in pulmonary edema, which was the cause of mortality. The samples taken during autopsy, showed the growth of Kocuria Kristinae .*

Conclusion: *We would like to emphasize the importance of Kocuria Kristinae and its association with cholecystitis and cholelithiasis, which are significant etiologic factors for acute pancreatitis.*

PULMONARY SARCOIDOSIS - CASE REPORT

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Sarcoidosis is a multisystem inflammatory disease of unknown etiology that predominantly affects the lungs and intrathoracic lymph nodes. Sarcoidosis is manifested by the presence of noncaseating granulomas in affected organs. It is characterized by exaggerated immune response against a difficult-to-discern antigen.

This report is aimed at presenting a 29 years old patient with a chronic form of sarcoidosis.

The oncet of the disease was in 2010 when the patient complained of cough with poor expectoration. After conducted several diagnostic methods, the chest CT has shown bilateral intralobular nodules, but the fibrobronchoscopy was noninformative for sarcoidosis. One week later after a toracotomy with lung and lymph node biopsy epitheloid cell noncaseating granulomas were confirmed. After 6 months of treatment corticosteroids' dose was reduced due to systemic side effects and they were combined with immunosuppressants. In result patient's symptoms has decreased and medications' doses was reduced. However, in 2012 the CT findings were aggravated, chronic sarcoidosis was suspected therefore the doses of the medicaments were raised again. In 2014 after a routine clinical examination and CT there were no evidence for presence of sarcoidosis. For that reason the treatment was stopped and since then the patient is in remission.

Chronic sarcoidosis is a complex disease with numerous comorbid conditions and can be fatal in some cases. Recognizing causes of morbidity and mortality is important to effectively select treatments, manage symptoms and improve outcomes.

IMPACT OF PAIN IN PATIENTS WITH OSTEOARTHRITIS ON THE QUALITY OF LIFE

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Osteoarthritis is a common disease with a great social impact. It affects people from different race, sex and age, all over the world. One of its main symptoms is pain which affects all aspects of patients` life.

Aim: To investigate the impact of osteoarthritis and its main symptom- pain on the everyday life."

This survey was conducted through a questionnaire for the period of 2 months in UMHAT St. Marina Varna. 70 people were included in the study, 44 patients suffering from osteoarthritis, average age 51.7 years and a control group of 26 people, average age- 48.4 years. 95.4% of the patients were women and only 4.6 % were men. All patients experience pain in a different degree, predominantly strong pain, impairing the normal activities

88.6% of the patients have pain for more than 1 year. 77.2 % of the people report having sleep disorders because of pain. Asked to evaluate their own health, people with osteoarthritis report it is normal to bad. Compared to them, the control group do not describe severe pain and intruded social and personal life.

Osteoarthritis is a severe condition that can lead to serious damage to the patient`s normal life. Patients with osteoarthritis are older and predominantly women. Despite the admission of drugs patients experience that that impairs the everyday life.

METABOLIC SYNDROME - CHALLENGE FOR THE PHYSICIAN AND PATIENT - CASE STUDY

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Metabolic syndrome is one of the most common metabolism disorders. It is a complex of connected risk factors leading to development of diabetes and cardiovascular diseases.

Criteria for diagnosis are:

√ Waist measurements- men ≥ 94 cm, women ≥ 80 cm

√ Increased levels of triglycerides - ≥ 1.7 mmol / l

√ Reduced levels of HDL-cholesterol - less than 1.0 mmol / l for men, less than 1.3 mmol / l

√ High blood pressure - systolic ≥ 130 mmHg and / or diastolic ≥ 85 mmHg

√ Fasting blood sugar - ≥ 5.6 mmol / l

The WHO requires the presence of at least 3 of the above criteria in order to accept the presence of metabolic syndrome.

We present a case of a 60- year- old woman suffering from metabolic syndrome, having 4 of the 5 criteria. The patient is 150 cm high, weighs 100 kg, the BMI is 44, waist- 120 cm. The patient has a ten-year history of high blood pressure RR : 140/100, that is treated. Systematic studies have shown elevated levels of blood sugar -6,7mmol/l, reduced levels of HDL-cholesterol 1,12mmol / l. MRI establishes a normal image of the brain without pathological findings. Comorbidities diagnosed: Hypertensive disease stage II, dyslipidemia, diabetes type II, obesitas stage II.A nutritionist recommends preparation of individual diet.

The basic principles of treatment of patients with metabolic syndrome include: non-pharmacological treatment (healthy lifestyle, diet, physical activity) and drug treatment. Successful treatment of metabolic syndrome is determined by the degree of adjustment of the set of risk factors that form the diagnosis of the patient. WHO recommends 30 minutes of physical activity ,minimum five times a week.

SPONTANEOUS RESORPTION OF SUBDURAL HEMATOMA – CASE REPORT

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Trakia University

The subdural hematoma (SDH) is a common condition in medical practice. Also known as subdural hemorrhage, the subdural hematoma usually originates from trauma – accidental or nonaccidental.They represent almost 5-10% of all head injuries and 30% of them – had an fatal outcome. SDH it is said to be - blood gathered between the brain surface and the Dura matter. The most common causes of subdural hematoma occurrence are: tearing of the vessels, believed to be due to inertial forces, sources of bleeding could be of arterial and venal vessels, on the brain cortex's surface in the area of contusions. Mostly the mechanism of bleeding to appear is "contre-coup".The compression of the brain tissue and increase of the intracranial pressure are the results of the formed hematoma.

Diagnosis of SDH is most commonly using CT-imaging. evacuation of the hematoma using invasive methods such as – craniotomy (widely osteoplastic) preferred in acute hematomas or burr-hole and twist drilling – in subacute and chronic, cases without active bleeding. We would like to represent to you a case of spontaneous resorption of subdural hematoma. A 61 y.o. patient, with a history of 2m falling, onto his head, reporting a short-time loss of consciousness, accompanied by headache and nausea. The patient did not ask for medical help for period of 48 hours, since the accident occurred. Following that, the patient was undergo a CT-imaging and administered in Neurosurgery clinic of UMHAT "Prof. Dr. Stoyan Kirkovich" JSC – Stara Zagora, Bulgaria. There were wide range of clinical examinations which the patient was passed through – concluding in neurological status – positive Romberg (only – with all other probes – negative).

After being suggested an operative procedure, the patient rejected decisively – left only with conservative therapy and advised to do a control CT-imaging in every 30 days. The condition of the patient was stable and remained stable, after 2 control CTs – on which was determined the spontaneous resorption of the subdural hematoma.

Keywords: *SDH, spontaneous resorption, invasive and non-invasive procedure*

HAEMOPHAGOCYTYS LYMPHOHISTIOCYTOSIS

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Introduction of the abstract: *Haemophagocytys lymphohistiocytosis is rare and fatal desease of hystyocytys and lymphocytis (cells of immune system), which is found in all age groups. Clinically in includes high temperature, splenomegaly, changes in blood cells and skin changes. Important for this disease are NK cells. The disease has two clinical forms: familial and genetical(after infections).*

Material and Methods: *History of disease.*

Results: *My case is of a child born on 19.01.2013 of first, absolutely normal without concluaiona, pregnancy. He has problems from 14.05 high temp, Tr(under), hb 60, lev(high). The patient have been in hospital in Ruse town. He had there treatment with methaxone, dexamethazone and methylredniaolon. After that he had complications and have been treated in Uni hospital of Varna.*

Conclusion: *Now the patient is in Germany to have another treatment.*

ACUTE RUPTURE OF RECTUS FEMORIS MUSCLE – CASE REPORT

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Rupture of Rectus femoris muscle is very rear type of injury and it can be partial or complete tear. It can be caused by falling, jumping, direct force to the front part of the knee. Risk factors for tendon weakness are chronic diseases such as diabetes mellitus, tendonitis, steroid use, etc. The rectus femoris is part of quadriceps femoris, which is large muscle group- main extensor of the knee and participate in hip flexion.

The object of this case-report is sixty-two year old man, who had fallen after that, he felt sharp pain above the left kneecap and cannot move his knee. As a risk factor, he has diabetes type I, which can disrupt muscle blood supply and lead to weakness in muscle-tendon junction or diabetic muscle infarction. During the examination we found a palpable line above the patella and tested the active extension of the knee. X-rays showed that the patella was displaced distally, due to torn quadriceps tendon.

Most of the patients present with rectus femoris tears and require urgent surgery to prevent the tendon from shortening and scarring. Because of the patient's chronic disease we performed a mini-invasive technique to reattach the tendon to its insertion point on the top of the patella with two 5.5 mm anchors (Corkscrew, Artrex) and immobilized the knee joint with orthesis for 6 weeks. Mini-invasive treatment is a reliable option for all patients with rupture of rectus femoris muscle. Suture anchors provide strenght and secure insertion of m.quadriceps. Short operative time and fast recovery are more beneficial than classical open transosseous sutures. Because of his chronic disease we have to choose a proper technique to avoid general or local complications such as inflammation , bleeding or re- tear of the tendon. Suture anchors are method of choice for acute or chronic tendon ruptures.

PARIETAL SUBDURAL EMPYEMA AS COMPLICATION OF ACUTE MAXILLAR SINUSITIS – AN INTERESTING CLINICAL CASE

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Acute infections of the CNS are among the most important medical problems. This is due to the fact that the disease outcome is directly dependent on early diagnosis, adequacy of decisions and immediate initiations of treatment.

We present a case of a 25 year old man from our practice with maxillary sinusitis complicated with bacterial meningitis and subdural empyema.

The patient has fever and headaches than 14 days. He is adopted in the ENT clinic where is performed maxillary puncture and evacuated purulent secretion. Subsequently is developped weakness in the right leg and aphasia. Physical examinations showed overactive reflexes, increased tone, Babinski (+) on the lower right limb. From the imaging: epidural collection on the left parietal zone, but with no data for brain compression. After consultation with infectionists it was appointed adequate antibiotic therapy.

Upon arrival in the neurosurgery department, after discussion it was decided that the patient is indicated for urgent surgical treatment, based on hypertensive syndrome and CT data of increasing epidural collection. Parietal parasagittal craniotomy and fronto-parietal parasagittal craniotomy in the left were done. Dura was tight, so we have done lumbar punction for decompression. After opening the dura, we shifted the hemisphere and evacuated the purulent collection. After the treatment, the patient recovered quickly without residual neurological deficit and any other complications.

It is important for specialists from different fields to know, that neurosurgery has leading place in the treatment of acute subdural empyema and it is from great importance for patients.

EXTRA-ANATOMIC BYPASS – ALTERNATIVE OPERATIVE TREATMENT OF CHRONIC ARTERIAL INSUFFICIENCY OF THE LOWER EXTREMITIES. A CLINICAL CASE

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Introduction: *Leriche's syndrome is a variation of chronic arterial insufficiency of the lower extremities' pathology. It is a chronic obliteration of the aortic bifurcation and the two common iliac arteries. On exhaustion of all conventional methods or contraindications for their implementation, it is necessary resorting to the so called extra-anatomic bypasses. They are of large importance considering avoidance of amputations or postponing these in future. We introduce a clinical case of a 55-years old man suffering and Lariche's syndrome with a realization of extra-anatomic bypass resulting in great improvement of the lower extremity blood flow.*

Material and Methods: *The patient introduced with pain in the left calf at rest and at night that was not influenced by NSAIDs. An ulcer on the left foot was present. The man was comorbid. After discussion and considering the doppler ultrasound and the angiography, proper treatment was found to be an axillo-femoral bypass. The operation was performed by proximal subclavicular and distal femoral access on the left. MaxiFlo 8/70mm Ring prosthesis was used and it was drowned along the middle axillar line with, respectively, a termino-lateral and termino-terminal anastomoses. On releasing the blood flow, good arterial pulsations of the left leg were found.*

Results: *Postoperatively, the patient's condition significantly improved with stable hemodynamics and palpable pulse of left popliteal artery. All complaints were eliminated. The left foot ulcer started healing. On discharge was found: RR a. Brachialis sin. – 120 mm Hg; RR a. Dorsalis pedis sin. – 60 mm Hg; RR a. tibialis post. sin. – 80 mm Hg; ankle-brachial index (ABI) – 0,66. Therapy was prescribed and proper physical activity was recommended.*

Conclusion: *Extra-anatomic vascular reconstructions are an alternative for save the extremity when treating CAILE with critical ischemia in case of comorbid patients with a great operative risk. As a last option of treatment prior to amputation, they give an opportunity of improving patients' quality of life.*

THE ROLE OF HONEY IN THE TREATMENT OF CHRONIC WOUNDS (A REVIEW AND CASE REPORT)

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Introduction: *Honey is an ancient remedy for the treatment of chronic wounds and its therapeutic potential has been the subject of a number of laboratory studies in New Zealand and France.*

Materials and methods: *Honey has been used to treat all kinds of wound types,such as: burns, venous leg ulcers, diabetic foot ulcers, pressure ulcers, abscesses, infected wounds from lower limb surgery, necrotising faciitis. Recent investigations have revealed, that in these and other cases honey dressings were more effective than conventional topical medications due to the following wound care advantages of honey: antibacterial action, correlating with the amount of released hydrogen peroxide, deodorising, debriding, anti-inflammatory action and stimulation of tissue growth.*

Case report: *The presented patient is a 58-year old male, who is hospitalized on the 29th of August 2014 with a deep wound, caused by a traumatic agent and located on the right lower extremity. The patient undergoes surgical treatment including debridement, subcutaneous and cutaneous sutures. The wound starts suppurating, but a second surgical intervention also fails to close it. A week later superficial skin necrosis in the wound area occurs, measured 3.0 cm in length, 4.0 cm in width. The total wound surface area is 28 sq cm. As a result of this complication, a treatment with Iodasept and Hidrosorb (Hartman) impregnated daily dressings is administered. Granulation tissue forms, but the skin doesn't show other signs of healing for about 3 months. After researching into into alternate therapies for wound healing, the patient initiates treatment with daily dressings with floral honey, which he applies after cleansing the wound tissue only with soap and water.*

Results: *The following two weekly assessments found the dimensions of the lesion progressively decreasing and by day 21 full closure and granulation of the wound was successfully obtained.*

Conclusion: *The case report supports the evidence of honey having a beneficial effect in the treatment of chronic wounds, published in numerous scientific journals.*

MALIGNANT PLEURAL EFFUSIONS - CONTEMPORARY DIAGNOSTIC ASPECTS

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

Aim: *The morphological verification of the effusion is essential for the staging and the therapeutical decision in these patients.*

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

Materials and methods*: We present materials from the Thoracic surgery clinic at UMHAT "St. Marina"- Varna, including analysis of the pathological specimens. In our clinical practice we use following methods: rentgenography, CAT, MRI, PET-scan, cytological examination of the effusions, VATS, mini-thoracotomy with biopsy with Immuno-histochemie of the pleural effusion and suspicious lesions of the pleurae or lungs.*

Results: *Analysing the results we established that 40% of the cases remain undiagnosed after conventional cytological examination. VATS- biopsy reveals best results, allowing histological typing and therapeutic intervention like talk-pleurodesis after evacuation of the liquid and debridman of the pleural cavity. The diagnostic process is improved with Immuno-histochemie.*

Conclusion: *Analysing the results we established that VATS or video-assisted mini- thoracotomy have the highest prognostic value and role of the treatment of malignant pleural effusions*

Keywords: *malignant pleural effusion, diagnostics, VATS*

TRIGEMINAL NEURALGIA AND LOW LEVEL LASER THERAPY

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Trigeminal neuralgia ("tic douloureux") is among the most painful conditions known to man. It affects mainly people after their 50s, with a female:male patient ratio of up to 2:1. Standard therapeutical concept includes potent medication (anticonvulsants, tricyclic antidepressants) with a lot of side effects, and possibly surgical intervention. The aim of this presentation is to evaluate the benefits of Low Level Laser Therapy (LLLT) for trigeminal neuralgia. We reviewed the effects of "soft" visible red and infrared lasers on pain and analysed research data about LLLT in trigeminal neuralgia. A case of our own (courtesy of Dr D. Grozdeva) was also reviewed in short. Irradiation of painful sites is generally conducted with low level He-Ne, GaAlAs and CO2 lasers for a mean of 30 one-minute sessions every other day. The results reveal that LLLT increases the chance of satisfactory therapy outcome by up to 70 percent compared to control groups. Low Level Lasers have virtually no side effects. This, combined with the results on their efficacy, demonstrates that they are an effective monotherapy alternative or adjunct to other treatment modalities for trigeminal neuralgia.

CLASSIFICATION OF MATERIALS AND THEIR BIOACCESSIBILITY USED IN CONTEMPORARY PROSTHETIC DENTISTRY

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Introduction of the abstract: *The progress of biomedical technology and increased demands on the materials used in prosthetic dentistry determine their diversity and expanded nomenclature and rapid pace of development in recent years. Nowadays the best clinical outcomes depend not only on the skills and qualifications of the dentists, but also on the quality and the characteristics of the materials he uses. This research aims to systematize the materials used in contemporary prosthetic dentistry and their bioaccessibility .*

Matherial and Methods: *A search was conducted in the electronic database of PubMed, ResearchGate, ScienceDirect, Google scholar, websites and in certain medical books by hand. After the first screening over 1000 abstracts published in the last 10 years 10 articles were included in the research. The review does not comprehensively review the literature, but highlights significant issues that confront the field.*

Results: *Years ago the materials which ware tested with variety of methods and were considered to be bioinert, now are proven to have many disadvantages compared to the contemporary materials. The definition of biocompatibility has broadened along with the roles for materials in patient oral health care. Nowadays thanks to the development of technology and science of dental materials more and more biomaterials with better biomedical properties are discovered and presented on the market.*

Conclusion: *Today materials play increasingly sophisticated structural and therapeutic roles in patient treatment. To accommodate these roles those materials need to evolve. This article provides a general view of the materials used in prosthetics dentistry and their bioaccessibility and it will help not only other researchers in their future science work but also practitioners , who want to use novel materials to treat oral disease.*

DENTAL IMPLANTS - GOOD OR BAD?

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Introduction: *Implantology is a relatively new discipline introduced in the past few years. We give answers to the questions people often ask such as - What are dental impalnts? What and when can they be used? How successful are dental implants?*

Matherial and Methods: *We examined studies regarding the success and failure rate regarding dental implants The studies we looked into aimed to show how successful are they, what are the risks and complications when dealing with such cosntructions.*

Results: *Dental implants have their uses in dental medicine, and are a reliable and modern solution to many problems in the human oral cavity.*

Conclusion: *The success or failure of dental implants is influenced by many factors. When deciding whether to use implants, the dentist must pay special attention to the patient's general health, oral health, and hygiene, as well as any interfering habits. Once the decision is made, other factors must be considered, including the surgeon's level of experience and the dentist's adherence to appropriate prosthetic design principles and recall procedures. The most critical positive factors appear to be bone type and volume, the dentist's experience, the patient's oral hygiene, implant dimensions, and placement location. The most critical negative factors appear to be poor bone quality and quantity, systemic or localized pathology, tobacco use, lack of clinician experience, short implants, and overloaded implants (that is, multi-unit bridgework placed on a restricted number of implants).*

DOES BREASTFEEDING WORK AS BIRTH CONTROL? THE INHIBITORY EFFECT OF PROLACTIN DURING OVULATION

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Prolactin [PRL] is a hormone released by the pituitary gland that stimulates breast development and milk production in women. The high prolactin levels inhibit the release of follicle stimulating hormone [FSH] and Luteinizing hormone [LH], and therefore stop ovulation. This is why lactation among exclusively breastfeeding women associates with longer periods of anovulation, amenorrhea and protection against pregnancy. This method of birth control is known as Lactational Amenorrhea Method (LAM).

This pilot study aims to: (1) identify LAM users who understand the method, and (2) determine whether an understanding of LAM is related to subsequent pregnancy.

The study is conducted in Bulgaria over a period of three weeks in February-March 2015. A total of 300 questionnaires are administered for the study period. Women who are breastfeeding or have ever breastfed are being recruited after obtaining informed consent for inclusion in the study. Participants are divided into two groups:1) exclusively breastfeeding women, and 2) women who are breastfeeding with supplementation. For the analysis, SPSS version 21 is used. Frequencies and descriptive statistics are analyzed to assess participants' level of understanding of the LAM method.

Our study showed that LAM as birth control is unknown and rarely used method of contraception in Bulgaria. Breastfeeding practices were significantly different across groups ($p < 0.01$).

By the statistical analysis occurred that the level of awareness is low. The method is perceived as unreliable and hardly attainable. Additional research is needed to understand how educational and ethnic backgrounds in Bulgaria affect the breastfeeding behavior.

Keywords: *prolactin, breastfeeding, birth control; inhibitory effect*

METABOLIC SYNDROME, DIABETES AND THE KIDNEY – THE ROLE OF AMYLOID

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Kidney involvement and kidney complications are amongst the leading causes of death in the developed world. Amongst the most common causes of chronic kidney disease are conditions caused by impairment of the metabolism of glucose - type 2 diabetes mellitus and the closely related metabolic syndrome. However the status quo of chronic kidney disease, associated with type 2 diabetes mellitus and metabolic syndrome, has not been put in to question despite new evidence regarding its starting point, development and progression.

The aim of this study is to point out the involvement of amyloid in type 2 diabetes mellitus and metabolic syndrome associated chronic kidney disease. Original research data from an established experimental animal model of metabolic syndrome, carried out with male Wistar rats for a duration of 16 weeks, was compared with the latest published papers, all using human biopsy material. All parties questioned the involvement of amyloid deposition in the genesis and progression of diabetic kidney disease.

Although focused on two different types of amyloid – islet associated and serum reactive, all parties showed amyloid was present in a considerable amount of cases and was closely associated with severity and prognosis of the condition. One study showed a similar pattern of islet associated amyloid in obesity related glomerulopathy.

KETOGENIC DIETS AS A POTENTIAL THERAPY FOR IMPROVING ALZHEIMER'S DISEASE CONDITION

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Alzheimer's disease (AD) is an age-related devastating neurodegenerative disorder. The presence of the E4 allele variant of apolipoprotein E and alteration of the processing of Amyloid precursor protein cause decreased cerebral metabolic rate of glucose consumption (CMRglc) which is main feature in individuals predisposed to develop or already having AD.

This approach is based on articles published in PubMed database ApoE4 alters lipid metabolism in a manner similar to high carbohydrate diet, causing hypometabolism of glucose in posterior cingulate, parietal, temporal, and prefrontal cortex. The decreased CMRglc leads to declining of Acetyl CoA and ATP which causes misfolding of proteins processed in the endoplasmic reticulum and Golgi apparatus. Abnormally folded proteins may produce amyloid beta protein (Aβ) or they can hyperphosphorilize Tau protein which is required for the stabilization of the microtubules. Dissociated microtubules lead to disintegration in the neuron's transport system. New studies reveal that ketone bodies that are normally used by the organism as alternative source of energy during prolonged periods of fasting may be used in AD as a therapeutic sources.

Medium Chain Triglycerides are a naturally occurring source of dietary fat. They induce ketogenesis regardless to the carnitine shuttle transport and undergo directly oxidation. During that oxidation Acetyl CoA production appear and generate high levels of ketone bodies. Those can be used in ketogenic diets which prevent further progression of the AD as an alternative source of energy.

MUSIC AND THE HEART

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Medical Faculty of Sofia University

Listening to music, whether a Mozart concert or the latest album from the top of the popular music charts, may not only help you to unwind at the end of a stressful day. Itc ould also lower your blood pressure and improve your heart rate, according to Dr Luciano Bernardi, associate professor of internal medicine at the University of Pavia, Italy. There is a study that music can help ease your recovery from a cardiac procedure, get you back to normal after a heart attack or stroke. Music has been there with mankind since the beginning of history, but where does it stand as a therapy? Is there any evidence base? How this therapy came into being and how it has evolved, and what the old and current research says about its role in heart rate. Informed consent was obtained from 20 students, ages 18 to 28. Each subject was tested in a booth set up in our workroom for Physiology lessons. At the start, each subject was asked to take 20 deep breaths and lay down on the coach to feel more comfortable and to calm down. Then we measured the heart's electrical conduction system and heart rate with the appropriate equipment. Our objectivewas to investigate the effect of listening to various genres of music on heart rate (HR). Based on the-literature, music does effect heart rate, but the hypothesis 'The faster the tempo, the greater increase in heart rate' is not really correct. Slower music proved to decrease heart rate, but faster music did not create an increase as it had been predicted. An experiment, which was made in 2013 by Grace Brancale, proved that all music decreased heart rate, although did not as much with the faster music. In same individuals, the faster music did increase the heart rate, but overall this not a trend. Our research will summarise, based on available epidemiologic and clinical studies, the heart rate and psychological responses due to exposure to various genres of music. Advancement in scientific understanding and more methodically sound research is still required to establish it as a sole quantified therapy. Till then, there exists ample evidence to not only enjoy it but to use it for the benefits it brings and promises as a therapy. Happy listening . . .

PHARMACOTHERAPEUTIC APPROACHES IN THE TREATMENT OF AUTOIMMUNE DISEASES

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Introduction of the abstract: *Pharmacotherapy of the autoimmune diseases is a complex process involving the use of various therapeutic agents. Our aim is to examining the basic principles and approaches in the treatment of autoimmune diseases*

Material and Methods: *Study of literature and databases*

Results: *"Traditional understanding is that autoimmune diseases are incurable and applied medication only eliminates or reduces some clinical manifestations such as pain. The main aim of the therapy is to achieve a clinical improvement - remission.*

It's formed a new strategy for the treatment of autoimmune diseases with the following main aims: 1) control the autoimmune process and prevent damage to tissues and organs by suppressing the immune system; 2) stopping or postponement the progression of the disease through the application of modern therapeutic products such as disease-modifying antirheumatic drugs (DMARDs) and biological products.

The choice of drug therapy is determined by the disease - its burden, specificity, clinical manifestations, and individual patient characteristics. The following groups of drugs - nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, immunosuppressants, anti-rheumatic drugs and biological products, are used.

An important principle in rational pharmacotherapy of autoimmune diseases is the choice of medicine capable of affecting chronic inflammation and tissue remodeling, therefore DMARDs are essential.

From great importance is the application of biological products - genetic or bioengineering derived protein molecules designed to block various targets in dysregulated immune system - activated T and B cells or pro-inflammatory cytokines. An essential part of the application of the biological products is anti-tumor necrosis factor therapy – anti-TNF therapy.

Also is used other target products - fusion proteins, monoclonal antibodies, biological response modulators.

Conclusion: *Autoimmune diseases are similar in nature and mechanism therefore are defined as non-infectious-inflammatory syndromes. This defines a similar strategy for their treatment. Significant progress and new therapeutic option in the pharmacotherapy of these diseases are disease-modifying antirheumatic drugs and biological products.*

INFLUENCE OF PROTON PUMP INHIBITORS (PPIS) ON THE ANTIPLATELET ACTIVITY OF CLOPIDOGREL

Tanya Topalova, Galina Dimitrova, Daniela Staeva, Krasen Tonev, Stanila Stoeva, Svetlava Georgieva

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Clopidogrel is an oral antiplatelet agent that is used to prevent blood clots after recent heart attacks or strokes. In the human body clopidogrel is converted to its active form by an enzyme called CYP2C19. Proton pump inhibitors (PPIs) reduce the amount of acid produced in the stomach. Side effects of clopidogrel intake are heartburns and ulcers of the stomach . Patients taking clopidogrel commonly take PPIs in order to prevent or ease their symptoms.

Review of the latest scientific data on the problem.

The latest investigations show that PPIs influence the antiplatelet activity of clopidogrel by reducing its conversion into the active form.The use of the combination of proton pump inhibitors (PPIs) and clopidogrel has recently been questioned due to pharmacological interaction.

The aim of this article is to review the recent scientific literature on the problem and to show if the pharmacological interaction between PPIs and clopidogrel are of clinical relevance.

INULIN: BENEFICIAL PHYSIOLOGICAL EFFECTS, PHARMACEUTICAL AND NUTRITIONAL APPLICATIONS

Galina Dimova, Stanila Stoeva, Tanya Topalova, Krasen Tonev, Iliya Zhelev

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The objective of the present study is to outline the impacts of inulin on human physiology and its use in chemical industry – both food and pharmaceutical one.

Systematic approach and analysis of scientific web databases (PubMed, ScienceDirect and Google Scholar) on the problem was conducted and articles showing versatile applications of inulin were reviewed.

Inulin is a natural plant-derived homopolysaccharide present in roots and rhizomes of a number of regularly consumed vegetables, fruits and cereals. Since it is resistant to mammalian digestive enzymes, it is only fermented by the bacteria in the large bowel, which could stimulate colonic motility. Acting as a prebiotic, this biopolymer stimulates the gut microbiota and thus the immune system. Nowadays it is suggested that inulin reduces fat and cholesterol absorption and increases that of minerals (mainly of calcium). The lack of toxicity in the human body and biochemical inertness of this polysaccharide promotes its various medicinal applications. It is utilised as a stabiliser and a drug delivery vehicle. Furthermore, inulin improves texture and is applied in food industry as a sugar and fat replacer.

Considering health-promoting and technological properties of inulin, further studies could advance its varied potential use.

DETERMINATION OF CAFFEINE, THEOPHYLLINE AND THEOBROMINE IN COFFEE AND TEA PRODUCTS BY HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY

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Caffeine, theophylline and theobromine are among the most commonly used purine alkaloids worldwide. These methylxanthines are attractive mainly because of their organoleptic qualities and the ability to remove fatigue. Depending on the dose administered and the patient's condition, they may have both positive and negative biochemical effects. Scientists have proven that they are not very toxic, but high doses lead to tachycardia, muscle tremors and shaking, rapid breathing, insomnia, diarrhea, agitation, stomach aches, increased urine output. The wide variety of products on the market and possible side-effects require the necessity of optimal qualitative and quantitative analysis to insure patients' safety.

The aim of the presented work was to determine caffeine, theophylline and theobromine content in some of the most commercially used coffee and tea, available on Bulgarian market.

The sample preparation procedure includes extraction into boiling water, filtration and purification. An HPLC analysis of samples was performed on a ODS2 Hypersil (250x4,6, 5µm) column with a mobile phase of acetoni-

trile:water = 90:10. The quantification of purine alkaloids was carried out using an external standard. The methylxanthines were monitored by an UV detection at 274 nm.

The three purine alkaloid were quantified in most of the analysed samples.The highest concentration was that of caffeine, while those of theophylline and theobromine showed closed values.

The described HPLC method showed good separation of the three alkaloids in the analyzed samples. It is sensitive and rapid and can be used in the analysis of all kinds of teas and coffees.

GINKGO BILOBA – ACTION, EFFECTS AND PHARMACEUTICAL APPLICATIONS

Plamen Bekyarov, Petia Georgieva

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Introduction: *Ginkgo biloba L. belong to Ginkgoaceae family, class Ginkgoopsida. The leaves of the Ginkgo tree have a long history of being used for medicinal purposes, and particulary standardized extract, labeled EGb761. Ginkgo is one of the most used herbal for treatment of neurodegenerative diseases, cancer, cardiovascular diseases, tinnitus, geriatric complaints and psyhiatric disorders.*

Material and Methods: *The two main pharmacologically active groups of compounds present in the Ginkgo biloba are 24% flavonoids(flavones ,flavonols, tannins, biflavons) and 6% terpenoids (ginkgolides and bilobalide). It contains also 5-10% organic acid. Ginkgo biloba can interacts with different medications and can cause some side effects, e.g gastrointestinal complications, headache, forceful heartbeat, and allergic skin reactions.*

Results: *Dosage forms in which Ginkgo is included are capsules, tablets, liquid extracts, tinctures and also dried leaf for teas. Standardized extract EGb761 contains 24-32% flavonoids and 6-12% terpenoids.*

Conclusion: *Major task for pharmaceutical companies is to ensure quality of the plant substance, in order to achieve exact therapeutic effect.*

THE DANGERS OF FRUCTOSE A COMMON SWEETENER

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Introduction: *Even if not in the form of sweeteners, all foods contain certain amounts of carbohydrates. Different kinds of sugars however give rise to different kinds of effects on the human body. High amounts of ingested fructose lead to lipid and lipoprotein dysregulation and insulin resistance, also accumulation of fat that is located inside the peritoneal cavity the so called visceral fat as opposed to subcutaneous fat, found underneath the skin, is linked with higher cardiovascular risk and is connected to the development of metabolic syndrome and type 2 diabetes.*

Material and Methods: *The mechanism of this accumulation of adipose tissue most probably is associated with the enzyme lypoproteinlypase (LPL), which is activated by insulin.LPL that is responsible for the subucutaneous adipose tissue accumulation is much more sensitive to insulin than its isoform that is responsible for the visceral. In comparison to glucose, fructose leads to lower postprandial plasma glucose peak (PPG) and therefore lower levels of insulin which lead to weaker activation of the LPL responsible for the subcutaneous fat build-up. The fatty acids left in the blood stream are picked up by the LPL associated with visceral adipose growth.*

Results: *According to epidemiological data there is a statistically significant increase of cardiovascular risk in young people after only 2 to 3 weeks of consumption of drinks containing fructose, most commonly in the form of high fructose corn syrup, in more than 25% of the recommended daily intake limits, or in drinks sweetened with su-*

crose in more than 12.5% of the daily limits. When the intake of sucrose sweetened drinks in middle-aged patients with obesitas exceeds 20% of the daily recommended limits, an increase of accumulation of fat in the liver and other visceral organs is observed which in 6 months leads to elevated risk of cardiovascular incidents

Conclusion: *In comparison to fructose in sweetened foods, fructose in fruits is found in significantly lower concentrations and is also associated with healthy substances such as antioxidants, dietary fiber and vitamins.*

A REVIEW OF MEDICINAL PLANTS WITH POTENTIAL ANTIDIABETIC ACTION

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Hyperglycaemia is a pathological condition associated with prediabetes and diabetes. There are two types of diabetes – type 1 and type 2. The regulation of blood levels of glucose and increase of insulin secretion or sensitivity are the main perspectives in diabetes treatment.

Data source for this review are www.scholar.google.com, www.ncbi.nlm.nih.gov/pubmed. Key words used for searching in databases are diabetes treatment, antidiabetic medicinal plants and antidiabetic herbs.

This review summarizes data recently available in literature for application of six commonly used medicinal plants with claims of hypoglycaemic effects, including Agrimonia eupatoria L. (agrimony), Allium sativa L. (garlic), Stevia rebaudiana L. (sweet leaf) and Mangifera indica L. (mango), ginseng species and spices like cinnamon. All of them contain various ingredients with different mechanisms of action. Special attention should be paid to investigations of antidiabetic properties of agrimony. In experimental model of type 1 diabetes antihyperglycaemic, insulin-releasing and insulin-like activities of agrimony aqueous extract have been demonstrated. Allicin, a sulfur-containing compound isolated from garlic, is responsible for the pungent odour. It is also considered to have hypoglycaemic action, which is probably due to the increased hepatic metabolism and insulin release. Sweet leaf contains stevioside and steviol which are found to stimulate insulin secretion by acting on pancreatic β-cells. Lupeol, a triterpene found in mango is acknowledged to display antioxidant and antidiabetic effects. Ginseng contains rebaudioside, a diterpene glycoside which possesses insulinotropic effect and may provide support in the treatment of type 2 diabetes. Cinnamaldehyde is a major substance in cinnamon. It has been proven to possess blood glucose and fat reduction properties in rat models of streptozotocin induced diabetes.

These plants are widely spread throughout the world and are easily accessible. They can be used both for treatment and prevention of diabetes.

FAILURE OF ACUTE CORONARY SYNDROME THERAPY CAUSED BY CLOPIDOGREL RESISTANCE

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Introduction: *Acute coronary syndrome (ACS) is usually associated with coronary thrombosis in which platelets, the smallest circulating human cells, play the main role. P2Y12 receptor, expressed on their surface, is the tar-*

get for thienopyridine antiplatelet drugs. They irreversibly inhibit adenosine diphosphate (ADP) binding to the P2Y12 receptor and thus interfere with platelet activation, degranulation and aggregation.

Material and Methods: *Clopidogrel is one of the thienopyridine antiplatelet agents which has been the mainstay of ACS treatment. Clopidogrel is a prodrug that requires activation via the cytochrome P450 enzyme isoform CYP2C19. Clopidogrel resistance accounts for the failure of clopidogrel to achieve its antiaggregatory effect. The lack of effect from clopidogrel can be due to extrinsic or intrinsic mechanisms. Among extrinsic mechanisms are the underdosing, drug-drug interactions involving CYPs, and variable absorption of the prodrug. Intrinsic mechanisms include genetic polymorphisms of the P2Y12 receptor and of the CYPs, increased release of ADP, or up-regulation of other platelet activation pathways.*

Results: *The main mechanism of clopidogrel resistance is associated with the lack of activation of the prodrug. Thus, depending on the single nucleotide polymorphism inheritance pattern in CYP2C19, individuals may be poor metabolizers of clopidogrel, and these patients may be at increased risk of cardiovascular events due to inadequate drug effect. Drugs that impair CYP2C19 function, such as omeprazole, should be used with caution.*

Conclusion: *In contrast to clopidogrel, cytochrome P450 genotype status is not an important factor in the pharmacology of the newer antiplatelet drugs prasugrel and ticagrelor*

CONCEPT MAP ON OCULAR EXAMINATION TECHNIQUES - PSYCHOPHYSICAL TESTS

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The aim of this study is to construct a concept map of ocular examination techniques, especially the psychophysical tests. The significance of this map is in easy and competent way to deliver information.

A concept map is constructed by a few paragraphs. They have the key words, filled with meaning. Making an analogy will not be a tough task for students and all interested in this field of science because of its clear design and comprehensive analytical system used for development of the map.

The concept map of psychophysical tests for ocular examination techniques could deliver the most significant information for the test and in the meantime it will not harden the reader or the student.

After the making of the map, the whole work was shown to a group of students, different ages and courses. The main aim was investigating the real value of the work. The results showed that almost all students understood the conceptual principals.

AMNIOTIC MEMBRANE TRANSPLANTATION FOR SEVERE CHEMICAL EYE BURN

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Alkali burns are more common and destructive than acid ones, and can cause severe structural damage including corneal melt, limbal stem cell deficiency and glaucoma. For this type of ocular pathology amniotic membrane transplantation appears to be a treatment of choice.

We present a 31-year-old man with severe bilateral alkaline burn of the cornea and conjunctival sac. Eye examination showed: visual acuity of right and left eye respectively 0.04 and 0.03, palpebral oedema, limbal ischaemia, corneal deepithelialization and opacification of both eyes. The burn is classified as grade III for the right and grade IV for the left eye. The following treatment was applied: autohaemotherapy, antibiotics, lubricants and epitheliasing drugs. Together with basic treatment, four consecutive amniotic membrane transplantations were performed to both eyes with in order to facilitate migration of epithelial cells and subsequent epithelial differentiation. Furthermore the anti-inflammatory and anti-bacterial activities of the amniotic membrane have been utilized with a goal to reduce future complications.

The treatment led to improvement as follows: visual acuity of right eye and left eye respectively 0.07 and 0.06, reduction of the limbal ischaemia and improved corneal transparency.

The above clinical case illustrates the benefits of amniotic membrane transplantation in severe chemical ocular burns in the acute stage and its effectiveness in reducing inflammation and preventing scarring at a later stage. Furthermore this treatment is associated with pain relief and therefore improved quality of life in short and long term.

THE "CROCODILE TECHNIQUE": A NEW OPHTHALMIC SURGICAL TECHNIQUE TO REMOVE SUBRETINAL PROLIFERATIVE TISSUE ASSOCIATED WITH RETINAL DETACHMENT

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To describe the "crocodile technique", a new ophthalmic surgery technique for removing subretinal proliferative tissue (SPT) associated with retinal detachment.

The crocodile technique is a new ophthalmic technique for removing SPT using vitreous forceps, without using subretinal forceps, in small-gauge vitrectomy. After performing sufficient peripheral vitrectomy, a small intentional retinal tear was created above the SPT. The SPT was then stabilized while grasped by vitreous forceps in the subretinal space. The vitreous forceps were then rotated on their long axis, such that the SPT was rolled around the vitreous forceps in the subretinal space.

The crocodile technique was successfully performed without enlarging the intentional retinal tear or creating new retinal tears, in all subjects. The retina was successfully reattached in all subjects, postoperative average visual acuity was improved after surgery, and postoperative re-detachment did not occur in any patients.

The crocodile technique can be performed without subretinal forceps. Using the technique, retinal detachment with SPT can be treated using vitreous forceps in small-gaugevitrectomy.

BREAST CANCER AWARENESS AMONG FEMALE POPULATION IN VARNA REGION

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The breast cancer is the most common neoplasm in women worldwide in both developed and developing countries. Critical for the cure of breast cancer is the early detection and diagnosis of the disease. Therefore the awareness of the public and the well-developed health programs are vital as part of the screening process and reducing the burden of breast cancer.

Information leaflets; Polls; free breast cancer examinations.

The poll was performed by medical students form the Medical University- Varna, on three locations in the city. The poll included questions about age, occurring of birth, age of childbirth, awareness of preventive exams and self-examination techniques. As part of the campaign, free physical examinations were performed in the thoracic surgery department in UMHAT "St. Marina". Another part of the campaign was the attempt to inform the public about the disease itself and the prevention methods by information flyers.

After gathering all the information form the polls the data was analyzed by sorting the women asked were divided in 6 groups by age. The results showed that the women above the age of 30 are much more involved in the screening process.

As a whole the women that took part in the poll were aware of the risk factors and have been taking precautions in form of prophylactic examinations and self-examinations.

ANTHRAX AS BIOLOGICAL WEAPON

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Based on the Anthrax attack in the USA in 2001 this biological weapon and its health impact obtained global advertence emerging the necessity of defense plans.

Bacterium Bacillus Anthracis, the causative agent, is a rod-shaped bacteria that can form spores, is anaerobic and easy to culture. Moreover the Bacilli appears to be a attractive biological weapon because of its infectiousness, its stability in the spore form, the respiratory route and the high mortality of inhaling anthrax.

The literature we studied about clinical cases regarding the bioterrorism-related inhalation of anthrax point out that these Bacilli lead to infections which are difficult to diagnose. The ten patients suffering from Anthrax through contact with contaminated letters had unspecific symptoms such as chills, nausea and fatigue. The antimicrobial therapy during the initial phase resulted in a death rate of 40%. Anthrax remains an eligible weapon considering the above mentioned characteristics and its high death rate. To minimize the health threat, governments and medical patricians have to deliberate on applicable countermeasures. Appropriate actions could include restrictions in the use of those pathogens, more valuable research, clarification and training of the professionals concerned. Vaccination of the soldiers, who represent a high risk group, is prescribed. Furthermore following studies about proper antibiotics and therapy are necessary.

MOLECULAR MARKERS AND NEW METHODS FOR DIAGNOSTICS OF COLORECTALCANCER

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Colorectal cancer (CRC) is a leading cause of half a million deaths worldwide every year. Colorectal cancer could results from the accumulation of genetic and epigenetic alterations that lead to the transformation of normal colonic epithelium to colon adenocarcinoma.

The collected data is based on the papers published in Pubmed.

This review summarizes data from recent publications on usage of molecular markers for diagnostics of CRC and advanced methods for their detection.

Activation of the Wingless/Wnt signaling pathway is an early event that is reported in about 93% of all CRCs cases and causes a subsequent expression of genes that favor cell growth. This cascade integrates retinoic acid, FGF, TGF-β, and BMP. Genes that promote tumour formation are switched to transcription "on state". As a result an overexpression of oncogenes, underexpression of tumor suppressor genes or altered expression of microRNAs are occurred that can contribute to tumor progression. Several miRNAs showing high levels of expression in cancer tissues – let-7a, miR-1229, miR-1246, miR-150, miR-21, miR-223, and miR-23a. Inactivation of transcription factor TP53 which has tumour suppressor activity, mediates the transition from adenoma to carcinoma. Other frequent genetic modifications include activating mutations in KRAS and BRAF. Specific chromosome copy number changes, deletion or translocation of whole chromosomes of chromosome arms called chromosomal instability (CIN) and microsatellite instability (MSI) are also observed. Commonly used methods for screening of CRC includes fecal occult blood test and flexible sigmoidoscopy, although they have inherited limitations. Usage of sequencing, microarray, qRT-RCR, mass spectrometry and enzyme-linked immunosorbent assay (ELISA) analyses are very reliable, sensitive and promising techniques for detection of CRC at the early stages on the development.

CHRONIC RENAL FAILURE AND ITS MARKERS AS A PREDICTOR OF DEATH

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Medical University of Varna

The occurrence of Chronic Kidney Disease in Bulgaria is almost double the average than that for EU countries as a whole. Chronic Kidney Disease is one of the main forms of renal failure alongside acute kidney injury.

Chronic renal failure is the condition in which the filtering rate of waste products from the blood is reduced.

Currently glomerular filtration rate (GFR) is the most used index to assess kidney function measuring kidney filtration capacity, which is found to be below 60 ml/min/1,73 m2 for more than 3 months. The GFR can provide information about markers that are recognized as indicators of kidney damage. Examples of such markers are as follows; albumin, creatinine, urea, uric acid and imbalance in electrolytes.

Chronic Renal failure causes an accumulation of waste products and fluid in the body which can have many impacts on the body systems and functions. One specific case is the cardiorenal syndrome. This syndrome comprises a system in which the heart and kidney negatively affect each other. This review analyses information collated from scientific journals and online publications regarding the markers of Chronic Renal Disease and how these markers are, in essence an indication of death.

The research from journals and publications has proven that in the general population the risk of death rose with the increasing ratio between Albumin and Creatinine markers.

In conclusion, renal failure is a predictor of death and it's most reliable assessment is conducted via the GFR values. The markers for chronic renal disease are effective for diagnostic purposes.

POLYCYSTIC OVARY SYNDROME AND INFERTILITY

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Introduction: *Polycystic ovary syndrome (PCOS) is a common hormonal condition in which women produce a surplus of androgens. This causes irregular ovulation, or even a lack of ovulation.The causes of Polycystic ovary syndrome are not completely understood, but it is likely to be an inherited condition. PCOS affects approximately one of every 10 women.*

Material and Methods: *Not all women with PCOS have difficulty becoming pregnant. For those who do, anovulation is a common cause. The mechanism of this anovulation is uncertain, but there is evidence of arrested antral follicle development, which, in turn, may be caused by abnormal interaction of insulin and luteinizing hormone (LH) on follicular cells.*

Results: *The main reason for infertility in women is not ovulating, which means not releasing eggs from the ovary. Polycystic ovary syndrome is the main cause of not ovulating.*

Conclusion: *The infertility rate of women with polycystic ovaries is very high. These women usually will have difficulty getting pregnant - and usually require treatment to improve chances for pregnancy. The good news is that the chance of getting pregnant with polycystic ovarian syndrome using fertility treatments is very good.*

HARMONIC SCALPEL USE IN PARATHYROID ADENOMA

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

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

Material and Method: *For the period 2008 –2014, 65 patients with secondary hyperparathyroidism – 7 males and 58 females were operated in our institution with Harmonic scalpel of Ethicon Endo Surgery Care.*

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

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

Keywords: *parathyroid adenoma, harmonic scalpel, advantages*

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