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ABSTRACTS

OF THE

FOURTH BLACK SEA SYMPOSIUM
FOR YOUNG SCIENTISTS IN BIOMEDICINE

April 7-10, 2016, Varna, Bulgaria
PROGRAMME

APRIL 7, 2016 THURSDAY - Medical University of Varna
10:00–17:00 – Registration (Lobby)
19:00 - OPENING CEREMONY AND DINNER PARTY – HORIZONT RESTAURANT

APRIL 8, 2016 FRIDAY - Medical University of Varna
08:00–09:30 - Session I - INTERNAL MEDICINE AND ONCOLOGY (AUDITORIUM 2)

1. IPILIMUMAB – MECHANISM OF ACTION AND IMPACT ON ADVANCED MELANOMA - I. Valkadinov, I. Karatsoli, B. Enikov, V. Bogdanova, S. Nizorkova, S. Gancheva, N. Conev
2. A REVIEW OF DRUG-INDUCED HYPERTERMIA - Niarah Ahmad, Dominic Fazel, Annam Ahmad, Stefka Valcheva-Kuzmanova
4. MICROSTRUCTURAL EVIDENCE OF KERATOPATHY IN DIABETES - V. Sheherov, V. Ivancheva, CN Grupcheva
5. HYPER-SENSITIVE C-REACTIVE PROTEIN (HSCRP) IN PATIENTS WITH CORONARY HEART DISEASE - R. Radushev; A. Akisheva; E. Dimitrova; R. Gencheva; E. Emin, M. Tzekova 6. LASER TREATMENT OF SPIDER VEINS - A. Yancheva, B. Yosifov, A. Angelov

08:00–09:30 - Session II – VARIA (AUDITORIUM 3)

1. INTERMITTENT FASTING AND ITS MOST SIGNIFICANT EFFECTS ON THE ORGANISM - D. Yahya, D. Dimov, L. Nikiforova, R. Rachkov
2. THE POTENTIAL HEALTH BENEFITS OF QUINOA ON THE HUMAN ORGANISM - T. Popov, O. Bayrak, N. Aliadinova, R. Georgieva, K. Kostadinova, Stanislava Hadzhiyeva
3. THE 21ST CENTURY DIAGNOSIS - Boryana Atanasova, Marina Atanasova, Petar Ivanov
4. PHARMACOLOGY - THE LONG WAY FROM ANCIENT CURES TO MODERN TECHNOLOGIES - J. Kitanovska, M. Ivanova, G. Stavreva, R. Krustev
5. EMERGING OF THE ZIKA VIRUS DISEASE - CLINICAL AND EPIDEMIOLOGICAL OVERVIEW - Hikaru Iwata, Tsonko Paunov, Y. Zayakova, Valeriev
6. DENTAL FILLINGS- CONSEQUENCES OF OUR MISTAKES - Ani Ivanova, Iliyan Georgiev, Joseph Zhechev, Mehmed Mehmedov, Martina Markova
7. SNORING – ETIOLOGY AND TREATMENT - Stela Petrova, Dimitar Koemdzhiev, Martin Stefanov, Petya Petrova, K. Kerimov
8. DIETARY SUPPLEMENTS OF PLANT ORIGIN – EFFECT, QUALITY, CONTROL - Katya Nedeva, Viktoria Ivanova, Svetlana Fotkova

09:30-10:00 COFFEE BREAK

10:00-11:30 – Session III - CASE REPORTS (AUDITORIUM 2)

1. SPINA BIFIDA AND ITS CONSTELLATION OF COMPLICATIONS - AN AUTOPSY REPORT - J. Kerz, G. Stoyanov, D. Velkova, N. Petrova
3. CARDIOVASCULAR MANIFESTATIONS OF ACROMEGALY – CASE REPORT - M. Avdzhiyska, M. Raykov, Z. Kasimova, E. Marinova, B. Kanazirev
4. MANAGEMENT OF ABDOMINAL AORTIC ANEURYSM USING ENDOVASCULAR ANEURYSM REPAIR METHOD – CASE REPORT - Zhenya Marinova, Elena Ivanova, Roksana Tsvetanova, Chavdar Bachvarov, Georgi Todorov
5. ALCAPA SYNDROME – EXTREMELY RARE CONGENITAL HEART DISEASE IN AN ADULT - B. Yosifov, A. Boyadzhiev, A. Raynova, S. Panteleymonova, P. Panayotov, S. Chilikova
6. CASE REPORT OF A CHILD WITH EPIDERMOLYSIS BULLOSA AND ITS COMPLICATIONS AT ST. MARINA UNIVERSITY HOSPITAL - Radina Petrova, Dimitar Ivanov, Dimitrichka Bliznakova, Miglena Stoyanova
7. PYRIDOXINE-DEPENDENT EPILEPSY - Ralitsa Nikolova, Stela Atanasova, Galina Yordanova, Violeta Iotova

10:00-11:30 – Session IV - NEUROPSYCHIATRY (AUDITORIUM 3)
1. SENSE OF HUMOR IN PATIENTS WITH SCHIZOPHRENIA – S. Krasteva, Y. Gerchev, D. Stoyanov, M. Yaneva, P. Marinov
2. GLUTAMATERGIC AND DOPAMINERGIC NEUROTRANSMISSION AND THEIR ROLE IN NEUROPSYCHIATRIC ILLNESSES - Y. Gerchev, S. Krasteva, M. Yaneva, D. Stoyanov, P. Marinov
3. THE CORRELATION BETWEEN WORK AND LIFE AND ITS INFLUENCE ON BURNOUT AND DEPRESSION AMONG PHYSICIANS IN BULGARIA, POLAND AND SERBIA - M. Swamad, A. Emad, K. Wilczynski, V. Subotic

11:30-12:45 – LUNCH

12:45-13:45 – GUEST LECTURE
1. THE ORGANIZATION AND DYNAMICS OF VASCULAR INNERVATION – Ronald Bleys

13:45-14:30 – SPONSOR LECTURE

14:30-15:00 – COFFEE BREAK

15:00-17:00 – Poster session I - EXPERIMENTAL MEDICINE AND PHARMACOLOGY (AUDITORIUM 4)
1. EFFECT OF APOE ON NEURITE MORPHOLOGY IN VITRO - Rachel Rubin, Alexis Carter, Danko Georgiev, Iliya Lefterov, Radosveta Koldamova, Richard L. Simmons, Chairman Emeritus
2. SYNCHRONIZED THERAPY WITH APHERESIS FOR RENAL DISORDERS IN SYSTEMIC LUPUS ERYTHEMATOSUS - A. Petrov, P. Petrov, I. Teodorova, V. Ikonomov
3. DESCRIPTION OF A NEW APPROACH FOR BLOOD-BRAIN BARRIER BREAKTHROUGH - Alkım Demirci, Stefka Valcheva-Kuzmanova
4. THE FREQUENCY OF MUTATED EGFR IN A GROUP OF BULGARIAN PATIENTS WITH ADVANCED NON-SMALL CELL LUNG CANCER - Roksana Tsvetanova, Zhenya Marinova, Elena Ivanova, Milka Georgieva

5. THE ROLE OF CYTOKINES IN THE DENGUE VIRUS Diagnostic - S. Stoycheva, I. Borisova, N. Ermenlieva

6. AN OVERVIEW OF DRUG TRANSPORTERS - Christina Yankova, Stefka Valcheva-Kuzmanova

7. ASSOCIATION OF HPV INFECTION AND CERVICAL DYSPLASIA PROGRESSION WITH DNA METHYLATION OF GENES, CONNECTED TO CELLULAR STRESS AND ONCOGENESIS - Liliyana Yaneva, I. Dimova

8. INHIBITION OF TUMOR NECROSIS FACTOR-ALPHA CONVERTING ENZYME AS A NEW THERAPEUTIC STRATEGY - Diyana Petrova, Blagovesta Todorova, Boryana Ivanova, Stefka Valcheva-Kuzmanova

9. RETROSPECTIVE 5-YEAR ANALYSIS OF ACUTE MEDICAMENTOUS INTOXICATIONS IN VARNA REGION - Galina Dimova, Stanila Stoeva, Gergana Josifova, Krasen Tonev, Petko Marinov

10. A NEW GENERATION OF HYPNOTIC DRUGS - Presiyana Boyarova, Teodorika Panayotova, Stefka Valcheva-Kuzmanova


12. THE PHARMACOLOGICAL ACTIVITY OF GENUS ARISAEMA - Ralitsa Simeonova, Zornitsa Borisova, Kristian Vasilyev, Rosi Hristova, Galina Vasileva

13. SGLT-2 INHIBITORS: A NEW MECHANISM FOR GLYCEMIC CONTROL IN TYPE 2 DIABETES - Dilyana Tonkova, Diyan Kyuchukova, Simona Dimulska, Kiril Hristozov, Mariya Petrova


15. A CRITICAL REVIEW OF THE SAFETY PROFILE OF NOVEL ORAL ANTICOAGULANT AGENTS - Krasen Tonev, Stanila Stoeva, Galina Dimova, Evgeni Grigorov

16. METFORMIN - OLD DRUG WITH NEW APPLICATIONS - Stanila Stoeva, Galina Dimova, Krasen Tonev, Maya Radeva

17. OMEGA-3 FATTY ACIDS IN SEAWEED - Boyko Matev, Alice Renjilian, Pavel Todorov, Magdalena Bliznakova, Albena Merdjanova, Mona Stancheva

18. PANOBINOSTAT AND TASIMELTEON – RECENTLY INTRODUCED ORPHAN DRUGS - Boryana Georgieva, Denitsa Stoykova, Doychin Nikolov, Stefka Valcheva-Kuzmanova

19. MULLER GLIA AND THE PATH OF LIGHT - FROM SIGHT TO INSIGHT - Yordan Slavov, George Stoyanov, Radoslav Spasov, AB Tonchev

20. THE ENDOCANNABINOID SYSTEM AND ITS MULTIPLE EFFECTS ON THE HUMAN BODY - Radoslav Rachkov, Lora Nikiforova, Dinnar Yahya, Velina Kerekovska, Simeona Zhivkova, Miroslav Eftimov

21. PARKINSON DISEASE AND DEEP BRAIN STIMULATION - Emir Çağrı Kiraz, Burak Bezirganoğlu, Basar Bilgic

APRIL 9, 2016 SATURDAY - University Hospital

08:00-09:30 – Session V - CASE REPORTS IN ONCOHAEMATOLOGY (PSYCHIATRIC AUDITORIUM)

1. SINUS HISTIOCYTOSIS WITH MASSIVE LYMPHADENOPATHY (ROSAI-DORFMAN DISEASE): CASE REPORT - V. Zhelezova, D. Ivanova, I. Minev, D. Bulyashki

2. A CASE REPORT OF A CHILD WITH CHICKENPOX AND IDIOPATHIC APLASTIC ANEMIA - R. Georgieva, K. Kostadinova, Ts. Popov, O. Bayrak, Diana Radkova

3. A COMPARATIVE STUDY OF TWO CASES OF THALASSEMA MAJOR AND INTERMEDIA - Teresa Buitrago García, Maria Dimova, Liana Gercheva, Branimir Kanazirev
4. A CASE REPORT OF A PATIENT WITH VENA CAVA SUPERIOR SYNDROME WITH UNDERLYING SMALL CELL LUNG CANCER - Birka Bähnemann, Petya Petrova, Diyan Dimov, Branimir Kanazirev
5. A CASE STUDY OF A PATIENT WITH CHRONIC MYELOGENOUS LEUKEMIA - Stefanie Degen, Nabiah Malik, Aischa Lehnhoff, Maria Dolores Franco Martinez, Trifon Chervenkov, Lyudmila Angelova, Ilina Micheva

08:00-09:30 – Poster session II – CASE REPORTS (PSYCHIATRIC AUDITORIUM – LOBBY)

1. CASE REPORT: COMPLICATED VARICELLA INFECTION COMBINED WITH LEUCINOSIS - Diyana Kyuchukova, Dilyana Tonkova, Simona Nikolaeva, Ralitsa Yotsova, Iliyan Todorov, Margarita Gospodinova-Bilznakovab
2. EMBOLIZATION OF A RUPTURED INTRACRANIAL ANEURYSM - CASE REPORT - Elena Ivanova, Zhena Marinova, Roksana Tsvetanova, Chavdar Bachvarov, Georgi Torodov
3. A CASE REPORT OF A GIANT CYST HYGROMA IN A 38-YEAR-OLD FEMALE PATIENT - T. Latunova, K. Marinova, B. Petrov, R. Radev
4. CHURG-STRAUSS SYNDROME: A CASE REPORT - Kiril Zhelyazkov, Elitsa Kupenova-Koleva, Radoslav Kolev, Vladimir Kadinov, Simona Bogdanova
5. CASE REPORT ON A PATIENT WITH HYPERALDOSTERONISM AT ST. MARINA UNIVERSITY HOSPITAL-VARNA - Teodora Karamfilova, Ivanina Arabadhieva, E. Zlatanova-Kazakova
6. THYMOMA- A CASE REPORT - D. Tsocheva, K. Marinova, B. Petrov, R. Nenkov, R. Radev
8. PREMATUR EMENARCHE ASSOCIATED WITH PRIMARY HYPOTHYROIDISM IN AN ALMOST 9-YEAR-OLD GIRL - A CASE REPORT - S. Zhivkova, L. Nikiforova, V. Kerekovska, L. Ilieva, S. Chaucheva, S. Galcheva
9. MALIGNANCY COMPLICATIONS ACCOMPANYING PULSE THERAPY OF TAKAYASU ARTERITIS - Nevena Ilieva, Angel Balinov, Nelly Radeva, Galita Decheva, Blagovest Petrov, Lina Stoyanova
11. DIABETIC FOOT - A CASE STUDY - N. Simeonov, M. Yanov, V. Dimitrova, V. Kozhuharov
12. CROHN’S DISEASE – A CASE STUDY - Anna Stoimenova, St. Stoicheva, D. Staeva, R. Varbanova, M. Varbanova, Atanasova
13. ACUTE VIRAL MYOCARDITIS IN A PATIENT WITH REFRACTORY ANEMIA AND CARDIAC HEMOSIDEROSIS - Y. Stoyanova, V. Dimitrova, L. Ilieva, D. Dimov, L. Mircheva, Y. Yotov
14. ARRHYTHMIA IN A PATIENT WITH CONGENITAL HEART MALFORMATION - V. Dimitrova, Y. Stoyanova, A. Kiseva, Y. Yotov
15. STRUMA CORDIS - Marina Ereva, Georgi Manchev, Vladimir Danov
16. A CASE REPORT: TREATMENT OF ANTERIOR CROSS-BITE IN EARLY MIXED DENTITION - Seölim Ibishiev; Oktavian Spanov; Boris Valkov; Kristina Arnauntsa, Zornica Valcheva
17. A CASE REPORT OF A 44-YEAR-OLD MALE WITH WEGENER’S GRANULOMATOSIS AND HEART FAILURE - D. Nikolov, D. Ivanov, L. Stoyanova
18. PSEUDOXANTHEMA ELASTICUM (GRÖNBLAD–STRANDBERG’S SYNDROME) - St. Stoycheva, D. Staeva, T. Topalova, R. Varbanova, M. Varbanova, B. Kanazirev
19. ATYPICAL DOESN’T MEAN IMPOSSIBLE. HAND, FOOT AND MOUTH DISEASE - Ralitsa Yotsova, Dimitar Dochev, Slavena Georgieva, Tsvetalina Gerova, Diyana Kyuchukova, Zhenya Borisova

09:30-10:00 – COFFEE BREAK

10:00–11:30 – Session VI - NEUROSCIENCES AND CELL BIOLOGY (PSYCHIATRIC AUDITORIUM)

1. ALZHEIMER’S DISEASE: WHAT IF THERE IS A CURE? - Stela Atanasova, Ivan Dimitrov
2. THE GREAT IMITATOR – GliOBlastoma multiFrome AND THE VALUE OF Immunohistochemistry IN ITS Diagnosis - G. Stoyanov, D. Dzhenkov
3. WHAT YOU MIGHT NOT KNOW ABOUT AMYOTROPHIC LATERAL SCLEROSIS - T. Nikolova, M. Ivanova, J. Kitanovska, G. Peev, Y. Velcheva
4. THE MORPHOLOGICAL BASIS OF THE MOTOR SYMPTOMS IN ADULT-ONSET HUNTINGTON DISEASE- A PARALLEL WITH NORMAL STRUCTURES AND FUNCTION - Elena Harizanova, Yasin Georgiev, Stoyan Pavlov
5. ENDOCYTOSIS AND VESICLE TRAFFIC IN THE OUTER HAIR CELL OF THE GUINEA PIG COCHLEA - Entcho Klenske, Csaba Harasztosi, Susanne Badum, Emese Harasztosi, A.W. Gummer

11:30-12:30 – LUNCH

12:30-14:00 – GUEST LECTURES

1. IS THERE A CAUSAL LINK BETWEEN OBFECTIVE SLEEP APNEA SYNDROME AND TYPE 2 DIABETES? - Jan Polak
2. THE ENIGMA OF THE INTERFACE - Ulrich M. Gross

14:00-14:30 – COFFEE BREAK

14:30-16:00 – Session VII - ABDOMINAL SURGERY (PSYCHIATRIC AUDITORIUM)


14:30-16:00 – Poster session III - INTERNAL MEDICINE, SURGERY AND PUBLIC HEALTH (PSYCHIATRIC AUDITORIUM – LOBBY)

1. GLUTEN-FREE DIET IN PATIENTS WITH GLUTEN ENTEROPATHY - Martin Krumov, I. Ivanova
2. MORPHOLOGICAL FEATURES OF UTERINE LEIOMYOMA FOLLOWED BY ADENOMYOSIS - Merey Kemelbekova, Aigul Sapargalieva
3. NON-ALCOHOLIC FATTY LIVER DISEASE. EPIDEMIOLOGY, NATURAL PROGRESSION AND TREATMENT OF THE DISEASE - D. Kehayov, Havalova A.
4. HISTOMORPHOLOGICAL CHARACTERISTICS OF TAENIARHYNCHUS SAGINATUS (TAENIA SAGINATA) AND ASCARIS LUMBRICOIDES - Kristian Yeremiev, Tatyana Cvetkova, Stoyan Pavlov, Kalina Stoyanov
5. A REVIEW OF DRUG-INDUCED SIALADENITIS - Atanas Kuzmanov, Vasilena Kuzmanova, Stefka Valcheva-Kuzmanova
6. LACRIMAL GLAND DYSFUNCTION IN SJÖGREN’S SYNDROME - Christiyan Vasilev, Liliya Ilieva, Y. Manolova
7. PARENTAL ANXIETIES RELATED TO COMMON GAIT PROBLEMS IN CHILDREN - S. Yanakieva, M. Raykov, M. Yanakiev, M. Avdzhiyska, D. Raykov
8. RADIOLOGICAL FEATURES OF FOCAL NODULAR HYPERPLASIA IN CHILDREN - S. El-Shemheri, Ts. Mancheva, B. Balev, N. Rasheva, M. Georgieva
10. SMOKING CESSATION AND POSTPARTUM DEPRESSION - Lora Nikiforova, Radoslav Rachkov, Dinnar Yahya, Velina Kerekovska, Simeona Zhivkova, Miroslav Eftimov
11. EVALUATION OF COMPLICATIONS OF FUNCTIONAL ENDOSCOPIC SINUS SURGERY - L. Ilieva, Y. Stoyanova, G. Georgiev, D. Ivanova, N. Sapundzhiev
12. NURSE PARTNERSHIP AND CARE OF PATIENTS WITH DEMENTIA - B. Blagova, Okean Kostov, Diana Paskaleva
13. THE INTEGRATED APPROACH OF THE NURSE TOWARDS PATIENTS ON HEMODIALYSIS - D. Paskaleva, B. Blagova, Okean Kostov
14. THE ROLE OF THE NURSE IN TAKING CARE OF PATIENTS WITH CARDIOVASCULAR DISEASES - S. Tufkova, B. Blagova, Okean Kostov, Diana Paskaleva
15. ELECTRONIC PRESCRIPTION – ESSENCE, OBJECTIVES AND PLACE IN THE HEALTH SYSTEM - St. Kochev, S. Galeva, V. Belcheva, E. Grigorov
16. DISLOCATION AFTER TOTAL HIP ARTHROPLASTY - RISK FACTORS AND REDUCTION OF THE COMPLICATIONS AFTER REVISION - Veselin Marinov, Stanislav Morfov, Plamen Minchev
17. VEGETARIANISM AND VEGANISM – INFLUENCES ON CHRONIC DISEASES - Lydia Blank, Karina Spechter, Ruzha Pancheva
18. TIME OF CLOSURE OF PHARYNGOCUTANEOUS FISTULA FOLLOWING LARYNGECTOMY – B. Todorova, D. Ivanova, K. Milcheva, P. Petrov, N. Sapundzhiev
20. THE ROLE OF THE NURSE IN CASES OF PERITONITIS SURGERY PATIENTS - O. Kostov; D. Paskaleva; B. Blagova
21. QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY AGE AND SEX FROM AN EQ-5D STUDY - Ivan Atanasov, Venelina Dudulova, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskrov, Rumen Stefanov

22. QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY INCOME FROM AN EQ-5D STUDY - Venelina Dudulova, Ivan Atanasov, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskrov, Rumen Stefanov

23. QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY EMPLOYMENT STATUS FROM EQ-5D STUDY - Ivan Atanasov, Venelina Dudulova, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskrov, Rumen Stefanov

24. INTRAVESICAL IMMUNOTHERAPY WITH BCG OF NON-MUSCLE INVASIVE BLADDER CANCER - Rostislav Kolev, Elitsa Kupenova-Koleva, Kiril Zhelyazkov, T. Ganev

25. MOBILITY OF THE NEXT HEALTH WORKFORCE GENERATION – A BRAIN DRAIN OR A BRAIN GAIN - Petya Sarkizova, Vanya Asenikova, Elena Nedyalkova, Aline Breidung, Dorian Westerdorf, Sven Alexander Eger, Todorka Kostadinova, Maria Rohova, Nikolina Radeva

22:00 - BSYSB PARTY – HORIZONT CLUB

APRIL 10, 2016 SUNDAY - Medical University of Varna

09:30-10:00 MORNING COFFEE

10:00-11:30 – Session VIII – ORTHOPEDICS (AUDITORIUM 2)

1. CLINICAL CASE OF FLOATING KNEE WITH POPLITEAL ARTERY INJURY - Ozge Ozdemir, Yavuz Saglam
3. PRIMARY LIGAMENT REPAIR AS A MAIN WAY OF TREATMENT OF THE ACUTE LATERAL MALLEOLAR LIGAMENT INSTABILITY - Konstantin Ganchev, Miroslav Raikov, Blagovest Belchev, Preslav Penev
4. CONSERVATIVE TREATMENT OF POST-TRAUMATIC SINUS TARSI SYNDROME - Blagovest Belchev, Konstantin Ganchev, Miroslav Raikov, Preslav Penev
5. ARTHROSCOPICALLY ASSISTED FRACTURE FIXATION OF EMINENTIA INTERCONDYLICA IN CHILDHOOD - Dimitar Valentinov Dimitrov, Valentin Dimitrov Dimitrov, Dimitar Raikov
7. SOFT TISSUE CONSOLIDATION AFTER A DISLOCATION OF THE HIP JOINT – A COMPLICATION AFTER TOTAL HIP ARTHROPLASTY - Stanislav Morfov, Veselin Marinov, Plamen Minchev
9. REVIEW OF KNEE ARTHROSCOPY PERFORMED UNDER DIFFERENT TYPES OF ANESTHESIA. IS LOCAL ANESTHESIA A VIABLE OPTION? - Venelin Petrov, Vanyo Vezirov, Georgi Galev, Evgeni Haritov

10:00-11:30 – Poster session IV - DENTAL AND ORAL MEDICINE (AUDITORIUM 4)

1. REPLANTATION OF AVULSED PERMANENT TEETH OF CHILDREN – SUCCESSFUL TREATMENT AND THE RELATED FACTORS - Slavena Georgieva, Tsvetalina Gerova, Ralitsa Yotsova, Plamena Georgieva
2. ORAL LEUKOPLAKIA. ETIOLOGY, CLINICAL PRESENTATION, DIFFERENTIAL DIAGNOSIS AND TREATMENT – M. Kafadarov, A. Havalyova, D. Kehayov, N. Nikolov
3. THE IMPACT OF GOOD ORAL HYGIENE ON DENTAL CARIES ONSET - A SOCIAL STUDY - T. Marinov, M. Stoykov, A. Varbanova, S. Chokanov, M. Doichinova, S. Angelova
5. THE IMPACT OF GOOD, PROPER ORAL HYGIENE ON THE NUMBER OF MISSING TEETH – A SOCIAL STUDY - S. Chokanov, T. Marinov, M. Stoykov, A. Varbanova, M. Doichinova, S. Angelova
7. PULP REGENERATION WITH THE HELP OF TISSUE ENGINEERING - Izabela Trifonova, Vanesa Katunzi, Daniel Rachev, Desislav Dobrev
8. INDICATIONS FOR SURGICAL REMOVAL OF MANDIBULAR THIRD MOLARS: ANALYSIS IN DECISION MAKING - Vanesa Katunzi, Izabela Trifonova, Daniel Rachev, Desislav Dobrev, Lilia Ilieva
9. KNOWING EACH OTHER BETTER – STUDENTS AND TEACHERS - ACHIEVING EXCELLENCE IN DENTAL EDUCATION - Hristo Naydenov, Vesselina Liondeva, Sophia Stamenova, Yoana Brussarska, Atidzhe Remzieva, Lydia Katrova
10. TITANIUM IMPLANTS – WHAT MAY THEY CAUSE TO YOUR BODY? - B. Valkov, O. Spanov, S. Ibishev, Ch. Madjova
11. LEUKOPLAKIA AS A PREMALIGNANT CONDITION IN SMOKERS - Radina Ivanova, Krasimir Todorov, Dimo Dimov, Yana Kichanova, Georgi Iliev

11:30-13:00 LUNCH

13:00-14:30 – Session IX – SURGERY (AUDITORIUM 2)

1. CRYOABLATION - THE MOST MODERN METHOD FOR SURGICAL TREATMENT OF ATRIAL FIBRILLATION - Simona Panteleymonova, Ani Raynova, Svetla Chilikova; P. Panayotov
2. FOURNIER GANGRENE – A RARE, UNPOPULAR BUT DANGEROUS DISEASE - Ts. Tsekova, A. Gabarski, P. Vladova, Sergey Iliev, Georgi Iliev
3. LOWER LIP RECONSTRUCTION - Pavel Georgiev, Ani Ivanova, Ilian Georgiev, Christian Kanazirev
5. SOCKET-SHIELD TECHNIQUE IN DENTAL IMPLANTOLOGY - Oktavian Spanov; Selim Ibishev; Boris Valkov

13:00-14:30 – Session X - OB/GYN, PEDIATRICS AND INFECTIOUS DISEASES (AUDITORIUM 3)

1. OUTBREAK OF THE ZIKA VIRUS DISEASE AND ITS COMPLICATIONS - Z. Kasimova, D. Tsankova, M. Avdzhiyska, G. Tsankova
2. PREVALENCE OF RUBElla IGG ANTIBODIES: AN EPIDEMIOLOGICAL ASSESSMENT - B. Ivova, S. Marinova, Ju. Miroslavova, M. Rachev, M. Karcheva
3. FUTURE TRENDS IN THE TREATMENT OF HEPATITIS C - Paola Nikolay Kulicheva, Liliya Emilova Raeva, Diana Todorova Gancheva-Tomova Medical
4. CHLAMYDIA AND FEMALE STEROID HORMONES - S. Nikolaeva, E. Kovachev, S. Anzhel, D. Tonkova, D. Kyuchukova, E. Kovachev
5. INCIDENCE RATE OF ENTEROBIOSIS AMONG CHILDREN, HOSPITALISED IN THE PAEDIATRIC CLINIC - M. Swamad, A. Emad, M. Kaiser, D. Kalmer, N. Yordanova, M. Kostovska, K. Tabakova
6. CESAREAN SECTION - BENEFITS AND RISKS - Ersin Ismail, Milena Nikolova, Neli Spasova
7. CESAREAN VERSUS VAGINAL DELIVERY: DOES IT IMPACT THE DEVELOPMENT OF ALLERGIES IN CHILDREN? - Annam Ahmad, Fotini Tsipou, Niarah Ahmad, Ruzha Pancheva

14:30 – 15:00 COFFEE BREAK
INTERNAL MEDICINE AND ONCOLOGY

APRIL 7, 2016 /Friday/
Medical University of Varna
AUDITORIUM 2
08:00 – 09:30

IPILIMUMAB – MECHANISM OF ACTION AND IMPACT ON ADVANCED MELANOMA
I. Valkadinov, I. Karatsoli, B. Enikov, V. Bogdanova, S. Nizorkova, S. Gancheva, N. Conev
Medical University of Varna, Varna, Bulgaria

Ipilimumab is a major step forward in cancer immunotherapy and is approved for treatment of advanced melanoma. There are clinical trials for non-small and small cell lung carcinoma, bladder cancer and prostate cancer. There is also an ongoing clinical trial for a combined therapy with Nivolumab (human IgG4 anti-PD-1 monoclonal antibody) and Ipilimumab.

The drug is a human monoclonal antibody (mAbs) IgG1κ which is specific for CTLA-4 (Cytotoxic T-lymphocyte associated antigen type 4), an inhibitory receptor on T-cells. CTLA-4 is a homologue of CD28, but has a higher affinity for its ligands B7.1(CD80) and B7.2(CD86) expressed on antigen presenting cells (APCs). When ligated it generates a series of intracellular reactions leading to T-cell downregulation. The mAbs, though, have a greater affinity for CTLA-4 than B7 does, leading to its competitive inhibition. CTLA-4 appears to be the main negative regulator of T-cell-mediated antitumor immune response.

The said response is targeted at unresectable or regional (stage III) and distant metastatic (stage IV) melanoma. Adjuvant therapy indications include complete resection with or without total lymphadenectomy. Patients treated with Ipilimumab have an increased overall survival rate, but usage is restricted because of its high cost and severe immune-related adverse events (IRAEs). They are related to the mechanism of action of Ipilimumab and are autoimmune in nature. Most of these side effects subside with appropriate clinical management. IRAEs include dermatitis, enterocolitis, hepatitis, nephritis, hypophysitis and other.

A REVIEW OF DRUG-INDUCED HYPERTHERMIA
Niarah Ahmad, Dominic Fazel, Annam Ahmad, Stefka Valcheva-Kuzmanova
Medical University of Varna, Varna, Bulgaria

Hyperthermia is a state in which the body temperature is above normal. Some drugs can cause excessive internal heat production leading to drug-induced hyperthermia (DIH).

The purpose of this report was to review the current literature describing drugs which can cause hyperthermia and to discuss the possible mechanisms of this adverse effect.

To achieve this purpose, articles mainly from Pubmed were researched.

The review of the literature showed that there are five major DIH syndromes: 1) Neuroleptic malignant syndrome due to antipsychotic medications, 2) Serotonin syndrome due to selective serotonin reuptake inhibitors, monoamine oxidase inhibitors, etc., 3) Anticholinergic poisoning due to numerous medications and plants such as sedating antihistamines, atypical antipsychotics, anticholinergic plants, tricyclic antidepressants, particular muscle relaxants and some antiepileptics, 4) Sympathomimetic poisoning due to psychostimulant drugs, and 5) Malignant hyperthermia due to exposure to volatile anesthetics.

The drugs can work in various ways for example interfering with heat dissipation peripherally, increasing the rate of metabolism, evoking a cellular or humoral immune response or damaging tissues.
With emerging evidence that hyperthermia causes multi-system effects and can lead to death, increased effort should be made to identify the cause of the temperature and understand the mechanisms better.

**IMPLICATION OF ENVIRONMENTAL FACTORS IN THE DEVELOPMENT OF NEOPLASMS**

K. Naydenova¹, M. Ivanova¹, H. Milev¹, G. Peev¹, George Miloshev², I. Yordanova³, N. Ivanova³, R. Micheva³

¹Medical University - Pleven, Pleven, Bulgaria
²Institute of Molecular Biology “Roumen Tsanev”, Bulgarian Academy of Sciences
³University Hospital for Active Treatment – “Dr. Georgi Stranski”- Pleven, Pleven, Bulgaria

The epigenetic mechanisms of oncogenesis are associated with a wide variety of environmental and nutritional factors. In our study we are concentrating on the influence of food ingredients, additives and colors and the exposure to occupational hazards, which are scientifically proven to lead to the development of neoplasms.

Our research is based on scientific journals, medical sources including books, articles and statistical analysis. We had access to the database with the most common cases of tumor formations associated with work occupation of the department of professional diseases, University Hospital for Active Treatment – “Dr. Georgi Stranski”- Pleven. We were also consulted by specialists about the pathological and genetic mechanisms of neoplasia and the influence of environmental factors on oncogenesis.

Physical interactions, chemical substances and biological carcinogens, combined with the emergence of epigenetic changes, can lead to aberrations in the cellular regulations of signal transduction. The resulting effects - apoptosis or cancerous proliferation may be prevented in the context of the reversible character of the epigenetic alterations unlike the genetic mutations.

This study is a review of the factors mentioned above and their potential effect on the cancer-molecular disease and the prevention from the latter.

**MICROSTRUCTURAL EVIDENCE OF KERATOPATHY IN DIABETES**

V. Sheherov, V. Ivancheva, CN Grupcheva

Medical University of Varna, Varna, Bulgaria

The purpose of this work is to examine the microstructural changes of the cornea in eyes of patients with type 2 diabetes, using laser scanning confocal microscopy (LSCM).

The study included sixty eyes of 30 patients with type 2 diabetes, examined clinically and by LSCM. Results were compared with age-matching subjects without eye disease (control group n=60 eyes). Qualitative and quantitative analysis was performed.

In both of the examined groups, the density in the midstroma was significantly lower than in both the anterior stroma and the posterior stroma (P<0.02). The cell density in the basal layer of diabetic patients was significantly lower than in healthy controls (-15.0%, P<0.0004). In the other layers, no significant differences between both groups (P>0.07) were observed. The number of subbasal nerve fibre bundles was significantly lower in diabetics compared to controls. In diabetic corneas we also observed increased tortuosity, thickened nerves, and irregularities. We observed very highly reflective cells in close vicinity to subbasal nerves, the number of which was significantly higher in diabetic than in healthy corneas. At the level of stroma, we found undulated structures, presumed degenerated or pathologically regenerated nerves, as well as microdots and larger deposits, consisting of highly reflective head and vague tail. Endothelial cells also had qualitative changes.

Keratopathy is a serious, but often neglected ocular complication of diabetes. Corneal confocal microscopy is a rapid, non-invasive in vivo clinical examination technique which accurately defines the extent of corneal damage
in diabetic patients. This novel technology provides new possibilities not only in the research of diabetic keratopathy, but also could act as a surrogate measure of the severity of diabetic somatic neuropathy.

HYPERSENSITIVE C-REACTIVE PROTEIN (HSCRP) IN PATIENTS WITH CORONARY HEART DISEASE

R. Radushev, A. Akisheva, E. Dimitrova, R. Gencheva, E. Emin, M. Tzekova

Medical University - Pleven, Pleven, Bulgaria

Inflammation plays an important role in the progression and development of coronary disease (CD). The C-reactive protein (CRP) is an acute phase protein and is one of the inflammatory markers. It is normally present in the serum in small quantities, but it can be highly elevated during an inflammatory process. The elevated levels of its high-sensitive fraction (hsCRP) are a predictor of acute coronary syndrome (ACS) and have a prognostic value about the outcome of ACS.

A retrospective study had been held for the period 2010-2011 about 96 patients with ACS, treated in Second Cardiology Clinic of University Hospital – Pleven.

The study was documentary – based on information from patients’ medical records and data from the journals of the clinic. Information from the available medical literature had been used for interpretation of the results.

The data from the study shows higher frequency of development of ACS among people above 60-years-old and a minimal difference in the morbidity among men and women. It was found that regardless of the distribution by gender and age, the levels of hsCRP are higher in patients with ACS with complications in the acute period. In patients with ACS the elevated levels of hsCRP are connected with more unfavorable near and long-term (6-month) prognosis.

HsCRP is a highly sensitive marker, which can be used with the complex treatment of hospitalized patients with ACS in mind. HsCRP is a unified and stable marker, which is not influenced by factors such as gender and age, which proves its value in early diagnosis and on-time treatment of cardiovascular incidents.

LASER TREATMENT OF SPIDER VEINS

A. Yancheva, B. Yosifov, A. Angelov

Medical University of Varna, Varna, Bulgaria

Varicose vein disease of the lower extremities affects approximately 37% of adults, prevailing in females. The pathological factor is the inherent weakness of connective tissue. Characterized by uneven expansion and “serpentine” folding of the subcutaneous leg veins. The presented case is of a 40-year-old woman, who showed a cosmetic stage (by Kistner classification) of the disease. It manifested in the appearance of spider veins in the thigh.

Endovenous laser therapy (EVLT) is a minimally invasive method for varicose veins treatment. In addition to intravenous ablation, a new laser tip for transcutaneous treatment of varicose vessels has been introduced into practice. The wavelength used with this patient was 1470 nm.

The wavelength of 1470 nm showed significantly better maximum absorption on the part of the water molecule, i.e. in the vein wall structure and minimal by hemoglobin. The procedure is quite simple, not requiring anesthesia—only slight cooling with ice. According to operative protocol, the procedure should be performed on the legs with 4 watts of power. The laser beam was directed vertically at the center of the spider veins. During the procedure a laser impulse was applied every 1-2 mm. All changes of the vein and skin were photographically documented. The aesthetic end result could be seen in 4-5 weeks. Additional treatment or compression of the legs was not necessary.

The obtained satisfactory results allowed us to conclude that transcutaneous treatment of small varicose veins is a good alternative for their removal by microsclerosis.
INTERMITTENT FASTING AND ITS MOST SIGNIFICANT EFFECTS ON THE ORGANISM
D. Yahya, D. Dimov, L. Nikiforova, R. Rachkov
Medical University of Varna, Varna, Bulgaria

Intermittent fasting is a pattern of food intake that consists in alternating between periods of eating and fasting from 10 to 24 or more hours in a row, for one or several days each week. Not only is it one of the latest “trends” amongst bodybuilders and healthy lifestyle advocates but also food for thought and an inspiration for many scientific researches carried out and published through the years.

Review of the current literature in Pubmed and Nature was done, with the use of keywords: intermittent fasting, energy restriction, metabolism. Intermittent fasting was researched in regard to human and animal trials and other scientific publications suggesting significant information on this topic.

Our research showed that the method decreases food intake and body weight over time and is also associated with decreased risk of cardiovascular disease. It is very likely that intermittent fasting has negative effect on the proliferation of dormant tumors. In addition, it is proven to have a neuroprotective effect concerning oxidative stress, hippocampus-related learning and memory, thus affecting brain function and structure in a particular pattern.

Based on the findings, intermittent fasting is a promising and quick acceptable approach to many diseases as a prophylaxis, treatment or preferably as a way of prevention. However, further scientific work and research on this topic are of major importance for all the theories to be proven and approved for daily medical practice.

THE POTENTIAL HEALTH BENEFITS OF QUINOA ON THE HUMAN ORGANISM
T. Popov, O. Bayrak, N. Aliadinova, R. Georgieva, K. Kostadinova, Stanislava Hadzhieva
Medical University of Varna, Varna, Bulgaria

Quinoa, a plant native to South America, has been recently singled out by the Food and Agricultural Organization of the United Nations (FAO) as a food with high nutritional content due to its high concentration of protein and essential amino acids, dietary fiber, unsaturated fats, anti-inflammatory phytonutrients and various vitamins and minerals.

A thorough survey of the literature on the nutritional composition and effects of quinoa on people was performed using compiled data, gathered from articles, an abstract from Science Direct and a study by Harvard University, published in the journal BMC Medicine.

Researchers from the Harvard Public School of Health studied more than 367,000 people, across 8 different states in America, recording their diets and health status for an average of 14 years. The results show that adding quinoa to your daily meal reduces the chance of premature death from cancer, cardiovascular disease, respiratory disease and diabetes by 17%. Recent surveys prove its impressive biodiversity and confirm its bio-active compounds - Genistein, Quercetin, Kaempferol, Epigallocatechin - phenolic substances with antiangiogenic properties and cancer cell proliferation suppression effect and saponins - plant glycosides, which induce apoptosis in tumor cells.
The interest in quinoa tends to increase as many findings about its nutrient richness are being made. The fact that it is gluten- and sugar-free, high in anti-oxidants and bio-active compounds, has no cholesterol, makes it a perfect combat food against heart disease, diabetes, cancer, atherosclerosis and other socially significant diseases.

THE 21ST CENTURY DIAGNOSIS
Boryana Atanasova, Marina Atanasova, Petar Ivanov
Medical University - Pleven, Pleven, Bulgaria

"Your food may be poison but also medicine." - Hippocrates or "You are what you eat". Environment, food and everyday life are what establishes us as a person. Globalization in recent years has triggered a new era in human diseases. Stress, panic, eating disorders, autism and/or even infertility are only some of the new diagnoses. This brings together the various specialists in medicine and science (doctors, scientists, researchers, psychologists and even health managers) to develop their research skills in the direction of prevention and decreasing of these "new" diseases. In Bulgaria mortality from CVD was 68 % for 2014, while the diagnosis of autism worldwide rose by some 600 % over the past decades, placing it in the leading positions in mental health. Functional foods and recent medical technology play an important part in helping the diagnosis.

The purpose of this work is to summarize the data from online based scientific publications dealing with non-genetic factors in the etiology of "new" diseases.

Conclusion: Stress is the scourge of the 21st century. The health system and its policy must be one step ahead in order to promote a new era of healthy and rational nutrition. Intervention programs aimed at the population, would be effective strategies for reducing the risk in diagnosing.

PHARMACOLOGY - THE LONG WAY FROM ANCIENT CURES TO MODERN TECHNOLOGIES
J. Kitanovska, M. Ivanova, G. Stavreva, R. Krustev
Medical University - Pleven, Pleven, Bulgaria

Even in the age of Hippocrates and his followers up through the Middle Ages, physicians knew that there was not an act of divine providence in any disease. It was well known that it was simply a condition, which any experienced doctor could cure back then with the help of natural medicine. What about nowadays? Well, the speed of development of this science and industry is an amazing phenomenon. From its very beginning when the main purpose of pharmacy and its endeavour was to discover medicinal agents that can cure diseases up to today when we are able to apply adequate and targeted therapy that could not only prevent a variety of medical complication, but actually save lives.

For our research we used a wide spectrum of sources including many medical and historical articles, well-known medical journals, books and encyclopedias and, of course, the information and the knowledge of our academic mentors.

This study goes through the main stages of pharmacology development and analyzes the huge events from its history. The result from it, we believe, would be retrospective awareness and, as we know, the key for the future is the past. The fascinating development of this science from the magical potions and herbal concoctions of the ancient times to the grandiose industry that it became in the 20th century represents a significant part of man’s cultural evolution.
EMERGING OF THE ZIKA VIRUS DISEASE – CLINICAL AND EPIDEMIOLOGICAL OVERVIEW
Hikaru Iwata, Tsonko Paunov, Y. Zayakova, B. Valeriev
Medical University of Varna, Varna, Bulgaria

Zika virus (ZIKV) is a mosquito-borne disease closely related to yellow fever, dengue, West Nile encephalitis and Japanese encephalitis viruses. It is from the Flaviviridae family, identified in 1947. The first epidemic was registered in the Zika Valley in Uganda 1947. It causes a mild disease with fever, erythema and arthralgia. Interestingly, vertical transmission to the fetus has not been reported previously, although two cases of perinatal transmission, occurring around the time of delivery and causing mild disease in the newborns, have been described. Sporadic human cases were reported in Asia and Africa until 2007. Later outbreaks were registered in French Polynesia in 2013, in Brazil and other South American and Central American countries in 2015. Today we associate ZIKV infection with pregnancy, Guillain-Barre Syndrome and with increased cases of babies born with microcephaly in Brazil. These features give reason to include ZIKV infection to the group of emerging (re-emerging) diseases. The World Health Organisation (WHO) states that up to 46 countries have reported some level of evidence of Zika infection and that 130 countries are home to the Aedes aegypti mosquito which carries the virus, meaning the eventual spread of the disease could be widespread and rapid.

The literature was systematically searched for published articles. These were identified using a keyword research of electronic databases.

There are already a lot of imported cases, even in Europe, such as pregnant woman presenting with fetal anomaly in Slovenia. Like the Dengue and the Yellow fever, Zika virus can easily be introduced to the countries where the vector of transmission exists, which is now not only Africa but tropical and subtropical regions throughout the world.

Our goal here is to present information and alert the healthcare professionals with clinical and epidemiological features of this reemerging infection.

DENTAL FILLINGS- CONSEQUENCES OF OUR MISTAKES
Ani Ivanova, Iliyan Georgiev, Joseph Zhechev, Mehmed Mehmedov, Martina Markova
Medical University of Varna, Varna, Bulgaria

A filling is a way to restore a tooth damaged by decay back to its normal function and shape. When a dentist, restores a tooth he or she first removes the decayed tooth material, cleans the affected area, and then fills the cleaned out cavity with dental filling material.

By closing off spaces where bacteria can enter, a filling also helps prevent further decay. Materials used for fillings include gold, porcelain, composite resin - tooth-colored fillings and amalgam - an alloy of mercury, silver, copper, tin and sometimes zinc. Proper silage is key for long lasting effect.

Constant pressure from chewing, grinding or clenching can cause dental fillings to wear away, chip or crack. If the seal between the tooth enamel and the filling breaks down, food particles and decay-causing bacteria can work their way under the filling. If the filling is large or the recurrent decay is extensive, there may not be enough tooth structure remaining to support a replacement filling - crown. New fillings that fall out are probably the result of improper cavity preparation, contamination of the preparation prior to placement of the restoration or a fracture of the restoration from bite or chewing trauma. Older restorations will generally be lost due to decay or fracturing of the remaining tooth.

Good oral hygiene and full clearance of the necrotic tissue with proper material adapting are the key steps in proper application of dental fillings.
SNORING – ETIOLOGY AND TREATMENT
Stela Petrova, Dimitar Koemdzhiev, Martin Stefanov, Petya Petrova, K. Kerimov
Medical University of Varna, Varna, Bulgaria

Snoring is the sound produced by vibration of the upper airway while sleeping. Any membranous part of the airway including the tongue, soft palate, uvula, tonsils and pharynx can throb. When sleeping muscle tone throughout the whole body decreases. This relaxation of the structures in the airway causes obstruction of the airflow and therefore there is turbulence resulting in the snoring sound.

People snore for different reasons. Some of the conditions or factors that promote muscle relaxation or a build-up of fatty tissue are:


There are two types of treatment:

Self-help cures to stop snoring include lifestyle changes such as weight loss, exercise, quitting smoking, reducing alcohol intake, sleeping medication and sedatives, and bedtime remedies - clear nasal passages, good bedroom humidity, changes of the sleeping position, sleeping on the side instead of on the back.

Medical cures and treatments for snoring include Continuous Positive Airway Pressure (CPAP), surgery, Laser-assisted uvulopalatoplasty (LAUP), Palatal implants, Somnoplasty etc.

In short, snoring causes sleep deprivation, irritability, decreased attention and concentration, lack of focus, etc. It can also be a risk factor for hypertension, heart attack and stroke.

DIETARY SUPPLEMENTS OF PLANT ORIGIN – EFFECT, QUALITY, CONTROL
Katya Nedeva, Viktoria Ivanova, Svetlana Fotkova
Medical University of Varna, Varna, Bulgaria

Dietary supplements of plant origin are preferred by many people nowadays. There is a large diversity among them and pharmaceutical manufacturers constantly produce new and different kinds. At the same time the control on their production is reduced or absent. The aims of this research are to find how much of the quantity of active substance, contained in these medicines, corresponds to the quantity shown on the package, and if manufacturers have selected the appropriate technological methods for extracting them from plants and their inclusion in the appropriate drug form.

Pharmaceutical analysis on dietary supplements of plant origin was made; also an inquiry among the citizens of Varna of different ages about their consumption of such drugs was conducted and the data was processed. Different sources were used to gather information about the researched topic.

The laboratory studies show differences in the content of the active substance in different medicines and the quality of individual producers.

The control on the production and the placing into service of dietary supplements of plant origin is very low and it needs to be improved to provide better quality of medicines used by people.
INTERNAL CAROTID ARTERY-MORPHOLOGICAL ANOMALIES OF THE COURSE AND CLINICAL IMPORTANCE
Hr. Nikolov, Ir. Bogeva, M. Kokleva, Sv. Pencheva, E. Ivanov
Medical University – Pleven, Pleven, Bulgaria

The origin and course of the carotid arterial system in the superior mediastinum and neck are remarkably constant. Elongation of the internal carotid artery (ICA) can result in tortuosity, coiling, and kinking. A tortuous ICA is an elongated ICA with an exaggerated C- or S-shaped curving. Coiling is defined as ICA elongation causing a circular configuration. Kinking is a variant of coiling and describes an elongated cervical ICA segment with an angulation less than 90°. Although variations are rare, they can have important implications. The aim of our present study is to discover the causes and to evaluate the clinical relevance of morphological anomalies of extracranial ICA and if it is correlated with stroke.

During routine anatomical dissections, 6 fixed bodies were examined. Pathology was detected on two of them. The findings that we observed were photographed. Two types of abnormalities were discovered in the course of extracranial ICA: 1) Coiling of ICA; 2) Kinking of ICA with concomitant variation in origination of vertebral artery (VA).

Elongation and angulation of the carotid arteries produce changes in the laminar flow, that lead to swirls which usually evolve all the way to strictures and stenosis. Although abnormalities in course and geometry (tortuosity, kinking, and coiling) of the internal carotid arteries (ICA) are commonly identified, their etiology and relationship with stroke and stroke risk factors remain unclear.

THE EVOLUTION OF THE SIXTH TOOTH
Iliyan Georgiev, Ani Ivanova, Mehmed Mehmed, Joseph Zhechev, Martina Markova
Medical University of Varna, Varna, Bulgaria

The function of human teeth is mechanically breaking down food by cutting and crushing it in preparation for swallowing and digestion. We are going to examine the life of first molars which are the most pressured teeth while eating.

During the examination of several molars amongst our patients we noticed the changes that occur with first molars, the teeth that carry the highest chewing pressure.

First molars tend to suffer from cavities more often than other teeth. The chronic high pressure administered causes them to get worn out sooner, suffer from approximal cavities, leading to the making of dental fillings, later on, root canal treatments, crowns and eventually extraction. Since the sixth teeth are one, if not the most important, functional elements in the action of chewing it is important to know what leads to their loss. What was most notable during this research was that the leading cause for problems with the sixth teeth was tooth decay, which on its own is due to poor oral hygiene – most often the lack of use of dental floss.

The sixth tooth is the center of the the highest chewing pressure. It is retentive for food and often suffers from tooth decay. The evolution of the sixth tooth is:
1. Dental filling, 2. Partial crown, 3. Total crown, 4. Extraction of the tooth leading to bridges, implants, partial and eventually total dentures
CASE REPORTS
Medical University of Varna
AUDITORIUM 2
10:00 – 11:30

SPINA BIFIDA AND ITS CONSTELLATION OF COMPLICATIONS
- AN AUTOPSY REPORT
J. Kerz, G. Stoyanov, D. Velkova, N. Petrova
Medical University of Varna, Varna, Bulgaria

Spina bifida is a severe birth defect condition, characterized by the incomplete fusion of the vertebral arches, spinal ligaments and muscles, leading to neurological deficit due to mechanical damage to the spinal cord and predisposing to a number of complications. The condition, according to its underlying cause, form and severity, can be accompanied by a number of additional clinical symptoms.

A recently deceased nine-month-old male patient, suffering from spina bifida aperta, complicated with bilateral internal hydrocephalus, for which corrective surgery had been carried out, was referred for an autopsy at the Department of General and Clinical Pathology, Forensic Medicine and Deontology of the Medical University of Varna and in the “St. Marina” University Hospital, Varna, Bulgaria to establish the imminent cause of death and the attributing factors.

The autopsy revealed that the main condition of spina bifida, complicated by hydrocephalus and brain matter atrophy, was also accompanied by lower extremity deformities, thymic involution and a generalized state of hypotrophy. Severe diffuse septic meningoencephalitis, bilateral septic pyelonephritis, with Seratia Marcescens isolated as a pathogenic factor and bilateral pneumonia were also detected as additional complications. As a result of the damaged central nervous system, impaired immune status, generalized hypotrophy and combined infections - brain edema, respiratory and cardiac failure had developed leading to the death of the patient.

The presented pathomorphological changes and their corresponding clinically diagnosed symptoms and syndromes represent one of the classical manifestations and progressions of spina bifida.

A FATAL CASE OF ANOREXIA NERVOSA – CASE REPORT
Catherina Shirokova, Savi Shishkov, N. Zgurova, N. Yanulova
Medical University of Varna, Varna, Bulgaria

Anorexia nervosa is a serious, life-threatening eating disorder, resulting in self-starvation and relentless pursuit of weight loss and thinness. Patients with such mental condition have a constant fear of weight gain and awareness of their body shape leading to extreme self-measures that are taken to prevent that. All these characteristics result in constant malnutrition and disturbance in all normal functions of the organism, making the condition one of the most serious among adolescents and young adults.

At the University Hospital “St. Marina” – Varna a 33-year-old woman was admitted urgently with extremely poor general condition. Due to her initial diagnosis, established as anorexia nervosa five years ago, she developed serious symptoms such as excessive weight loss up to 15 kg, malnutrition and cachexy, leading to episodes of unconsciousness. During her current hospitalization she was diagnosed with pseudomonas pneumonia and bilateral pleural effusions and continued to be treated with glucose and electrolyte infusions and IV antibiotics to correct her electrolyte status and infection.

Despite the combined efforts of gastroenterologists, neurologists, physiotherapists and reanimation team, the patient later died at the ICU department due to acute respiratory failure.

A required autopsy was performed and on macroscopic view the cachectic body and total reduction of body fat demonstrated consistency with the anorexia diagnosis. Later on during the autopsy, bilateral enlarged adrenal
glands were found caused by the hormonal imbalance aspects of the disease. After the microscopic and histological studies of the case, the conclusion was that the low blood proteins led to septic complications, pituitary inflammation and eventually - the death of the patient.

CARDIOVASCULAR MANIFESTATIONS OF ACROMEGALY – CASE REPORT
M. Avdzhiyska, M. Raykov, Z. Kasimova, E. Marinova, B. Kanazirev
Medical University of Varna, Varna, Bulgaria

Acromegaly occurs in 3–4 cases per million, it is one of the rare endocrine disorders. This disease occurs with increased secretion of growth hormone (GH), most often from a pituitary adenoma, which in turn, increases insulin-growth-factor-1 (IGF-1), which acts on organs promoting cell growth and development. Prior to the introduction of modern therapy, most patients (80%) diagnosed with acromegaly died from cardiovascular disease prior to the age of 60.

The aim of this case report is to demonstrate cardiovascular manifestations of acromegaly.

We present 44-year-old woman who was frequently hospitalized with complaints of dyspnea, easy tiredness, reduced physical capacity, high blood pressure, discomfort at the neck and the chest, and hoarse voice. She was with comorbidities, arterial hypertension and nephrolithiasis. Cardiomyopathy and developed chronic heart failure were detected from the performed imaging examinations. Thickened lips and enlarged glossa (glossomegaly), widely-spaced teeth (on the maxilla and the mandibula), without the typical enlarged extremities made an impression during the objective examination. Because of suspicion for acromegalic cardiomyopathy a screening examination of GH and IGF-1 that showed their high levels was made. Magnetic resonance imaging (MRI) with evidence for macroadenoma of the pituitary gland (somatotropinoma) was performed.

This case demonstrates that the diagnosis acromegaly is hard and late. Often cardiovascular symptoms are these which lead us to the right diagnosis and are important for the prognosis of the disease.

MANAGEMENT OF ABDOMINAL AORTIC ANEURYSM USING ENDOVASCULAR ANEURYSM REPAIR METHOD – CASE REPORT
Zhenya Marinova, Elena Ivanova, Roksana Tsvetanova, Chavdar Bachvarov, Georgi Todorov
Medical University of Varna, Varna, Bulgaria

Abdominal aortic aneurysms (AAA) are an important cause of death in the Western world and occur most often in Caucasian males over the age of 65. They are less common in women. AAAs are most often localized in the infrarenal and aortoiliac arterial segments.

We present a case report of a 64-year-old male patient who was admitted to the Urology Department with complaining about episodes of painless macroscopic haematuria. He was diagnosed with invasive urinary bladder carcinoma and underwent total cystoprostatectomy during which an abdominal aortic aneurysm was discovered. In this case instead of the traditional open surgery an endovascular aneurysm repair (EVAR) was performed.

A three-part stent graft was successfully implanted in the abdominal aorta and the two common iliac arteries under radiographic guidance.

Endovascular aneurysm repair (EVAR) is a minimally invasive, generally less painful method, which results in a lower risk of complications than traditional surgery and potentially improved survival rates. EVAR also allows the patient to leave the hospital sooner and to recover more quickly after undergoing the procedure.
ALCAPA SYNDROME – EXTREMELY RARE CONGENITAL HEART DISEASE IN AN ADULT

B. Yosifov, A. Boyadzhiev, A. Raynova, S. Panteleymonova, P. Panayotov, S. Chilikova
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Anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA) is an uncommon congenital heart abnormality. There are two types of ALCAPA syndrome: the infant type and the adult type. Nearly 90% of these patients would die within the first year of life and only a few survive to reach adulthood. In some cases the vessel collateralization is adequate and survival into adulthood is possible, a so-called adult-type ALCAPA. Diagnosis is extremely rare in living adults. Potential risks of the adult-type ALCAPA include myocardial ischemia, cardiomyopathy, chronic mitral regurgitation and the risk of sudden cardiac death.

This case report describes a 42-year-old female who complained of severe fatigue and shortness of breath at rest. An absolute arrhythmia in atrial fibrillation was diagnosed. Clinical examination, coronary angiography, trans-thoracic and transesophageal echocardiography, electrocardiography, chest X-ray and computer tomography were performed. Coronary artery bypass grafting, Cryo-Maze IV and mitral valve repair procedures were done in one surgery under cardiopulmonary bypass. The anomalous opening was corrected by suturing and the left internal mammary artery (LIMA) was harvested and reimplanted directly into the anomalous left coronary artery (LCA).

At discharge the patient was asymptomatic, in sinus rhythm, without mitral regurgitation and with increased ejection fraction.

Surgical correction soon after establishment of the condition is the treatment of choice. This approach provides good results even in the setting of severe left ventricular dysfunction and mitral regurgitation.

CASE REPORT OF A CHILD WITH EPIDERMOLYSIS BULLOSA AND ITS COMPLICATIONS AT ST. MARINA UNIVERSITY HOSPITAL

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Epidermolysis Bullosa (EB), is a rare genetic connective tissue disorder that affects 10 out of 1 000 000 people with higher frequency in Northwestern Bulgaria (2001). There are many genetic and symptomatic variations of EB, but all share the prominent symptom of extremely fragile skin that blisters and tears from minor friction or trauma. Internal organs and bodily systems can also be seriously affected by the disease.

The case report is about a one-year-old girl with epidermolysis bullosa. The literature research has been done in the epicsises of the patient and different databases: PubMed, Medscape, The Dystrophic Epidermolysis Bullosa Research Association of America (Debra of America), Debra Bulgaria, Acta Dermatovenerologica Croatica (ADC)

The patient has developed several of the complications which can appear as a result of the disease: multiplicity of blisters on her limbs, gastrointestinal disorder, frequent respiratory infections, tubulointerstitial nephritis, and malnutrition.

As people with EB cannot be fully cured, symptomatic treatment is the primary clinical focus. There are existing guidelines in some areas required to support the complete medical care of patients - oral healthcare, wound care, pain management, skin cancer and nutrition, infection control. However, there is a strong need of guideline development in others - esophageal dilation, eye care, anemia, renal diseases, hand surgery, social and physiological care. Clinical and academic research is being conducted in new therapies - stem cell transplantation, protein replacement and gene therapies.

A variety of complications arise in patients with inherited EB, varying across the major EB subtypes in their relative severity, frequency, and time of onset.
PYRIDOXINE-DEPENDENT EPILEPSY
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Pyridoxine-dependent epilepsy (PDE), also referred to as pyridoxine-dependent seizures (PDS) or vitamin B6 responsive epilepsy, is an extremely rare genetic disorder characterized by intractable seizures in the prenatal and neonatal age and resistant to most of the anti-epileptic medications, but responding to the administration of pyridoxine. The disorder was first recognized in the 1950s, with the first description provided by Hunt et al. in 1954. More recently pathogenic variants within the ALDH7A1 gene have been identified to cause PDE. Only around 100 cases of PDE have been described worldwide.

This is a case report of one-year-old patient hospitalized at the Pediatric Department of the University Hospital in Varna. The report includes information given from the relatives of the patient, clinical features, symptoms and laboratory data from the examinations, which were performed at the Pediatric Department of the Hospital.

This is a one-year-old boy. Birth history revealed delivery by Caesarean with birth weight of 3,100 kg. He had a perinatal asphyxia and the need for ventilation for respiratory distress. The baby required ventilator support. The patient had neonatal seizures which were treated unsuccessfully with Phenobarbital. In the view of recurrent seizures despite anti-epileptic medications the doctors started him on pyridoxine and the seizures subsided.

After the rapidly deteriorating neurological status with intractable seizures, resistant to anti-epileptic medications, a test with Pyridoxine was carried out due to suspicions of PDE, which were later proved right by DNA analysis.

MESENTERIC FIBROMATOSIS – DESMOID TYPE. CLINICO-MORPHOLOGICAL AND DIFFERENTIAL DIAGNOSTIC ASPECTS. A CASE REPORT.
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Mesenteric fibromatosis (MF) is a rare benign intra-abdominal lesion of desmoid type, which is characterized with myofibroblastic proliferation, locally aggressive growth with infiltration of abdominal organs, without metastatic potential. It can exist as diffusive, multifocal or nodular form. The last form is also known as desmoid tumor/fibromatosis. MF accounts for 0.03% of all neoplasms and less than 3% of all soft-tissue tumors. The incidence is from two to five cases per million per year and is often associated with FAP/Gardner’s Syndrome, trauma, Crohn’s disease, hyperestrogenic status and genetic predisposition.

The authors present a case report of a formation of mesenteric origin, histologically identical with MF, in a 26-year-old woman. The patient complains of enlargement of the abdomen, feeling of heaviness, discomfort and reflux, symptoms that date back 1-2 months. Radical surgical excision was recommended based on the aggressive growth process.

The surgical specimen was submitted for histological examination and immunohistochemical analysis for CD117, CD34, α-SMA, desmin, S-100 protein, β-catenin antibodies.

The pathomorphological examination exhibits a tumor mass with size of 30/30 cm that originates from the mesentery. Histologically, it is observed as an encapsulated fibroproliferative lesion consisting of spindle cells with infiltration in the small intestinal wall. Clinico-morphological and differential diagnostic aspects are discussed for this type of fibromatosis.

In our report we present a rare disease such as the mesenteric fibromatosis. The treatment of the mesenteric fibromatosis has a multidisciplinary approach with the lead role of the histological examination.
RECONSTRUCTIVE SURGERY OF THE MAMMARY GLAND

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A 41-year-old, female patient presented with impaired healing of a surgical wound after single-stage skin-sparing mastectomy and silicon prosthetic placement in the occasion of breast carcinoma. As a result of complications, formation of a defect along the anterior axillary line can be observed, in which the initial implant prolapsed. Its immediate removal is required and achieved and it is followed by radiotherapy. Five months after the operation breast reconstruction is performed on the patient. The placement of a new prosthesis requires the use of myocutaneous latissimus dorsi flap. This flap is well suited for dealing with poorly-vascularized or radiated defects, contour deformities following breast conservation therapy or for covering an implant. In the face of previous irradiation implants fair better with an overlying latissimus flap than without.

Using the latissimus dorsi muscle as a flap is an appropriate method for defect filling in breast reconstructive surgery. This flap is frequently combined with implant to enhance symmetry and to reduce capsular contracture. The latissimus dorsi flap/implant is a reliable method for breast reconstruction in cases such as skin-sparing mastectomy and is highly effective when dealing with the complications of the radiated breast.

ASYMPTOMATIC BILATERAL PRIMARY MEGAURETER IN 48-YEAR-OLD WOMAN – COMPLICATIONS, DIAGNOSIS AND TREATMENT

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Congenital ureteral anomalies are a common cause of morbidity in children and frequently require surgical intervention. Primary megaureter is the second most common cause of neonatal hydronephrosis. This abnormality can be asymptomatic for a long part of the patient’s life and sometimes it is found by accident. The aim of this case report is to underline the late clinical manifestation, the high risk of complications and the successful surgical treatment of congenital megaureter.

Materials and Methods: Our case of bilateral primary megaureter is in a 48-year-old woman – M.V.G. (medical record №825/January, 2013). The patient was admitted at the Department of Urology of 5th MHAT, Sofia, complaining from low-back pain and heaviness in both sides. Succusio renalis was positive on both sides. The ultrasonography demonstrated bilateral hydronephrosis I-II grade and parenchymal damage of both kidneys. The laboratory tests showed ESR-25.6mm/h and serum creatinine - 129μmol/l. Intravenous urography showed reduced renal function of both kidneys and bilateral dilated ureters. CT confirmed a bilateral hydronephrosis and megaureters.

On January 28, 2013 during the open surgery both ureters were found greatly dilated (d=30mm). Afterwards prosthesis and nonrefluxing reimplantation of both ureters were performed (surgical record №22/January 28, 2013). Histological examination (№881/January 29, 2013) of the wall of the ureter showed hypertrophy of the muscular layer, fibrosis and haemorrhage. The postoperative recovery was uneventful. Retrograde urogram showed stenosis of the right pyelo-ureteral junction.

Accordingly, we want to give prominence to the asymptomatic primary megaureters, the significantly increased risk of hydronephrosis and the possibility of successful surgical treatment at any age. Early diagnosis and surgical treatment can prevent kidney failure.
**NEUROPSYCHIATRY**

Medical University of Varna
AUDITORIUM 3
10:00 – 11:30

**SENSE OF HUMOR IN PATIENTS WITH SCHIZOPHRENIA**

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Schizophrenia is a mental disorder characterized mainly by positive symptoms (e.g. hallucinations, delusions, disorganized speech and behavior) due to hyperactive dopaminergic signal transduction and negative symptoms (e.g. reduction of emotional responsiveness, motivation and socialization) due to hypofrontality. The purpose of this study was to determine whether the hypofunction of the frontal cortex in schizophrenic patients could be associated with a loss of the sense of humor the center of which is located in the lower frontal lobe.

In this study 20 patients diagnosed with schizophrenia more than 5 years ago and 20 healthy individuals were investigated using the Multidimensional Sense of Humor Scale and evaluation of the respond to visual stimuli with entertaining and non-entertaining features. The MSHS is a 24-question multiple-choice self-report inventory. In order to evaluate the presence of negative symptoms we used Scale for the Assessment of Negative Symptoms (SANS).

After comparing the results, we have found that most of the healthy individuals feel confident about their sense of humor, while some of the schizophrenic patients appear to have lost their interest in socializing through jokes and feel uncertain about the importance of sense of humor as a social skill.

There are strong evidences that schizophrenia affects the sense of humor and also the self-perception of the patients in different ways.

**GLUTAMATERGIC AND DOPAMINERGIC NEUROTRANSMISSION AND THEIR ROLE IN NEUROPSYCHIATRIC ILLNESSES**

Y. Gerchev, S. Krasteva, M. Yaneva, D. Stoyanov, P. Marinov

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Understanding the interplay between the neurotransmitters dopamine and glutamate has become the highlight of several theories of neuropsychiatric illnesses, such as schizophrenia, depression, Parkinson’s disease and drug addiction. However, it is unclear how alterations in striatal dopamine could modulate glutamate concentrations in the basal ganglia. In this review, we examine the interactions and neurochemical alterations between dopamine and glutamate in various neuropsychiatric diseases. Also this review sought to determine the mechanism by which NMDA-antagonists may disrupt dopaminergic neurotransmission in, and cognitive functions associated with, the prefrontal cortex and to present the new directions in psychopharmacology about the treatment of schizophrenia and depression.

Articles from sciencedirect.com, scholar.google.com, pubmed.com.

There is a correlation between the glutamatergic and dopaminergic systems. Dysfunction in this neurotransmission might be the core of even more diseases than assumed today.

NMDA-type glutamate receptors appear to be a potential site for therapeutic intervention in schizophrenia, depression and drug addiction. Future research will be needed to find the link between glutamate and dopamine, their role in the pathophysiology of neuropsychiatric diseases and the possibilities for pharmacological treatment.
THE CORRELATION BETWEEN WORK AND LIFE AND ITS INFLUENCE ON BURNOUT AND DEPRESSION AMONG PHYSICIANS IN BULGARIA, POLAND AND SERBIA

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Our aim was to evaluate the occurrence of depression and work engagement among physicians in three countries with diverse economies; analyse the factors affecting the levels of work engagement, focusing on the interactions between the workplace and the family life.

The surveys were carried out in Bulgaria, Poland and Serbia on 417 physicians of differing specialties, with the format of data collection being questionnaires of varying formats. The respondents were asked to answer 34 questions including demographics. With the permission of authors, three scales were incorporated into our study. The first one was the 9-items Utrecht Work Engagement Scale consisting of three subscales: absorption (UWES-A), vigour (UWES-V) and dedication (UWES-D). The second one was Survey on Work-home Interaction NijmeGen (SWING) based on four subscales: positive work-home interactions scale, negative work-home interactions scale, positive home-work interactions scale and negative home-work interactions scale. The third was Beck’s depression inventory.

There was no statistically significant difference between female and male respondents in all of the studied issues nor was there any between the ages of respondents and the outcomes of the completed scales. There was however a significant impact on the responses when it came to the physicians’ countries of origin.

The differing scales used to measure and gauge the level of burnout and depression per se in the physicians were just another instrument to try and vocalise in numbers the feelings of these individuals. We could only understand to a certain level the real impact work has on us. There is still much to be discovered.

DIFFERENT DIAGNOSTIC TECHNIQUES IN ALZHEIMER’S DISEASE

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Alzheimer’s disease is one of the most common causes of dementia. Alzheimer’s disease has a profound impact on the quality of life and the society. Because of the complicated procedure of gaining human brain examples, the investigation of AD is limited and invasive. The strategies are focused on detecting early signs of pathological changes of neurotic activity and morphology. That is why the efforts in finding effective treatments are essential. There are numerous physical methods used to assist in the diagnosis of Alzheimer’s disease such as: Positron Emission Tomography, Single Photon Emission Computed Tomography, and Magnetic Resonance Imaging. These methods play important roles during the mild cognitive impairment stage of Alzheimer’s disease by differentiating it from other types of dementia and predicting the conversion from mild cognitive impairment to Alzheimer’s disease as well as assessing therapeutic indications and their effects. Developments in nanotechnology are beginning to exert a significant impact in neurology, and are currently being applied to early Alzheimer’s disease diagnosis and treatment. The advancement of these methods has markedly enhanced the value of the analysis of dementia. In conclusion the unceasing experiments which are connected in the development of effective treatments for neuronal degeneration diseases are focused on methods associated with early diagnosing procedures.
THE ORGANIZATION AND DYNAMICS OF VASCULAR INNERVATION

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Blood vessels are supplied by sympathetic, parasympathetic and sensory nerves. For many years descriptions have concentrated on sympathetic nerves but now the presence of the other subpopulations of the autonomic nervous system has been confirmed for several vessels including cerebral arteries. Nerves are generally confined to the adventitia where they form a multilayered plexus. The deepest nerve fibers lie at the advential-medial border and are functionally important as is indicated by their close topographical relationship with smooth muscle cells. More superficially located nerves had been thought to be nerves of passage only but some have locally functional importance, e.g. sensory fibers in the internal carotid arteries. Furthermore, the possibility of signalling between immune cells and nerves in the adventitia has been suggested.

The innervation of blood vessels is heterogeneous with respect to nerve fiber density and neurotransmitter content. Even in a particular vascular bed large differences may occur as has been demonstrated in the human basal cerebral arteries. Not only locality-related differences but also dynamic changes have been reported. Local decreases of nerve fiber density have been associated with several diseases and experimental conditions including ageing, Alzheimer’s disease, peripheral arterial disease, diabetes mellitus and anosmia. Density increases as a consequence of the application of growth factors, hypertension and altered hemodynamics have been described as well.

The fact that innervation patterns are dynamic and have the capacity to adapt to altering functional demands makes it reasonable to assume that these changes are related to modification of functional aspects. However, to date many functional aspects of vascular innervation are still far from clear. Nevertheless, there is general agreement that nerves play a role in the regulation of the circulation. Furthermore, they exert a trophic influence on the vessel wall during development and in maturity. Another interesting phenomenon is the way cerebrovascular nerves are involved in the pathophysiology of neurovascular headaches.

EFFECT OF APOE ON NEURITE MORPHOLOGY IN VITRO

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Alzheimer’s Disease is a neurodegenerative disease that, although as many 1/3 of seniors die with it, is still not completely understood. Marked by cognitive decline, it generally begins after age of 75. There are two pathological hallmarks specific for AD: extracellular amyloid plaques deposited in brain and intracellular neurofibrillary tan-
gles made of hyperphosphorylated protein tau. Fibrillar Amyloid (Aβ) is formed during normal processing of its precursor.

Apolipoprotein E plays an important role in Alzheimer's disease - the inheritance of APOE4 allele is associated with an increased risk to Alzheimer's development. However, the underlying molecular mechanisms of APOE's role are unknown.

In this study we used primary neuronal cultures from wild-type mice, treated with lentiviral vectors expressing Green Fluorescent Protein. ApoE3 or ApoE4 lipid particles derived from conditioned culture media, and Aβ, were used for treatment groups: Vehicle (DMSO), Aβ and ApoE3, Aβ and ApoE4, and just ApoE3, ApoE4, or Aβ. Images were recorded under a Nikon 90i microscope using DAPI and FITC filters, 20 images per treatment group. The neurons were manually traced using Neuromantic and Sholl Analysis to count number of branches per every 3 microns from the soma.

Treatment with Aβ results in fewer branching than treatment with both Aβ and ApoE. However, there was no statistically significant difference between the branching of ApoE3- and ApoE4-treated neurons.

Both forms of ApoE had a protective effect against Aβ. The results of our study indicate that ApoE3 and ApoE4 are equally protective against fibrillar Aβ when used in equal concentration.

SYNCHRONIZED THERAPY WITH APHERESIS FOR RENAL DISORDERS IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Systemic lupus erythematosus (SLE) is a chronic autoimmune disorder in which the body's immune system attacks its own organism. SLE commonly involves the kidneys. The aim of therapy in lupus nephritis is to normalize renal function or, at least, to prevent the progressive loss of renal function. In the last few years the treatment of SLE has been improved due to the development of the immunosuppressive therapy. Yet, renal failure remains an important cause of morbidity and mortality in patients affected with systemic lupus. In some cases the drug therapy is not efficient enough, therefore we can use therapeutic apheresis.

The extracorporeal removal is a term used to refer to a broad range of procedures in which the separation of substances from the plasma, such as immunoglobulins is effective. We have observed patients with morphologically verified SLE III-IV class nephropathy. In the research group significant reduction of the proteinuria (Patient 1: MAU: 263 mg/l - 7,6 mg/l; Patient 2: 3360mg/l - 657 mg/l) in a follow-up period from 3 months till 2 years was found.

After a combination and synchronization of approximately 3 apheresis procedures and treatment pulse with Methylprednisolone (10mg/kg/day) and Cyclophosphamide (1-2.5mg/kg/day), the control immunological studies showed a trend towards reduction of the ANA, pANCA, anti-dsDNA, anti-RNP autoantibodies. The general condition of the patients improved and at this time all of them are dialysis independent.

Apheresis is an important low-cost and effective therapy for kidney disorders in SLE. Nevertheless, a benefit from the synchronized therapy with TPE to a standard steroid and cyclophosphamide treatment have to be proven. In the reported cases we have observed a clinical and laboratory improvement in the patients condition. Therefore this cost-effective, synchronized, immunomodulation therapy deserves further controlled clinical studies.

DESCRIPTION OF A NEW APPROACH FOR BLOOD-BRAIN BARRIER BREAKTHROUGH

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The blood-brain barrier (BBB) is a highly selective permeability barrier that separates the circulating blood from the brain extracellular fluid. It is formed by brain endothelial cells connected by tight junctions. The BBB protects the brain from noxious agents; however, it also significantly hinders the delivery of medicines to the brain. Several strategies have been employed to increase the BBB permeability for drugs.
The purpose of this paper is to describe a new approach for blood-brain barrier breakthrough. Scientific articles were reviewed showing that focused ultrasound enabled temporary and targeted opening of the BBB, allowing more effective delivery of chemotherapy into the brain. Principally, the approach involves three steps. First, the patient is given a dose of the medication. Then, harmless gas microbubbles are injected into the bloodstream. The third step uses a high-intensity ultrasound beam directed onto the tumour to cause the bubbles to vibrate and tear apart the proteins around capillaries, allowing the drug into brain tissue.

It seems to be extremely safe and doesn't cause any damage. After about 12 hours, the coating around the blood vessels re-heals and the BBB remains intact. The method was introduced by a team at Sunnybrook Health Sciences Centre in Toronto. The team infused the chemotherapeutic agent doxorubicin by this method.

In conclusion, as the BBB is probably the major limitation for innovative drug development for neurosciences, patients with brain tumors, Alzheimer's disease and other brain disorders will benefit from this new treatment should it continue to exhibit promising trial results.

THE FREQUENCY OF MUTATED EGFR IN A GROUP OF BULGARIAN PATIENTS WITH ADVANCED NON-SMALL CELL LUNG CANCER

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Non-small cell lung cancer (NSCLC), accounting for more than 85% of lung cancer cases, is a leading cause of cancer-related death worldwide. NSCLC management is evolving rapidly due to an improved understanding of the molecular heterogeneity of this disease and the development of effective, personalized, targeted therapy strategies, e.g specific anti-EGFR tyrosine kinase inhibitors (TKIs) such as gefitinib, erlotinib and afatinib. These agents have shown higher efficacy among patients harboring specific activating mutations in exons 18–21 encoding the tyrosine kinase domain of EGFR gene. The majority of EGFR-activating mutations are exon 19 deletions (45%) and a point mutation (L858R) in exon 21 (40%–45%).

392 patients with advanced NSCLC (stage IIIb and stage IV) were analysed for EGFR mutations in exons 18-21. Allele-specific real-time PCR was used for EGFR mutation status determination.

We evaluated 392 patients for EGFR mutations in exons 18-21. Patients exhibited EGFR mutations in 13.77% (54/392) of cases, which is concordant with the observed frequency worldwide (10-15%).

The analysis of this patient group provides a representative estimate of the overall EGFR mutation frequency in Bulgarian NSCLC patients. Given the frequency of EGFR mutations in Bulgarians, making a genetic study before deciding to treat advanced NSCLC patients with specific anti-EGFR tyrosine kinase inhibitors is indispensable.

THE ROLE OF CYTOKINES IN THE DENGUE VIRUS DIAGNOSTIC

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The Dengue disease has a global significance. As many as 400 million people are infected yearly. With more than one-third of the world’s population living in areas at risk for infection, the dengue virus is a leading cause of illness and death in the tropics and subtropics. Although the disease isn't common in the moderate climate zone, due to the global climate change, it becomes more and more widespread in the Northern countries. The infection causes various symptoms such as fever, headache, severe myalgias and rash. Some patients develop more severe and life-threatening symptoms.

This study aims to further understand the role of cytokines in the different stages of the disease. It investigates the cytokine profiles of Interleukin 1 (IL-1β), Interleukin 6 (IL-6), Interleukin 10 (IL-10), Tumor necrosis factor (TNF-α) and Monocyte chemotactic protein-1 (MCP-1) in the different phases of the Dengue disease. The study
includes 44 patients confirmed to have dengue, examined three times during the disease: in the febrile, defervescence and convalescence phase.

The results show that these cytokines have different blood levels in the three phases of illness. After detailed observation it is determined that these patterns could be used to make diagnosing patients with these symptoms easier, faster and allows faster and more accurate treatment.

The cytokine profile patterns discovered between the different phases of illness indicate an essential role in the dengue pathogenesis and with further studies may be used as predictive markers for the progression of the Dengue disease.

AN OVERVIEW OF DRUG TRANSPORTERS
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Membrane transporters play a significant role in drug absorption, distribution and excretion, and they consequently affect the pharmacokinetics, efficacy and safety of a drug.

The purpose of this paper is to make a concise overview of the importance of major drug transporters and to stress some aspects regarding their significance for pharmacokinetic variability and drug-induced effects.

Pharmacology textbooks and articles, mainly from Pubmed, including reviews, animal studies and randomized controlled trials, were analyzed to establish the current understanding of the significance of drug transporters.

There are two major gene superfamilies that play critical roles in the transport of drugs across the plasma and other biological membranes: the SLC (solute carrier) and ABC (ATP-binding cassette) superfamilies.

The SLC superfamily includes 43 families and represents approximately 300 genes in the human genome. The SLC family members mediate the influx or bidirectional movement of drugs across the cell membrane.

The ABC superfamily now consists of 49 genes. Drug transporters belonging to this superfamily are efflux transporters. They are expressed specifically on the blood side of the endothelial or epithelial cells that form barriers to the free entrance of toxic compounds into naive tissues. The most widely studied drug transporter is P-glycoprotein (Pgp, MDR1, ABCB1). The Pgp-mediated multidrug resistance is the most widely observed mechanism in clinical multidrug resistance to anticancer drugs, antiviral agents, immunosupressants, antihistamines, cardiac glycosides. Another important representative of the ABC transporters is the breast cancer resistance protein.

In conclusion, transporter pharmacology is a rapidly emerging field in drug discovery and development.

ASSOCIATION OF HPV INFECTION AND CERVICAL DYSPLASIA PROGRESSION WITH DNA METHYLATION OF GENES, CONNECTED TO CELLULAR STRESS AND ONCOGENESIS
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Cervical cancer is tightly connected to the HPV infection, but it is not yet elucidated why some of the infected cases progress to cancer, but others not. Our aim was to study the role of DNA methylation in this process by analyzing HPV-infected cervical tissues from different PAP groups.

We measured unmethylated and hypermethylated fraction in promoters of 22 genes, connected to cellular stress and toxicity by real-time PCR in three groups: (i) 10 HPV positive PAP I/II cervical samples; (ii) 10 HPV positive PAP III/IV cervical samples; (iii) 10 healthy blood donors.

Overall, there was an increased average hypermethylated fraction (Fhm) for all investigated genes in cervical groups compared to controls. The highly methylated genes were DNAJC15 (Fhm 31% and 32% vs 0.6% in controls), BRCA1 (29% and 13% vs 0.8%), Tp53 (19.5% and 19.2% vs 0.8%), Gpx3 (13% and 16% vs 1.3%), ATM (11% and 15% vs 0.7%), CSTB (11% and 13% vs 0.3%) and Prdx2 (11.7% and 11.6% vs 0.5%). Comparison between high
grade and low grade lesions found an increase in Fhm of more than 1.5 times for the genes Msh2 (3 times), Rara (2.1 times), Gadd45G (1.7 times), SCARA3 (1.6 times) and Mlh1 (1.5 times).

We suggest an association between the HPV infection and the hypermethylation (inactivation) of important tumor-suppressor genes and genes, connected to cellular stress. The dysplasia continues to progress along with further hypermethylation (inactivation) of the mismatched repair genes and genes connected to the inflammation response and oxidative stress protection.

### INHIBITION OF TUMOR NECROSIS FACTOR-ALPHA CONVERTING ENZYME AS A NEW THERAPEUTIC STRATEGY

Diyana Petrova, Blagovesta Todorova, Boryana Ivanova, Stefka Valcheva-Kuzmanova
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Tumor necrosis factor-α (TNF-α) is a pro-inflammatory cytokine, produced primarily by activated monocytes and macrophages, and plays an important role in the pathogenesis of chronic inflammatory autoimmune diseases. TNF-α converting enzyme (TACE), a member of the family of metalloproteinase disintegrin proteins, is responsible for the conversion of the inactive TNF-α precursor form to the active mature form. The purpose of this paper was to summarize the literature data on the role of TACE inhibition as a therapeutic option in chronic inflammatory autoimmune diseases.

Articles, mainly from Pubmed and Scopus, including reviews and animal studies, were analyzed to establish the current understanding of the significance of TACE inhibition.

The inhibition of TNF-α converting enzyme has been explored as a feasible therapy for the treatment of rheumatoid arthritis and Crohn's disease. Identification of selective TACE inhibitors has proved elusive until recently due to structural similarities between TACE and matrix metalloproteinases. Recently, large numbers of novel and selective TACE inhibitors have been reported. TACE is a potential target to treat TNF-α-dependent diseases but there are concerns about potential side effects, because TACE also protects the skin and intestinal barrier by activating epidermal growth factor (EGFR) signaling. The protein (iRHOM2) encoded by the gene Rhbdf2 regulates the maturation of TACE. Inactivation of Rhbdf2 allows tissue-specific regulation of TACE by selectively preventing its maturation in immune cells, without affecting its homeostatic functions in other tissues.

Through selective inhibition of TACE, new hope is emerging for the treatment of chronic inflammatory autoimmune diseases.

### RETROSPECTIVE 5-YEAR ANALYSIS OF ACUTE MEDICAMENTOUS INTOXICATIONS IN VARNA REGION

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As poisonings constitute an important public health problem worldwide, they are one of the major causes of patient admissions to emergency departments. The aim of this study is to explore the demographic and etiological characteristics of cases of acute medicamentous intoxications in the Clinic of Toxicology of the Military Medical Academy Varna, Bulgaria, registered for a five-year period.

This retrospective study covers a period of 5 years (2011-2015), in which acute intoxications with medicines were the cause of hospitalization of 683 patients. The hospital case files and personal medical ambulatory cards were analyzed and the intoxications were classified according to their demographics and etiology.

During the discussed period the frequency of the drug poisonings was 25.28% of all general intoxications, thus keeping the second place (just after alcohol intoxication rate) as a cause of hospitalization. Medicamentous intoxications were more frequent in women (72%). The proportion women to men was 2.58:1. This represents an exception from the general tendency of equal occurrence in males and females of general poisonings. According to age –
the majority of registered patients were people at working age. In these five years there is a trend of reduction in the cases of intoxication with benzodiazepines and an increase in the intoxications with cardiovascular drugs.

Based on the results of the study, it could be concluded that women of young age comprise the major risk group.

Nowadays, determination of poisoning profiles is essential in order that necessary preventive measures could be taken.

**A NEW GENERATION OF HYPNOTIC DRUGS**

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Insomnia is a common disorder with a major negative impact on social life, physical and mental health. The purpose of this review is to introduce new approaches for the treatment of sleep disorders.

Scientific articles were analysed and as a result two groups of new hypnotic medicines were distinguished: melatonin agonists and orexin antagonists.

Melatonin is a neuro-hormone released in association with the circadian rhythm. Melatonin replacement therapy has been advocated for treating insomnia. A serious obstacle for melatonin use is its short half-life (<30 min). A new possible way to treat disturbances in the circadian rhythm regulation is to administer exogenous melatonin agonists such as ramelteon and tasimelteon. In comparison with melatonin, ramelteon has a longer half-life (1-2 hours) and higher affinity to melatonin (MT1 and MT2) receptors. Tasimelteon is an MT1/MT2 agonist, an orphan drug for blind individuals with non-24-hour sleep-wake disorder.

Recent studies have shown that orexins (A and B) play a key role in the regulation of sleep and awake states. Both neuropeptides realize their effects through orexin receptor 1 (OX 1R) and 2 (OX 2R). These findings have led to the development of a new generation of pharmacological agents that antagonize the physiological effects of orexin. Almorexant and suvorexant are dual orexin receptor antagonists (DORAs). A great advantage of DORAs is that they do not change sleep architecture.

In conclusion, based on data from animal and human studies, a new generation hypnotic drugs has been introduced. They have limited side effects and thus suggest significant benefits in the sleep medicine.

**THERAPEUTIC APPLICATION OF ANTI-ARTHRITIS, PAIN-RELEASING, AND ANTI-CANCER EFFECTS OF BEE VENOM AND ITS CONSTITUENT COMPOUNDS**

Kristian Vasilev, Rosi Hristova, Ralitsa Simeonova, Zornitsa Borisova, Galina Vasileva

Medical University of Varna, Varna, Bulgaria

Bee venom therapy (BVT) has been used in traditional medicine to treat diseases, such as arthritis, rheumatism, pain, cancerous tumors, and skin diseases. BV contains a variety of peptides, including melittin, apamin, adolapin, the mast-cell-degranulating (MCD) peptide, enzymes, biologically active amines and nonpeptide components, which have a variety of pharmaceutical properties.

The aim of this paper is to investigate the pharmacological ability of bee venom and its positive effects on the human body.


In summary, we have described, that bee venom has been reported to have anti-arthritis effects in several arthritis models. Melittin, a major peptide component of BV, has anti-inflammatory and anti-arthritis properties. The anti-nociceptive effects of BV have also been demonstrated in thermal, visceral, and inflammatory pain models. Acupoint stimulation (apiupuncture) therapy into the subcutaneous region may be important in the BV-induced anti-nociceptive effects. The cell cytotoxic effects through the activation of PLA2 by melittin have been suggested to be the critical mechanism for the anti-cancer activity of BV. The conjugation of cell lytic peptide (melittin)
with hormone receptors and gene therapy carrying melittin can be useful as a novel target therapy for some types of cancer, such as prostate and breast cancer.

Bee venom and its therapeutic application can be very helpful in several ways. It is mainly used, because of its anti-arthritis, pain-releasing and anti-cancer effects.

**THE PHARMACOLOGICAL ACTIVITY OF GENUS ARISAEMA**

Ralitsa Simeonova, Zornitsa Borisova, Kristian Vasilev, Rosi Hristova, Galina Vasileva

Medical University of Varna, Varna, Bulgaria

Genus Arisaema is an Indian and Chinese folk medicinal herb traditionally used for treatment of various diseases related to inflammation and stress. It is used to promote the subsidence of induration and swelling, quicken blood and relieve pains, and kill intestinal parasites in humans and animals, treat malaria, and snake and insect bites in humans and animals.

The aim of this paper is to investigate the pharmacological ability of different plants of the genus Arisaema and their chemical substances.

We have used the web databases -PubMed, Science Direct and Google Scholar

In summary, we have described the anthelmintic activity of Arisaema franchetianum and Arisaema lobatum essential oils against Haemonchus contortus. Pharmacology experiments with arisaema extract reveal an anti-convulsant effect (which may explain its use in treating epilepsy), a sedative action, and an expectorant action. We have described the antioxidant and immunomodulatory potential of Arisaema jacquemontii and the antibacterial and anticancer activity of Arisaema propinquum.

The extracts of these plants were considered as suitable candidates for pharmacological drug discovery. Based on our findings, we envision that the discovery of a novel pharmacological agent from natural sources (plants) will help to minimize the adverse effects of synthetic drugs.

**SGLT-2 INHIBITORS: A NEW MECHANISM FOR GLYCEMIC CONTROL IN TYPE 2 DIABETES**

Dilyana Tonkova, Diyana Kyuchukova, Simona Dimulska, Kiril Hristozov, Mariya Petrova

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Type 2 diabetes, being a progressive, chronic metabolic disease is characterized by hyperglycemia and results from the combination of resistance to insulin action and inadequate insulin secretion. Poorly controlled, this global burden is associated with an array of microvascular, macrovascular, and neuropathic complications.

The accompanying potential risks encourage the search for new therapeutic regimens, one of which is the sodium-glucose co-transporter 2 (SGLT2) inhibition. SGLT2 is a low-affinity, high-capacity transporter, located in the proximal tubules of the kidneys, responsible for 90% of the glucose reabsorption.

Drugs in the SGLT2-inhibitor class were first approved by the Federal and Drug Association (FDA) in March 2013 and now include Empagliflozin, Canagliflozin, Dapagliflozin, Ipragliflozin. They block the reabsorption of glucose by lowering the renal threshold and thus increase the glucose excretion. The most important feature concerning this mechanism is the fact that it acts directly and independently of the B-cell function and the insulin resistance. Furthermore, other compelling outcomes of their usage, were recently introduced - reduction in body weight and influence on the systolic blood pressure. All the data presented so far is very encouraging, but there is still reason for caution. In May 2015 a warning that the gliflozins may lead to ketoacidosis was issued.

Everything in the world of diabetes moves fast these days. Based on the pharmacology of the SGLT2 inhibitors there are quite a few biologically plausible effects achieved in a totally innovative way compared to the already known antidiabetics.
PREVENTION OF DENGUE INFECTION

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Dengue is a mosquito-borne infection which in recent years has become a major international public health concern. It is transmitted by female mosquitoes of the species Aedes. It is an endemic infection in tropical and subtropical countries, but it is spreading around Europe as well. The infection usually presents with flu-like symptoms, on the other hand the dengue hemorrhagic fever is a serious life-threatening complication that can develop in infected people. The aim of our research is to show some of the perspectives in protection against dengue.

Broad research was made on vaccines against dengue and the challenges in their development. Our main source were published articles about the development of live attenuated tetravalent dengue vaccine (CYD-TDV) and other prevention methods including vector control and the use of genetically modified mosquitoes.

National trials on the efficacy and safety of the vaccine in Mexico shows variations in efficacy against different serotypes of the virus. Long term immunity depends also on age and previous exposure of the patients. Positive results are published also in preventing methods using genetically modified mosquitoes. These methods show good results in lowering of the population of wild type infected mosquitoes.

In April 2016, World Health Organization immunization advisers will examine the vaccine and provide recommendations for its use. Dengue is a socially significant infection which could be lethal. This fact makes the prevention of the infection essential especially for endemic areas.

A CRITICAL REVIEW OF THE SAFETY PROFILE OF NOVEL ORAL ANTICOAGULANT AGENTS

Krasen Tonev, Stanila Stoeva, Galina Dimova, Evgeni Grigorov

Medical University of Varna, Varna, Bulgaria

Anticoagulants are pharmaceutical substances that are used to suppress or inhibit blood coagulation and the further formation of clots. Anticoagulant agents are widely used to prevent strokes and systemic embolism in patients with valvular and non-valvular atrial fibrillation, and in the treatment and prevention of venous thromboembolism. Anticoagulation therapy has evolved since the discovery and application of heparin and nowadays includes several pharmacological groups: vitamin K antagonists (warfarin, acenocoumarol), low molecular weight heparins (enoxaparin), indirect (fondaparinux) and direct (dabigatran) thrombin inhibitors, as well as direct factor Xa inhibitors (rivaroxaban, apixaban). The aim of the present work is to outline the safety profile of novel oral anticoagulant agents (dabigatran, rivaroxaban and apixaban) and compare them to traditional anticoagulants (acenocoumarol and warfarin).

A search of up-to-date scientific research on the problem was carried out in several web databases (ScienceDirect, PubMed and Google Scholar).

Multiple clinical trials have demonstrated the merits of dabigatran, rivaroxaban and apixaban compared to vitamin K antagonists. These novel anticoagulants are more specific and are characterised with a rapid onset of action as well as predictable pharmacokinetic parameters. The clinical trials have proven that these substances are non-inferior and in multiple occasions even superior to warfarin and acenocoumarol in reducing the risk of stroke and systemic embolism as well as the risk of bleeding.

Dabigatran, rivaroxaban and apixaban are an appropriate alternative to traditional anticoagulants in the treatment and prevention of venous thromboembolism and possess similar, if not greater, level of safety. Therefore, their clinical use is entirely justified.
METFORMIN - OLD DRUG WITH NEW APPLICATIONS
Stanila Stoeva, Galina Dimova, Krasen Tonev, Maya Radeva
Medical University of Varna, Varna, Bulgaria

Metformin is the first medication prescribed for type 2 diabetes (t2d) and is the only biguanide that is authorized in Bulgaria. It was synthesized in 1922, but it started being studied clinically as an oral antidiabetic agent in humans 35 years later. An interesting fact about this medicine is that scientists continue to discover new peculiarities associated with its anticancer and anti-aging effects.

Databases as Science Direct and Google Scholar were used for the research of this topic.

In one of the largest studies of its kind, a group of scientists pored over the 10-year case histories of 8,000 t2 diabetic who had been using metformin. They have found that patients on metformin have 54% lower rate of cancer in comparison with the general population. The reason is that it reduces obesity, which is a risk factor for some cancers, and also, metformin increases the production of a chemical that regulates cell growth and replication. It inhibits chronic inflammation, which can lead both to the development of cancer, and premature aging.

Studies have shown that molecular pathways used to produce these anti-aging and anti-cancer benefits are not the same paths used when metformin is used against t2d. Therefore, scientists believe that in the future they will be able to modify the content so that only the anti-aging effects remain. Then it can be prescribed for more than just the classical cases.

OMEGA-3 FATTY ACIDS IN SEAWEED
Boyko Matev, Alice Renjilian, Pavel Todorov, Magdalena Bliznakova, Albena Merdjanova, Mona Stancheva
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Omega fatty acids are polyunsaturated fatty acids (PUFA). Currently they are regarded as an invaluable part of any nutrition due to their many properties that aid certain metabolic processes. The necessity of including omega-3 (n-3) fatty acids from outside sources is caused by the inability of the human body to synthesize them. A PUFA is a type of carboxylic acid that contains more than one cis double bond in its carbon chain. The most essential omega-3 fatty acids are α-Linolenic acid 18:3(n-3), Eicosapentaenoic acid 20:5(n-3) and Docosahexaenoic acid 22:6(n-3), important omega-6 acids are Linoleic acid 18:2(n-6) and Arachidonic acid 20:4(n-6). They are widely used for their antiatherogenic, antithrombotic, and antiarrhythmic effects.

Traditionally the main source of PUFAs are seawater fish, however our research shows that an equally viable source of these essential nutritive components can be seaweeds. The main objective of this study was to provide knowledge of the FA composition of brown seaweed (Cystoseira barbata), red seaweed (Gelidium crinale) and green seaweed (Chaetomorpha linum) from the Black Sea coast as an alternative source of n-3 PUFAs.

N-3 PUFAs in all analyzed algae species accounted for 8.85% to 12.27% of the total FA. Eicosapentaenoic acid (C20:5 n-3) was the most dominant n-3 PUFA in all Black Sea species.

Investigated Black Sea algae species appear as a potentially rich sources of n-3 omega PUFAs for the very near future although we have also got a very limited number of researches in the related area.
PANOBINOSTAT AND TASIMELTEON – RECENTLY INTRODUCED ORPHAN DRUGS
Boryana Georgieva, Denitsa Stoykova, Doychin Nikolov, Stefka Valcheva-Kuzmanova
Medical University of Varna, Varna, Bulgaria

Rare diseases are conditions that affect a small percentage of the human population. They usually are life-threatening and their number is constantly increasing. This type of diseases are treated with drugs called ‘orphan’. Their number and development is being updated every month. The purpose of this review was to search for the most recently introduced orphan drugs and to describe two of their representatives – panobinostat (Farydak) and tasimelteon (Hetlioz).

Information from European Medicines Agency (EMA) and the U.S. Food and Drug Administration (FDA) was searched to report the mechanisms of action, efficacy and adverse effects of these medications.

Both drugs have been approved by the FDA Office of Orphan Products Development (OOPD) and by the EMA’s Committee for Medicinal Products for Human Use (CHMP).

Panobinostat is used for patients with multiple myeloma who have already received at least two prior regimens. It is usually combined with bortezomib and dexamethasone. Panobinostat realizes its effect due to the ability to inhibit multiple histone deacetylase enzymes. As a result, it causes apoptosis of malignant cells.

The other drug, tasimelteon, is indicated for the treatment of people with Non-24-Hour Sleep-Wake disorder. It acts by antagonizing G protein-coupled receptors which bind melatonin (MT1 and MT2).

In conclusion, due to the growing number of rare diseases awaiting treatment, the interest of the pharmaceutical companies in the development of orphan drugs is becoming higher.

MULLER GLIA AND THE PATH OF LIGHT - FROM SIGHT TO INSIGHT
Yordan Slavov, George Stoyanov, Radoslav Spasov, AB Tonchev
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Muller glial cells (MGC) are cells located in the retina. Their functions range from retinal neuronal support and local homeostasis regulation to photoreceptor (PhRN) stem cells in the ciliary marginal zone (CMZ). However, recent studies have demonstrated that MGC act as optic fibers through which light reaches the PhRN.

The selected study design criteria for article search for this scientific review were topic – key words "Müller glia" and "Optic fiber". Additional criteria included the date of publication and journal status – only articles published after the year 2010 in peer-reviewed journals were sought as a viable source of information. The article search, in accordance with the study design, was carried out using the Google Scholar scientific article search engine.

The retina consists of several layers, with PhRN being stacked beneath the other retinal layers. This superimposing of cell layers causes high rates of distortion of the light passing through them. Recent studies have demonstrated that MGC provide a single cell path for light to reach directly to individual PhRN undistorted. Experiments using light transmission and reflection show that MGC are both highly transitive for light and do not reflect it back and have a refractive index higher than that of surrounding cells. Laser measured distortion of light passing through MGC showed low distortion rates of light reaching PhRN through them.

MGC are continuing to expand their established set of functions ranging from PhRN stem cells in the CMZ, homeostasis regulation and retinal fiber optic highways.
THE ENDOCANNABINOID SYSTEM AND ITS MULTIPLE EFFECTS ON THE HUMAN BODY
Radoslav Rachkov, Lora Nikiforova, Dinnar Yahya, Velina Kerekovska, Simeona Zhivkova, Miroslav Eftimov
Medical University of Varna, Varna, Bulgaria

According to Dustin Sulak, osteopathic doctor and Diplomat of the American Academy of Cannabinoid Medicine, the endogenous cannabinoid system (ECS) is “perhaps the most important physiologic system involved in establishing and maintaining human health.”

A thorough literature review of studies focusing on the diverse effects of the ECS in the human body and the ways of boosting the endogenous levels of ECS neurotransmitters (e.g. the endocannabinoid - exercise interaction).

Various studies on the ECS effects and the experimentally proven medical properties of cannabinoids have been found.

The role of the ECS as an alternative neuromodulatory system in pain perception has been a central focus of cannabinoid research. The potency and efficacy of cannabinoids in producing antinociception rivals that of morphine. Activation of the endocannabinoid system also produces sedation, anxiolysis and a sense of wellbeing (positive effects).

The close interaction of endocannabinoids with dopamine shows that they have a function in the brain’s reward system and therefore possibly addiction. The endocannabinoid system is also implicated in the control of motor activity mediated through the basal ganglia. Finally, the endocannabinoid system mediates peripheral effects such as vasodilation and bronchodilation that may play a contributory role in the body’s response to exercise.

Direct and indirect evidence suggests that the ECS might mediate some of the positive effects of the physical activity on many diseases.

The endocannabinoids have various beneficial effects on cognition, mood, and nociception, while avoiding impaired energy metabolism, oxidative stress, and inflammatory processes. More thorough clinical studies are required to identify all the cannabinoid effects of human health and the possibilities of their use for medical purposes.

PARKINSON DISEASE AND DEEP BRAIN STIMULATION
Emir Çağrı Kiraz, Burak Bezirganoğl, Basar Bilgic
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Parkinsonism is a clinical syndrome characterized by tremor, bradykinesia, rigidity, and postural instability. Parkinson’s disease (PD), also known as idiopathic or primary parkinsonism, hypokinetic rigid syndrome, or paralysis agitans, is a degenerative disorder of the central nervous system mainly affecting the motor system.

This disease is firstly defined as “Shaking Palsy” by British doctor James Parkinson in 1817. In Parkinson’s disease (PD), in addition to degeneration of the nigrostriatal dopaminergic pathway, a variety of neuronal systems are involved, causing multiple neuromediator dysfunctions that account for the complex patterns of functional deficits. Degeneration affects the dopaminergic mesocorticolimbic system, the noradrenergic locus ceruleus (oral parts) and motor vagal nucleus, the serotonergic raphe nuclei, the cholinergic nucleus basalis of Meynert, pedunculopontine nucleus pars compacta, Westphal-Edinger nucleus, and many peptidergic brainstem nuclei.

Surgical methods are remarkably useful in cases with medically intractable Parkinson’s disease. These procedures have high efficiency and low morbidity, when they are performed in the experienced centers. There are two surgical basic stereotactic methods in the management of the disease: (1) lesioning (unilateral thalamotomy or pallidotomy with radiofrequency); and (2) neurostimulation. These procedures are performed on the several deep brain structures: the subthalamic nucleus (STN), the pallidum (internal-posterior part) and thalamus (nucleus ventromedialis). Thalamotomy and pallidotomy are usually performed unilaterally. Thalamotomy is indicated in cases mainly suffering from tremor; on the other hand, pallidotomy in cases with drug-induced dishinkesias, predominantly. Bilateral STN neurostimulation has recently become the most prominent surgical method in the control of the cardinal parkinsonian symptoms, e.g., bradykinesia. In this presentation, we will talk about Parkinson’s Disease and surgical techniques.
CASE REPORTS – ONCOHAEMATOLOGY

APRIL 9, 2016 /Saturday/

University Hospital
PSYCHIATRIC AUDITORIUM
08:00 – 09:30

SINUS HISTIOCYTOSIS WITH MASSIVE LYMPHADENOPATHY (ROSAI-DORFMAN DISEASE): CASE REPORT
V. Zhelezova, D. Ivanova, I. Minev, D. Bulyashki
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Rosai-Dorfman Disease (RDD) is a rare histiocytic disease with unknown etiology. Generally, it is associated with enlargement of superficial and/or deep lymph nodes, with a predilection for neck lymph nodes. Other locations of the lymph nodes that can be affected are: kidneys, chest, the digestive system. 40% of patients have extra-nodal involvement. About 20% of RDD cases undergo spontaneous remission. No treatment strategy has been established since it is a rare disease with only a few hundred cases described worldwide.

A 38-years-old male was admitted in the Thoracic Surgery Department of UMHAT „St. Marina” complaining of fatigue, weight loss and subfebrile temperature for 2-3 weeks. A physical examination revealed palpable, enlarged, painless, neck and axillary lymph nodes. Computed tomographic scan showed generalized lymphadenopathy.

A biopsy of an axillary lymph node was taken. The specimen showed a histological and immunohistochemical findings of RDD. After the confirmation of the disease, the patient was transmitted to the Hematology Unit for further follow-up.

The clinicians should be aware of RDD as a differential diagnosis in patients with massive lymphadenopathy. The RDD may be misdiagnosed easily, due to non-specific and various clinical presentations. The lesions, which are found on CT and FDG-PET resemble common malignant diseases such as primary lung cancer and malignant lymphoma. Histopathological and immunohistochemical confirmations are essential in establishing the diagnosis.

A CASE REPORT OF A CHILD WITH CHICKENPOX AND IDIOPATHIC APLASTIC ANEMIA
R. Georgieva, K. Kostadinova, Ts. Popov, O. Bayrak, Diana Radkova
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Chickenpox, also known as varicella, is a highly contagious airborne disease caused by the initial infection with the varicella zoster virus. A rare complication of varicella is the development of thrombocytopenia, but in our case the patient is known to have been suffering from aplastic anemia for 2 years, which presents itself with a deficiency of all three blood cell types.

We report the case of A.C.S., a 6-year-old male, who was admitted at the Clinic of Infectious diseases, Varna on February 16 with the following symptoms: a generalized rash, fatigue and high fever. The physical examination revealed impaired general condition, skin – vesiculopustular rash with hemorrhagic bullae on the trunk, extremities, face, scalp, characteristic for severe forms of varicella; throat – vesicular enanthema.

PLT – 33g/L, low Hb level, neutropenia. Due to the extremely low platelet count, associated with aplastic anemia, petechial hemorrhages are located on the patient’s ankles, feet and inguinal region. Several months ago a treatment with Methylprednisolon (corticosteroid) was initiated, which can lead to immune deficiency.

The varicella disease was successfully treated with Acyclovir (antiviral medication) and Amikacin/Medaxon – antibiotics, used to prevent common secondary infections.
Although acute varicella is generally mild and self-limited, it may be associated with serious complications, especially when aggravating factors are at hand, such as hematopoietic disorders and immunosuppression.

A COMPARATIVE STUDY OF TWO CASES OF THALASSEMIA MAJOR AND INTERMEDIA
Teresa Buitrago García, Maria Dimova, Liana Gercheva, Branimir Kanazirev
Medical University of Varna, Varna, Bulgaria

β-thalassemia is an autosomal recessive genetic disorder characterized by severe chronic hemolytic anemia resulting from impaired β subunit synthesis and formation of unstable α tetramers in bone marrow and spleen, which further contribute to ineffective erythropoiesis.

Hemoglobinopathies being the most common monogenic disorders worldwide, we have a fairly good amount of data that allows us to see a clear change in the pattern of the progression of the disease.

The introduction of regular blood transfusions in the 60s has undoubtedly increased life expectancy, but it created as well another problematic focus consisting of the complications due to iron overload and deposition in the heart, liver and endocrine glands. The development of new chelation strategies has now allowed a balance to be achieved in this paradox.

Furthermore, we present two patients with thalassemia major and intermedia demonstrating the pathognomonic involvement of the left heart in the first, and the right side in the latter, due to pulmonary hypertension. Patient A, 27-years-old, being diagnosed at 4 months, with cardiac T2* ranging from 4.83 to 6.15, hepatic T2*, 1.06 to 1.17 and EFs between 54 and 65 in the period 2010-2014. While patient B, 46-years-old and diagnosed later, at age 4, with cardiac T2*, 17.57 to 33.85, hepatic T2*, 1.16 to 1.18 and EFs, 66 to 76. In both cases ferritin levels varied from 3600 to 7000 in that same period.

A CASE REPORT OF A PATIENT WITH VENA CAVA SUPERIOR SYNDROME WITH UNDERLYING SMALL CELL LUNG CANCER
Birk Bähnemann, Petya Petrova, Diyan Dimov, Branimir Kanazirev
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We present a patient with thrombosis in the vena cava superior syndrome with underlying small cell lung cancer (SCLC) T3N3M1 as a chief disease. The patient has additional diseases (polynodosa struma (thyroid), subclinical hyperthyroidism, stage 1 hypertension and lupus erythematosus) at the St. Marina, University Hospital of the Medical University of Varna.

Superior vena cava syndrome is presented when the blackflow of blood from the upper extremities and head is impaired. To set the diagnosis, the patient is placed in a 45° sitting position. A strongly enlarged vena jugularis externa can be observed. Reasons for the reflux might be: valvular heart disease, heart failure, cardiac tamponade, pneumothorax, bronchial asthma or pulmonary embolism. In rare cases a tumour of the mediastinum can exert pressure on the vena cava superior.

We present a patient with superior vena cava syndrome. Transferred from a hospital in Greece, the patient reports, that the diagnosis of a benign tumour in the chest was made in Greece. Symptoms are present since May 2015. During admission the patient showed impaired general condition, facial and neck oedema, eyelid swelling, visible veins on the upper chest, erythemic squamous plaques on the upper back, chest and face. Percussion of the chest is sonor symmetric, bronchial breath sounds on the right, vesicular - on the left. There is tachycardia with a heartrate of 100 and blood pressure of 150/90 mmHg.
As treatment a therapy of corticosteroids, Furantril, Heparin, Trisole and Lerkanidipine was introduced.
A CASE STUDY OF A PATIENT WITH CHRONIC MYELOGENOUS LEUKEMIA

Stefanie Degen, Nabiah Malik, Aischa Lehnhoff, Maria Dolores Franco Martinez, Trifon Chervenkov, Lyudmila Angelova, Ilina Micheva
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In 2009, 205 patients were diagnosed with Chronic Myelogenous Leukemia (CML) across Bulgaria. It is a myeloproliferative disorder usually arresting after several years as the disease enters the accelerated phase ('blast crisis'). The disease is caused by a balanced chromosomal translocation between chromosomes 9 and 22 forming the 'Philadelphia' chromosome (Ph). This results in BCR-ABL gene fusion leading to hyperactivation of the ABL protein, tyrosine kinase domain, and the chronic stimulation of granulocyte precursor proliferation. A new class of drugs (signal transduction inhibitors), which selectively inhibit the hyperactive ABL tyrosine kinase and control the disease with minimal adverse effects, were introduced in the clinic. This compelling therapy has proven to diminish recurrence in several patients after treatment.

The diagnosis and monitoring of the treatment were done by haematological and cytogenetical analysis. Furthermore, molecular methods like reverse transcription with RealTime Polymerase Chain Reaction (PCR) were used for the BCR-ABL fusion gene.

A patient aged 86, diagnosed in 2011 with chronic phase CML, presented Ph Chromosome positive by cytogenic tests and Mbcr BCR-ABL transcript positive by reverse transcription PCR. Haematological response was achieved with 600 mg nilotinib in the first month, cytogenetic response during the third month and major molecular response in the sixth month. Four years later, treatment was discontinued. After a six-month follow-up, the patient is still in deep molecular response MR^4.5.

These devastating diseases can finally be cured with minimal adverse effects sustaining a high quality of life - making CML the first curable neoplastic disease.

THE SIGNIFICANCE OF COMBINATION THERAPY WITH MTOR- AND AROMATASE INHIBITOR IN METASTATIC BREAST CARCINOMA. A CASE REPORT

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Contemporary breast cancer management is based on molecular pathology subtype classification and signal pathways studies. Luminal B breast cancer tends to be higher grade and more aggressive than luminal A (HR+/HER2-) breast cancers.

We present the case of a 50-year-old postmenopausal woman diagnosed in 2008 with carcinoma in the right breast – pT2 pN1a cM0, G3, which was operatively removed and followed by adjuvant chemotherapy in 6 cycles, but without hormone therapy as the immunohistological receptor status was registered negative. In 2010, the woman was admitted with dyspnea and coughing fit. Due to a conducted CT, subpleural parenchymal lesions were discovered. The metastatic relapse and revision of the histological material, which showed the hormone receptors positive, HER2-negative (luminal B), led to first line treatment of chemotherapy in combination with hormone therapy. In 2013, she presented with pernicious anemia causing PS 3 (performance status grade 3) and needed palliative care. Its successful treatment decreased her PS to 0. This allowed including the patient in a clinical trial, offering an innovative treatment with the mTOR-inhibitor Everolimus, combined with Exemestane (aromatase inhibitor in postmenopausal women). In such treatment the expectancy of PSF (progression-free survival) is 11 months but up to now she is in her 30th month of complete remission.

Targeted therapy was performed, aiming to inhibit the PI3K/mTOR signal pathway. The problems in its regulation are discussed as a reason for the induction and development of a variety of tumors.

It is concluded that the study of genetics and proteomics of metastatic breast tumors gives a perspective to the discovery of new revolutionary therapeutic strategies with good clinical results in the face of targeted therapies.
A RARE CASE OF EYELID LYMPHOMA

M. Ivanova, L. Ivanov, J. Angelov, G. Peev, T. Betova, Ch. Balabanov, P. Yordanov
Medical University - Pleven, Pleven, Bulgaria

Lymphoma is the most common blood cancer and it affects immune cells. There are two main types - Hodgkin and non-Hodgkin lymphoma. Marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) type is a very rare disease. However, it is the most common subtype of the non-Hodgkin lymphomas (NHLs) and extranodal lymphomas affecting the ocular adnexa. Modern immunological techniques allowed the distinction between MALT lymphoma and other lymphoproliferative processes.

Materials and Methods: First, a review of the literature was made. It allowed us to fully comprehend the multidisciplinary approach that this disease requires. This is a case report of a 55-year-old Caucasian woman who suffered from an extremely rare lymphoproliferative process - extranodal lymphoma affecting the lower conjunctiva of the left eye.

In this research we describe the patient’s medical history, presentation, diagnosis, and treatment. Very important role in specifying all of the above has the process of collaboration between medical specialists such as immunologist, ophthalmologist and pathologist.

All of the clinically important information received from the eye examination as well as photographic data are also included. We analysed the pathology report including the biopsy and immunohistochemical test which were used in order to confirm the diagnosis.

The result from the histological examination led to the diagnosis of Extranodal Marginal Zone Lymphoma (MALT) of the patient’s lower left eyelid. The lymphoid proliferation was situated very close to the mucosa.

We decided to present a case report and literature review of marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) type because as any other rare disease the current understanding of its pathogenesis is limited and we consider that our study could, after all, provide updated information, which at some level would have some prognostic significance and would serve as a tool to the process of classifying.

RARE BASALOID SQUAMOUS CELL CARCINOMA OF THE HEAD AND THE NECK WITH MULTIPLE RECURRENCES

Yasen Petrov, Sezgin Syuli, Ivona Zhekov, Desislava Nalbantova, Lazar Kutin, Nikolay Conev
Medical University of Varna, Varna, Bulgaria

Head and neck squamous cell carcinoma (SCC) develops from the mucosal linings of the upper aerodigestive track comprising a) the nasal cavity and paranasal sinuses b) the nasopharynx, c) the hypopharynx, larynx, and trachea, and d) the oral cavity and oropharynx. Squamous cell carcinoma is the most frequent malignant tumor of the head and neck region. SCC is the sixth leading cancer by incidence worldwide. There are 500,000 new cases a year worldwide. Basaloid squamous cell carcinoma (BSCC) is a rare and aggressive variant of squamous cell carcinoma that mainly arises in the upper aerodigestive tract.

The case report centers on the medical history of a woman aged 33 at the time of diagnosis. She presented with enlarged neck lymph node (LN), excised in 07/2008, the performed histology revealed a BSCC. Definitive 60Gy radiotherapy was given. In 01/2013 a PET/CT scan revealed recurrence of the formation in a retromandibular lymph node and the tongue, followed by a partial lingual resection. In 2015 a PET/CT scan provided information of an advanced local recurrence and distant metastases in LN and bones. A nutritive gastrostomia and tracheostomia were performed. The Oncology committee decided for first line chemotherapy.

This type of cancer is rare, aggressive and despite various forms of therapy it has adverse development.
CASE REPORTS

PSYCHIATRIC AUDITORIUM - LOBBY
08:00 – 09:30

CASE REPORT: COMPLICATED VARICELLA INFECTION COMBINED WITH LEUCINOSIS
Diyana Kyuchukova, Dilyana Tonkova, Simona Nikolaeva, Ralitsa Yotsova, Iliyan Todorov, Margarita Gospodinova-Bliznakova
Medical University of Varna, Varna, Bulgaria

Varicella (chickenpox) is a common highly contagious disease, affecting nearly all susceptible individuals before adolescence. The etiological agent is varicella zoster virus (VZV), a DNA virus, transmitted mainly through respiratory droplets and direct contact with the papules and the vesicles. The illness is generally regarded to have a mild, self-limiting course with occasional complications such as cellulitis and bacterial superinfection of the skin lesions, often caused by Streptococcus pyogenes and Staphylococcus aureus.

A 3-year-old boy with previously diagnosed leucinosis (Maple syrup urine disease (MSUD)) was referred to St. Anna Hospital- Varna in October 2015 for VZV infection. At admission the typical rash and high temperature were present and along with positive serology (IgG+, IgM+) and epidemiological data, the diagnosis of varicella was confirmed.

A few days after hospitalization the patient developed massive painful infiltration in the left submandibular zone with skin hyperemia. The conduction of cervical ultrasound and two consultations with oral and maxillofacial surgeons concluded it to be a nonspecific lymphadenitis. This complication of varicella is relatively rare and is a result of the prolonged immunosuppression, caused by the accompanying enzyme defect. Moreover, due to the genetic disease alterations in the acid-based profile were also observed, showing multiple times compensated metabolic acidosis.

This case illustrates the uncommon occurrence of submandibular abscess, complicating varicella in a patient with underlying aminoacidopathy. This unusual mixed form represents clinical interest for there are only three other known patients with MSUD in the Varna region.

EMBOLIZATION OF A RUPTURED INTRACRANIAL ANEURYSM - CASE REPORT
Elena Ivanova, Zhenya Marinova, Roksana Tsvetanova, Chavdar Bachvarov, Georgi Todorov
Medical University of Varna, Varna, Bulgaria

Introduction: An aneurysm is a balloon-like bulge or weakening of an artery wall. An estimated 50 to 80 percent of all aneurysms do not rupture during the course of a person's lifetime. Although ruptured aneurysms are relatively uncommon, they represent a very serious illness which can lead to subarachnoid hemorrhage and aneurysmal hemorrhagic stroke.

Materials and Methods: We report a case of a 61-year-old male who presented to the neurosurgery department with complaints of an acute headache that radiated into his neck. A subarachnoid hemorrhage was detected by using computerised tomography (CT). Cerebral angiography revealed an 11 × 13 mm sized paraclinoid internal carotid artery aneurysm. The aneurysm was embolized with coils. Then, a flow-diverting device was deployed across the neck of the aneurysm in the parent blood vessel where the aneurysm was present.

Results: The procedure was carried out successfully and was followed by a complete recovery. No rebleeding from the aneurysm had occurred by the 4-month follow-up evaluation, and the patient has experienced significant neurological improvement.
Conclusion: Aneurysm embolization offers a minimally-invasive method of treating both ruptured and unruptured aneurysms. Endovascular coil treatment is being increasingly used as an alternative to craniotomy and clipping for some ruptured intracranial aneurysms.

A CASE REPORT OF A GIANT CYST HYGROMA IN A 38-YEAR-OLD FEMALE PATIENT

T. Latunova, K. Marinova, B. Petrov, R. Nenkov
Medical University of Varna, Varna, Bulgaria

Cystic hygromas/lymphangiomas are rare congenital malformations of the lymphatic system. Most are seen in the head and neck region (75–80%) and usually affect children under 2 years of age. They are quite rare in adults. The etiology of hygromas in adults is controversial, but they are thought to be due to proliferation of lymphoid vessels in response to head or neck trauma or infection.

We present a 38-year-old female patient - R.A. with a giant tumor in the right cervical region. CT- and ultrasound examination shows big tumor mass with liquid components. The pathological examination reveals a rare case of cystic hygroma.

Our treatment of choice for the hygroma was radical surgical excision. On the other hand, there are several nonsurgical treatment modalities for cystic hygroma such as interferon alpha, laser therapy, or intralesional sclerosing agents administration, all not acceptable for this case. We consider that total surgical excision should be a method of choice, because cyst remnants usually cause tumor recurrence.

Lymphangiomas in the neck region usually border with very important structures, and all the risks should be considered. Experienced surgical technique and precise approach are mandatory.

CHURG-STRAUSS SYNDROME: A CASE REPORT

Kiril Zhelyazkov, Elitsa Kupenova-Koleva, Radoslav Kolev, Vladimir Kadinov, Simona Bogdanova
Medical University of Varna, Varna, Bulgaria

Churg-Strauss syndrome (CSS) is an allergic granulomatous angiitis, a rare necrotizing vasculitis with unknown pathogenesis, involving small and medium arteries and veins, associated with the presence of perinuclear antineutrophil cytoplasmic antibodies (p-ANCA).

A 51-year-old female presented with a five-month history of subfebrile fever, asthenia, adynamia, nausea, vomiting, pain in the abdomen and weight loss of 12-15 kilograms. She was diagnosed with bronchial asthma over 15 years before admission and inhaled corticosteroids. LABA was applied as long-term therapy. A few months before admission she developed upper and lower dyspeptic syndromes. Fibrogastroscopy showed chronic atrophic gastritis. Biopsy taken during the fibrogastroscopy revealed chronic antral gastritis HP (-) and eosinophilic duodenitis. Fibrocolonoscopy showed solitary ulcer of the rectum and eosinophilic entorocolitis. Biopsy taken during the fibrocolonoscopy revealed tubular adenoma of the sigma with low dysplasia. Lab exams revealed elevated CRP, WBC, eosinophil levels, also HBsAg (+), antiHBC/total (+) and anti HBeAg (+).

The patient was diagnosed with Churg-Strauss Syndrome and initial treatment with prednisone was introduced. After four days of treatment, the temperature normalized, and the nausea, vomiting, abdominal pain, asthenia and adynamia subsided. The patient continues oral corticosteroid therapy.

Despite long-standing pulmonary symptoms, laboratory findings of eosinophilia and the appearance of eosinophilic duodenitis raised suspicion of possible Churg-Strauss syndrome. The histologic examination leads to the diagnosis and helps to differentiate this disease from other necrotizing vasculitides.
CASE REPORT ON A PATIENT WITH HYPERALDOSTERONISM

AT ST. MARINA UNIVERSITY HOSPITAL-V ARNA

Teodora Karamfilova, Ivanina Arabadzhieva, E. Zlatanova-Kazakova
Medical University of Varna, Varna, Bulgaria

Hyperaldosteronism is a condition characterized by excessive production of aldosterone from the adrenal glands, which leads to sodium retention and potassium loss. There is primary and secondary aldosteronism, due to reasons of different origin. The most common cause of primary hyperaldosteronism is adenoma of the adrenal gland. Clinically, the disease is characterized by symptoms caused by hypertension and hypokalaemia. Essential for the diagnosis are: high levels of aldosterone, low potassium levels, clinical and imaging studies.

In the Department of Endocrinology at the St. Marina University Hospital a case of a 67-year-old man coming for diagnostic and therapeutic clarification was observed. The complaints of the patient consist of tinnitus, headache and high arterial hypertension. A year and a half ago he underwent surgery in connection with a carcinoma of the penis. Based on the results of the clinical trials, a rounded lesion in the medial foot of the left adrenal gland was established, with the liquid equivalent of an adenoma. The differential diagnosis includes primary and secondary aldosteronism, bilateral adrenal hyperplasia and other endocrine hypertension (pheochromocytoma, low-renin essential hypertension).

After consulting with a surgeon, stabilizing and compensating the general condition of the patient, operative treatment has been discussed.

The patient remains under constant observation by an endocrinologist, cardiologist, nephrologist and an abdominal surgeon with a recommendation for periodic check-ups.

THYMOMA- A CASE REPORT

D. Tsocheva, K. Marinova, B. Petrov, R Nenkov, R. Radev
Medical University of Varna, Varna, Bulgaria

Introduction: Thymomas are the most common tumors of the front mediastinum, representing 20-25% of all mediastinal tumors and about 50% of the tumors in the front mediastinum. They originate from the epithelial cells of the thymus and are often associated with a neuromuscular disease -myasthenia gravis. Sometimes it is combined with hematologic syndromes and autoimmune diseases. The tumors can be benign or malignant. Thymoma usually occurs in people between the ages of 40-50 and there is a similar incidence in men and women. It’s quite rare in childhood. Thymoma often remain asymptomatic, but can be observed by the symptoms of tumor invasion into local structure such as chest pain, cough, dyspnea, fatigue and obstruction syndromes.

Materials and Methods: Thymoma is diagnosed by CT scan with contrast material, X-ray of lungs, MRI and confirmed by histological biopsy.

Results: We present a case report of a 60-year-old woman diagnosed with a tumor associated with myasthenia gravis. The only symptoms and signs were eyelid ptosis and generalized muscle weakness. After a chest CT scan with contrast material, a tumor formation in the anterior mediastinum was found. The histological results established a morphological picture of mixed thymoma with microscopic focal capsular invasion – type AB. The pathological stage was II A on the classification system of Masaoka. Following this the patient was scheduled for operation - throracotomy, mediastinotomy and a radical excision of the tumor lesion. The specimen was sent to the pathology department for histological examination and precise staging.

Conclusion: The prognosis for thymoma depends on the stage of the tumor, the clinical signs and symptoms, the histological results and the multidisciplinary approach of treatment involving surgical operation of the tumor, chemotherapy or radiotherapy. Patients must be monitored due to the risk of tumor recurrences and metastases.
MYSTERIOUS VISITOR IN THE HEART

M. Velieva, Kr. Mavrodieva, T. Barish, Vl. Kornovski, Pl. Panayotov
Medical University of Varna, Varna, Bulgaria

Heart primary tumors are not common. These in the right atrium are some of the rarest ones. We present this report to remind once again that sometimes the diagnosis turns out completely different even when “we have seen it with our own eyes”.

We present a 55-year-old hypertensive female with a three-year history of shortness of breath and fatigue during common physical exertions. For the last year she has had nocturnal dyspnea and intermittent vertigo. Physical examinations followed by echocardiography showed a non-homogenous round formation in the right atrium. Our patient underwent a successful surgical excision of a 6/7 cm mass after which she was placed at the intensive care in a haemodynamically steady state.

A histopathological study renounced the diagnosis of neoplasm. It turned out to be a hydatid cyst. Hydatid disease is a human parasitic infection caused by larvae of Echinococcus granulosus. Its most common site of occurrence is the lung.

In this case report we emphasize the rarity of cardiac cystic echinococcosis. The diagnosis is difficult because of nonspecific clinical and radiographic findings. We should always be prepared for the most unexpected and unpredictable situations.

PREMATURE MENARCHE ASSOCIATED WITH PRIMARY HYPOTHYROIDISM IN AN ALMOST 9-YEAR-OLD GIRL – A CASE REPORT

S. Zhivkova, L. Nikiforova, V. Kerekovska, L. Ilieva, S. Chausheva, S. Galcheva
Medical University of Varna, Varna, Bulgaria

Children with hypothyroidism generally have delayed pubertal development. Rare association with precocious puberty may occur especially in long-standing untreated patients. The cardinal features of hypothyroidism-induced precocious pseudopubertal development include thelarche, galactorrhea and menarche. Other characteristic features are an absence of sexual hair and retardation of linear growth. Its manifestation as isolated menarche has been rarely reported.

We present the case of a girl (B.T.) at the age of 10, with a history of three episodes of vaginal bleeding, operated on in 2012 due to suspicion of ovarian tumor (histological diagnosis of follicular and lutein cysts – polycystic ovary) without prior hormonal blood tests. The vaginal bleeding was repeated twice after the cystectomy and the girl was directed to consult with a pediatric endocrinologist. Recently, in January, 2014 she was admitted in the Pediatric Clinic of the St. Marina University Hospital - Varna with additional symptoms of retardation of linear growth (below the 3rd percentile according to the CDC growth chart), weight gain without a significant change in appetite, yellowish and dry skin, mask-like face, retardation of hair growth (dry and brittle hair), delayed replacement of milk teeth and constipation.

After the hormonal tests the physicians in the Pediatric Clinic assessed and evaluated the clinical results and anamnestic data. The feedback overstimulation causes hypertrophy of THS producing cells in the pituitary gland and leads to pituitary macroadenoma visualized on CT scan. The ovary stimulation is caused by an identical polypeptide chain in TSH and FSH.

During the hormone replacement therapy the condition of the patient has visibly improved. In conclusion, the girl is discharged with reduced complaints and nowadays her condition is managed by a pediatric endocrinologist at the St. Marina University Hospital – Varna.
MALIGNANCY COMPLICATIONS ACCOMPANYING PULSE THERAPY OF TAKAYASU ARTERITIS
Nevena Ilieva, Angel Balinov, Nelly Radeva, Galita Decheva, Blagovest Petrov, Lina Stoyanova
Medical University – Plovdiv, Plovdiv, Bulgaria

Takayasu’s arteritis is a rare, idiopathic, chronic inflammatory disease involving mainly the aorta and its major branches. It leads to stenosis, occlusion or aneurysmal degeneration of large arteries. The therapy involves most of all corticosteroids, which reduce the inflammation, but in severe cases therapy with cyclophosphamides (Endoxane) is also required.

This case report is based on the existing documents and physical examinations. The patient is a 69-year-old man, who has been diagnosed with Takayasu arteritis in 2000 with histological verification. At some point, not mentioned in the epicrisis, he underwent Billroth II gastric resection after a perforated duodenal ulcer. This led to corticosteroid intolerance. As a result, the common therapy was substituted by symptom-relieving therapy and pulse therapy with Endoxan (cyclophosphamides) during periods of exacerbation of the disease. These periods occurred at an interval of 1-2 years. The dose given at the beginning was 1 mg per kg body mass (500mg total), which later was reduced to 200mg per application. In April, 2014 the patient was diagnosed with histologically verified papillary carcinoma of the urinary bladder epithelium and was operated. This is a common side effect of the therapy with cyclophosphamides, therefore regular cytological urinal checkups were performed.

The prescribed dose is not considered toxic. This shows that neoplastic complications may also occur when the patient is exposed to the medication over an extended period of time. Similar to this case - the patient was healed with small doses, but over a period of 16 years.

PAROXYSMAL NOCTURNAL HEMOGLOBINURIA – A RARE CAUSE FOR ISCHEMIC ATTACKS
E. Merashka, V. Iliev, G. Ahmedova, N. Bonchev, G. Ivanova, V. Velikov, D. Nguyen
Medical University – Pleven, Pleven, Bulgaria

Paroxysmal nocturnal hemoglobinuria (PNH) is a rare disease, complications of which lead to disability and often to fatal outcome for these patients. The frequency of occurrence of venous thromboembolism is higher in patients with PNH compared to the general population. Visceral, cerebral and peripheral veins are more likely to be affected which undoubtedly causes a variety of surgical complications.

We present a case report of a 36-year-old male patient, diagnosed with PNH in 2008. As a complication he suffers from skin ulcerations and hard-to-heal wounds on the shanks of both lower limbs recurring spontaneously or after a minor injury. This condition is a consequence of the primary disease and the following corticosteroid therapy and its manifested side effects. The soft tissue defects show insufficient signs of improvement after the application of antiseptic and stimulating epithelial regeneration wound dressings, enzymatic necrolysis and chemical necrectomy, debridement and vacuum-assisted closure (VAC) therapy. Microbiological specimen show presence of polymicrobial flora and persisting secondary bacterial infection.

Patients with clinical manifestation of hard-to-heal soft tissue defects require an interdisciplinary approach and a profound analysis of the major pathological process. This is the key to improving their quality of life, increasing their average life expectancy and avoiding further disabling complications.
DIABETIC FOOT – A CASE STUDY

N. Simeonov¹, M. Yanev¹, V. Dimitrova¹, V. Kozhuharov²

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²University Hospital Lozenets, Sofia, Bulgaria

We present a case of a 63-year-old man with a 4 cm in diameter wound on his left heel. The patient is diabetic. He has had the current wound for 10 years. He was treated operatively but the situation got even worse. After a thorough cleaning of the operative field a split skin graft of about 70 cm² was taken from the right thigh. Bactigras was used to dress the donor site. In the area of the longitudinal arch of the foot a flap is lifted. The mobilization of the flap followed. The donor area of the arch was covered with split skin graft. Immobilization was done with plaster.

The surgery went without any complications. The graft healed very well. But 20 days postoperatively an infection occurred. Then the microbiology showed an unexpected result as the bacteria which contributed the infection, Shewanella pseudomonas putrefaciens, is rarely encountered.

Unfortunately, multi-drug resistant organisms have become increasingly common, making empirical therapy decisions more difficult. In many cases, empirical therapy is necessary, especially in therapeutic centers that have no microbiology laboratories and limited resources. This case report emphasized the need of healthcare centers and providers of improvement on microbiological laboratories in a hospital or medical center.

CROHN’S DISEASE – A CASE STUDY

Anna Stoimenova, St. Stoicheva, D. Staeva, R. Varbanova, M. Varbanova, M. Atanasova

Medical University of Varna, Varna, Bulgaria

Crohn’s disease is a chronic transmural inflammation in any part of the gastrointestinal tract, often accompanied by extraintestinal changes. Crohn’s disease is a chronic inflammatory disease of probably autoimmune origins associated with the onset of ulcerative changes of the digestive system. We present a case of a 26-year-old woman who entered the clinic a year ago for clarification of the diagnosis regarding lower-dyspeptic and abdominal-pain syndrome. The haematological, biochemical, imaging and invasive studies confirmed the clinical diagnosis of Crohn’s disease with an inclusion of the colon. The patient was discharged with assigned home therapy. After a year of treatment with recombinant human monoclonal antibody, the disease control is carried out by an invasive procedure - FCC and disease remission is established.

ACUTE VIRAL MYOCARDITIS IN A PATIENT WITH REFRACTORY ANEMIA AND CARDIAC HEMOSIDEROSIS

Y. Stoyanova, V. Dimitrova, L. Ilieva, D. Dimov, L. Mircheva, Y. Yotov

Medical University of Varna, Varna, Bulgaria

Refractory anemia with ringed sideroblasts (RARS) is part of a heterogeneous group of myelodysplastic syndromes. It is a type of hematopoietic neoplasm characterized by ineffective hematopoiesis. Due to the increased amount of iron in RBC in RARS and the frequent blood transfusions, hemosiderosis in a number of organs is observed. Cardiac hemosiderosis (CH) in RARS is a potential cause for the development of heart failure in the absence of adequate chelation therapy.

This is a case of a 19-year-old boy who had a history of RARS and developed heart failure as a result of acute viral myocarditis (AVM) and CH.

The patient was admitted to hospital in a critical general condition. After a former acute viral infection, his condition worsened with clinical features of total heart failure. Antibody testing established significant increase in titers of antibodies against CMV. The patient was diagnosed with AVM. The combination of AVM and CH led to
severe systolic dysfunction: EF- 35% and total heart failure with manifestation of ascites, hepatic venous stasis and bilateral pleural effusions. Treatment with Desferal, glucose solutions, diuretics, hepatoprotectors and Isoprinosine based on the viral etiology of the infection was initiated. Four blood transfusions were conducted.

This clinical case is a rare combination of AVM and CH, due to inadequate chelation therapy in RARS. As a result of the 19-day hospitalization at UMHAT „St. Marina” and the dynamic monitoring by a cardiologist, within two months the output parameters of cardiac function were reached and a complete patient recovery was accomplished.

ARRHYTHMIA IN A PATIENT WITH CONGENITAL HEART MALFORMATION
V. Dimitrova, Y. Stoyanova, A. Kisheva, Y. Yotov
Medical University of Varna, Varna, Bulgaria

Arrhythmias in some adult patients with CHD are specific for the structural malformation itself – WPW syndrome in Ebstein’s anomaly, or atrioventricular block in “congenitally corrected” transposition of the great arteries (L-TGA). The prevalence of congenital heart defects is 8 per 1000 live births. Arrhythmias in adult patients with CHD may be attributed to structural defects such as WPW syndrome in Ebstein’s anomaly and AV block in „congenitally corrected”, transposition of the great arteries (L-TGA). In other cases, arrhythmias occur due to surgical scars in association with cyanosis or prolonged abnormal tension or volume overload.

This is a case of a 30-year-old woman who was admitted to a hospital with symptoms of palpitations, swelling of the lower limbs and abdomen for 10 days. At the age of 9 she had undergone a Fontan operation due to CHD. The physical examination revealed tachyarrhythmic HR-100/min, T3 gallop rhythm, BP-106/80, ascites and limb swelling. ECG revealed atrial flutter with variable block. Echocardiography showed normal systolic function of the camera, AV regurgitation type I-II. Treatment with beta-blocker, cordarone, an anticoagulant and a diuretic, was initiated.

Ten days after starting the treatment sinus rhythm was recorded on ECG. Physical examination revealed compensation for right-type heart failure.

The most common mechanism for symptomatic tachycardia in the adult CHD population is macroreentry within the atrial muscle. Intra-Atrial Reentrant Tachycardia is often associated and especially problematic for older patients who have undergone older-style Fontan operation.

STRUMA CORDIS
Marina Ereva, Georgi Manchev, Vladimir Danov
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We report a case of ectopic thyroid tissue of the heart (struma cordis), which is an exceptionally rare defect in the embryonic development of the primitive gut tube. The most common location in the heart is the right side of the ventricular septum and the right ventricular outflow tract (RVOT). Extirpation of a tumor can be performed under total cardiopulmonary bypass (CBP).

Diagnosis: The patient is a 57-year-old woman, presenting with symptoms of heart failure and a systolic murmur best heard at the second left intercostal space. Echocardiography visualized enlarged right heart cavities and an obstructing mass in the RVOT sized 30/30 mm with a peak gradient of 55 mmHg and turbulent flow. The patient had right ventricular hypertrophy measuring 9 mm in thickness.

Histological diagnosis: It confirmed differentiated thyroid tissue in the tumor - macro and microfollicular goiter with cholesterol deposits and PAS-positive for colloid.

Differential diagnosis: First, we excluded metastatic thyroid carcinoma. Because of the lack of history of deep venous thrombosis and the location of the tumor in an area with a high rate of the blood flow, we ruled out the possibility of intraventricular thrombus and suggested neoplasm.
Discussion: The most common primary tumor of the heart is left atrial myxoma. The primary thyroid tumor (struma cordis) is one of the rarest tumors of the heart. The metastatic thyroid cancer is more common.

A CASE REPORT: TREATMENT OF ANTERIOR CROSSBITE IN EARLY MIXED DENTITION

Selim Ibishev, Oktavian Spanov, Boris Valkov, Hristina Arnautska, Zornica Valcheva
Medical University of Varna, Varna, Bulgaria

Anterior crossbite is a major esthetic and functional concern for the parents during the developmental stage of a child. It is one of the major responsibilities of the pediatric dentist or orthodontist to guide the developing dentition to a state of normalcy in line with the stage of oral-facial growth and development. This paper documents two cases in which anterior dental crossbite was successfully corrected in developing dentition.

Diagnostic data was gathered from clinical photographs, models were cast from intraoral impressions, cephalometric analysis based on lateral cephalograms and panoramic radiographs.

Both the cases reported here were in the early mixed dentition period and had Class-1 molar and canine relation. There was enough space in the mesiodistal distance in both of the cases to achieve labial movement of the maxillary tooth.

Anterior crossbite is the lingual positioning of the maxillary anterior teeth in relation to the mandibular anterior teeth. There are many treatment options available for correction of crossbites according to the number and site of the teeth/tooth involved, the stage of the dentition and its etiology.

A CASE REPORT OF A 44-YEAR-OLD MALE WITH WEGENER’S GRANULOMATOSIS AND HEART FAILURE

D. Nikolov, D. Ivanov, L. Stoyanova
Medical University – Plovdiv, Plovdiv, Bulgaria

Introduction: Granulomatosis with polyangiitis, also known as Wegener’s Granulomatosis is a rare systematic autoimmune disorder with unknown etiology, which has a wide specter of symptoms and complications in different organs and systems (most commonly involving the eyesight, skin, and/or the respiratory, renal, and cardiac systems).

Case Report: We are presenting the case of a 44-year-old male, diagnosed with Granulomatosis with polyangiitis in 2007. Due to the renal symptoms 2 biopsies have been performed - in 2007 and in 2012, showing data for crescent chronic glomerulonephritis. The patient also has a history of repeating pneumonias, the most recent being in December, 2015.

The patient was first admitted with symptoms of respiratory insufficiency, confirmed by blood tests results and X-ray findings. After the treatment the patient showed improvement, but soon after that he was re-admitted with worsened symptoms. Further examination revealed left-sided heart failure.

Conclusion: Granulomatosis with polyangiitis is a very rare and hard to diagnose disorder with various symptoms. Although heart failure and lung failure do occur in patients with this disease, they are comparatively rare complications and, furthermore, usually have earlier symptoms.
PSEUDOXANTHOMA ELASTICUM (GRÖNBLAD–STRANDBERG’S SYNDROME)
St. Stoycheva, D. Staeva, T. Topalova, R. Varbanova, M. Varbanova, B. Kanazirev
Medical University of Varna, Varna, Bulgaria

Pseudoxanthoma elasticum (PXE) is a rare autosomal recessive disease affecting the elastic fibers in the skin, eyes, and the walls of arteries, associated with mutations in the ABCC6 gene.

It includes specific skin lesions and increased laxity of the skin, mainly in the flexor parts of the body, hemorrhages in the retina, leading to loss of central vision. There is a vascular multiorgan damage with progressive atherosclerosis, leading mainly to cardiovascular complications.

We present a case of a 29-year-old woman whose complaints are related to the presence of atypical skin lesions in the abdominal area. There was a number of studies and review was carried out by doctor specializing in dermatology. Dermatologic diagnosis - rare skin disease characterized by the presence of linear and reticular placed yellow plates forming papules like „cobblestone pavement” on the lateral parts of the neck and the area around the umbilicus of the patient, accompanied by a characteristic skin looseness in these places.

CT examination of the chest and abdomen was made without contrast. The presence of calcium deposits in the coronary arteries, aorta, lungs and liver was established.

Currently there only two cases describing the use of PTCA (Percutaneous transluminal coronary angioplasty) with intracoronary vascular ultrasound visualization of calcified arteries in patients with PXE are known. Most patients are treated by coronary artery bypass surgery.

ATYPICAL DOESN’T MEAN IMPOSSIBLE. HAND, FOOT AND MOUTH DISEASE
Ralitsa Yotsova, Dimitar Dochev, Slavena Georgieva, Tsvetalina Gerova, Diyana Kyuchukova, Zhenya Borisova
Medical University of Varna, Varna, Bulgaria

Hand, foot and mouth disease is a common viral infection, caused by coxsackie viruses. It mainly affects infants and children but it can occasionally occur in adults, too. HFMD is characterized by a low-grade or moderate fever and papulovesicular eruptions, involving predominantly the skin of hands and feet and the oral mucosa. Some rare forms of the disease are presented by single unspecific lesions or a generalized rash.

We present the cases of both a mother and her 3-year-old daughter. The woman reported previous contact with a child, diagnosed with the disease. Soon she noticed several eruptions, located on her hands. She had no additional complaints and the lesions soon disappeared. A few days later her daughter felt weak and nauseous. She had a high-grade fever (39.6-40ºC), which was resistant to any antipyretic medication. The lesions developed in hours. They were generalized and resembled roseola.

The primary diagnosis was confirmed by laboratory tests afterwards. The throat culture verified the viral aetiology – coxsackie virus A16.

We described two cases of HFMD, which is a mild, widespread and self-limiting disease. Each one of them was presented by eruptions with a relatively atypical location. Although they were caused by the same strain of a viral agent, the two cases differed from each other. This could have caused difficulties in diagnosis and proves that even “the simplest” diseases require a proper range of differential diagnoses, additional testing and examination techniques.
YOUNG MAN WITH NONINVASIVE BLADDER CANCER
Medical University – Sofia, Sofia, Bulgaria

Introduction: Bladder cancer (BC) is the second most common malignancy of the genito-urinary tract. Approximately 75% of the patients with BC present with a disease confined to the mucosa (stage Ta, CIS) or submucosa (stage T1).

Our aim is to highlight the clinicopathological features of urinary bladder cancer.

Materials and Methods: Our case of a 25-year-old man – I.T.I. (medical record № 5536/April 27, 2015) is presented with its clinical course and morphologic findings. The patient was admitted at the Department of Urology of 5th MHAT, Sofia, complaining from dysuria and recurrent painless hematuria. He is employed in a paint manufacture (chemical exposure). The laboratory tests showed ALAT - 226.1U/l, ASAT - 118.8U/l.

Results: The ultrasonography demonstrated a mobile tumor mass in the urinary bladder near the right ureterovesical orifice. The sonogram showed diffuse parenchymal damage of the liver. Computed tomography confirmed a tumor mass, not invading the bladder wall beyond the inner layer. Subsequent CT scan of the chest was negative for metastases. During the urethrocystoscopy we found a tumor mass size of 4/5cm near the right ureterovesical orifice and resected it (surgical record №:204/May 7, 2015). The postoperative recovery was uneventful. The histological examination (№:2090/May 8, 2015) showed moderately differentiated papillary transitional cell carcinoma, stromal invasion is suspected (G2).

Conclusion: Over the last few decades the incidence of BC has increased greatly. Often younger patients are affected. Usually BCs are multiple and often give recurrences. It is very important to ensure the follow-up of these patients. Regular urology consultations and cytological tests of the urine after the surgical cancer treatment are recommended.

NEUROSCIENCES AND CELL BIOLOGY
PSYCHIATRIC AUDITORIUM
10:00 – 11:30

ALZHEIMER’S DISEASE: WHAT IF THERE IS A CURE?
Stela Atanasova, Ralitsa Nikolova, Ivan Dimitrov
Medical University of Varna, Varna, Bulgaria

Alzheimer’s disease (AD) is a degenerative brain disorder that breaks down and eventually destroys neurons. This damage causes a decline in the mental capabilities such as memory, in the behavior, and in the ability to cope with daily activities.

Science has not yet identified any treatments that can slow or halt the progression of the degenerative process in AD even if the disease is diagnosed in the earliest stages. Instead, the treatment is symptomatic and focuses on providing a better quality of life for people with AD.

Present studies aim at discovering drugs or a vaccine-like compound that would block the secretion of amyloid, preventing its deposition in the form of plaques, and the formation of neurofibrillary tangles.

A recent theory for the treatment of AD involves the properties of coconut oil. The main active ingredient of this oil is capric acid. It represents a triglyceride with a medium chain which is processed in the body to ketones. These serve as an alternative source of energy for the nerve cells which due to damage cannot use glucose as an energy source.

The purpose of the present review is to explore the literature related to coconut oil, outlining the known mechanistic physiology, and to discuss the potential role of coconut supplementation as a therapeutic option in the prevention and management of AD.
THE GREAT IMITATOR – GLIOBLASTOMA MULTIFORME AND THE VALUE OF IMMUNOHISTOCHEMISTRY IN ITS DIAGNOSIS

G. Stoyanov, D. Dzhenkov
Medical University of Varna, Varna, Bulgaria

Glioblastoma multiforme is a diagnostic challenge for the neuropathologist. This rare oncological entry, originating from the astrocytic glia, is able to manifest itself in a variety of histomorphological forms, mimic other tumors and often gives a varying immunohistochemical profile.

Four pathologically verified cases of glioblastoma, registered at the the St. Marina University Hospital, Varna, Bulgaria were retrieved from the central pathological archive. The cases were reviewed based on their H&E profiles and immunohistochemical reactions with GFAP and Vimentin – used as a positive control, Ki-67 – a proliferative marker, and EMA – an epithelial marker, non-reactive in healthy astrocytes.

As expected all glioblastoma cases revealed the histomorphological hallmarks of the tumor and were diagnostically positive for GFAP and Vimentin and revealed Ki-67 positivity in more than 50% of the tumor cell nuclei. Three out of the four cases also revealed a positive reaction with EMA, with one case giving a weak reaction in individual cells which could not be considered diagnostic and the other two cases giving a diffuse positive reaction in most of the tumor cells.

Glioblastoma has historically earned the name multiforme. In the age of immunohistochemistry, glioblastoma continues to expand the set of immunohistochemical markers that react positively with it, although a number of them such as cytokeratin AE1/AE3 and EMA, as demonstrated in this study, should be non-reacting as they detect proteins normally present only in epithelial cells and absent in astrocytes. This can often be misleading and in certain cases, lead to histopathological misdiagnosis.

WHAT YOU MIGHT NOT KNOW ABOUT AMYOTROPHIC LATERAL SCLEROSIS

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As you may know (ALS) is a progressive degenerative disorder that affects the motor neurons. Well-known fact may also be that there are sixteen different types of ALS, which are distinguished by the signs and the symptoms which occur in each one of them. And then you are probably aware that one of the greatest physicists of our time Steven Hawking is suffering from that disease. What you might not know about this medical condition is that military veterans are approximately twice as likely to develop ALS, that there is higher susceptibility to the disease in the native island populations and that Mr. Hawking has surpassed the standard life expectancy by more than 40 years.

As materials for this study we have used a variety of sources including famous medical journals, scientific publications and articles, which allowed us to examine methodically and in detail the chosen topic.

According to the literature worldwide, this disorder occurs in 4 to 8 per 100,000 individuals. Our research is concentrated on the differentiation of the rates between the sporadic and familial ALS forms, the little known details about the history of this disease, the latest researches in the field of medicamentous treatment and the main mechanisms by which the motor neurodegeneration is thought to appear.

We have analyzed the little known facts connected with the medical history and the latest scientific researches in the field of neurology associated with this disease.

ALS is a rare disorder concerning diversified groups of the population. It is still a subject of great medical interest for the contemporary neurology and neurosciences, with abundant unclarified details.
THE MORPHOLOGICAL BASIS OF THE MOTOR SYMPTOMS IN ADULT-ONSET HUNTINGTON DISEASE- A PARALLEL WITH NORMAL STRUCTURES AND FUNCTION

Elena Harizanova, Yasen Georgiev, Stoyan P. Pavlov
Medical University – Varna “Prof. Dr. Paraskev Stoyanov”, Varna, Bulgaria

Huntington disease (HD) is an autosomal dominant disease observed only in humans. Currently HD is incurable and the life span after the presentation of the first symptoms is 10 to 15 years. The pathological changes are attributed to the production of an abnormal form of the protein huntingtin encoded in the 4th chromosome. The mutant huntingtin causes severe progressive neurodegeneration in the brain. The basal ganglia are relatively early impacted. The changes in the extrapyramidal system disrupt the motor function and thus HD seriously affects the quality of life.

Our survey is based on contemporary scientific literature (2001-2015) as available in major scientific bibliographic databases (Pubmed, Scopus, ISI Web of Knowledge) and educational sources on the topic (books, cases and specialists’ opinions) accessible via Medscape, Huntington’s Outreach Project for Education at Stanford (Stanford University), etc.

We reviewed and analyzed the current knowledge on the changes in the basal ganglia circuitry involved in the onset and development of the motor symptoms exhibited in the course of HD.

Understanding the morphological basis of HD allows the forming a better perspective on the pathogenesis and development of the disease. This may improve the process of assessment and staging of the patient with HD, serve as basis for development of novel strategies for treatment and improvement of the quality of life and provide a firm basis for future scientific research of this rare and overlooked condition.

ENDOCYTOSIS AND VESICLE TRAFFIC IN THE OUTER HAIR CELL OF THE GUINEA PIG COCHLEA

Entcho Klenske, Csaba Harasztosi, Susanne Badum, Emese Harasztosi, A.W. Gummer
University of Tübingen, Tübingen, Germany

Outer hair cells (OHCs), the cells responsible for the extraordinary sensitivity and frequency selectivity of the cochlea, possess rapid endocytic activity at their apical pole. It has been demonstrated using the fluorescent membrane marker FM1-43, that apically endocytosed vesicles traffic towards the basolateral membrane and the infranuclear pole of OHCs. We reported that vesicles formed at the basal pole are transcytosed towards the supranuclear area and along a central strand towards the apical pole.

Confocal laser-scanning microscopy and multiphoton microscopy were used to visualize vesicle traffic of freshly isolated OHCs. Our newly-developed double-barrel perfusion system was used to stain OHCs independently either on their apex, base or both with the fluorescence membrane markers FM1-43 and FM4-64, as well as the fluid-phase markers Lucifer Yellow (LY) and Dextran Oregon Green (DOG).

Vesicles endocytosed at the infranuclear pole are transcytosed towards the apical pole with a speed of ~0.44 and ~0.08 μm/s at the distances of 5 and 67 μm from the base of the cell. The fluid phase markers DOG and LY, which have a molecular weight of 10 kDa and 521 Da, respectively, were not internalized by OHCs. Vesicle traffic could be effectively reduced by the kinesin inhibitor monastrol (50 μM).

OHCs possess intense endocytic activity at their infranuclear pole. Data imply that pinocytosis is restricted to molecules no larger than 500 Da, the basoapical vesicle traffic is faster around the infranuclear pole in comparison to the infracuticular zone and the traffic is kinesin dependent.
IS THERE A CAUSAL LINK BETWEEN OBSTRUCTIVE SLEEP APNEA SYNDROME AND TYPE 2 DIABETES?

Jan Polak

Center for Research on Diabetes, Metabolism and Nutrition, Third Faculty of Medicine, Charles University in Prague, Czech Republic

Obstructive sleep apnea (OSA), affecting 5-15% of the general population is characterized by repetitive partial or complete collapses of the upper airway during sleep, resulting in periodic drops in blood oxygen levels (intermittent hypoxemia) and sleep fragmentation. Previous research has identified OSA as an independent risk factor for hypertension, cardiovascular diseases, stroke, and all-cause mortality, however, recent studies indicate that obstructive sleep apnea is also associated with glucose intolerance, insulin resistance, and type 2 diabetes mellitus (T2DM), independently of other confounding factors. Nevertheless, mechanisms linking OSA with T2DM remain poorly understood. The presentation will provide evidence for a causal relationship between OSA and T2DM using experiments performed in humans as well as using animal model of sleep apnea. Additionally, possible approaches for in-vitro investigation of cellular effects of hypoxia and intermittent hypoxia (IH) will be presented. Specifically, experiments exposing mice to chronic IH demonstrated that IH increased fasting glucose levels and worsened glucose tolerance by 67% and 27%, respectively. Furthermore, intermittent hypoxia exposure was associated with impairments in insulin sensitivity and beta cell function, an increase in liver glycogen, higher hepatocyte glucose output, and an increase in oxidative stress in the pancreas. Glucose intolerance, insulin resistance, and impairments in beta cell function persisted despite discontinuation of the hypoxic exposure. In parallel, IH increased spontaneous lipolysis by 264%, reduced epididymal fat mass by 15% and adipocyte size by 8%. Furthermore, when IH-exposed mice were treated with a lipolysis inhibitor (acipimox), IH-induced increase in lipolysis was prevented. Additionally, acipimox fully prevented IH-induced impairments in fasting glycemia, glucose tolerance and insulin sensitivity. For all reported results, p<0.05. We suggest, that augmented lipolysis contributes to insulin resistance and glucose intolerance observed in mice exposed to IH and in humans with OSA. Acipimox treatment ameliorated metabolic consequences of IH and might represent a novel treatment option for metabolic impairments in OSA patients.

THE ENIGMA OF THE INTERFACE

Ulrich M. Gross

Institute of Pathology, Free University of Berlin

The interface is defined as sharp contact boundary between two substances, materials or phases, either or both of which may be solid, liquid or gaseous (1). In the medical practice clear-cut conditions are not encountered, because the components at the interface change by time, chemical composition and physical conditions that are dictated by wound healing processes and functional wear. The properties of materials play an important role. Examples are given for pure metals and metal alloys, ceramics, bioglasses and some polymers.

Apart from the materials properties the surface structures also are important for the success or failure of implants. Again, surface structures can change by time and cellular reaction at the surface. Whereas in former time and for special intentions inertness of materials was requested, bioactive properties were built in the bulk or surface coatings of biomaterials. Non-absorbable and absorbable materials represent a scale of possibilities. The engineering of specific activities, e.g. release of drugs, from the surface of implants by cells or tissue fluid is an option.
The release of particles from the surface or the modification of intercellular fluid by solubilized material from the implant can generate considerable unexpected and undesired tissue reaction that in the worst case lead to the sequestration of the implant and deterioration of physiological tissue structure and function. Specific problems are encountered when nanometer size particles are injected, implanted or released from bulk material. They can influence shape and properties of physiological molecules, e.g. polypeptides or proteins, and introduce new types of cellular reactions or inflammation.

Implant success or failure is difficult to define. Even short duration of new ability to walk, chew, feel or digest can be a personal success for a patient. On the other side is an infection of an implantation site, e.g. of an artificial heart valve, a deadly disaster for a patient. The surgeons strategy, skills and critique are also important for success and failure.

I. The Williams Dictionary of Biomaterials, Liverpool University Press, 1999

ABDOMINAL SURGERY
PSYCHIATRIC AUDITORIUM
14:30 – 16:00

ENDOSCOPIC ALTERNATIVES FOR CHOLEDODHOLITHIASIS
Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Choledocholithiasis is a common complication of gallstone disease. The therapeutic approach should be carefully selected because missed common bile duct (CBD) stones present a risk of recurrent symptoms. However, the morbidity and cost from indiscriminate invasive biliary evaluation should also be minimized.

In this study we will present the different endoscopic approaches used in the diagnosis and treatment of choledocholithiasis.

The retrospective study includes 91 patients in the period from 2010 to 2015. The information from imaging studies for diagnosis of choledocholithiasis was collected. After the diagnosis, the patients were subjected to different treatment modalities. After completing the procedures, the outcomes, morbidity and the complications were compared analysed.

Jaundice was the most common symptom. Abdominal ultrasound was the commonest imaging modality done with sensitivity of more than 60% in finding the common bile duct stones. CT and MRCP were the main methods of confirming the diagnosis. ERCP was the common treatment modality done, performed in 59 from 91 patients (65%), and having success rate in 46 out of 59 patients (78%).

Occurrence of choledocholithiasis increases with age. Abdominal ultrasound is a cheap and effective method with sensitivity of more than 60%. In lot of cases MRCP is more preferable as a biliary imaging modality. ERCP is a feasible method of management followed by laparoscopic cholecystectomy.
MINIMALLY INVASIVE SURGERY FOR ADRENAL TUMORS
Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

The minimally invasive adrenalectomy is the procedure of choice for benign adrenal tumors having a size of less than 6 cm.

The aim was to evaluate the results after laparoscopic adrenalectomy (LA).

We performed a retrospective review of case series of laparoscopic adrenalectomy for benign and metastatic adrenal tumors performed in the Institution from 2009 to 2015. The objective of the study was postoperative morbidity, mortality and clinical outcomes.

Sixty-four patients were operated on in the time between 2009 and 2015. Six out of these sixty-four patients being operated on in the Institution were suffering from a bilateral adrenal disease. There was no mortality or major postoperative complication observed. The mean operative time was higher during the learning curve. In two patients the operating team had to perform a conversion. The morbidity rate was 5% in total and in three patients hypertensive crises were observed.

Laparoscopic adrenalectomy is a safe procedure for benign adrenal tumors having a size of less than 6 cm. Performing a preoperative adrenergic blockade facilitated easier intraoperative control of the hemodynamic stability.

RETROPERITONEAL HEMORRHAGE AS FIRST PRESENTATION OF ADRENAL GLAND TUMOR – CASE REPORT
Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Acute hemorrhage of the adrenal glands is a rare condition. Although trauma is the most common cause, some authors report non-traumatic etiology.

We present a case of a 67-year-old female complaining of severe, unbearable pain in the upper abdomen. The physical examination found pale skin and cyanosis. The CT revealed retroperitoneal hematoma and highly vascularized tumor formation with dimensions of 16x10x17 cm, as well as intraperitoneal free fluid.

After initial conservative treatment and resuscitation, the patient was operated on due to ultrasound data for an increasing size of the hematoma. The laparotomy established rupture of the giant left adrenal gland tumor and large retroperitoneal hematoma. Left adrenalectomy was performed. The hemorrhagic shock led to fatal complications.

Tumors of the adrenal glands rarely cause life-threatening complications and may reach large size. Usually they are recognized early and patients undergo elective surgery. Survey of Medline, the Scopus database revealed only about 12 cases of retroperitoneal hemorrhage due to an adrenal gland tumor. The study found very few cases of death, regardless of the type of the tumor. Most of them are treated successfully using interventional radiology (embolization) and elective surgery. This condition is rare and usually fatal if not recognized and diagnosed in time. We recommend timely diagnosis of retroperitoneal tumor masses and elective surgery, especially for large tumors with a high risk of spontaneous rupture.
THE IMPORTANCE OF SURGICAL APPROACH FOR ACHALASIA


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Achalasia is a rare primary motility esophageal disorder, which presents disrupted peristalsis and absent LES relaxation upon swallowing. According to its classification - type I, II and III - its management, currently available for symptom palliation, includes surgical, endoscopic and pharmacological. Our aim is to present the experience in the surgical treatment of achalasia and a review of the literature.

We present a retrospective study of 21 patients who underwent laparoscopic and open Heller myotomy combined with partial fundoplication in First Clinic of Surgery, St. Marina University Hospital. The results were compared with literature data from leading centres for upper GI disorders.

Laparoscopic Heller myotomy was performed in 17 patients. The perioperative results and long-term outcome were comparable to the literature data. According to recent meta-analysis on esophageal stasis improvement, decreased LES pressure and esophageal width, laparoscopic Heller myotomy with fundoplication provided superior and longer-lasting symptoms relief in comparison to the former treatment options. Randomized controlled trials compared the results of a 5-year follow-up period allowing evidence suggesting that surgical intervention is superior to pneumatic dilation, even though the latter is the favored strategy.

Transabdominal laparoscopic Heller esophagomyotomy is a safe and effective minimally invasive procedure of choice for achalasia treatment, preventing post-operative GERD and dysphagia optimum control, improved life quality and lowest morbidity.

MINIMALLY INVASIVE MANAGEMENT OF PANCREATIC PSEUDOCYSTS


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Pancreatic pseudocyst (PP) is a common complication of acute and chronic pancreatitis, trauma or obstruction of the pancreatic duct. Most PP undergo spontaneous remission and do not require treatment, although some of them persist and progress to the occurrence of complications. A matter of open discussion is whether pseudocysts should be treated, what the method of treatment should be and when should the treatment be initiated.

Treatment of PP includes various methods: percutaneous catheter drainage, endoscopic transmural or transpapillary drainage, laparoscopic or open surgery by pseudocystenterostomy. This article is based on a thorough literature review on articles published during the last years by leading world centers on the management of PP. We present clinical experience with minimally invasive drainage of PP performed in the First Clinic of Surgery, St. Marina University Hospital - Varna.

A significant advantage of the endoscopic method is that it creates a permanent tract between the cyst and the stomach, without the possibility of leakage of pancreatic enzymes. Several conditions must be met for the complete obliteration of the cyst cavity during the drainage, as the anatomy of the pancreatic duct is one of the most important factors.

Current trends in the treatment of symptomatic PP are shifting towards minimally invasive methods such as endoscopic transmural and percutaneous drainage under sonographic or CT control. Results from open surgery are compared to percutaneous drainage and endoscopic stenting in pseudocysts of the pancreas.
SPLENECTOMY AS A PROCEDURE OF CHOICE FOR HEMATOLOGICAL DISEASES


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

In 1549 Zakarello of Polo performed the first elective splenectomy on a patient with a hematological disease. Splenectomy is a method for the treatment of a number of hematological diseases. Idiopathic thrombocytopenic purpura is the most common indication for splenectomy.

We performed a retrospective research of the period 2001-2015, which included all the patients who underwent splenectomy at First Clinic of Surgery, St. Marina University Hospital, Varna.

A total number of 68 patients were included. The ratio of female to male patients is 3:2. The age is between 18 and 80. Blood loss varied from 20 to 400 ml. Perioperative antibiotic prophylaxis was applied in all patients. Infectious complications occurred in 10 patients, 4 patients developed an abscess and 2 patients developed postsplenectomy syndrome.

Splenectomy is the procedure of choice in selected hematological diseases. Splenectomy in patients with hematologic disorders keeps a risk of fulminant and life-threatening infection known as "overwhelming postsplenectomy sepsis" that can be avoided by appropriate treatment.

LAPAROSCOPIC PERITONEAL DIALYSIS CATHETERIZATION


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

The use of peritoneal dialysis catheterization is a common method of renal replacement therapy in patients with renal dysfunction. The methods used nowadays are laparoscopic and conventional peritoneal catheterization. Since the early 1990s laparoscopic techniques have been applied by many surgeons around the world.

The aim of this paper is to compare the positive and negative sides of laparoscopic and conventional peritoneal dialysis catheterization in patients with renal malfunction.

We present a review of the literature and a case report of laparoscopic peritoneal catheterization. Results: Migration of the stent is more frequently observed after a classic open procedure and far less frequent after a laparoscopic procedure. There is no difference in catheter survival in the two groups. The laparoscopic approach also gives the possibility to revise the abdominal cavity for concomitant pathology and perform adhesiolysis.

The laparoscopic technique with secure placement of the catheter lowers the incidence of catheter migration and should be recommended in the practice. The laparoscopic placement of the catheter leads to better function than the open procedure; it allows the immediate start of dialysis without fluid leakage and permits simultaneous performance of other laparoscopic procedures.
SHORTENED ESOPHAGUS - UNDERESTIMATED COMPLICATION OF HIATAL HERNIA


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Laparoscopic treatment has become the gold standard for hiatal hernia. Large hiatal hernias on the other hand remain a challenging procedure for the surgeon especially in the presence of esophageal shortening, which requires lengthening procedures. We performed retrospective analysis of esophageal shortening and the required surgical procedures.

We identified 79 (30.4%) patients with giant hiatal hernia and shortened esophagus out of 260 patients operated on in the First Clinic of Surgery, St. Marina University Hospital – Varna. The repair includes Nissen fundoplication, crurorrhaphy after aggressive esophageal mobilization or Collis gastroplasty.

Esophageal shortening was observed statistically more frequently in giant hiatal hernias with long history of symptoms (p<0.005). Compared to fundoplication alone, esophageal lengthening procedure led to better symptom improvement in large hiatal hernias, less gas bloating and excellent quality of life (p<0.05). Patients with giant hiatal hernias and short esophagus had statistically more frequent symptom and radiographic recurrence (p<0.05).

The postoperative and long-term results were excellent after laparoscopic Nissen fundoplication and esophageal lengthening. The utilization of Collis gastroplasty enables the surgeon to retain excellent results even in complicated cases. Non-treated esophageal shortening was identified as a factor for hernia recurrence. Esophageal lengthening procedures should be implemented in the routine surgical treatment of giant hiatal hernias.

VIRTUAL COLONOSCOPY – RELIABLE APPROACH FOR DIAGNOSTIC AND SCREENING OF COLORECTAL PATHOLOGY


Department of General and Operative Surgery, Medical University of Varna, Varna, Bulgaria

Virtual examinations used in different fields of science are becoming more popular and extremely comprehensive and useful field of application. This direction is the most innovative in the study of the anatomy of the human body and also more widely spread in the diagnosis and screening of pathologies of the GI. One of the directions in this field is the virtual colonoscopy. It reveals a major opportunity and almost 100% diagnostic success in detecting colorectal cancer and polyps of the colon.

In the presented retrospective study of the period 2009-2015 we included 500 patients examined by virtual colonoscopy (VC) and endoscopic colonoscopy (EC) in the St. Marina University Hospital – Varna. The patients were referred to virtual colonoscopy because of various gastrointestinal complaints. We analyzed the diagnostic value of virtual colonoscopy for lesion type and location.

Virtual colonoscopy revealed 79 patients with colorectal cancer, 81 with benign tumors of the colon and 40% with colon diverticulosis. Patients with CRC represent 49% of the total number. The most common indications for VC include supplementary examination after EC. In the case of colorectal lesion, requiring histological verification, VC does not universally replace EC.

Virtual colonoscopy is an established diagnostic method with high specificity and sensitivity, with a significant role in the diagnostic and screening of colorectal pathology. VC is a non-invasive, painless, preferred diagnostic method and does not require sedation. It is useful in patients with no opportunity to see the colon via an endoscop-
ic method, when the patient condition does not allow to do endoscopic colonoscopy and like a modality for stag-
ing CRC. VC as a diagnostic approach can be applicable in cases of malignancy and benign diseases such as IBD and diverticulosis.

AUGMENTED REALITY IN SURGERY


Department of General and Operative Surgery,
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Augmented reality (AR) is a live direct or indirect view of a physical, real-world environment whose elements are augmented (or supplemented) by computer-generated sensory input such as sound, video, graphics or GPS data. As a result, the technology functions by enhancing one’s current perception of reality. In surgery the main place of augmented reality is in planning operations, intraoperative image processing and telementoring training.

Online research using Internet searching machines with key words: “augmented reality”, “intraoperative imaging processing”, “telementoring”, “virtual reality in surgery” was performed. A research was performed using the following scientific databases Medline, SCOPUS, Google Scholar. The criteria that were set were: the article should be published in last 5 years, all types, abstracts.

We found and used over the 556 publications, 310 of them (55%) were full text publications, and 246 (45%) were open reviews. After a review of these articles and a summary the results it was revealed that the most common applications of virtual reality include student education, improving the skills of the surgeons by creating hybrid operating rooms, representing different diseases and the way of treatment in one virtual reality.

The advances in technologies produce devices for augmented reality, necessary equipment for every resident, mentor and even for professors preparing the different steps of operations. With devices for virtual reality telemedicine goes to a new aspect, making interactive telementoring accessible to every point in the world.

INTERNAL MEDICINE, SURGERY AND PUBLIC HEALTH

PSYCHIATRIC AUDITORIUM - LOBBY
14:30 – 16:00

GLUTEN-FREEDIET IN PATIENTS WITH GLUTEN ENTEROPATHY

Martin Krumov, I. Ivanova
Medical University of Varna, Varna, Bulgaria

Gluten-sensitive enteropathy or celiac disease is an autoimmune disease where there is a subtotal atrophy of the intestinal mucosa, which gets back to normal when a gluten-free diet is followed. Even a small intake of gluten results in a morphological damage and clinical relapse. The disease was first documented in the 2nd century AD. Gluten enteropathy is a common cause of malabsorption in Europe, North America and Australia. Two peaks of the condition are observed - infancy and patients in their 40s, with female prevalence. The gluten intolerance is genetically determined. The gluten in wheat, rye, barley and oats, as well as its component – the alcohol soluble gliadin are toxic substances for the intestinal mucosa. The symptoms can vary widely, but typically the following conditions prevail: a) diarrhea, malabsorption- and astheno-adynamic syndrome; b) symptoms of nutrient deficien-
cies and hypovitaminosis; c) secondary endocrine disorders - infertility; d) combination with other autoimmune diseases.

A gluten-free diet is the leading treatment (potatoes, corn, rice, soy); with almond and rice flours allowed; also avoiding dairy products in secondary lactose deficiency; a sufficient intake of fruits and vegetables, along with limiting of fats. In acute cases of diarrhea syndrome, the following are beneficial: vitamins, bio products, water-electrolyte solutions, iron.

When a gluten-free diet is ineffective, glucocorticoids are used.
Spontaneous healing and a favourable evolution of the disease are rarely observed.

MORPHOLOGICAL FEATURES OF UTERINE LEIOMYOMA FOLLOWED BY ADENOMYOSIS
Merey Kemelbekova, Aigul Sapargalieva
Asfendiyarov National Medical University, Almaty, Kazakhstan

Leiomyoma of the uterus and adenomyosis are the most common gynecological diseases. And there is a high frequency of a combination of both of these pathological conditions. However, the influence of these hyperproliferating processes on each other is not researched enough.

This study was conducted within the framework of the scientific project “Clinical and Laboratory Diagnostics of Adenomyosis”. We have investigated 61 cases of hysterectomy for leiomyomas of the uterus and analysed the operational material with a following histopathological examination. The operational material was received from the Scientific Center for Obstetrics, Gynecology and Perinatology.

Two morphological variants of uterine leiomyoma were established in the results of the histopathological examination: classic leiomyoma and cellular leiomyoma of the uterus. Cellular leiomyoma was established in 8 cases and classic - in 53 cases. In 11 cases endometrioid foci were found in nodules of the leiomyomas. Adenomyosis was established in 53 cases.

The results of morphological examination allowed to determine a prevailing combination of cellular leiomyoma and diffuse adenomyosis. Associated adenomyosis is characterized by II-III degree of activity. In such combinations cellular leiomyoma often was multiple, had big sizes and submucous location. Typical signs of a uterine leiomyoma as a hypertrophy of myocytes and increased cellularity are found in the myometrium round the area of adenomyosis. So, we can assume that leiomyoma of the uterus and adenomyosis influence each other by mutual activation.

NON-ALCOHOLIC FATTY LIVER DISEASE. EPIDEMIOLOGY, NATURAL PROGRESSION AND TREATMENT OF THE DISEASE
D. Kehayov, A. Havalyova
Medical University – Plovdiv, Plovdiv, Bulgaria

Non-alcoholic fatty liver disease (NAFLD) is considered to be the most common liver disease in our Western society. It includes conditions like simple steatosis, non-alcoholic steatohepatitis (NASH) and cirrhosis. NAFLD is strongly associated with insulin resistance and obesity and is considered the liver manifestation of the metabolic syndrome.

The prevalence among adults is 20 to 30% and in Asians around 15%. The prevalence of NASH is much lower than that of NAFLD. In obese patients with BMI>35kg/m² NAFLD and NASH prevalences are 91% and 37%, respectively. There is major association of NAFLD with upwards of 70% prevalence in Type 2 diabetes. Due to the increasing obesity in children, it is expected that NAFLD will increase above the reported 3% in the general pediatric population and 53% in obese children. 12 to 40% of patients who present with steatosis will develop NASH with fibrosis in 8-13 years. Of those around 15% will develop cirrhosis. Of those with cirrhosis 7% will develop hepatocellular carcinoma within 10 years and half of them will die from a liver-related issue or have a transplant. Only
small part of patients with steatosis develop NASH. Current treatment strategies are directed towards treating the components of the metabolic syndrome and directly targeting the liver. The general prognosis of NAFLD is benign. Only patients with proven NASH through biopsy develop progressive liver disease. Current treatment strategies are directed towards treating the components of the metabolic syndrome and directly targeting the liver. To this date there is no specific treatment for NASH or NAFLD.

HISTOMORPHOLOGICAL CHARACTERISTICS OF TAENIARHYNCHUS SAGINATUS (TAENIA SAGINATA) AND ASCARIS LUMBRICOIDES
Kristian Yeremiev, Tatyana Cvetkova, Stoyan Pavlov, Kalina Stoyanova
Medical University of Varna, Varna, Bulgaria

Ascaridosis and taeniarhynchosis are chronic intestinal parasitic diseases, caused by the multicellular helminthes - Ascaris lumbricoides and Taeniarhynchus saginatus. A. lumbricoides is the largest nematode found in the human intestines with the female organism reaching lengths between 20 and 40 centimeters. T. saginatus is a hermaphroditic cestode reaching lengths from 6 to up to 10 meters.

Aim: The aim was to prepare histological tissue sections and to present the specific microscopic structure of the intestinal helminthes with different staining techniques.

Material and Methods: We used museum preparations of adult worms, fixed in a 10% formalin solution. The proximal, medial and distal segments from a mature A. lumbricoides specimen were excised, as well as proglottids from T. saginatus. Histological tissue sections were prepared and stained with hemalaun-eosin technique, with orcein (Taenzer-Unna protocol), trichrome stain (van Gieson protocol) and azan (Heidenhein protocol).

The preparations stained with hemalaun-eosin allowed us to observe and describe the morphology and positioning of the internal organs of the intestinal parasites, while the special stains allowed the differentiation of some morphological elements. The van Gieson staining revealed the contrast between the collagen fibers of the extracellular matrix and the underlying myocytes in A. lumbricoides. All of the implemented techniques demonstrated intensive staining of the characteristic radially striated shell of the cestodal ova.

The histological sections allowed a detailed examination of the helminths’ internal morphology. Although more efficient tests for intestinal parasites are available for the routine diagnostic practice, the histological samples stained with different techniques provide useful information in studying the specific morphology in the ongoing education of the specialists in human and veterinarian parasitology, biology, laboratory technicians etc.

A REVIEW OF DRUG-INDUCED SIALADENITIS
Atanas Kuzmanov, Vasilena Kuzmanova, Stefka Valcheva-Kuzmanova
Medical University of Varna, Varna, Bulgaria

Sialadenitis refers to inflammation of a salivary gland and may be acute or chronic, infective or autoimmune. Signs and symptoms of sialadenitis have been noted as an adverse drug reaction related to various medications.

The purpose or this review was to search the current literature for cases of drug-induced sialadenitis. Literature was accessed through PubMed and Scopus. Review articles, clinical trials, and case reports of drug-induced sialadenitis were collected.

The reviewed literature showed that most of the data on drug-induced sialadenitis are based on isolated case reports. There is a significant number of reports suggesting that the anti-inflammatory drugs phenylbutazone and oxyphenbutazone may be implicated in causing sialadenitis. There are cases of sialadenitis reported with the antipsychotics thioridazine and clozapine, the calcium channel blocker nifedipine, the antithyroid drug thiamazole, the angiotensin converting enzyme inhibitors captopril and intravenous enalaprilat, the antibiotic doxycycline, the antimycotic agent terbinafine and the anti-inflammatory drug naproxen. Sialadenitis is a rare complication occurring secondary to administration of an iodinated contrast medium. Salivary glands concentrate radioiodine
(13I), an important therapy for patients with well-differentiated thyroid cancer. As a result, these glands can receive a significant radiation resulting in a sialadenitis.

The mechanisms of drug-induced sialadenitis remain unclear in most cases. Either oedema or spasm of the smooth muscle in the salivary gland or a hypersensitivity reaction could be responsible.

In conclusion, drug-induced sialadenitis is a rare adverse reaction and oral physicians need to be vigilant in recognizing and reporting it.

**LACRIMAL GLAND DYSFUNCTION IN SJÖGREN’S SYNDROME**

Christiyan Vasilev, Liliya Ilieva, Y. Manolova

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Sjögren syndrome (SS) is an autoimmune disorder characterized by lymphocytic inflammation and destruction primarily of lacrimal and salivary glands. The first clinical description of Sjögren syndrome was by Mikulicz, who described a 42-year-old patient with bilateral parotid and lacrimal gland enlargement in 1892. In 1933, the Danish ophthalmologist Sjögren compiled a clinical and histopathologic description of a series of patients with the „sicca complex“ of dry eyes and mouth.

The aim of this investigation is to confirm and quantify a clinical diagnosis of dry eye and there are three main ways for a doctor to prove it: tear film break-up time, Schirmer test, ocular surface staining.

Tear substitutes have a relatively simple formulation that cannot approximate the complex components and structure of the normal tear film. Conjunctival impression cytology in early onset of Sjögren syndrome may show an increased number of goblet cells. In severe and long-standing cases, the conjunctiva shows loss of goblet cells and squamous metaplasia.

The tear film becomes unstable because of the nonwetting surface and the eye is very vulnerable to infection and minor trauma. The classic clinical triad consists of dry eyes, dry mouth and parotid gland enlargement.

**PARENTAL ANXieties RELATED TO COMMON GAIT PROBLEMS IN CHILDREN**

S. Yanakieva, M. Raykov, M. Yanakiev, M. Avdzhiyska, D. Raykov

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Deformities of the lower extremities are frequent in childhood and generally these conditions are physiological. Consultations with a pediatric orthopedician are important for the development of the child.

The following study presents experience in observation and activities in the treatment of deformities of the lower extremities in children, admitted in an outpatient pediatric orthopedic office at the Department of Orthopedics and Traumatology at the Medical University of Varna. The study period was 3 years.

The most common concerns of the parents were about flat feet, in-toeing and bent legs.

The above-mentioned foot deformities are very common in childhood and the parents’ concern should be accepted by the medical specialist. The analysis of the symptoms and tests must be conducted to differentiate them from the pathological ones. While proven to be physiological, generally the deformities of the lower extremities in children correct spontaneously up to the age of 10. Very few of them have to follow specific treatment methods – foot supports or specialized shoe patterns.

Regular examination and proper prevention are the most important measures for the normal development of the children’s feet. Not orthopedic tight shoes, but barefoot and minimalist- type footwear take best results!
RADIOLOGICAL FEATURES OF FOCAL NODULAR HYPERPLASIA IN CHILDREN
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Focal nodular hyperplasia is the second most common benign liver tumor after the haemangioma and it has been reported in 8% in adults and 2% in children. FNH remains sporadic, but predisposing factors exist as follows: long-term cancer survivor, portal deprivation in congenital or surgical portosystemic shunt. The usual therapeutic approach is to manage the asymptomatic lesion conservatively and to resect the symptomatic ones.

We present a case of a 6-month-old infant from first pathological pregnancy, who was urgently admitted to the Pediatric Department of UMHAT St. Marina - Varna. The infant needed specifying of an ultrasound established heterodense mass in the left lobe of the liver. Clinical, laboratory and medical image investigations were made.

The liver function tests were normal, except AFP which was mildly elevated. The viral serologic tests for hepatitis B and C were negative. Abdominal ultrasound revealed a 26/29 mm heterodense parenchymal mass, well-delimited from the surrounding liver tissue in the left lobe. Doppler examination showed that the blood supply was via a large artery. This finding was confirmed by computer tomography. In the arterial phase the lesion enhanced strongly after contrast injection, except for a small central scar. These findings were diagnostic for FNH.

Although the diagnosis of FNH in children can be challenging and remains difficult, ultrasonography, computer tomography and magnetic resonance imaging all offer different advantages in the detection and characterization of liver lesions. They have a main role in the diagnosis.

SUDDEN INFANT DEATH SYNDROME - INCIDENCE AND ETIOLOGY
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Sudden Infant Death Syndrome (SIDS) - defined as “the sudden, unexpected death of an infant less than 1 year of age that cannot be explained despite a thorough investigation, including a complete autopsy, examination of the death scene, and review of the clinical and social history” – is a major problem with still unknown causes. A great deal of research has been focused on uncovering the causes of SIDS and preventing infants’ death.

Materials and Methods: An overview of scientific publications on SIDS incidence and etiology, with the keywords: SIDS, incidence and etiology.

The etiology of SIDS is multifactorial – an interaction between extrinsic and intrinsic factors. Extrinsic risk factors are physical stressors that would place a vulnerable infant at risk for asphyxia or other homeostatic aberration. Intrinsic factors are thought to affect the underlying vulnerability of the infant and thus increase the risk of SIDS. Many countries have launched educational campaigns in an effort to prevent SIDS, focusing on the modifiable factors, associated with SIDS. These campaigns have resulted in a decline of SIDS rates, with reductions of over 50% for most countries.

Current evidence suggests that SIDS involves a combination of stressors that probably results in the asphyxia of a vulnerable infant with defective cardiorespiratory or defense-arousal systems and immature defense mechanisms. SIDS remains a major problem that requires continued interdisciplinary efforts for its ultimate resolution.
SMOKING CESSATION AND POSTPARTUM DEPRESSION

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Dopamine is a neurotransmitter with a central role in the brain’s reward (mesolimbic) system. Tobacco alkaloid nicotine stimulates releases of dopamine in this system resulting in a sense of well-being. In contrast nicotine withdrawal, caused by smoking cessation, leads to a decrease of dopamine and depressed mood. Postpartum depression (PPD) is a type of depression that is triggered predominantly by stress and hormonal imbalances after birth. It is unclear whether smoking cessation can be a risk factor for postpartum depression. The aim of this study is to find evidences supporting the presence of a connection between smoking cessation prior to conception/during pregnancy and PPD.

A literature review of the relevant studies was done and the results were summarized.

Estimates have concluded that 1/5 women suffer from at least one episode of depression, usually in their reproductive period (20 – 40 years). Furthermore, approximately 20% of pregnant women present with severe depressive symptoms. There are also increased abstinence rates in pregnant women who smoke - 13.3%, compared with 7.6% in the usual case. Women who quit smoking during pregnancy are more inclined to relapse if they experience depressive symptoms. On the other hand, women who continued smoking at any level during pregnancy and postpartum, are with 30% higher risk of PPD compared to those who quit during pregnancy and did not resume smoking during the postpartum period.

Screening and treatment of PPD should be considered in the smoking-cessation programs that target pregnant women. Smoking cessation prior to conception is necessary not only to protect the fetus, but also to avoid the negative effects of withdrawal on the mother’s behavior and psychological state.

EVALUATION OF COMPLICATIONS OF FUNCTIONAL ENDOSCOPIC SINUS SURGERY

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The objective of this study is to evaluate the complications after functional endoscopic sinus surgery (FESS) in the Department of Otorhinolaryngology at the University Hospital St. Marina, Varna.

The records of all patients subjected to FESS were evaluated retrospectively. The complications were classified as major (severe hemorrhage, leakage of cerebral spinal fluid, visual disturbances) and minor (mild hemorrhage, periorbital hematoma and cellulitis, subcutaneous emphysema, epiphora).

A total of 64 patients aged 11-77 (2 children, mean age 13 ± 2.8 and 62 adults, mean age 46.5 ± 13.9, 40 men and 24 women), who were subjected to FESS, were evaluated. The indications for surgery included nasal polyposis (57.8%, 37/64), chronic sinusitis (21.8%, 14/64), polyposis combined with sinusitis (7.8%, 5/64), benign tumors (10.9%, 7/64) and malignant tumors (1.5%, 1/64). The types of FESS interventions performed included polypectomy (10.9%), incision into the sinuses (29.6%), combined interventions (48.4%) and excision/extraction of other lesions (10.9%). The complications observed included hemorrhage (12, 18.7%), visual disturbances (1, 1.5%) and subcutaneous emphysema (1, 1.5%). The overall complication rate was 20.2%. Four cases were classified as major complications (6.25%). Nine cases were classified as minor complications (14%).

Functional endoscopic sinus surgery may be considered a relatively safe method with low rate of complications, but as with any surgical intervention, it carries risks. According to other published reports the average rate of minor and major FESS complications is about 9% and about 0.9%, respectively.
NURSE PARTNERSHIP AND CARE OF PATIENTS WITH DEMENTIA

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Medical University – Plovdiv, Plovdiv, Bulgaria

Dementia is a clinic syndrome, characterized with loss of intellectual function. The notion is of Latin origin and “dementia” translated literally means – without sense. Usually it develops gradually in the course of a few years. It is rare to see growth at once. Cognition and cogitation are affected progressively, at a later stage other higher functions of the human psyche, too. The first symptom is loss of memory. The main reason is Alzheimer’s disease. The endogenous change appears through an irreversible destruction of the brain cells. Often, it is called a disease of old age, as according to the statistics most of the damaged people are over sixty-five years age. The problem of the appearance of the syndrome has as a clinic, purely social and daily nature. The quality of life is diminished, as well as the processes of communication, the ability to take care of oneself.

Our aim is to describe the etiology, pathogenesis, syndromes and behavior of the different kinds of dementia. The proper healthy habits and medical care can help prevent the occurrence some forms of dementia. We will offer trends, methods, strategies for medical treatment for the nurses and the subsidiary staff concerning communication and taking care of patients with psychological breakdowns and, in particular, with dementia.

The home atmosphere and the attention of the closely related are very important factors for the medical treatment and prevention of this disease. We will provide enough information about the complications, stemming from the lack of diagnosis and treatment of dementia, as well as give references for preventions method and prophylaxis.

To support our statement we have used medical literature, world statistics and personal observations.

THE INTEGRATED APPROACH OF THE NURSE TOWARDS PATIENTS ON HEMODIALYSIS

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Hemodialysis is a specific medical procedure by which the function of the kidneys is replaced by a device, cleaning and filtrating the blood of the patient. It is done through a hemodialyzer, which divides the molecules in the solution through a biochemical method via a semi-permeable membrane. This way the blood is purified from by-products, nitrogen-containing, needless liquids, elements and salts. It is applied to patients with sharp or terminal chronic renal insufficiency, in certain cases of emergency, cases of overdose of medicaments, poisoning or narcotic overdose.

The duration of this method of treatment depends on the cause of the kidney disease, as it could be done in a short period of time, but with certain patients it should be life-long, if kidney transplantation does not take place. The duration of this procedure is also strongly individual, varying between 4 to 6 hours. The vascular access can be done in several ways. The most preferred and used way is through the arteriovenous fistula. It is performed surgically through the subcutaneous tissue by a vascular surgeon.

Due to the specifics of this method of treatment, the care for patients on hemodialysis is a subject of special education for the nursing staff. There are a lot of risks and complications connected to the maintenance of access to the blood vessels, as well as to the monitoring of the state of the patient during the procedure and after it.

The nurse has to follow the local changes through the connected apparatuses in order to obtain data about the general state of the patient and to measure his somatic indicators. There is also a set of other moral and legal responsibilities.
THE ROLE OF THE NURSE IN TAKING CARE OF PATIENTS WITH CARDIOVASCULAR DISEASES
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The diseases of the cardiovascular system are the main reason for high disease rate, disability and mortality among elderly people internationally and in Bulgaria as well. According to the report of the Ministry of Health, in our country, two in every three people die due to lack of treatment. There is not a single reason for the rise in cardiovascular diseases but a combination of hereditary and risk factors. The second group is comprised of the controllable factors such as lifestyle, nutrition regimen, unhealthy habits and concomitant diseases.

The structural and functional changes, caused by a specific cardiovascular disease, affect the functions of the other organs and systems from where the enormous need of medical treatment follows. In some milder cases, the only option is to apply medical therapy and change the health habits, but in complicate cases and in advanced stages, surgical intervention is necessary.

The term cardiovascular disease comprises a lot of specific states and diseases, such as ischemic disease, myocardial infarction, arterial hypertonia, atherosclerosis, insult and others, which require special nursing care. In the cases requiring surgical intervention, this care is divided into three basic periods: prior to the surgery, the surgery itself, and the postsurgical period.

These cover a combination of different diagnostic and therapeutical actions, which are planned and carried out by a well-educated nurse. This is meant to decrease the psycho-emotional stress of the impending operation, to provide proper organization of the work in the surgical team and to reduce to a minimum the complications and the risks for the patient.

ELECTRONIC PRESCRIPTION – ESSENCE, OBJECTIVES AND PLACE IN THE HEALTH SYSTEM
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In recent years, e-commerce and internet services have become an inseparable and very important part of the consumers’ lives and everyday habits. The introduction of e-health services in Bulgaria will unlock the potential of electronic transfer of health resources and healthcare and this is expected to improve the whole healthcare system. The establishment of a genuine digital single platform would generate new types of growth. Part of the e-Health concept in Bulgaria is the introduction and implementation of electronic prescription as part of the patients’ electronic health card. An e-prescription is a digital version of the existing paper document, which is an address from the medical doctor to a pharmacist. Its implementation will facilitate the process of dispensing medicines to the patient and reduce the prescription errors.

This review article contains summarized information from available literature sources in national and international journals and an overview of the project of the Bulgarian Ministry of Health about launching a pilot project for electronic prescriptions in Slivnitsa.

The electronic prescription could be sent over the Internet at the time it is written and this way the entire process of purchasing and dispensing medicines becomes easier and the chance for errors is reduced. An e-prescription allows the immediate removal of errors without the need for a repeat visit of a medical doctor. It helps to obtain information and provides opportunities for more effective planning and resource management by the government.

The implementation of the prescription and dispense of drugs through an electronic prescription is linked to the development of patients’ electronic individual files. This way the information will be available to your doctor and pharmacist, and the data will be accumulated through the years. This allows for higher security and better treatment.
DISLOCATION AFTER TOTAL HIP ARTHROPLASTY - RISK FACTORS AND REDUCTION OF THE COMPLICATIONS AFTER REVISION

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²Military Hospital – Varna, Varna, Bulgaria

Dislocation after total hip arthroplasty is a common complication and it is very important, because it could be a reason for a prolonged hospital stay. There are different risk factors, according to most of the published studies. Most authors divide risk factors into two large groups: patient risk factors and surgical risk factors.

Meta-analysis, based on the existing literature on dislocation after total hip arthroplasty, was performed. The purpose of our study is: To generalize the main risk factors for dislocation after total hip arthroplasty, based on the statistics in the existing literature and studies in this area and 2. To determine how we can obtain a better result during the revision.

The classification of THA dislocations is divided into four groups: positional, component malposition, soft tissue imbalance, component malposition and soft tissue imbalance. This classification is important, because according to it, we have four different categories of operative behavior.

The patient risk factors are: neuromuscular and congenital disorders (in 22% of the patients with a first dislocation and in 75% of the patients with more than one dislocations), gender, age, fracture, osteoarthritis. On the other hand, the surgical risk factors are: head size of femoral component of the prosthesis, position of the acetabular component and liner profile, impingement. The type of the dislocation can be – posterior, anterior, superior or inferior.

According to the statistics we have different risk factors and different ways to prevent dislocations. Surgical methods in every following revision should be based on recommendations for the components of the prosthesis.

VEGETARIANISM AND VEGANISM – INFLUENCES ON CHRONIC DISEASES

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Recently the increasing interest in the vegetarian diet is not only due to environmental, ethical or economic reasons but also because of the positive effects on our health. Our aim is to draw attention to the influences of a nutrition without meat, or even without any animal products, on the most frequent noncommunicable diseases.

We conducted a literature review using the PubMed, Google Scholar and Medline Plus databases, from 2012 until March 1, 2016. We used keywords like vegetarian, vegan, advantages and disadvantages. Relevant articles were included if they contained large prospective cohort studies, in which clearly the dietary patterns are considered as factors for health influence and where vegetarians (including vegans) are directly contrasted with non-vegetarians, and reviews published in journals with evidence-based medical publications.

Vegetarians, especially vegans, have a lower mean Body Mass Index, decreased low-density lipoprotein cholesterol levels and lower blood pressure. Consequently, there is a diminished risk for type 2 diabetes (up to 46-49% lower risk), hypertension (Vegetarians: up to 15%; Vegans: 50% lower risk) and ischemic heart diseases (up to 26-34% less risk for mortality). Different studies show either less cancer prevalence or are inconclusive. Disadvantages of veganism can be Vitamin B12, Vitamin D and Calcium deficiency, subsequently 30% higher bone fracture risk.

In summary, the vegetarian diets show beneficial preventive and therapeutic effects on certain diseases. Veganism seems to protect even more from diabetes, hypertension and cardiovascular diseases. The risk for micronutrient deficiency has to be taken into consideration and corrected in time.
TIME OF CLOSURE OF PHARYNGOCUTANEOUS FISTULA FOLLOWING LARYNGECTOMY

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Pharyngocutaneous fistula (PCF) is a complication of laryngectomy, increasing the time of hospitalization and morbidity.

This study evaluates the impact of PCF on the postoperative course after laryngectomy.

The charts of 92 patients with laryngectomy for laryngeal cancer at UMHAT St. Marina between July, 2007 and December, 2014 (86 males, 6 females, aged 61.9±8.2 years; 39xT4, 53xT3, 71xN0 and 21xN+) were evaluated retrospectively. 2.2% (2/92) of the patients had had preoperative irradiation.

Six patients developed clinically evident fistula. One of them was subjected to laryngopharyngectomy with pectoralis flap. Thus, the overall incidence of PCF in patients with standard laryngectomy was 6.5% (6/91). The management of PCF was conservative with a nasogastric tube (NGT) left in place, systemic antibiotics and local compressive bandages. Surgical interventions, if performed, were aimed at an evacuation of the haematoma/drainage/debridement and not at a direct closure of the fistula. The time of closure of the PCF was 43.8±23.5 days after the operation and 36.6±24.4 days after the PCF development. Four out of five patients with PCF undergo videofluoroscopy. In 2 of the cases the examination was normal on the 5th postoperative day, the NGT was removed, PCF became clinically apparent 1 and 3 days later. In 2 other cases videofluoroscopy showed hypopharyngeal defect on the 5th postoperative day. With NGT left in place PCFs developed 2 and 7 days later.

In radiation-naive laryngectomies PCF closes under conservative treatment approximately within a month and a half. This leads to a significant delay of the postoperative radiotherapy.

APPLICATION OF VACUUM-ASSISTED CLOSURE

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The application of vacuum-assisted closure (VAC) systems is a modern technique that provides the treatment of life-threatening bacterial infections, wounds that are hard to heal, diabetic foot, decubitus, open fractures, peritonitis, abdominal trauma and so on. It is an effective therapeutic measure for wound treatment that cannot replace standard surgical therapy.

The materials used in this procedure are in direct connection with the enclosed method. In this research we are going to describe the usage of VAC in cases of slowly recovering ulcers and VAC laparostomy. The basic components, of which the VAC system is composed, listed in the order of their laying, are: fenestrated foil layer, foam, non-fenestrated foil layer, a tube for taking out the wound secretion and a system that is able to establish a negative pressure. In UMHAT „Georgi Stranski“ a modified version of VAC laparostomy in which the original components are slightly changed and adapted is also used.

When applying VAC system remarkable results are achieved in the following directions: wound cleaning, reducing wound oedema and infection, improving local blood flow and encouraging the growth of healthy granulation tissue to facilitate an intended operation, actively removing exudates.

The VAC therapy is a convenient and simple technique, that not only ensures the recovery of the tissue, but is also associated with fewer complications compared to other well-known and frequently used methods.
THE ROLE OF THE NURSE IN CASES OF PERITONITIS SURGERY PATIENTS

O. Kostov, D. Paskaleva, B. Blagova
Medical University – Plovdiv, Plovdiv, Bulgaria

Peritonitis presents a quickly developing acute inflammation of the peritoneum and the abdominal cavity leading to death when emergency medical help is not provided by the 72th hour. It is caused by the influx of microbial flora in the abdominal cavity through a leakage of purulent materials and chemically active substances (enteric contents, gastric juice). It could be caused subsequently by non-treated appendicitis, organ perforation, trauma of the organs of the abdominal cavity, cholecystitis, diseases of the female reproductive system and sexually transmitted diseases. It is rare to encounter it by itself. It often appears as a postoperative complication after an exploratory surgery of the abdominal cavity. There are different classifications of peritonitis. According to the process of dissemination, it could be localized and generalized, the latter involving inflammation of the entire abdominal cavity. The disease takes its course in 3 phases. The basic symptoms appear in the first one: a sharp pain, muscular contraction of the abdomen and vomiting. In the last phase involves a septic shock, because of the dissemination of toxic substances to the smallest peripheral blood vessels, which affects negatively the normal vascularity of the tissues. The medical treatment is complex and the surgical intervention plays a major role in the process. During the procedure the cause of the inflammation is detected and eliminated.

The aims and responsibilities of the nurse are during the pre- and post-operative period and play an important part for the prevention, diagnostics, treatment and recovery of the patient.

The high quality care will contribute to the patient’s proper preparation for the surgery, the smooth course of the rehabilitations process and will avoid post-operative complications.

QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY AGE AND SEX FROM AN EQ-5D STUDY

Ivan Atanasov, Venelina Dudulova, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskov, Rumen Stefanov
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EQ-5D by the EuroQol Foundation is the most widely used generic tool for measuring health-related quality of life. Population norms for quality of life are an important indicator for analyzing health outcomes, determining the socio-economic burden of a disease and comparing different health systems. These benchmarks are now available for a number of countries worldwide and are actively applied in health technology assessment.

This study aimed to derive quality of life population norms for the South Central region of Bulgaria.

The study was authorized by the EuroQol Foundation. Trained staff conducted direct interviews with a representative sample of 300 non-hospitalized adult residents of the South Central region, stratified by age and gender. Each interviewee evaluated his/her own quality of life on five dimensions, using the EQ-5D descriptive system, where the best health state a person can have is marked 100 and the worst one is marked 0. Interviewing was conducted by the Association of Medical Students – Plovdiv and the Association of Medical Students in Bulgaria.

The mean value of the quality of life was 75.72 ± 18.63. Women (156 participants) report a health status of 73.28, while men (144) – 77.92. As expected, the quality of life declines with advanced age. Men aged 18-19 reported the highest health status (92.50), while women aged 80+ years - the lowest (45.81).

Population norms for health-related quality of life are important because they reflect in an objective and scientifically rigorous manner the health status of the Bulgarian society. These reference values can be used by health authorities, medical professionals and researchers in planning and making informed decisions about providing access to medical and health services for Bulgarian patients.
QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY INCOME FROM AN EQ-5D STUDY

Venelina Dudulova, Ivan Atanasov, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskrov, Rumen Stefanov
Medical University – Plovdiv, Plovdiv, Bulgaria

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The mean value of the quality of life was 75.72 ± 18.63. The level of income affected the reported health status. The quality of life progressively increased with the advancing gross monthly income - from 69.30 in the lowest income group (less than 360 BGN) to 85.35 in the highest one (more than 2600 BGN). It should be noted that the lowest income group contained in an almost equal number retired people (the oldest study segment) and students (the youngest study segment).

Population norms for health-related quality of life are important because they reflect in an objective and scientifically rigorous manner the health status of the Bulgarian society. These reference values can be used by health authorities, medical professionals and researchers in planning and making informed decisions about providing access to medical and health services for Bulgarian patients.

QUALITY OF LIFE IN THE SOUTH CENTRAL REGION OF BULGARIA - PRELIMINARY RESULTS BY EMPLOYMENT STATUS FROM AN EQ-5D STUDY

Ivan Atanasov, Venelina Dudulova, Gina Stoykova, Gergana Lengerova, Kostadin Kostadinov, Eleonora Hristova, Georgi Iskrov, Rumen Stefanov
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The mean value of the quality of life was 75.72 ± 18.63. The employment status affected the health status. As expected, students (the youngest group) reported the highest quality of life - 89.00 and retired people (the oldest group) – the lowest - 58.40. Excluding these categories, the highest health status was found in working men - 82.93, and the lowest one was observed in unemployed women - 68.70.
Population norms for health-related quality of life are important because they reflect in an objective and scientifically rigorous manner the health status of the Bulgarian society. These reference values can be used by health authorities, medical professionals and researchers in planning and making informed decisions about providing access to medical and health services for Bulgarian patients.

INTRAVESICAL IMMUNOTHERAPY WITH BCG OF NON-MUSCLE-INVASIVE BLADDER CANCER

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Bladder cancer (BC) is the 11th most commonly diagnosed cancer in the world. Approximately 75% of patients with BC present with a disease confined to the mucosa (stage Ta, CIS) or submucosa (stage T1) - Non-muscle-invasive bladder cancer (NMIBC). They have a high prevalence due to long-term survival in many cases and a lower risk of cancer-specific mortality compared to T2-4 tumours.

NMIBC is characterized by a high risk of recurrence after a transurethral resection of an initial tumor; the 1-year recurrence rate is 15–61%, and the 5-year recurrence rate is 31–78%.

Bacillus Calmette-Guerin (BCG) is a proven and valuable adjunct to transurethral resection (TUR) for decreasing recurrence and progression of NMIBC. BCG acts by means of an immunological reaction strongly associated with cell apoptosis. We present mechanism, efficacy, indications, optimal dose and side-effects of BCG immunotherapy.

BCG has become the treatment of choice for high-risk NMIBC and for patients in whom chemotherapy fails. It is superior to intravesical chemotherapy in terms of both disease recurrence and progression to muscle-invasive disease.

MOBILITY OF THE NEXT HEALTH WORKFORCE GENERATION – A BRAIN DRAIN OR A BRAIN GAIN

Petya Sarkizova, Vanya Asenikova, Elena Nedyalkova, Aline Breidung, Dorian Westerdorf, Sven Alexander Eger, Todorka Kostadinova, Maria Rohova, Nikolina Radeva
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The migration of young health professionals is a very important issue for the European health systems. If it is only temporal or a circular migration, it could be beneficial for both the receiving and the source countries; but in case of permanent emigration it could be interpreted as a loss of human capital and loss of investments in education and specialization.

The study is conducted among students of Medicine, Dental Medicine, Nursing Care, Midwifery and Health Care Management at the Medical University of Varna (Bulgaria). Its main goal is to compare the intentions for mobility of Bulgarian and German students and to answer the following questions:

What indicates the intentions of the new generation – a brain gain or a brain drain? Which are the driving factors for mobility of the next health professionals’ generation? What are the stick factors in the country of origin? Could we expect different mobility patterns for the next 10-15 years?

The results from the conducted 86 in-depth interviews show that almost half of the Bulgarian students prefer to specialize and work in other EU countries (Germany, UK, etc.). The preferred destinations for the German students are Scandinavian countries, Switzerland, Austria and the USA. Interesting fact is that almost all German students said that during their study in Varna their personal motivation to stay in Bulgaria has changed.
ORTHOPEGICS

APRIL 10, 2016 /Sunday/

Medical University of Varna
AUDITORIUM 2
10:00 – 11:30

CLINICAL CASE OF FLOATING KNEE WITH POPLITEAL ARTERY INJURY

Ozge Ozdemir, Yavuz Saglam
Orthopedics and Traumatology Department, Biruni University, Istanbul, Turkey

Floating knee (FK) is a high-energy trauma, defined by ipsilateral fractures of the tibia and the femur. In FK, concomitant vascular injuries and soft-tissue injuries can be seen.

We report a clinical case of a 52-year-old man who was a driver involved in a motor vehicle accident and was admitted to the Emergency Room with close distal femur and proximal tibial fracture with popliteal artery injury. Reversed saphenous vein graft reconstruction was performed in the first hours after hospitalization to reduce ischemia time and to save the extremity. During the same procedure a multiplanar external fixator was applied for bone stabilization which then was followed by early fasciotomies. The patient was followed for 10 days after the initial surgery to monitor lower extremity circulation. Open wounds were treated with sterile vacuum dressing (VAC) and broad spectrum antibiotics. Ten days after the initial injury definitive surgery was performed by using Ilizarov circular external fixators.

The use of temporary external fixator provided damage control and avoided secondary trauma. The use of sterile dressing and antibiotics protected the extremity against infection. The early fasciotomies decreased the risk of ischemia and amputation. Complications such as fat embolism, pneumonia and compartment syndrome were avoided with early surgical stabilization.

FK with popliteal artery injury should be treated immediately with the approach of damage control orthopedics. Vascular repair should be performed prior to bone stabilization in order to decrease the period of ischemia time. Early fasciotomy prevents ischemic complications.

DISTAL FINGER INJURIES IN HAND TRAUMATOLOGY AMONG THE PATIENTS FROM THE EMERGENCY DEPARTMENT OF THE ST. ANNA HOSPITAL - VARNA

I. Minev, V. Zhelezova, D. Ivanova, I. Kocheva, D. Raykov
Medical University of Varna, Varna, Bulgaria

Fingertip injuries are the most common type of trauma of the upper limb. The goals of the reconstruction are covering the defect, establishing maximum tactile gnososis, obtaining a satisfactory cosmetic appearance and allowing the patient to return to work as soon as possible. Adjacent skin and soft tissue are the best covering for plastic reconstructions.

The overall study consists of 19 952 patients, admitted at the Emergency Department of the St. Anna Hospital -Varna, in 2015. Three hundred patients (1.5%) presented with fingertip injuries. They all are admitted for surgical treatment to the Department of Orthopedics at the Department of Orthopedics and Traumatology of the Medical University of Varna.

The most common methods for local reconstruction of the defects were
The main outcome indicators included flap survival rate, sensory restoration, occurrence of cold intolerance, length of occupational disability. In 35% of the cases plastic reconstruction was not performed, 55% of the patients were operated on with successful outcomes and in 5% venous congestion with partial flap necrosis, requiring debridement with subsequent skin grafting was observed. The mean recovery period was 23 days. None of our patients complained of cold intolerance.

The fingertip is known as “the second eye” of human beings. As a challenging and common pathology it requires an adequate treatment in order to gain maximum functional results.

**PRIMARY LIGAMENT REPAIR AS A MAIN WAY OF TREATMENT OF THE ACUTE LATERAL MALLEOLAR LIGAMENT INSTABILITY**

Konstantin Ganchev, Miroslav Raikov, Blagovest Belchev, Preslav Penev
Medical University of Varna, Varna, Bulgaria

The ankle sprain takes a huge part in the pathology of the musculoskeletal system. Hyperextension of the ligaments of the lateral malleolar complex combined with or without rupture is the reason for 93% of the sprained ankles. That particular group of ligaments consists of the anterior talofibular ligament (ATFL), calcaneofibular ligament (CFL) and posterior talofibular ligament. A scale of three grades, based on the severity of their rupture, is used. Stage III conditions lead to acute ankle instability, which, if not handled properly, escalates to chronic instability, pain and premature osteoarthrosis of the ankle joint.

40 patients with acute ankle ligament injuries in the Clinic of Orthopedics and Traumatology at the St. Anna Hospital were operated on in a period of 29 months (July, 2013 – December, 2015) using the surgical method of Cain. Their postoperative results were used for evaluation of the method.

Three months after the surgery the patients were asked to grade their postoperative results as excellent, good, fair and poor based on their feeling for stability and pain. 38 gave excellent grades and 2 gave good grades. Their control radiographs show that the tibiotalar angle is below 5 degrees and the average group score is 95.77 on the AOFAS (American Orthopaedic Foot and Ankle Society) scoring system – the scale used to grade the postoperative function of the ankle.

The primary ligament repair is a simple, yet very effective method, which increases the patient’s recovery speed and returns the stability of the joint to its physiological level.

**CONSERVATIVE TREATMENT OF POST-TRAUMATIC SINUS Tarsi SYNDROME**

Blagovest Belchev, Konstantin Ganchev, Miroslav Raikov, Preslav Penev
Medical University of Varna, Varna, Bulgaria

The tarsal canal and tarsal sinus form a boundary between the posterior subtalar joint and the anteriorly located talocalcaneonavicular joint. Sinus tarsi syndrome (STS) is a clinical entity related to an abnormal tarsal sinus and tarsal canal. It is induced by an inversion injury of the ankle and is characterized by chronic pain over the lateral ankle, which is increased by physical activity. STS is an unusual but not rare condition and it frequently follows an ankle sprain. Planned radiographic examination is normal and there remains no diagnostic standard or reference. Clinical examination discloses localized tenderness over the sinus tarsi and it is increased by inversion or eversion of the hindfoot. The initial treatment is conservative, including local injections and physiotherapy. In case of failure of the conservative treatment, surgical debridement is recommended.

During a period of 12 months (December, 2014 – December, 2015), a total of 15 (mean age 35±5.2) patients with clinical presentation and evaluation of STS were treated. Conservative treatment includes injection in the tarsal sinus, physiotherapy, local anti-inflammatory gels and systemic drugs.
The results of the conservative treatment are controversial. The patients’ satisfaction was determined as follows: 27% (4 patients) – excellent, 33% (5 patients) – good and 40% (6 patients) - fair or poor.

Treatment of STS starts with conservative methods, but in case of failure, surgical treatment is suggested.

**ARTHROSCOPICALLY ASSISTED FRACTURE FIXATION OF EMINENTIA INTERCONDYLICA IN CHILDHOOD**

**Dimitar Dimitrov, Valentin Dimitrov, Dimitar Raikov**

Medical University of Varna, Varna, Bulgaria

Eminentia intercondylarica fractures are rare in childhood, mostly occurring between 6-13 years of age. The mechanism is forced knee flexion, abduction and external rotation. Because of the elasticity among children, this fracture is rarely combined with meniscal tears or collateral ligament injuries. The classification is based upon the stage of fragment displacement. Clinical symptoms include knee pain, swelling, limitation in knee motion.

A 13-year-old boy sustained a trauma, complaining of a strong right knee pain and swelling. Clinically, we observed anteromedial instability. By performing a knee puncture, the presence of haemarthrosis was proven. Fracture of the intercondylar eminentia was diagnosed by standard X-ray.

Arthroscopically assisted reduction and further fixation of the fragment were performed, using K-wire. It was inserted in a retrograde manner, through the tibial metaphysis. The inner end of the wire was bended over the eminence, while the outer end was bended towards the tibial cortex. The knee was immobilized by an orthosis for 30 days, followed by walking without weight bearing. Full weight bearing was permitted on the 90th day since the operation, while full functional recovery was observed on the sixth month.

Displaced fragments in cases with eminentia intercondylarica fractures should be reduced surgically. Advantages of the above-mentioned method are the opportunity of anatomical fragment reduction, visual control of all other knee structures (meniscuses, ligaments), as it is less invasive and followed by a short period of rehabilitation. The patient is fully recovered in six months.

**TRANSPEDICULAR SCREWS STABILIZATION TECHNIQUE IN SPONDYLODISCITIS – CLINICAL EXPERIENCE WITH 9 PATIENTS.**

**Diyan Dimov, Y. Stoyanova, D. Yahya, B. Bähnemann, Enchev, B. Iliev, E. Zaharieva, T. Kondev**

Medical University of Varna, Varna, Bulgaria

Spondylodiscitis presents a condition that is characterized by inflammation of the intervertebral disc, often due to infection with secondary engagements of cartilaginous endplate and vertebral body. Most often it affects the lumbar spine, followed by cervical and chest localization. Treatment is based on eliminating the infection with antibiotics, preventing spinal instability with vertebral fixation, and ample debridement of the infected tissue to obtain samples for analysis.

Transpedicular screws stabilization technique was performed in 9 patients with thoracolumbar and lumbar spinal spondylodiscitis from 2015 to 2016. Our study comprises 8 males and 1 female at an average age of 55. The diagnosis is based on clinical, radiological, laboratory, microbiological and histopathological data. The patients were retrospectively reviewed for this study. Postoperative antibiotic treatment, functional capacity, pain levels, side effects, and complications were documented.

Surgery was performed successfully in all 9 patients. The mean surgical time was 240 min. Decompressive laminectomy was performed in all 9 cases. All patients experienced pain relief after the procedure. There were postoperative complications in one case, which occurred due to chronic renal failure and the hemodialysis performed. 3 months after the surgery functional capacity was restored to 90% in 7 cases and about 50% in 2 cases. The patients received antibiotic treatment up to 3 months after surgery. There were no recurrent spinal infections.
Transpedicular screws stabilization reduces postoperative pain and leads to an earlier achievement of functional capacity at a low complication rate in patients with surgically treated lumbar and thoracic spondylodiscitis.

SOFT TISSUE CONSOLIDATION AFTER A DISLOCATION OF THE HIP JOINT – A COMPLICATION AFTER TOTAL HIP ARTHROPLASTY

Stanislav Morfov¹, Veselin Marinov², Plamen Minchev²

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Dislocation is one of the most important complications after total hip arthroplasty (THA). The purpose of our paper is to present a new surgical method of soft tissue consolidation around the hip arthroplasty, after a previous dislocation.

This is meant to prevent another dislocation of the artificial hip joint components and maximum recuperation of the normal function of the hip joint.

Our clinical research and accomplished operations with this method include 20 cases of patients with postoperative dislocation of the hip arthroplasty, which happened at a maximum of 2 years after the operation of total hip arthroplasty. Our medical cases are traced by us from 0.5 to 3 years after the accomplished operation with our new method. There is no case of a new dislocation. The function of the hip joint after an accomplished operation is absolutely normal. The assessment according the WOMAC scale after the operation is from 39 to 80, on average it is 61.

The essence of our method is creating operatively a new soft tissue joint capsule from a fascial band from iliotibial tractus, which is a distant prolongation of tensor fasciae latae muscle. The band is put in a position of adapting in a different way, which is in a direct correlation with the type of the dislocation – posterior, anterior, superior or inferior dislocation.

The presented results corroborate the need of an operative technique after a dislocation after THA. Our conclusions about the success of our method are based on the long-term results and the functional normality of the joint movements.

GENERAL CLINICAL AND IMAGING DIAGNOSTIC SIGNS OF DEVELOPMENTAL DYSPLASIA OF THE HIP

M. Raykov, M. Avdzhiyska, K. Ganchev, B. Belchev, P. Penev, Dimitar Raykov

Medical University of Varna, Varna, Bulgaria

Developmental dysplasia of the hip (DDH) is a wide spectrum of anomalies, ranging from simple instability with laxity of the articulation capsule to total dislocation of the femoral head from the acetabular socket. DDH manifests in 3 clinical-radiology forms: dysplasia coxae, subluxatio coxae and luxatio coxae. Objectives: To present general clinical and imaging diagnostic signs of DDH.

For a period of 1 year, in our outpatient pediatric orthopedic office, we have admitted 1115 babies. Parents came with their children for preventive screening examination of the hip.

Here were assessed the following clinical signs:

1) Immediately after birth: symptom of the clicking joints (Marx-Ortolani; Barlow); symptom of Severin; symptom of Nelaton-Ombredan. 2) Before walking age: symptom of Peter-Baade; symptom of Joahimstal; symptom of Dupuytren; symptom of Thomas. 3) Walking age: late walking onset (16-17 months); easy fatigue; duck walking or painless limping (symptom of Trendelenbur); shortening of the extremity; high position of the trochanter; scoliosis; adduction contracture.

General imaging diagnostics examinations:
1) Radiography – triad of Putti. 2) Ultrasound of the hip, following the Graf’s method– one of the most important and most sensitive methods.

The above-mentioned methods for early screening of babies for determining the status of the infant’s hips provides information and helps to start treatment as early as possible. The study group presented DDH frequency - 14‰ (14/1000), which is the typical one for the Northeastern region of Bulgaria for the last 20 years.

The early diagnosis and regular examinations lead to better and easier treatment. The early presentation of the baby to the orthopaedic specialist provides up-to-date information about the status of the hips. Thus, the general principle - successful treatment of DDH depends on the earlier start and reduces substantially the application of the different types of surgical techniques.

**REVIEW OF KNEE ARTHROSCOPY PERFORMED UNDER DIFFERENT TYPES OF ANESTHESIA. IS LOCAL ANESTHESIA A VIABLE OPTION?**

Venelin Petrov, Vanyo Vezirov, Georgi Galev, Evgeni Haritov

Medical University – Sofia, Sofia, Bulgaria

Today, arthroscopies of the knee joint have become a routine procedure. Generally, these operations are performed under general or spinal anesthesia, although local anesthesia (LA) for knee arthroscopy is a well-documented procedure with a diagnostic and therapeutic role. Numerous therapeutic procedures including partial menisectomy, meniscus repair, and abrasion chondroplasty can be performed safely and comfortably.

In order to evaluate the local anesthesia technique for knee arthroscopy on medically healthy patients, this study compared 3 anesthesia techniques.

Four hundred patients were randomly assigned local (n=200), general (n=100) or spinal (n=100) anesthesia. Evaluated outcomes included the patient’s subjective view of the procedure, nausea and pain at rest and during active movement. Three hundred forty-two patients completed the study. In the group receiving local anesthesia the median score from the visual analog scale for pain assessment during surgery was 6mm. Twenty-one LA patients would have preferred another form of anesthesia. In 29 patients, LA was not considered as the optimal anesthesia by the performing surgeon. Eight LA patients agreed with the surgeon that the anesthesia method used was not optimal, of these patients, 5 had synovitis (3%). In 5% of the LA patients there were technical problems.

Thus, this study shows that knee arthroscopy can be performed under local anesthesia in 92% of the patients from a technical point of view.

There are several advantages of local anesthesia, the most important of which is the minimally invasive procedure. Risk factors can be avoided, the pain level described by the patients is acceptable and the costs are lower than with other anesthetizing techniques.
DENTAL AND ORAL MEDICINE

AUDITORIUM 4
10:00 – 11:30

REPLANTATION OF AVULSED PERMANENT TEETH
OF CHILDREN – SUCCESSFUL TREATMENT
AND THE RELATED FACTORS
Slavena Georgieva, Tsvetalina Gerova, Ralitsa Yotsova, Plamena Georgieva
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Dental trauma is a common condition among children, the most serious of which is tooth avulsion. In such cases it is necessary that immediate replantation is provided. The prognosis of the treatment, however, depends on a wide range of factors. The aim of this research is to systemize them and show their relation to the outcome of replantation.

We studied a series of related articles and publications and compared data from numerous researches so that we can draw a general conclusion. There were slight differences, as we expected, but all the authors indicated the same major factors.

In cases of avulsion, the outcomes of the treatment depend mainly on the extra-oral period and the storage media of the avulsed tooth. Prolonged extra-alveolar time and dry storage of the tooth lead to unsatisfactory results. Other sufficient factors are: the time of the endodontic treatment, the stage of root development and the treatment of the root surface before replantation. Studies show that even delayed replantation could provide stability of the tooth. It remains functional for many years, which preserves the height of the alveolar bone and postpones and benefits the future prosthetic treatment.

Physiological storage of the avulsed tooth, followed by its immediate replantation is the key to the successful treatment. Even after prolonged extra-oral time the replantation should be considered as an option since it can restore occlusal function and esthetics for a long period of time.

ORAL LEUKOPLAKIA. ETIOLOGY, CLINICAL PRESENTATION,
DIFFERENTIAL DIAGNOSIS AND TREATMENT
M. Kafadarov, A. Havalyova, D. Kehayov, N. Nikolov
Medical University - Plovdiv, Plovdiv, Bulgaria

Leukoplakia is the most common precancerous lesion in the mouth. Oral leukoplakia is present in 60% of patients diagnosed with oral squamous cell carcinoma. It is also a risk factor for the development of oropharyngeal cancer. A differential diagnosis should be done with several other oral diseases to assess the risk of malignant transformation.

Leukoplakia prevalence is 0.4% to 0.7% of the general population. It is higher in tobacco smokers and chronic alcoholics. Leukoplakia is present in 16% to 62% of those diagnosed with oral squamous cell cancer. Localized lesions have good long-term prognosis while disseminated forms, especially on the floor of the mouth and the ventrolateral part of the tongue have a worse prognosis. It is important to differentiate between leukoplakia and other benign and malignant lesions such as stomatitis nicotina, leukoedema, morsicatio buccarum and others. Candida albicans and HPV-16/18 superinfection are associated with a higher risk of malignisation but they are not proven to be the causative agents. Treatment consists of eliminating tobacco smoking and alcoholism and surgical excision, laser ablation or cryotherapy.

We have done a research of available scientific literature.

Leukoplakia is the most common precancerous lesion of the mouth that can give rise to squamous cell carcinoma with high mortality, high recurrence rates and metastases. The diagnosis is one of exclusion. Treatment con-
sists of eliminating the risk factors such as tobacco smoking and chronic alcohol consumption plus surgical excision with regular follow-ups in order to detect any recurrence.

THE IMPACT OF GOOD ORAL HYGIENE ON DENTAL CARIES ONSET - A SOCIAL STUDY

T. Marinov, M. Stoykov, A. Varbanova, S. Chokanov, M. Doichinova, S. Angelova
Medical University of Varna, Varna, Bulgaria

Numerous methods have been clinically evaluated in order to assess their impact on the level of oral hygiene. According to some authors the use of a toothbrush and a toothpaste reduces the total amount of dental biofilm by 60%. The remaining forty percent is inflicting chronic damage to the gingiva and is considered among the main factors in the etiology of dental caries. The aim of this study is to analyze the level of dental health awareness among the citizens from the city of Varna.

Subjects of the present social study are 577 citizens from the city of Varna. Data collection was done through an original questionnaire, comprised of ten questions concerning dental health awareness.

41.34% of all who participated in the social survey pointed out that they suffer from dental caries, of which 63.6% were female and 36.4% were male. In group A 13.2% of the subjects report that they suffer from caries, in group B - 60.4%, in group C - 22.7%, in group D - 3.7% and in group E - none report this. In group A – 68.8% use additional methods and 31.2% use only a toothbrush and a toothpaste, in group B - 74% to 26%, respectively, in group C - 76.4% use additional methods to 23.6% who do not. In group D - 55.6% to 44.4%, respectively.

This type of survey is not relevant for determining whether or not it is advisable for patients to maintain oral hygiene by more than two means. Patients rely only on the usage of additional means, neglecting the correct technique of the mechanical control of plaque. Patients should be advised and motivated to use the correct brushing technique as well as additional means for mechanical and chemical inhibition.


A. Varbanova, M. Stoykov, T. Marinov, S. Chokanov, M. Doichinova, S. Angelova
Medical University of Varna, Varna, Bulgaria

Demographic, health, personal, and clinical factors influence the number of missing teeth. The probability of losing teeth increases with age, poor maintenance of the oral health status, and general health conditions. Any lost teeth may lead to improper sound articulation, problems while consuming food, general health issues, etc. A large number of prosthetic constructions are available to compensate for the missing teeth.

Subjects of the present social study are 577 citizens from the city of Varna. Data collection was done through an original questionnaire, comprised of ten questions concerning dental health awareness.

21.7% subjects of all who participated in the social survey pointed out that they have prosthetic constructions, of which 57.6% were female and 42.4% were male. 21.8% subjects of all who participated in the study have missing teeth but do not have prosthetic constructions. 13.4% of the subjects have missing teeth but do have prosthetic constructions. 56.5% of the subjects do not have missing teeth and do not have prosthetic constructions. 8.3% of the subjects do not have missing teeth but do have prosthetic constructions. The results from this study indicate that the number of people reporting of existing prosthetic constructions increases with age.

Age has an impact on the number of prosthetic constructions. Results point out the increased need for prosthetic treatment with age. Patients should take measures to exclude the etiological factors that cause extraction of teeth and compensate for the extracted teeth by implementing a prosthetic construction.
THE IMPACT OF GOOD, PROPER ORAL HYGIENE ON THE NUMBER OF MISSING TEETH – A SOCIAL STUDY

S. Chokanov, T. Marinov, M. Stoykov, A. Varbanova, M. Doichinova, S. Angelova
Medical University of Varna, Varna, Bulgaria

Demographic, health, personal and clinical factors influence the number of missing teeth. The pandemic distribution of dental caries leads to complications affecting the periapical periodontal tissues. These often result in a surgical removal of the affected teeth. The incidence of tooth loss increases with age. The same effect has the personal neglect of oral health care. Certain general health conditions contribute largely to the number or extractions.

Subjects of the present social study are 577 citizens from the city of Varna. Data collection was done through an original questionnaire, comprised of ten questions concerning dental health awareness.

35.2% subjects of all who participated in the social survey pointed out that they have extracted teeth. Men and women were equally divided. 1 person did not use any methods of controlling the biofilm. The results from this study indicate that the number of people reporting missing teeth increases with age.

These types of surveys are not relevant for determining whether or not it is advisable for patients to maintain oral hygiene by more than two means. Patients should be continually informed of the importance to keep their dentition in a healthy state. Each extracted tooth represents a threat to the individual's health both functionally and esthetically. There is an ongoing need of all forms of events increasing the awareness of the patient - informative brochures, seminars, and educational workshops.

THE ROLE OF MEDICAL SPECIALISTS IN THE PROPHYLAXIS OF TOOTH DECAY IN CHILDREN

Havalyova, D. Kehayov, M. Kafadarov, N. Nikolov
Medical University - Plovdiv, Plovdiv, Bulgaria

Tooth decay is a localized, progressive destruction of the hard tooth tissues. It begins from the tooth enamel, afterwards it progresses in depth and width. It appears even at a very young age. Its occurrence is higher in children fed with different milk mixtures. Breastfed children have lower incidence rates.

We have done a research of the available scientific literature.

The main reason for tooth decay at an early age is the use of feeding bottles. Usually 4 to 6 upper teeth will be affected. The main factors are sugars that form a thin biofilm on their surface. That biofilm is breeding ground for bacteria which create an acid environment that destroys the enamel. The enamel loses its hardness, gets covered with brown scale and tooth decay occurs. It is very important to visit the dental office at least twice throughout the year. Children's teeth should be washed with wet lint after feeding. The child should not use a feeding bottle for too long. Sweet foods should be removed from the late hours of the day. If needed, the dentist will cover the child’s teeth with special protective layer containing fluoride. Dentists reconstruct the enamel with fluoride-containing preparations. Ozone therapy may be used.

Prophylaxis of tooth decay in children is a priority in the work of medical specialists because the affected tooth is a breeding ground for infections and a risk factor for many chronic diseases. The earlier the treatment starts, the earlier the fear and discomfort will be overcome. Healthy teeth are a necessity for proper digestion which is of vital importance to the children.
PULP REGENERATION WITH THE HELP OF TISSUE ENGINEERING

Izabela Trifonova, Vanesa Katunzi, Daniel Rachev, Desislav Dobrev
Medical University of Varna, Varna, Bulgaria

The ultimate goal of this study is to prove that pulpectomy and pulpotomy are not the only possible treatments of pulp inflammation. The scientists are searching to find a different approach to regenerate dental pulp with the help of tissue engineering using stem cells.

The research is based on information found in the electronic database of Google Scholar. The articles were selected with the help of inclusion and exclusion criteria. For the aim of the study in vitro and in vivo studies were reviewed. The keywords used in the researching process were: “pulp regeneration”, “stem cells”, “regenerative endodontics”, “tissue engineering” and others.

After revising 263 articles, 10 of them were selected for our research. According to the literature, regenerating lost pulp is possible by stimulating adult stem cell growth toward producing new dental tissue. A study reveals a method where stem cells (SCAP, DPSCs) are isolated, seeded onto synthetic scaffolds and then placed into a human root fragment and transplanted on the back of an immunocompromised mouse. One side of the root canal was filled with MTA (mineral trioxide aggregate) ~ 1mm, leaving the depth of the canal ~ 5-6mm. The other one is open to the blood supply. After 3-4 months the tooth fragments were removed and after a histological analysis new pulp and dentin tissue was revealed.

This research confirms that pulp-like tissue can be rebuild de novo in an empty root canal by isolated stem cells from the apical papilla and dental pulp stem cells.

INDICATIONS FOR SURGICAL REMOVAL OF MANDIBULAR THIRD MOLARS: ANALYSIS IN DECISION MAKING

Vanesa Katunzi, Izabela Trifonova, Daniel Rachev, Desislav Dobrev, Lilia Ilieva
Medical University of Varna, Varna, Bulgaria

Third mandibular molars (TMM) have the greatest incidence of impaction and their removal is one of the most frequent procedures in oral surgery. Despite the existence of different indications for their extraction, many surgeons practice prophylactic removal of asymptomatic impacted molars. The aim of the research is to present a critical review of the literature related to the methods of decision making in the surgical removal of TMM.

For the aim of the study a literature research was conducted in the electronic database. Article selection was based on inclusion and exclusion criteria.

One article features detailed presentation of the risks and benefits related to intervention and non-intervention in cases of impacted TMM. The literature reveals that the most significant indication for surgical removal of the 3rd mandibular molars is the presence of associated pathology. Some authors claim that prophylactic removal of TMM should be abandoned. Other statements show that prophylaxis should be the principal indication for extraction. According to the literature most of the surgeons regard the age of the patient in order to make a decision concerning prophylactic surgical removal. Orthodontic and prosthetic reasons are also among the indications for removal mentioned in the literature.

According to the results, presence of associated pathology should be considered as a significant indication for the extraction of TMM. A decision for surgical removal due to prophylactic indications should be made only after considering the risks and benefits related to intervention and non-intervention in cases of impacted TMM.
KNOWING EACH OTHER BETTER– STUDENTS AND TEACHERS - ACHIEVING EXCELLENCE IN DENTAL EDUCATION
Hristo Naydenov, Vesselina Liondeva, Sophia Stamenova, Yoana Brussarska, Atidzhe Remzieva, Lydia Katrova
Medical University – Sofia, Sofia, Bulgaria

This research aims to study students' opinion on the significance of the effective communication between teachers and students in the context of the learning process in FDM – MU Sofia.
A self-administered questionnaire was distributed to 250 undergraduate students from 1st to 5th year. It includes 44 closed-ended and semi-closed-ended questions to describe the opinions of dental students on the forms of teaching, forms of learning, perceived strengths and weakness of the teaching environment with a stress on the interaction between teachers and students.
Contrary to expectations, the students showed interest in attending lectures if a choice of the lecturer is provided. Most of them appreciate the attention of their teachers. Only a few cases report about lack of cooperation.
Dental students from the FDM-Sofia demonstrate a mature critical attitude towards the teaching-learning process. Their criticism has to be taken into consideration in order to achieve excellence in the dental education.

TITANIUM IMPLANTS – WHAT MAY THEY CAUSE TO YOUR BODY?
B. Valkov, O. Spanov, S. Ibishev, Ch. Madjova
Medical University of Varna, Varna, Bulgaria

Introduction: Dental implants are used in the treatment of partial or total edentulism. They need to be chosen carefully, because they are in constant interaction with saliva and can cause pathological effects due to slow removal of ions from the surface of the implant.
Materials and Methods: Data was collected by using a documentary method. An analysis of scientific papers spanning over a period of 15 years is made. Databases were explored using a combination of the following keywords: “allergy,” “dental,” “hypersensitivity,” “implant,” “oral,” and “Titanium.” The data was then revised and briefly presented.
Results: Several complications were shown by the research. One of them is allergy, defined as an acute immunological response to a known antigen. People allergic to other metals are exposed to higher risk of titanium hypersensitivity. Some tests such as the Patch test, Prick test and MELISA can be done in order to diagnose and prevent titanium allergy. The so-called “cluster patients” can experience implant failure because of metal hypersensitivity. The Yellow Nail Syndrome is another complication, manifested by nail changes, respiratory disorders and lymphedema, caused by a galvanic reaction between gold constructions and implants.
The prevention of complications is always better than the removal of the dental implants.

LEUKOPLAKIA AS A PREMALIGNANT CONDITION IN SMOKERS
Radina Ivanova, Krasimir Todorov, Dimo Dimov, Yana Kichanova, Georgi Iliev
Medical University of Varna, Varna, Bulgaria

Leukoplakia is the most frequent potential malignant lesion of the oral mucosa. It can progress in a neoplastic process – most likely oral squamous cell carcinoma. The aim of this study is to evaluate the malignant transformation of leukoplakia in smokers.
Cases of 3 patients with leukoplakia who are all smokers were reviewed. Articles exploring the relation between malignant progression of leukoplakia and tobacco, used in various ways, were selected and gathered.

Researches show that using tobacco in any form is a venture factor for developing an epithelial disorder in the oral cavity such as leukoplakia. Furthermore, continuing smoking after being diagnosed with leukoplakia, increases the possibility for the lesion to become malignant.

Regular examinations are important as a preventive measure. Once found in a patient, leukoplakia should be treated and regularly monitored. Noxious habits like smoking should be reduced to lower the risk of developing a more severe condition than the already existing one.

**SURGERY**

**AUDITORIUM 2**

13:00 – 14:30

**CRYOABLATION - THE MOST MODERN METHOD FOR SURGICAL TREATMENT OF ATRIAL FIBRILLATION**

Simona Panteleymonova, Ani Raynova, Svetla Chilikova, P. Panayotov

Medical University of Varna, Varna, Bulgaria

Atrial fibrillation (AF) is the most common type of cardiac arrhythmia. It affects 1-2% of the population. The association between AF and structural heart diseases is common among the patients indicated for cardiac surgery. The surgical treatment of AF is also known as Cox Maze IV procedure or surgical ablation. One of the sources of surgical ablation is cryoablation. The purpose of cryoablation is blocking the abnormal conduction and a reestablishment of the sinus rhythm (SR).

The information was collected from electronic databases and cardiothoracic surgical books. Cryoablation is the most modern method for surgical ablation, used in the Department of Cardiac Surgery of the St. Marina University Hospital in Varna. The Cox Maze IV procedure was performed by a cryoablative device in six patients with AF undergoing concomitant cardiac procedure. Rhythm assessment using electrocardiograms, 24 Holter/EKG and echocardiograms was performed in all patients before surgery, during the patient’s hospital stay, on discharge and after one, and three months. According to the published in the medical literature results, the sinus rhythm is restored in over 80% of the cases, 5 years after the cryoablation procedure. The procedure significantly reduces the risk of stroke and thromboembolic events, improves the ejection fraction and exercises tolerance, improves long-term survival and the quality of life. In the six cases from the Department of Cardiac Surgery in Varna the patients were discharged with sinus rhythm registered by 24 Holter/EKG.

Cryoablation is a safe and effective procedure for treating paroxysmal and persisting AF.

**FOURNIER GANGRENE – A RARE, UNPOPULAR BUT DANGEROUS DISEASE**

Ts. Tsekova, A. Gabarski, P. Vladova, Sergey Iliev, Georgi Iliev

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Fournier gangrene is necrotizing fasciitis of the perineum and genitalia. It is caused by a synergic polymicrobial infection. The isolated microorganisms are aerobic and anaerobic, part of the normal microflora of the organism. Trauma, infection of the genitalia or the surrounding areas and impaired immunity are a frequently recognized vector for the introduction of bacteria that initiate the infectious process.
This report includes 6 patients from the Department of Coloproctology and Septic Surgery at the UMHAT "Dr. Georgi Stranski"-Pleven, Bulgaria for a period of two years with similar symptoms: prodromal symptoms, fever, intense genital pain and tenderness which is usually associated with edema with progressive erythema of the overlying skin, subcutaneous crepitation and specific bad smell. Part of the patients present with one or more accompanying diseases like diabetes mellitus, high blood pressure, schizophrenia.

For the described period a total 6 patients with Fournier disease passed through the hospital: 3 male and 3 female. The mean age of these patients was 45. The average hospital stay of the patients was 12.5 days. All of the patients underwent a surgical treatment for a definitive diagnosis and an excision of necrotic tissue (debridement), as well as broad-spectrum antibiological treatment and adequate management of the comorbid conditions.

Fournier gangrene is a very rare disease which requires adequate and fast diagnosis made basically on clinical findings. Systemic effects of this process vary from local tenderness with no toxicity to florid septic shock. In general, the greater the degree of necrosis, the more profound the systemic effects.

LOWER LIP RECONSTRUCTION
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Lip reconstruction poses a particular challenge to the surgeon. The goals are both functional and aesthetic, and the surgical techniques employed are often overlapping. The discussion will focus on lip defects with small and large tissue loss. The flaps described include Wedge excision and Karapandzic flap. Lip reconstruction requires familiarity with the surface anatomy, underlying muscular anatomy, and neurovascular anatomy of the lower face. The functional goals of lip reconstruction are to maintain intraoral mucosal lining and to preserve the surface area of the oral aperture.

Subject of the present study are 5 patients with benign and malignant tumors. Data collection was done in the University Hospital St. Marina. The patients’ age varied between 40 and 75.

Patients who had a Karapandzic flap and Wedge excision were analyzed with a reference to demographic details, histology and location of the tumor.

All of the patients stated above underwent lower lip reconstruction. The defects ranged from 10 to 60% of the lower lip. The oral stoma was of a reduced circumference in all cases but did not lead to any functional compromise in terms of oral competence, facial expression, speech, diet, denture and sensation. There were no wound complications. The esthetic outcome was considered excellent.

The Karapandzic flap and the Wedge excision and primary closure are reliable techniques that are offering consistently good functional and esthetic outcomes after the reconstruction of lip defects.

RELATIONSHIP BETWEEN LOWER MOLARS AND CANALIS MANDIBULARIS – RISK OF INFERIOR ALVEOLAR NERVE INJURIES AFTER EXTRACTION
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The extraction of the mandibular second and third molars can cause permanent or temporary neurological complications. These types of complications can be a result of an inferior alveolar nerve (IAN) injury due to the close anatomical relationship between the lower molars and canalis mandibularis. Detailed radiographic assessment is required to predict the risk of an IAN injury. The aim of the research is to present the relationship between the mandibular second/third molars and the mandibular canal in reference to the evaluation of the risk of IAN injury.

For the aim of the research OPGs of 100 patients were examined. The relationship between the apices of the molars and the canal was measured in all patients. The results were classified according to gender, type of the mo-
lar, feature of the molar and measured relationship. According to the defined relation the molars were separated in 6 groups.

Male to female ratio in the conducted research is 53:47. A total amount of 325 mandibular molars were reviewed, but only 94 third and 178 second lower molars were included in the statistics. The total number of molars which are superimposed on the mandibular canal is 36. These molars are classified as 1st group and have a significant importance in evaluating the risk of IAN injury.

According to the conducted research the third mandibular molars from the 1st group, which have a major risk of IAN injury after extraction, represent 22.34% of all 94 third lower molars. Extraction of third lower molars presents a significantly higher risk of IAN alteration than the extraction of the second lower molars due to anatomical features.

SOCKET-SHIELD TECHNIQUE IN DENTAL IMPLANTOLOGY

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Following tooth extraction, the alveolar bone undergoes remodeling processes that lead to horizontal and vertical bone loss. These processes complicate the dental rehabilitation, especially in connection with implants. The Socket-shield technique has shown potential in preserving buccal tissues.

Related articles were gathered, selected and reviewed. Databases were explored using a combination of the following keywords: "socket-shield" "extraction socket" "ridge preservation" "implant" and "tooth retention". After a systematic and objective collection of data, the socket-shield technique, its modifications, histological evaluation and applications are presented.

Alveolar bone formation is linked ontogenetically to tooth eruption. The bundle bone is the part of the alveolar bone that is vascularized by the periodontal membrane and embedded with periodontal ligaments. This part of the bone is compromised by the extraction of the tooth which leads to bone resorption, due to insufficient nourishment, especially on the buccal side. The socket-shield technique is a promising treatment to better manage and preserve post-extraction tissues. The basis is to prepare the root of the tooth indicated for extraction in such manner that the buccal root segment (periodontal ligament, bundle bone and vascularization) remains undamaged and vital in order to prevent the expected post-extraction remodeling.

The socket-shield technique is a promising addition to clinical dental implantology. It helps retain the buccal part if the root does not appear to interfere with osseointegration and is beneficial in preserving the buccal alveolar ridge.

SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY

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Laparoscopic cholecystectomy is the treatment of choice for symptomatic gallstone disease. Conventional laparoscopic cholecystectomy (CLC) is performed through three or four ports. The innovative technique single-incision laparoscopic surgery (SILS) has been applied in gallbladder removal as a step towards even more less invasive procedures. Single-incision laparoscopic cholecystectomy (SILC) is performed using a single umbilical skin incision through which a laparoscope and two instruments are introduced and cholecystectomy is performed. It is virtually a "scarless" surgery with entry point hidden in the umbilicus.

A literature review of the scientific topic using the PubMed and Springer link databases was performed. We also show our experience with the access technique of the SILS™ Port insertion.

Phillips et al (2011), in their randomized clinical trial (n=197), reported that the incidence of wound complications was significantly higher in SILC patients compared to 4-port laparoscopic cholecystectomy (4PLC) patients (p=0.047). Vidal et al (2011) in their non-randomized clinical trial (n=240) reported that none of the SILC patients had an incisional hernia, compared to two (4PLC) patients (p=0.036). Significant difference in intra- and postop-
Surgical complications was not found. Other studies show better cosmetic score and higher surgeons’ stress in SILC compared to the CLC group. The conversion rate, blood loss, length of stay, operative time and postoperative pain did not differ significantly between the two groups.

SILC appears to be as safe and effective as CLC. Although SILC produces better cosmetic outcomes, additional long-term data from randomized studies is essential in order to confirm the safety and efficacy of the procedure.

THE EVOLUTION OF THE SURGICAL TREATMENT OF ACUTE CALCULOUS CHOLECYSTITIS (A LITERATURE REVIEW)

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Cholecystectomy is the most commonly performed surgery of the biliary tract and one of the most common operative procedures today.

The development of cholecystectomy started with the open access of Carl Langenbuch in 1882, updated by Philippe Mouret using a laparoscopic approach and its evolution is still in progress.

The purpose of this study is to show the history, present and future of this surgical technique.

A literature overview of the scientific topic in the databases of PUBMED was performed.

In our overview we present the very rapid development of the biliary tract surgery and we prove that, its fast progress is improving the postoperative condition and recovery of the patient.

Despite the “high speed” and “simplicity” of the performance of cholecystectomy, surgeons all around the world are working for the improvement of the surgical technique with the purpose of decreasing surgical time, complications, use of anesthetics, hospital stay, and postsurgical pain of the patient.

OB/GYN, PEDIATRICS AND INFECTIOUS DISEASES

AUDITORIUM 3
13:00 – 14:30

OUTBREAK OF THE ZIKA VIRUS DISEASE AND ITS COMPLICATIONS

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The Zika virus (ZIKV) is an emerging arthropod-borne virus (arbovirus) belonging to the family Flaviviridae and the genus Flavivirus. It is related to the yellow fever, dengue, West Nile, and Japanese encephalitis viruses. First isolated from a monkey in the Zika forest of Uganda in 1947, it was the cause for several cases of sporadic infections in humans in Africa and Asia. Since the Zika virus disease is usually relatively mild and only 1 in 5 infected with ZIKV showed any symptoms, it required no specific treatment.

However, in 2007 ZIKV caused an outbreak of a relatively mild disease characterized by rash, arthralgia, and conjunctivitis on the Yap Island in the Southwestern Pacific Ocean. This was the first time that ZIKV was detected outside Africa and Asia. The following year cases of non-vector borne ZIKV transmission through sexual intercourse and perinatal transmission were reported. This drew insignificant public interest until the outbreaks in French Polynesia in 2013/2014 and the ZIKV infections spread throughout the Americas. Complications such as microcephaly after intrauterine infection with the Zika virus and the occurrence of Guillain-Barre syndrome in some of the infected patients in French Polynesia revealed how many “known unknowns” there are about this issue.
These blank spots of missing data are a legitimate cause for alarm. They also have the knock-on effect on creating a fertile Zika conspiracy theory industry, where theories that link the outbreak to genetically modified mosquitoes seem to be the most popular, thus, deviating from the real problem and its negligence for more than 50 years. Nevertheless, recent investigations and many ZIKV infection cases proved the capacity of ZIKV to be more dangerous than anyone thought.

PREVALENCE OF RUBELLA IGG ANTIBODIES: AN EPIDEMIOLOGICAL ASSESSMENT
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The importance of the rubella infection as a public health issue is determined by the teratogenic effect of the rubella virus during pregnancy. The aim of this study was to determine the prevalence of rubella IgG antibodies in individuals at a young age in the city of Pleven.

A prospective seroepidemiological study was performed. For the period January-June, 2014, 194 serum samples from individuals at an age of 23 to 53 (average age 35 ± 0.871) were collected and tested. Enzyme immunoassay (ELISA) was used for detection and quantification.

The survey determined that 188 (97%) from the subject group of the study were seropositive in regard to rubella IgG antibodies and 6 (3%), respectively, were seronegative. We found that the majority of the negative subjects were women - 4 (66%). Men were respectively - 2 (44%). The age of these subjects was 34 - 4 (66%) and 36 - 2 (44%).

The aim of the World Health Organization is to eliminate congenital rubella from the European region. It is necessary to monitor the susceptibility to rubella among women of childbearing age.

FUTURE TRENDS IN THE TREATMENT OF HEPATITIS C
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Numerous studies in the recent years have proved the need for a change in the treatment of HCV and the inclusion of protease and polymerase inhibitors in the combined regimen with ribavirin and Pegylated interferon (PEG-IFN). More specifically, our discussion will be on studies on the sofosbuvir and simeprevir activity, indications and contraindications of their application as well as the observed results due to the said application.

Using Medscape and searching for the terms “sofosbuvir”, “simeprevir”, “HCV polymerase inhibitors,” “HCV protease inhibitors”, we reviewed literature on the clinical development of sofosbuvir and simeprevir. We gathered research papers from the past two years on adult patients with HCV genotype 1 infection and compensated cirrhosis.

After a comparison between treatment solely with interferon and ribavirin and such in combination with protease or polymerase inhibitors, the latter provides a better therapeutic effect, better disease control and greater hope for the patients.

Protease and polymerase inhibitors demonstrate that when applied in combination with interferon and ribavirin, show better results even in patients who have not responded to treatment solely with interferon, and are indicative of a manifestation of less side effects than otherwise expected.
CHLAMYDIA AND FEMALE STEROID HORMONES
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Chlamydia trachomatis is an obligate intracellular parasite whose prime target is the columnar epithelial cells lining the endocervical canal, the urethra, the endometrium, the conjunctiva, the sinovial membrane and the Glisson’s capsule. Chlamydia is the most common sexually transmitted disease which can seriously damage the fallopian tubes (obturation and peritubal adhesion) which eventually leads to tubal infertility.

Several studies suggest that during chlamydial infection the hormonal status in the genital mucosa is changed and this can influence the infection by changes in the gene expression. This is due to several features of Chlamydia trachomatis, such as the need of cholesterol to replicate genes encoding enzyme -A and its direct influence on the levels of progesterone and estradiol.

All these features of genital chlamydia lead to the development of various models based on RNA-specific tests to establish the limitation of the disease, as well as the appointment of adequate and proper treatment.

The aim of the article is to establish the correlation between female steroid hormones and genital chlamydiosis. We have reviewed the available data and medical literature about the problem.

INCIDENCE RATE OF ENTEROBIOSIS AMONG CHILDREN, HOSPITALISED IN THE PAEDIATRIC CLINIC
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Enterobiosis is a helminthic disease, distributed worldwide. It affects more frequently children in pre-school and school age. The universal susceptibility to the parasite and the contact route of transmission are favourable conditions for the spread of enterobiosis among hospitalised paediatric patients.

The purpose and aim of our study was to determine the incidence of infection with Enterobius vermicularis and the epidemiological risk of enterobiosis in paediatric clinics.

Within a two-month period in 2015, 265 perianal swabs from children were taken. The patients were hospitalised in the Paediatric Clinic of the University Hospital - Pleven. The materials used were native preparations studied by light microscopy.

Thirty-nine children (14.72%) were positive for E. vermicularis. The prevalence of enterobiosis among hospitalised paediatric patients was significantly higher than that in the Pleven region (0.27%), Pleven childcare centers (0.91%) and in the country (0.87%) in 2014. The distribution of enterobiosis in early-age children (1-3 years) is 9.09%; from 4 to 7 years of age (pre-schoolers) - 14.44% and over 7 years of age - 20.69%. Boys were affected more often than girls - 20.83% to 7.43%, respectively.

The high incidence of infection with E. vermicularis among children requires periodic laboratory control in paediatric hospital wards.

CESAREAN SECTION - BENEFITS AND RISKS
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The increase in diagnostic and preventive capabilities of the modern medicine sets the Caesarean section as a key factor in reducing postoperative morbidity and mortality rate. This is why many mothers in developed countries choose it as a safer, secure way to give birth.
The Cesarean section provides a high chance of a successful outcome of pregnancy if there are any pathological indications. Life-threatening indications for the mother are considered: placenta praevia, narrow pelvis (con. vera obst. - under 6 cm), severe heart failure, detachment of the placenta, HELLP syndrome, etc. There are additional indications of intrauterine fetal distress, lack of conditions for rapid vaginal birth and irregular positions. The risks of Cesarean section are associated with age, complications in the course of the current and previous pregnancies and application of anesthesia. Among the causes of maternal mortality are: pulmonary embolism, hypertension complications and bleeding.

The improvement of the anesthesiological and surgical practice turns the Caesarean section into a preferred method of delivery for many pregnant women. The low rate of complications and mortality belongs to the benefits of avoiding the birth stress, pain and risks of vaginal delivery.

Studies show that the incidence of Caesarean section of over 13-14%, does not show a significant improvement in the perinatal indicators, increasing the early and late maternal morbidity. The uneven distribution of medical resources and the lack of need for surgery makes natural childbirth a preferred choice for giving birth.

CESAREAN VERSUS VAGINAL DELIVERY: DOES IT IMPACT THE DEVELOPMENT OF ALLERGIES IN CHILDREN?

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After birth the gastrointestinal tract of neonates is colonised with environmental microorganisms. It is suggested that lack of exposure to beneficial microbes in the birth canal can affect the development of the immune system. The type of microorganisms which take part in this play an important role in the development of the immune system of the infant postnatally. The intestinal microbiota after a vaginal delivery consists of Bifidobacterium species, Ruminococcus species, Bacteroides. The intestinal microbiota of neonates delivered by C-section is less diverse than that of vaginally delivered infants. In infants delivered by Caesarean section Bifidobacterium species is not found in the intestinal microbiota.

The aim of this paper is to determine if there is a link between the methods of delivery (caesarean or vaginal delivery) and the development of allergies in small children.

A cross-sectional study to collect information was undertaken over a period of 4 weeks in February-March, 2016. The questionnaires were randomly distributed to mothers of children up to the age of 6 in Varna. Information about their pregnancies and the health of their children was collected. Of particular interest was the mode of delivery (vaginal or Caesarian section), breastfeeding practices, additional antibiotic medication, family history of allergies as well as diagnosed atopy of the child. The atopy concentrated on in the questionnaire included: food allergies, atopic dermatitis, allergic rhinitis, asthma. For the analysis, SPSS version 21 was used. Frequencies and descriptive statistics were analysed to assess the association between the mode of delivery and the types of atopy.

Implications and Conclusion: Our study showed that the mode of delivery is associated with the signs of atopy. Stronger correlation was found between family history of allergies and breastfeeding practices. Additional research is needed to understand how additional factors during pregnancy and lactation could affect the rate of allergy in children.
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