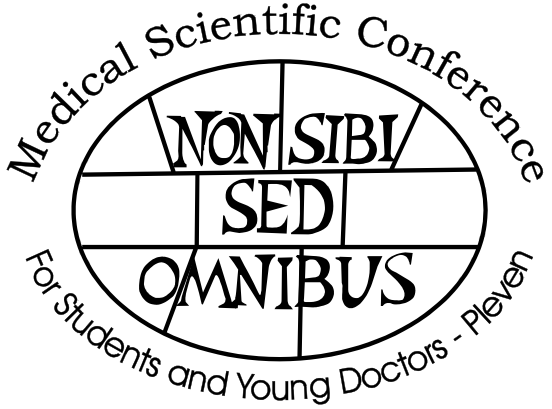
MEDICAL UNIVERSITY – PLEVEN, BULGARIA

XVIII INTERNATIONAL MEDICAL SCIENTIFIC CONFERENCE FOR STUDENTS AND YOUNG DOCTORS
13 – 18 SEPTEMBER 2021

MEDICAL UNIVERSITY – PLEVEN, BULGARIA



ABSTRACT BOOK

Under the auspices of the Rector of Medical University – Pleven, Bulgaria

Prof. Dobromir Dimitrov, MD, PhD

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DEAR COLLEAGUES AND FRIENDS,

Once again, it is our pleasure to welcome you to the XVIII International Medical Scientific Conference for Students and Young Doctors (MDSC) with this year's motto "Blooming Colours of Medical Science!".

The eighteenth edition of this inspiring forum of young scientist is dedicated to the 47-year anniversary of our Alma Mater and will take place on 13th September – 18th September 2021 at the University Telecommunication Endoscopic Center (TELEC) of MU-Pleven.

It has been 47 years since Medical University – Pleven started giving us knowledge and wisdom! It is a fortress of future light in education and research and a path to good realization and modern training that brightens our professional dreams! And that is why we continue working with the same motivation, passion and curiosity which guided the very first Organizing Committee in the year of beginning 2002!

Following our tradition, we will tirelessly focus on bringing you again to the best lectures and workshops that we strongly believe will broaden your competence in the basic fields of medicine and health sciences.

We also put our efforts on organizing the Sixth Autumn School on Innovations in Medicine which has become a hallmark of MU-Pleven during the first conference days. This year, we will focus your attention on two main pillars: Artificial Intelligence. Furthermore, we will cover a number of other innovative topics throughout the entire duration of the conference.

Like in any other remarkable event, your experience would not be completed without meeting new amazing people at our social programme, including a Welcome party and a trip to one of the many beautiful locations in Bulgaria. Therefore, stay tuned for more information.

We are filled with enthusiasm and are looking forward to meeting you all here in Pleven at the XVIII International Medical Scientific Conference for Students and Young Doctors.

THE ORGANIZING COMMITTEE

ORGANIZING COMMITTEE

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	Mireille Truong, MD Assistant Professor of Gynecology, Director of Minimally Invasive Gynecologic Surgery, Cedars-Sinai Medical Center; Los Angeles, CA, USA; Board of Trustees, SLS **Jessica Ybanez-Morano, MD, MPH** Professor of Obstetrics & Gynecology, Northeast Ohio Medical University, Medical Director and Chair Department of Obstetrics & Gynecology West Virginia University, Reynolds Memorial Hospital; Glen Dale, WV, USA Board of Trustees & Past President, SLS
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CONFERENCE TIMETABLE

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SIXTH AUTUMN SCHOOL ON INNOVATIONS IN MEDICINE	
08:30 – 15:30	Registration – TELEC
14:00 – 18:00	**BREAST CANCER VIRTUAL COURSE:** **TOPIC: Optimization of prophylactic and diagnosis of breast cancer** **Moderator:** Mariela Vasileva-Slaveva, MD, PHD Department of Surgery, University Hospital Acibadem City Clinic, Sofia; Women for Oncology, Bulgaria; EORTC Pathobiology Group **PRESENTING AUTHORS:** **Educational opportunities for young surgeons - courses and fellowships (and other organizations)** – Mariela Vasileva-Slaveva, MD, PHD, Department of Surgery, University Hospital Acibadem City Clinic, Sofia; Women for Oncology, Bulgaria; EORTC Pathobiology Group **The missing link – screening programs for gynecological cancers** – Assoc. Prof. Angel Yordanov, MD, PhD, Medical University – Pleven, Bulgaria **Procedures for cancer prevention in BRCA positive women** – Dr Claudia Iannetti, Medical University Innsbruck, Innsbruck, Austria **Vacuum assisted biopsy of breast lesions - indications and contraindications** – Prof. Dobromir Dimitrov, MD, PhD, Medical University – Pleven, Bulgaria **The sentinel nodes – the axilla and the probe** – Assoc. Prof. Svilen Maslyankov, MD, PhD, Acibadem City Clinic, Sofia, Bulgaria **Marking primary tumor and metastatic lymph nodes with titanium clips and wire** – Dr. Birgit Amrot, MD, Medical University Innsbruck, Innsbruck, Austria **Alternative approaches in marking primary tumor and metastatic lymph nodes** – Valkan Ivanov, MD, University Hospital Acibadem City Clinic Sofia, Bulgaria **Surgery in advanced and metastatic breast cancer** – Konstantinos Zarampukas, MD, Acibadem City Clinic Sofia, Bulgaria
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SIXTH AUTUMN SCHOOL ON INNOVATIONS IN MEDICINE	
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12:00 – 12:30	**Lunch break**
16:00 - 17:30	**OFFICIAL OPENING CEREMONY** **AL: WHAT DOES IT TAKE TO BECOME A SUCCESSFUL SURGEON?** Prof. Tsvetomir Loukanov, MD, PhD; Head of Pediatric Cardiac Surgery, Dept. Cardiac Surgery, University of Heidelberg, Germany
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09:00 – 09:45	**KL: EVIDENCE-BASED PHARMACOTHERAPY FOR COVID-19 – DIRECT ACTING ANTIVIRALS AGENTS AND DISEASE-MODIFYING MEDICINES** Prof. Georgi Momekov, MPharm, PhD Head of the Department of Pharmacology, Pharmacotherapy and Toxicology, Faculty of Pharmacy, Medical University of Sofia, Bulgaria; President of Bulgarian Pharmaceutical Science Society
10:00 – 10:45	**SL: INTERNATIONAL MOBILITY UNDER THE "ERASMUS+" MEETING: Focus on the 2021-2027 Erasmus+ programme – new opportunities for mobility and cooperation in higher education.** **Moderators:** Assoc. prof. Diana Pendicheva, MD, PhD Milislava Gancheva, International Cooperation Expert Erasmus+ experts at the EIIC Department, Medical University – Pleven, Bulgaria
12:00 – 12:30	**Lunch break**

SOCIETY OF LAPAROENDOSCOPIC & ROBOTIC SURGEONS (SLS) ONLINE SYMPOSIUM	
12:30 – 17:30	**SLS MODERATORS:** **Maurice Chung, RPh MD** Mercy Center for Endometriosis, Pelvic Pain, & Urogynecology; Mercy Medical Center; Canton, OH, USA; Professor of OB/Gyn & FPMRS Northeast Ohio Medical University, Rootstown OH; Board of Trustees & Past President, SLS **Steven Minaglia, MD MBA** Associate Professor of Obstetrics & Gynecology, Urogynecology/ FPMRS Director of Robotic Surgery, Kapiolani Medical Center for Women & Children University of Hawaii, Honolulu, HI, USA **John Morrison Jr, MD** Professor of Clinical Surgery & Vice Chair of Education Louisiana State University (LSU) Health; New Orleans, LA, USA; President & Board of Trustees, SLS **Jay Redan, MD** Professor of Surgery, University of Central Florida; Chief of Surgery & Medical Director, Minimally Invasive General Surgery; Advent Health-Celebration; Celebration (Orlando), FL, USA; Past President, SLS **Col. Richard Satava, MD PhD (Hon)** Past Program Manager, DARPA, US Department of Defense Past Senior Science Advisor, US Army Medical Research Professor Emeritus of Surgery, University of Washington; Seattle, WA, USA; Board of Trustees, SLS
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12:30 – 12:45	**INTRODUCTION:** Prof. Dobromir Dimitrov, MD, PhD (Medical University – Pleven, Bulgaria) Phillip Shadduck MD DrHC FACS (SLS)
12:45 – 14:30	**DIDACTIC SESSION #1:** **Moderators: John Morrison, Ybanez-Morano, Prof. Slavcho Tomov, MD, PhD, DSC (Medical University-Pleven, Bulgaria)** 1. Enhanced Recovery After Surgery (ERAS) & Opiate Reduction – Jay Redan 2. Patient Consent- Process, Form, Relationship – Phillip Shadduck 3. Safer Use of Surgical Energy & Laparoscopic Bowel Complications – John Morrison 4. Evaluation & Management of Chronic Pelvic Pain – Maurice Chung 5. Hysterectomy in USA - Vaginal, Open, Laparoscopic, Robotic – Jessica Ybanez-Morano 6. Tissue Extraction – Mireille Truong 7. Genitourinary Injuries – Steven Minaglia
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14:45 – 16:45	**LIVE SURGERY CASES FROM CELEBRATION HOSPITAL FL** **Moderators: Jay Redan, Maurice Chung, Steven Minaglia, Prof. Grigor Gortchev MD, PhD, DSc** **(Medical University – Pleven, Bulgaria)** **Proposed:** Michael McDonald, Robotic Urology, Carlos Ortiz, Robotic Abdominal Wall Repair, Aileen Caceras, Robotic Gynecology
16:45 – 17:30	**DIDACTIC SESSION #2** **Moderators: Phillip Shadduck, Martin Karamanliev, MD, PhD (MU-Pleven, Bulgaria), Prof. Dobromir Dimitrov, MD, PhD (MU-Pleven, Bulgaria)** 1. Focused Energy – Richard Satava 2. Impact of Future Technologies on Healthcare and Surgery (Covid Lessons) – Richard Satava 3. A Taste of Surgical Surprises – John Morrison
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16 SEPTEMBER, 2021 (THURSDAY)	
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12:30 – 13:30	Lunch break
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14:00 – 15:30	**OP: SURGERY, ORTHOPEDICS & UROLOGY SECTION**
17:30	**OFFICIAL CLOSING CEREMONY**

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SIXTH AUTUMN SCHOOL ON INNOVATIONS IN MEDICINE

13 - 14 September 2021

BREAST CANCER VIRTUAL COURSE

OPTIMIZATION OF PROPHYLACTIC AND DIAGNOSIS OF BREAST CANCER

13 September 2021

Moderator: ***Mariela Vasileva-Slaveva, MD, PHD***
Department of Surgery, University Hospital Acibadem City Clinic, Sofia; Women for Oncology, Bulgaria; EORTC Pathobiology Group

EDUCATIONAL OPPORTUNITIES FOR YOUNG SURGEONS - COURSES AND FELLOWSHIPS (AND OTHER ORGANIZATIONS)

Dr. Mariela Vasileva, University Hospital Acibadem City Clinic, Sofia, Bulgaria

There is a huge inequality in the education of breast specialist around Europe. This is particularly seen in surgery, where breast cancer patients can be operated on by gynecologists, general surgeons or thoracic surgeons, which are dedicated or not to breast cancer treatment. There are many societies around Europe providing education opportunities as short courses or long term fellowships. They aim to improve the quality of breast cancer care and produce a certified breast specialists.

THE MISSING LINK – SCREENING PROGRAMS FOR GYNECOLOGICAL CANCERS

Dr. Angel Yordanov, Medical University Pleven, Pleven, Bulgaria

Over 40% of cancer cases are preventable. The primary prevention remains the most cost-effective intervention in cancer control and most of the European countries have established screening programs. The effect of the mass screening is seen in the last years in Europe, where cancer mortality has been constantly reduces. This is not the case in Bulgaria, where the mortality of breast cancer is keeping the same levels and the mortality of cervical cancer is invreasing.

PROCEDURES FOR CANCER PREVENTION IN BRCA POSITIVE WOMEN

Dr Claudia Iannetti - Medical University Innsbruck, Innsbruck, Austria

Hereditary breast cancer represents 5-10% of the newly diagnosed breast cancer. Most often it is associated with mutations in BRCA1/2 genes. Germline mutations in those genes result in a significantly increased lifetime risk of developing breast and ovarian cancer, estimated at up to 7 and 25 times (respectively) higher of the average risk population. The purposeful searching and identification of women at high risk of breast cancer provides the opportunities to reduce their individual risk.

VACUUM ASSISTED BIOPSY OF BREAST LESIONS - INDICATIONS AND CONTRAINDICATIONS

Prof. Dobromir Dimitrov, Medical University Pleven, Pleven, Bulgaria

Triple assesment of breast cancer lessons, combined with additional methods can discriminate between benign and malignant breast lesions with 95% accuracy. Still, none of these methods is perfect. Uncertainty in diagnosis may lead to multiple and sometimes unnecessary hospital admissions. Patients may neglect follow-up visits only to return later with advanced breast cancer. Therefore, a selective histological diagnosis is necessary to assure patients and to avoid a misdiagnosis for lesions higher than BI-RADS category 3. Vacuum assisted biopsy of breast lesions offers the best possible histological sampling and aids avoidance of unnecessary operations.

THE SENTINEL NODE – THE AXILLA AND THE PROBE

Assoc. Prof. Svilen Maslyankov, MD, PhD, Acibadem City Clinic, Sofia, Bulgaria

The technique of intraoperative lymphatic mapping was developed in the 1990s. It has been used to identify the first site (lymph node) of the metastatic spread. It was first described during surgeries on the parotid gland and later on in the lymphatic drainage of the penis, testis and later on – breast. Currently sentinel node dissection is a gold standard procedure for evaluating the status of the axillary node in patients with early clinically node negative breast cancer.

MARKING PRIMARY TUMOR AND METASTATIC LYMPH NODES WITH TITANIUM CLIPS AND WIRE

Dr. Birgit Amrot, Medical University Innsbruck, Innsbruck, Austria

We all should always leave a mark! The radiologist should mark the site of biopsy in order to prevent multiple interventions in the breast. He should live a mark in the tumor to help surgeons to identify the lesion and to guide him during the operation. The classic approach in this is to use a titanium clip and a hook wire. The procedure of marking of the non palpable breast lesions or tumors prior neoadjuvant chemotherapy is allowing for much more breast conserving surgeries and has direct impact on quality of life and cosmetic outcomes.

ALTERNATIVE APPROACHES IN MARKING PRIMARY TUMOR AND METASTATIC LYMPH NODES

Dr Valkan Ivanov, University Hospital Acibadem City Clinic Sofia, Bulgaria

The are several options for marking the tumor. The classic approach with a titanium clip is sometimes insufficient since the marker is the best seen only on mammography. One cheap and simple way of identification of the tumor is using the intraoperative ultrasound. Some additional characteristics of the material of the markers can be used for more easy and precise identification as their magnetic or radioactive properties. There are localization systems using also radiofrequency identification. Each approach has its pros and cons, but in any case the localization of the tumor before any treatment is obligatory.

SURGERY IN ADVANCED AND METASTATIC BREAST CANCER

Dr Konstantinos Zarampukas, MD, Acibadem City Clinic Sofia, Bulgaria

Surgery in advanced and metastatic breast cancer patients is topic rising many discussions. Systematic spread of the disease is usually contraindication for radical local treatment, because in its essence it can't be radical. Some retrospective studies are suggesting that surgery may improve survival in metastatic patients, but the quality of the evidence is very low. The current recommendation of treatment for both locally advance and metastatic breast cancer patients include systemic therapy as initial treatment and surgery only in selected cases and if performed with the same attention to detail (e.g. complete removal of the disease) as in patients with early-stage disease.

AUTUMN SCHOOL ON CARDIAC SURGERY

14 September 2021

EBSTEIN ANOMALY – SURGICAL TREATMENT

Prof. Tsvetomir Loukanov, MD, PhD, Head of Pediatric Cardiac Surgery, Dept. Cardiac Surgery, University of Heidelberg, Germany

Ebstein Anomaly of the tricuspid valve and right ventricle include the following:

1. Adherence of the tricuspid leaflets to the underlying myocardium (failure of delamination);
2. Anterior and apical rotational displacement of the functional annulus (septal > posterior > anterior leaflet);
3. Dilation of the "atrialized" portion of the right ventricle with variable degrees of hypertrophy and thinning of the wall;
4. Redundancy, fenestrations, and tethering of the anterior leaflet;
5. Dilation of the right atrioventricular junction (the true tricuspid annulus);
6. Variable ventricular myocardial dysfunction. These anatomical and functional abnormalities cause important tricuspid regurgitation, which results in right atrial and right ventricular dilation and atrial and ventricular arrhythmias.

Numerous techniques of repair have been described since the first report of Lillehei. This is not surprising, because each heart with Ebstein's anomaly is different, and there is infinite variability that can occur with all of the above-mentioned characteristics. The cone reconstruction is different than previous valvuloplasty techniques in that it is closest to an "anatomic repair." The end result of the cone reconstruction includes 360° of tricuspid leaflet tissue surrounding the right atrioventricular junction. This allows leaflet tissue to coapt with leaflet tissue, similar to what occurs with normal tricuspid valve anatomy. With the exception of some persistent right ventricular dilation in the early postoperative period, the cone reconstruction restores the appearance of normal tricuspid valve anatomy and function more than any previously described technique. Because this technique can be applied to the wide variety of anatomical variations encountered with Ebstein's anomaly, we have adopted this repair technique when approaching patients with this malformation.

LECTURES

ACADEMIC LECTURES

WHAT DOES IT TAKE TO BECOME A SUCCESSFUL SURGEON?

Prof. Tsvetomir Loukanov, MD, PhD, Head of Pediatric Cardiac Surgery, Dept. Cardiac Surgery, University of Heidelberg, Germany

Contrary to the superficial perception, surgery is much more than just manual activity. Rather, it requires an orderly and efficient interaction between the brain, eyes and hands to provide optimal patient care.

Many students can imagine a surgical career at the beginning of their studies or find surgery interesting, but only a small proportion actually decide to pursue surgical training at the end of their studies. One reason is that ideas about surgery are often very vague and questions/myths build up that prevent students from actively choosing such a career.

With this seminar we would like to engage in interactive dialogue medical students of any stage with an interest in surgery to convey and discuss what surgery means, what prerequisites can be helpful for a successful surgical career, and finally integrate practical/technical aspects that are the cornerstone of a successful surgical career.

Using historical examples and our own experience, we would like to discuss with the audience what questions and criteria can be used to find out if you want to pursue a surgical career.

COMBINED IMMUNOTHERAPY AND RADIATION INDUCE CELLULAR AND HUMORAL IMMUNE RESPONSES TO AUTOLOGOUS TUMOR ASSOCIATED ANTIGENS AND PROLONG SURVIVAL OF PATIENTS WITH ADVANCED CANCERS

Dean L Mann*, Kathleen A Berlyn*, Etse H. Gebru*, Kim Hankey*, Ryuko Watanabe**, Kenichiro Hasumi**
****University of Maryland School of Medicine, Baltimore MD, USA***
***** Shukokai Clinic, ICVS Tokyo Clinic, Hasumi International Research Foundation***

Immune based therapies alone and in combination with standard of care treatment modalities have revolutionized treatment of Cancer. The recognition that effector and suppressor immune responses are generated to products of malignant cells, viewed by the immune system as non- self, led to approaches that mobilize and augment cancer cell directed cellular immune responses. Examples of these approaches include use of check-point inhibitors that block cancer cell signals that inhibit cytotoxic activity of T cells. Another approach has been to use vaccines to augment/boost existing anti -cancer cellular activity. Anti-cancer vaccines have been developed by arming Dendritic cells in vitro with products of tumor cells (Dendritic cells are the quintessential antigen presenting cell in the human immune system). While immune responses to these vaccines have been documented, there is little evidence for a concomitant clinical response. This is in contrast to the approach Dr Hasumi has pioneered wherein dendritic cells are directly injected into tumors thus providing the immune system with a full array of potential autologous tumor associated antigens. Clinical responses in patients treated on this protocol have been documented and published. We will present data demonstrating generation of tumor specific cellular and antibody responses in treated patients with different cancers. We will also show statistically significant prolonged survival of patients with a variety of advanced cancers treated on this protocol.

INTERNAL MEDICINE SECTION

CHAIRMEN:

Vanya Slavcheva, MD, PhD

SECRETARY:

Mariya Tsvyatkova, OC

It is much more important to know what sort of a patient has a disease than what sort of a disease a patient has.

William Osler

APPLICATION OF INDOCYANINE GREEN (ICG) IN ROBOT-ASSISTED URETEROPLASTY - THE FIRST CASE IN BULGARIA

Mavropoulos A.*, Eucaris F.*, Kolev D.*, Sachdeva M.**
****Medical student, Medical University-Pleven, Bulgaria***
***** Department of Urology, UMHAT "Saint Marina" Pleven, Bulgaria***
Presenting author: Eucaris F.
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Robotic technology allows the implementation of complex urological operations with greater accuracy, miniaturized instruments and smaller incisions compared to laparoscopic and open approach. However, the plastic reconstruction of the ureter can be technically challenging. In such surgeries the surgeon must rely on visualization in the absence of the tactile feedback. Evolution in technology can improve the visualization of internal anatomical structures and make it easier for the surgeon.

A unique improvement is the use of ICG – a special dye that can be visualized under near-infrared fluorescence (NIRF). Unlike white light, fluorophore-added NIRF (ICG) allows deeper photon penetration, superior optical contrast, less scattering and a high signal-to-background ratio. The da Vinci (Intuitive Surgical, Sunnycale, CA) surgical platform, equipped with Firefly technology (Novadaq Technologies, Missisauga, ON), allows control use of NIRF by the console surgeon. Intravenous or intraluminal administration of ICG is used to clearly distinguish the vessels of tumors, lymph nodes and other structures.

With a short video we present the first case of application of ICG in robot-assisted ureteroplasty in Bulgaria. We performed this new procedure in a 45 year old patient with iatrogenic stricture in the middle third of the ureter and chronic hydronephrosis after taking consent. The intraoperative application of ICG facilitated our surgical intervention. There were no perioperative complications. Postoperative follow-up with contrast computed tomography showed a good surgical outcome.

KEY WORDS: Robotic technology ICG

SITUS INVERSUS WITH LEVOCARDIA AND CONGENITALLY CORRECTED TRANSPOSITION OF GREAT VESSELS IN A 45 YEAR OLD LADY: A CASE REPORT

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INTRODUCTION: Congenitally corrected transposition of the great arteries (CCTGA) is a rare cardiac anomaly. Heart transplantation may be the only option for certain patients with CCTGA who are either too old for LV retraining or anatomic repair or have bad outcomes following anatomic or Fontan repair. Technical modifications are necessary to achieve good outcomes.
AIMS/OBJECTIVES: A 45 year-old female presenting to the University Hospital with acute onset shortness of breath. She was visibly cyanotic and had a Class III Dyspnea. Physical examination revealed an irregular rhythm with heart rate at 90/min, a grade III systolic ejection murmur and blood pressure was 95/75 mmHg in both arms with normal distal pulses.
METHODS: Diagnosis: Chest X-ray showed a left heart axis, a right-sided gastric bubble below the right diaphragm and left-sided hepatic contour. Cardiac catheterization was performed.Transesophageal echocardiogram (TEE) confirmed the diagnosis.
RESULTS: Currently patient is stable. Treatment: 1/congenitally corrected transposition of the great arteries. 2/medications. Heart – lung transplantation is the treatment of choice.
CONCLUSION: The CCTGA is a rare congenital cardiac anomaly which occurs in less than one percent of all forms of congenital heart disease. Most cases are Situs Solitus, therefore, the combination of CCTGA and situs inversus with levocardia are extremely rare defects, especially in adulthood. Thus, the anatomic repair is not always suitable for older patients. International papers have published very few cases of adult patients with CCTGA with situs inversus and other associated defects, so management of these patients; particularly complicated cases remain controversial.

KEY WORDS: congenitally corrected, levocardia, situs inversus

THE RELATIONSHIP BETWEEN CIGARETTE SMOKING AND CHRONIC SPONTANEOUS URTICARIA

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INTRODUCTION: Chronic spontaneous urticaria (CSU) is defined as occurrence of itchy wheals and/or angioedema for at least 6 weeks. The prevalence of CSU is 0.5-5%. Etiopathogenesis is complex, with inflammation being one of the most important factors. The percentage of smokers in Poland is 26%. Due to the data on possible protective effect of smoking on CSU, we hypothesized there should be lower percentage of smokers.
AIM: To assess the prevalence of smokers in CSU-patients and to check for selected laboratory data.
MATERIALS AND METHODS: 68 adult patients (52 females, 16 males) admitted to the University Hospital in Opole (2018-2021) were diagnosed with CSU and divided into two groups: sex and smoking. U Manna-Whitney test (Statistica ver.13) was used.
RESULTS: Smokers accounted for 26.5%. No statistical difference was found between smokers and non-smokers regarding level of CRP, neutrophils (NE), lymphocytes (LYM), or neutrophil-lymphocyte ratio (NLR). In the female group (regardless of smoking) in relation to males, there were significantly different (p0,05) levels of NE (6,28vs.6,06), LYM (6vs.1,66) and NLR (4,13vs.4,11). In the group of non-smokers, females had significantly different level of LYM (7,07vs.1,55) and NLR (4,81vs.4,22), while in group of smokers of NE (4,36vs.6,32) and NLR (1,92 vs.3,92).
CONCLUSION: We did not find lower percentage of smokers in patients with CSU. Significant differences in NE, LYM, and NLR between genders need further investigation and might support the concept of inflammation as an important factor in CSU pathogenesis.

KEY WORDS: chronic spontaneous urticaria, smoking

COVID-19 ASSOCIATING WITH MYOCARDIAL INJURY AND PULMONARY COMPLICATIONS

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BACKGROUND AND AIM: A number of patients with COVID-19 have underlying cardiovascular disease or may develop CVD during the period of COVID-19 infection. Our aim is to analyse the severity of disease in a patient with COVID-19 and associated cardiovascular co-morbidity, with a comprehensive scrutiny of the clinical presentation.
METHODS: Case study of patient in the hospital comprising of complete anamnesis, ECG and Echocardiographic evidence and detailed clinical findings.
RESULTS: COVID-19 is implicated mainly in respiratory pathology, Cardiovascular involvement although uncommon has been observed. COVID-19 induces a pro-inflammatory state & therefore is seen to be a poor prognostic factor in infected individuals with cardiovascular pathology. COVID-19 has been implicated as a probable precipitating factor in acute cardiac injury. The mechanism of injury can be through direct myocardial injury which occurs by the viral involvement of cardiomyocytes and through the impact of systemic inflammation affecting the cardiovascular system.
CONCLUSIONS: The association of COVID-19 on cardiac pathology has been elucidated in the impact of the infection as clinical manifestations of the patient. The scope of this research must be broadened to accommodate a larger sample size which will shed light on the incidence, mechanism & prognosis of Cardiovascular disease in COVID-19.

KEY WORDS: COVID-19, cardiovascular disease, cardiac injury.

THE RARE CASE OF HAEMOSUCCUS PANCREATICUS

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INTRODUCTION: Haemosuccus pancreaticus is haemorrhage from the Ampulla of Vater through the Pancreatic Duct. I present a patient with history of chronic pancreatitis, he was admitted to the hospital with tiredness, anaemia, hematochezia and melaena. The cause was investigated using various methods such as colonoscopies which revealed nothing; however, a Computer Tomography Scan showed splenic vein thrombosis, portal hypertension and splenomegaly. Following this an angiogram show splenic artery pseudoaneurysm as the most likely cause of the bleeding. The patient also underwent a Magnetic Resonance Cholangiopancreatography due to severe pain in the abdomen which was radiating to the back which revealed acute-on-chronic pancreatitis. The patient underwent medical and surgical management of the splenic artery pseudoaneurysm, the severe anaemia and the acute pancreatitis. He also underwent splenic nerve radiofrequency ablation.
AIMS/OBJECTIVE: To outline the significance of Haemosuccus Pancreaticus and raise the awareness of this obscure cause of upper gastrointestinal haemorrhage.
METHODS: Anamnesis, clinical observations, and investigations of patient.
RESULTS: Using methods such as CT scans we were able to find the source of the bleed and use various methods to treat the patient.
CONCLUSION: This patient had Haemosuccus pancreaticus which is a rare cause of gastrointestinal bleeding. Interventional Radiography and both medical and surgical management were needed to treat this condition.

KEY WORDS: gastrointestinal bleeding, pancreatitis, haematochezia, melaena

THE IMPLICATION OF NEW GUIDELINES FOR TREATMENT OF TYPE 2 DIABETES MELLITUS IN REAL CLINICAL PRACTICE

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AIM: The aim of the present investigation was conducting and analyzing the antidiabetic treatment among patients with type 2 diabetes mellitus (DMt2) before and after the new recommendations of American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) from 2018.
MATERIALS AND METHODS: A retrospective observational study among 611 patients with DMt2 hospitalized in Endocrinology clinic of University Hospital „Dr. G. Stranski" Pleven during the two one year period (n1- DMt2 during 2017 and n2- DMt2 during 2019) was conducted. The data for duration of disease, blood pressure, glycemic control and the presence of any cardiovascular disease (CVD), antidiabetic treatment was obtained from medical records. The data was processed using the statistics software.
RESULTS: No significant differences between age, sex and HbA1c levels between the patients with DMt2 from both groups. The duration of disease in n2 group was longer than n1 (n1-9,97±0,9 vs n2- 11,54±0,85 years; p0,01). The presentation of CV diseases was similar. The results from antidiabetic treatment analysis indicated: no significant changes of proportion of patients with DMt2 conducting metformin monotherapy (n1-5,26% ; n2-6,98%). Raising proportion of GLP-1 agonist and SGLT2 inhibitors in combination with metformin and reducing of sulfonylurea with metformin drug (n1-17,7%; n2-8,94%) during 2019 year was found.
CONCLUSION: CV risk in DMt2 should be actively treated and guidelines specifically address this approach - both the EASD and the ADA. Our results demonstrate real changes in treatment of DMt2 according guidelines recommendations.

KEY WORDS: type 2 diabetes mellitus (DMt2), antidiabetic treatment

NEUROLOGY, PSYCHIATRY & NEUROSURGERY SECTION

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SECRETARY:

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To array a man's will against his sickness is the supreme art of medicine.

Henry Ward Beecher

THE EFFECTS OF COVID-19 ON STUDENTS MENTAL HEALTH IN VARIOUS COUNTRIES

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AIMS/OBJECTIVES: We aimed to evaluate the depression, anxiety and stress levels of students globally during the COVID-19 pandemic and to investigate the effects of quarantine and remote learning on this subject.
METHODS: A detailed questionnaire was created using an amalgamation of Patient Health Questionnaire Anxiety-Depression Scale (PHQ-ADS), Perceived Stress Scale and other coronavirus related scales. This online questionnaire was subsequently distributed as a google form web link via social media outlets for all responders to answer anonymously. We received 325 responses from 55 universities across 19 different countries.
RESULTS: We gathered data from 325 students. Out of which, 243 (75%) students stated that they had been negatively affected due to the COVID-19 pandemic. Furthermore, 274 (84%) felt nervous and stressed, 273 (84%) students felt depressed and hopeless, 279 (86%) had trouble falling asleep, 249 (77%) had a disturbed appetite, and 301 (93%) struggled to concentrate on their studies. 301 (69%) students worried about how online education will affect their futures, with 151 (46%) who found online education stressful and 126 (39%) felt like self harming or had suicidal thoughts.
CONCLUSION: From this study, we can conclude that COVID-19 and it's subsequent effects such as lockdowns have had a negative impact on the majority of university students. The proportion of students who were adversely affected is alarming and our findings suggest that actions must be taken in order to understand and prevent the worsening of the mental health of students.

KEY WORDS: mental health, psychiatry, COVID-19

A PARKINSON DISEASE PATIENT WITH PSYCHOTIC AND DEPRESSIVE NEUROPSYCHIATRIC SYMPTOMS

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AIMS/OBJECTIVES: Depression is the most common and severe psychiatric manifestation of Parkinson Disease (PD) regardless of its type - familial or sporadic. This case confers it showing the dynamics of neuropsychiatric symptoms in PD. Patient's symptoms started with a psychotic episode subsequently turning into severe depression and extreme suicidal potential.
MATERIALS AND METHODS: We present a case of a 50-year-old male patient with no previous history of psychiatric diseases who had been hospitalized with assistance of police in January 2020 as an emergency for evaluation of distress and superficial cuts. He abused alcohol, became tense in late 2019 whilst doubting his co-workers, suspecting his wife and hearing voices in this regard diagnosing him with Paranoid schizophrenia. Over a year later, in May 2020, he was admitted to the clinic for the second time.
RESULTS: Findings on psychiatric examination: oriented, externally calm psychomotor with intense internal tension and self-awareness of unexplained mental discomfort. Findings on neurological examination were bradykinesia, hypomimia and static tremor involving hands, head and tongue. Furthermore, he presented with spasticity, impaired short-term episodic memory, relatively preserved recognition and decreased psychomotor processing speed. Brain MRI showed mild cortical atrophy. He was diagnosed with Idiopathic PD and reported positive family history. Consequently, a genetically driven condition was suspected but he tested negative for heritable neurodegenerative condition. Approximately two months after the second hospitalization, he completed suicide.
CONCLUSION: A polygenically transmitted PD is our second hypothesis which is to be tested using PD Polygenic Risk Score (PRS) approach in the near future.

Key Words: Parkinson disease, depression, suicidality, heritability

NEUROLOGICAL COMPLICATIONS DUE TO COVID-19

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INTRODUCTION: The current COVID-19 pandemic situation have emerged a consequential cause of mortality due to neurological complications. Viral infections have detrimental impacts on neurological functions, and even to cause astringent neurological damage. It is reported that CoV can be found in the encephalon or cerebrospinal fluid. The pathobiology of these neuroinvasive viruses is still incompletely kenned, and it is ergo consequential to explore the impact of CoV infections on the nervous system. Among sundry abnormalities in encephalon, encephalopathy takes a major role for the patients affected by COVID -19.
MATERIALS AND METHODS: Encephalopathy is general term for encephalon damage or disease due to infection. Hypoxic/metabolic changes engendered by profound inflammatory replication against the virus triggers cytokine storm and subsequently causes multiple organ failure. Hypoxic/metabolic changes result in encephalopathy. The simultaneous presence of two or more medical conditions with metabolic changes accountable for Encephalopathy. The hallmark of encephalopathy includes progressive loss of consciousness ranging from mild headache, dysphoria, noetic disorder, and delirium to earnest disorientation, loss of consciousness, deep coma, and paralysis. Patients with COVID-19 often suffer from rigorous hypoxia and viremia, which has the potential to cause toxic encephalopathy. Coronal T2 and coronal and axial (or 3D) T2/FLAIR sequences should be analysed which takes the vital role in neuroimaging abnormalities using MRI. Cerebrospinal fluid test avails in the viral infection due to SARS-COV-2 encephalitis. Anosmia, Ageusia, Hyposmia and Hypogeusia can avail in differentiating other types of encephalopathies.
RESULTS: Moreover, virtually 40% of patients with COVID-19 develop headache, perturbed consciousness, and other encephalon dysfunction symptoms (Mao et al., 2020), and that an autopsy study reported that edema has been detected in encephalon tissue of COVID-19 patients (Xu et al., 2020).
CONCLUSION: Collectively, these findings provide the evidence that COVID-19 could cause infectious toxic encephalopathy, albeit detailed studies are greatly required. The paper aims in reviewing various published case reports on COVID-19 associated with encephalopathy.

KEY WORDS: encephlon, coronal T2, corona axis.

OBSTETRICS AND GYNECOLOGY & PEDIATRICS SECTION

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All of us are products of our childhood.

Michael Jackson

MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN WITH COVID-19 PRESENTING AS ACUTE APPENDICITIS IN A 12-YEAR OLD BOY: CASE REPORT

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INTRODUCTION: Multisystem inflammatory syndrome in children (MIS-C) is a severe complication of the COVID-19 infection. In contrast to adults, children often first present with gastrointestinal symptoms of COVID-19 and MIS-C, which could lead to misdiagnosis in paediatric patients.
AIMS: Our aim is to provide information on atypical presentations of MIS-C as the onset may mimic a more routine diagnosis, such as appendicitis.
CASE PRESENTATION: We present a clinical case of a 12-year-old male who presented with a 38-degree fever, abdominal pain and repeated vomiting without resultant relief. No respiratory symptoms were reported upon admission. Two days following admission he underwent surgery on the suspicion of peritonitis and catarrhal appendicitis was located via a laparotomy. Upon admittance to the PICU, the child's condition continued to debilitate with a generalized polymorphic rash, oedema (facial and palmar) and dry, hyperaemic mucous membranes. A PCR test for SARS-CoV-2 was positive. The patient was diagnosed and treated for MIS-C with excellent response to the treatment.
CONCLUSION: This clinical presentation of COVID-19 differs from the well-known image of the SARS-CoV-2 virus presenting as a respiratory syndrome with dyspnoea and cough.
Diagnosing MIS-C is an ongoing challenge for physicians as it relies on the principle of exclusion and the need for a prompt diagnostic and therapeutic response involving a multidisciplinary team. Collecting data from cases affecting children nationally and internationally would aid in the timely diagnosis and management of MIS-C in the daily healthcare setting.

KEY WORDS: MIS-C, COVID-19, children, appendicitis, SARS-CoV-2

A CASE OF TURNER SYNDROME DIAGNOSED AT BIRTH

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INTRODUCTION: Turner syndrome is a chromosomal abnormality that affects 1 in 2000 live-born girls. The most common karyotype is 45, X (40-50% of the cases) - complete loss of one X chromosome due to de novo (sporadic) mutation and it is the only full monosomy compatible to life. The clinical phenotype includes lymphedema (hands and feets) in the newborn period, webbed neck, short stature, congenital heart defects, ovarian dysgenesis, delayed puberty, infertility, endocrine disorders such as type 1 and type 2 diabetes mellitus, osteoporosis and autoimmune disorders. Females with Turner syndrome are usually diagnosed around 15 years of age. Only 15–30% of patients are diagnosed during their first year of life.
CASE PRESENTATION: We report a case of a female neonate born at 37 weeks of gestation, of the first complicated pregnancy (19 years old mother). Physical examination of the newborn revealed brachycephaly, saddle nose, webbed neck, lymphedema of the hands and feet, hypoplastic nails and hypertelorism of the nipples. The patient died 8 days after the delivery due to heart and kidney failure. Chromosomal analysis of the baby established the karyotype – 45, X in all analysed metaphases.
CONCLUSION: Most cases of Turner syndrome are found at childhood and puberty. Early presentation seen in a newborns is rare. Early diagnosis enables efficient treatment with growth hormone and estrogen replacement therapy.

KEY WORDS: Turner syndrome, early diagnosis, cytogenetic analysis

CERVICAL PREGNANCY

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One of the rare types of ectopic pregnancy is the cervical one – when the gestational sac is implanted in the endocervix. For 20 years there is significant increase of the ectopic pregnancies - from 3 ‰ to 19.7 ‰ of all pregnancies. The incidence of cervical ones is reported to be less than 0.1% of all extrauterine pregnancies. The cervical pregnancies are cases to be followed with caution for severe life-threatening bleeding due to penetration of the cervical walls up to cervical blood vessels.

The reported case is a 33-year-old woman with history of 2 previous Caesarean sections. The patient informs about intake morning after pill 13 hours after the intercourse as pregnancy was unplanned. She presents at 5th week of gestation with gestational sac in the cervical canal.

A trial for medical abortion was tried, however was unsuccessful. It was then followed by conservative treatment with Methotrexate intravenously on day 1, 3, 5, with continuous follow-up of the beta hCG and ultrasound scans. On day 6 of the administration of Methotrexate was revealed a living embryo in a normally formed gestational sac at the cervix. This led to the need of curettage followed by intracervical balloon tamponade of the cervix. The levels of the serum beta hCG slowly dropped down to normal within 4 weeks.

Despite the low rates of cervical pregnancy, the incidence of ectopic pregnancies nowadays are rising. This initiates the need of proper management and diagnosis to save the fertility and exclude unnecessary hysterectomies.

KEY WORDS: ectopic pregnancy, cervical pregnancy, case report

THE USE OF HIGH INTENSITY FOCUSED ULTRASOUND (HIFU) IN THE TREATMENT OF UTERINE FIBROIDS – A CASE REPORT

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AIMS/OBJECTIVES Uterine fibroids are hormone-sensitive, benign smooth muscle tumours. They are the most common benign uterine tumours in women of reproductive age. Symptoms may lessen quality of life, and these require further management, possibly affecting future fertility plans of the patient. High intensity focused ultrasound (HIFU) is a non-invasive, thermoablative technique aimed at shrinking and destroying fibroid tissue, and is a proposed alternative to more radical therapies.
METHODS: A 32-year-old female presented with menorrhagia and severe pelvic pain. Scans revealed a 10cm intramural fibroid on the anterior wall. She stated her wish to have a second child, therefore ruling out hysterectomy. The patient was accepted for HIFU ablation of the fibroid in order to preserve the uterus.
RESULTS: Three months after the procedure, the patient had a follow-up MRI which demonstrated the fibroid had shrunk to 75% of its original size. In addition, her symptoms of menorrhagia and severe pelvic pain had disappeared. Further follow-up confirmed the reduction in size of the leiomyoma and the patient subsequently became pregnant. The baby was delivered by Caesarean section at 38 weeks gestation, when the same fibroid measured only 2 cm (having shrunk by 8cm in approximately 18 months).
CONCLUSION: HIFU treatment of uterine fibroids is a new innovative approach and should be encouraged for its more widespread adoption in similar cases. Maintaining the option of future pregnancies in patients with fibroids is only one of its benefits and might be the key in these women.

KEY WORDS: fibroids, High intensity focused ultrasound

CAN WE USE FETAL FIBRONECTIN TO PREDICT PRETERM LABOUR?

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AIMS/OBJECTIVES: This study aimed to evaluate whether we can use fetal fibronectin (fFN) to predict premature labour.
METHODS:A prospective, cross-sectional study was conducted on pregnant patients splitting them into two groups: Group A consisting of participants with threatened premature labour and Group B - women with normally going non-complicated pregnancy. All patients had a test of fFN that was followed by a transvaginal measurement of the cervical length.
RESULTS: The total number of patients enrolled in this study was 68. The outcome of their pregnancy was monitored. There were 4 positive results in the group of symptomatic patients, and 3 of them gave birth prematurely within 7 days. Equally strong tocolytic therapy was used for all 4 patients, but in these 3 it had no effect.2 of the patients had a cervical length of less than 10 mm. Both tested positive for fFN and began spontaneously giving birth prematurely within 15 hours.There was high predictive value in the cases of negative result.
CONCLUSION: Nowadays a lot is being investigated to predict easily preterm labour and the ability of a pregnant woman to carry to time is quickly determined.By measuring the length of the cervix, patients at risk of premature birth are identified. Clinical biomarkers found in cervico-vaginal fluid (CVF), led by fFN, can help predict it.

KEY WORDS: fetal fibronectin (fFN), cervico-vaginal fluid (CVF), preterm labour.

A CASE REPORT OF OVARIAN METASTASES FROM BREAST CANCER APPEARING UNDER THE MASK OF PRIMARY OVARIAN CANCER

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INTRODUCTION: Breast cancer is the most common malignant solid tumor among women (30% of all malignant diseases). Every year 114.9/100 000 women are diagnosed with it. This tumor metastases both through blood and lymphatic vessels. Through the vessels the primary cancer cells spread and colonize distant organs. One of the rarest metastatic sites is the ovaries. However, there is a number of similarities between ovarian metastases from breast cancer and primary ovarian cancer, developed in correlation of another primary tumor.
CASE: We present the case of 57-year-old female with tumor formations in the ovaries, who 14 years ago underwent mastectomy and chemoterapy due to breast cancer. This formations and ascites in the pelvis were detected by a PET/CT. Vaginal ultrasound confirmed the bilateral enlargement of the ovaries (5x5cm) and ascites in the Douglas pouch. Taking the patient's symptoms into consideration and the period after the primary diagnosis, there is a chance the tumors will be primary ovarian cancer. The histological report however displays metastasis form of a ductal breast cancer.
CONCLUSION: Ovarian metastases from breast cancer are a rare condition. Distinguishing them from the primary ovarian cancer is very difficult, but also vital due to the different approach in both surgical and postoperative treatment. But before all these the most important is prevention and periodical screening of the female population.

KEY WORDS: primary ovarian cancer; breast cancer; ovarian metastasis

OVARIES - METASTATIC SITE FOR BREAST CARCINOMA: CASE REPORTS

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AIMS/OBJECTIVES: To present the difficulties in differential diagnosis of metastatic and primary ovarian tumors in patients with breast carcinoma.
METHODS: We present 4 clinical cases of patients with breast cancer who performed PET/CT scan in Nuclear medicine laboratory at Medical center „St. Marina – diagnostics and therapy“ Pleven during the period 2019-2021.
RESULTS: The case reports represent women with incidental finding of ovarian masses several years after the diagnosis of breast cancer during the PET/CT follow-up.
CONCLUSION: Ovarian metastases from breast cancer are relative rare and frequently asymptomatic, therefore their diagnosis is very challenging. PET/CT scan is a valuable tool in the assessment of ambiguous ovarian lesions in patients with breast cancer.

KEY WORDS: breast cancer, ovarian mass, metastatic, PET/CT

SURGERY, UROLOGY & ORTHOPEDICS SECTION

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The art of medicine was to be properly learned only from its practice and its exercise.

Thomas Sydenham

APPLICATION OF INDOCYANINE GREEN (ICG) IN ROBOT-ASSISTED URETEROPLASTY - THE FIRST CASE IN BULGARIA

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Robotic technology allows the implementation of complex urological operations with greater accuracy, miniaturized instruments and smaller incisions compared to laparoscopic and open approach. However, the plastic reconstruction of the ureter can be technically challenging. In such surgeries the surgeon must rely on visualization in the absence of the tactile feedback. Evolution in technology can improve the visualization of internal anatomical structures and make it easier for the surgeon. A unique improvement is the use of ICG – a special dye that can be visualized under near-infrared fluorescence (NIRF). Unlike white light, fluorophore-added NIRF (ICG) allows deeper photon penetration, superior optical contrast, less scattering and a high signal-to-background ratio. The da Vinci (Intuitive Surgical, Sunnycale, CA) surgical platform, equipped with Firefly technology (Novadaq Technologies, Missisauga, ON), allows control use of NIRF by the console surgeon. Intravenous or intraluminal administration of ICG is used to clearly distinguish the vessels of tumors, lymph nodes and other structures. With a short video we present the first case of application of ICG in robot-assisted ureteroplasty in Bulgaria. We performed this new procedure in a 45 year old patient with iatrogenic stricture in the middle third of the ureter and chronic hydronephrosis after taking consent. The intraoperative application of ICG facilitated our surgical intervention. There were no perioperative complications. Postoperative follow-up with contrast computed tomography showed a good surgical outcome.

KEY WORDS: Robot-assisted ureteroplasty, Indocyanine green

RETROPERITONEAL HYDATID CYST – A RARE ZOONOSIS IN THE MODERN WORLD – CASE REPORT

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INTRODUCTION: Cystic echinococcosis is a chronic parasitic disease caused by the larval stage of the tapeworm Echinococcus granulosus. It is characterised by the development of cysts in the liver, lungs, retroperitoneum and other organs. Retroperitoneal localisation is predominantly secondary and accounts for 0,8% of all cases.
AIMS: To present an unusual clinical case of retroperitoneal echinococcosis.
METHODS: A 70-year-old man was admitted to First Surgical Clinic, UMHAT "Dr. Georgi Stranski" Pleven. The patient was presented with strong pain in the right lumbar region, edema and pain in the right thigh.
RESULTS: The patient demonstrated typical clinical signs of sepsis and anaphylaxis. The CT scan results pointed towards the diagnosis of generalised abdominal echinococcosis. Surgical treatment was advised. The patient was discharged with significant improvement.
CONCLUSION: Retroperitoneal echinococcosis is an extremely rare clinical manifestation of the parasitosis. It is linked to increased complication and mortality risk. Retroperitoneal cysts should be differentiated from other cystic formations especially in endemic regions.

KEY WORDS: cystic echinococcosis, retroperitoneal localisation

FELINOSIS. HIDDEN INFECTIOUS DISEASE IN THE FIELD OF SURGICAL PRACTICE

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AIMS/OBJECTIVES: To present the late complications of Felinosis and the role of surgery in the complex treatment of the disease. **METHODS:** A rare case of 52-year old patient with cat-scratch disease (CSD) without animal contact, who was admitted in department of Coloproctology and purulent-septic surgery in UMHAT "Dr. Georgi Stranski" – Pleven. **RESULTS:** Hospitalised patients with peripheral lymphatic pathology were examined over a period of five years. Of this patients' cohort, two were diagnosed with Felinosis, one of whom developed rare complications of the disease. **CONCLUSION:** CSD is mostly described as a self-limiting disease. However, it remains a frustrating clinical problem due to its difficult diagnosis and the lack of effective treatment. The need of surgical intervention and antibiotics is still controversial, which represents an ongoing dilemma. Therefore, more studies are needed to define the best patient-specific treatment.

KEY WORDS: lymphadenopathy, immunocompromised, complications, CSD

A RARE CASE OF A PATIENT WITH PEUTZ – JEGHERS SYNDROME: CASE REPORT

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INTRODUCTION: Peutz-Jeghers syndrome (PJS) is an autosomal dominant inherited disorder characterized by intestinal hamartomatous polyps in association with a distinct pattern of skin and mucosal macular melanin deposition. The syndrome is an extremely rare condition with estimated rates of 1:60 000 to 1:120 000 cases. It was first described by Jan Peutz in 1921 and after that Harold Jeghers managed to give us the definitive descriptive reports of the syndrome in 1949.
AIM: To present a case of a patient with Peutz – Jeghers syndrome.
THE CASE: I.M. an 18 years old female was admitted to 1st Surgical Clinic of University Hospital „Dr. Georgi Stranski" with an acute abdominal pain and symptoms of bowel obstruction. During the physical examination a „sausage-shaped" mass was palpated in the right lateral region of the abdomen. A computed tomography with contrast was performed and it revealed the specific target sign of intussusception. An emergency laparotomy was performed. During laparotomy multiple small bowel tumors were found. All of the palpable formations were resected. Histology examination showed that the tumors were hamartomas, which established the diagnosis of Peutz – Jeghers **syndrome.**
CONCLUSION: Peutz – Jeghers syndrome is an extremely rare condition which clinical presentation is often in young age. The approach to the patient is concentrated in managing the complications of the disease and an active follow up because of the very high risk of malignancies especially of the digestive tract.

KEY WORDS: Peutz – Jeghers syndrome, hamartomatous polyps

RARE CASE OF DISSECTING CELLULITIS - SURGICAL TREATMENT AND OUTCOME

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AIMS/OBJECTIVES: Dissecting cellulitis, also known as Perifolliculitis capitis abscedens et suffodiens (Hoffman disease) is a rare chronic inflammatory disease of the scalp of unknown origin. The condition is characterised by the presence of perifollicular pustules alongside keloids, abscesses and nodules which interconnect via sinus tracts, typically advancing into scarring alopecia. The condition has been observed more commonly in males of Afro-Caribbean descent; reports in Caucasian males represent a mere 10% of cases.
METHODS: In this case report, we aim to describe the surgical treatment and outcome of Hoffman disease in a patient.
RESULTS: A 34-year-old patient was admitted to the Clinic of Plastic and Reconstructive Surgery at the 'Dr Georgi Stranski University Hospital' with a year long history of perifollicular pustules, keloids, abscesses and nodules on the scalp with no success of resolution with medical intervention.
CONCLUSION: Hoffman disease is a rare condition with a challenging treatment profile. Non-surgical treatment options for the condition have thus far been deemed, unsatisfactory. Insignificant results attained by non-surgical treatment options may significantly delay the time for surgical referral and intervention. Surgical resection followed by reconstructive skin grafting offers a durable cure.

KEY WORDS: Dissecting cellulitis, Perifolliculitis capitis abscedens et suffodiens, Hoffman disease

RAPUNZEL SYNDROME

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INTRODUCTION: Rapunzel Syndrome or as it is more popular – trichobezoar is rare disease, usually presented in young females. It's often combined with mental disorders. Conglomerats of hairs are found in the stomach or in the small intestine.
AIM: To represent a interesting case of trichobezoar in 13 years old girl.
CASE: We present a child admitted to the emergency room with abdominal pain in lower left quadrant and vomiting for one week. Also hairs in the stools were found. Due to the current complains, surgical treatment was needed.
RESULTS: The girl was operated and all the bezoars were extracted. During the operation was found.
CONCLUSION: Once the trichobezoar is dealt with surgically, trichophagia must be looked into. When there is some mental disorder, prevention of further episodes may require multidisciplinary approach including pediatricians and psychiatrists.

KEY WORDS: trichobezoar, child, surgery, hairs, mental disorders

ZINNER'S SYNDROME - A RARE ABNORMALITY DUE TO A DEVIATION IN THE DEVELOPMENT OF THE MESONEPHRIC DUCT

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INTRODUCTION: Zinner's syndrome is a rare congenital malformation characterized by ipsilateral renal agenesis, ipsilateral cystic transformation of the seminal vesicle, and ipsilateral obstruction of the ejaculatory duct. It was first established and described by Zinner in 1914, and to date about 200 cases have been reported in the literature.
PURPOSE: Our goal is to present a clinical case of a patient with accidental oral Zinner syndrome, as well as the behavior in the same.
MATERIALS AND METHODS: A 24-year-old patient was hospitalized in the department of abdominal visceral surgery with complaints and symptoms characteristic of the clinical picture of Ileus. As part of the diagnostic and therapeutic plan, an abdominal ultrasound was ordered, during which an aechogenic zone was found near the prostate gland. From the examination performed at the urology clinic the patient was found: normal for age local status of the prostate gland, and from the ultrasound examination - echogenic cystic formation in the area of the left seminal vesicle, with clearly visualized right one, as well as renal agenesis.
RESULTS: After an MRI and a literature review, Zinner's syndrome was diagnosed. In view of the lack of urological complaints in the patient, an approach was taken to waiting and follow-up with follow-up examinations once a year, before moving on to future surgical behavior.
CONCLUSIONS: Zinner's syndrome is most commonly detected and diagnosed between the ages of 20 and 40 in men, with a frequency of 1: 3000 to 1: 4000 newborn boys. It was found that the clinical manifestation correlates with the size of the cystically transformed seminal vesicle - at sizes over 5-6 cm there are almost always complaints from the patient. Behavior in patients with Zinner syndrome depends on the presence or absence of symptoms, mainly of the lower urinary tract, as well as the presence of infertility, and literature data recommend that asymptomatic patients be monitored and monitored regularly once or twice a year. In the presence of symptoms, possible options are transrectal puncture and aspiration, often associated with recurrence, transurethral aspiration with / without excision or open, laparoscopic, or robot-assisted excision.

KEY WORDS: Zinner's syndrome, embriology

ROLE OF INTERVENTIONAL PRE-THERAPEUTIC BREAST BIOPSIES. VACUUM ASSISTED BIOPSIES

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INTRODUCTION: Currently there is a lot of scientific information about the diagnosis and treatment of breast cancer. Thanks to modern imaging studies and interventional pre-therapeutic procedures, breast cancer can be diagnosed and treated at an early stage.
AIM: The aim of this study is to present the indications, clinical feasibility and effectiveness of stereotactic vacuum-assisted biopsy in the diagnosis of breast lesions and to present our initial experience.
MATERIALS AND METHODS: For the period from February 2020 to July 2021 eighteen vacuum-assisted biopsies were performed in the Clinic of Surgical Oncology at the University Hospital „G. Stranski"- Pleven. All patients underwent mammography, vacuum-assisted biopsy under local anesthesia was taken and histological verification material was provided.
RESULTS: The average age of the patients was fifty six years. In six of them the histology was malignant. Five of them were in the first stage, one – in the second stage. All women in the first stage were offered and performed breast-conserving surgery. In the second stage patient we started the treatment with chemotherapy. In twelve of the patients the histology was benign.
CONCLUSION: Stereotactic vacuum-assisted biopsy has its role in the diagnosis and treatment of non-palpable, X-ray-positive breast lesions. It is an effective and minimally traumatic method, with a very good cosmetic result. In some patients, in addition to diagnostic, it can also be a treatment method.
Acknowledgements: This work was supported by the European Regional Development Fund through the Operational Program „Science and Education for Smart Growth" under contract № BG05M20P001-1.002-0010-C01 (2018-2023).

KEY WORDS: breast cancer, vacuum-assisted biopsy

PYODERMA GANGRENOSUM POST BREAST SURGERY

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INTRODUCTION: Pyoderma Gangrenosum is uncommon dermatological disorder which presents with painful skin ulcers with irregular, raised, violaceous borders which increase in size daily. It occurs mostly due to skin injury where surgery occurs.
AIMS/OBJECTIVES: To discuss the condition and raise awareness of it to allow for timely identification post breast surgery.
MATERIALS AND METHODS: I present a middle-aged woman who was admitted to the department for breast reconstruction following a mastectomy due to breast cancer. The patient was otherwise healthy, however after the operation she presented with lesions on the surgical incision lines which grew larger and ulcerated and had exudate. Anamnesis, Clinical Observations and Investigations of the patient such as histopathology and dermatological consultations were done.
RESULTS: Wound biopsy were taken and histopathology revealed necrosis, ulcerations, neutrophilia and inflammatory exudate which proved Pyoderma Gangrenosum. Intravenous steroids were started which rapidly improved the status of the patient.
CONCLUSION: Soon after the patient was moved to oral steroid medication and months later the wounds has epithelialised and steroids were stopped. She was offered nipple reconstruction surgery.

KEY WORDS: pyoderma gangrenosum, mastectomy, breast, flap

IMPACT OF SCREENING PROGRAMMES ON SURVIVAL OF WOMEN CANCERS

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OBJECTIVES: Screening programmes for women cancers have been established in almost all European countries. Bulgaria is one of the very few exceptions. We aimed to compare the incidence, mortality and stage of diagnosis of patients with breast cancer (BC) and cancer of the uterine cervix (CUC) in Bulgaria with other European countries, where there are established screening programmes.
MATERIALS AND METHODS: This is a retrospective, population-wide observational study of patients with BC and CUC, registered in the Bulgarian National Cancer Registry (BNCR) 2018. We analysed age, age standardized incidence (ASI), age standardized mortality (ASM) and stage of diagnosis.
RESULTS: In Bulgaria, a total of 3261 patients with BC were registered in 2018, most of which were registered in stage 2 (36.92%). Comparatively, in the Netherlands, 46% of patients with invasive BC have been diagnosed in stage I, after implementation of their screening programme.
Of 864 patients registered with CUC in Bulgaria, 39.35% were diagnosed in stage 1 and 22% in stage 2. After the implementation of the screening programme in the Netherlands, most of the patients are diagnosed in the pre-cancerous stage.
Bulgaria is a country with an ASI of BC cases per 100,000 (60.0), but with one of the highest ASM rate (16.7). Both incidence and mortality of CUS are highest in Eastern Europe, respectively in Bulgaria.
CONCLUSION: National screening programmes are essential in prevention and improving treatment outcomes of patients with women cancers and their implementation in Bulgaria is urgently needed.

KEY WORDS: cancer, breast, uterine cervix, Bulgaria, Netherlands, screening

VARIA SECTION

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There's no such thing as alternative medicine; if it works, it's just called medicine.

Ed Yong

A RARE CLINICAL CASE OF MALIGNANT LEYDIG-CELL TUMOR OF THE TESTIS

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Testicular tumors are generally described under the two categories of germ cell tumors and sex cord-stromal tumors. Leydig cell tumors are the most common among sex cord-stromal tumors accounting for an average of 1.2 - 3% of all testicular tumors. Malignant variants are rare, occupying about 10% of cases and about 0.2% of all malignant tumors of the testis.

We present you a case of a 28 - year - old male patient who complaint of dense formation in the left testicle with pain appearing periodically while exercising. Upon clinical examination, a hard and painless formation was found in the lower pole of the left testis, near epididymis. Scrotal ultrasound showed a hypoechoic area with a diameter of 12 mm suspected of a malignant process. The patient was scheduled for the left sided orchiectomy along with frozen section biopsy. After appropriate diagnostic evaluation with tumor markers, biopsy and postoperative immunohistochemistry the patient was finally diagnosed with malignant tumor of the gonadal stroma-leydig cells with infiltration into the parenchyma of the testis and tumor emboli in peritumoral lymphatics with tumor staging pT1NxMx.

On four months follow-up patient presented with lack of metastasis in relation to the underlying disease. The patient was advised to perform PET-scanner once a year for long-term screening.

KEY WORDS: dense formation, hypoechoic area, biopsy, immunohistochemistry, leydig cells, tumor

CLINICAL SIGNIFICANCE AND RESISTANCE TO ANTIMICROBIAL AGENTS OF SERRATIA SPECIES

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INTRODUCTION: In the past members of the genus Serratia were considered to be saprophytic microorganisms. Evidence of their clinical significance has been gradually collected and the interest in these bacteria is currently growing, especially due to their resistance to antibiotics.
PURPOSE: To analyze Serratia strains, isolated from patients treated at UHMHAT - Pleven for a period of 4 years. To determine the most common types of infections, species distribution, and to analyze the susceptibility of isolated strains to antibiotics.
MATERIALS AND METHODS: The study includes 147 strains of Serratia, isolated from 147 patients. Cultivation was performed on a chromogenic CPS medium, blood agar, Levin's medium, and liquid enrichment medium. The identification was performed by conventional biochemical tests and automated systems. The resistance to antimicrobial drugs was tested using disk-diffusion method and with determination of minimal inhibitory concentration (MICs).
RESULTS: Out of 147 patients, 103 (70.06%) strains were isolated from males and the remaining 44 (29.94%) - from females. The mean age of the patients is 60.4 years. The dominant part of the strains are causes of urinary infections - 53 (36.05%), wound infections - 51 (36.69%), respiratory infections - 23 (15.64%) and rarely infections in other regions. Infections caused by S. marcescens predominate - 144 cases (97.9%), followed by S. liquefaciens, S. rubidaea and S. fonticola - 1 case each. Serratia spp. show the lowest resistance to Carbopenems - 11 (7,5%) strains and Aminoglycosides - 34 (23,1%) strains. Eight of the strains were producers of broad-spectrum beta-lactamases.
CONCLUSION: Serratia is more likely to cause infection in males. The most common types of infections are urinary infections and wound infections. S. marcescens was the predominant species. Serratia spp. show the highest susceptibility to Carbopenems and Aminoglycosides.

KEY WORDS: Serratia, infection, antimicrobials, resistance

A LITERATURE REVIEW OF CHALLENGES IN OPHTHALMOLOGY EDUCATION AND THE USE OF TECHNOLOGICAL APPROACHES

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AIM: The aim of the paper is to critically assess and review existing literature on the status of undergraduate ophthalmology education and the use of technology in addressing global concerns in ophthalmology education.
BACKGROUND: This paper critically reviews the use of technology in addressing the challenges faced in undergraduate Ophthalmology training before and during the COVID-19 pandemic
METHODS: Medical databases were searched using keywords "medical education", "ophthalmology education", "online medical education", "e-learning medical education". Research from the last 3 years was included.
Eight papers met the inclusion criteria. The papers were critically appraised to identify challenges faced in ophthalmology education, e-learning strategies used to overcome challenges and the feedback from students and faculty on the use of e-learning platforms
RESULTS: Areas of concern encompassed competency-based concerns in Ophthalmology education. Limited time in Ophthalmology training was identified as the primary concern which translated to lower confidence rates of junior doctors in ophthalmology practice. The analysis showed that the adoption of e-learning platforms improved academic retention and performance. Other advantages with e-learning platforms were ease of implementation, lower resource usage and customizability.
CONCLUSION: Our review suggests that the development of a hybrid mode of learning, that utilizes e-learning methodologies based on a multimodal, competency based approach to ophthalmology will lead to the best outcomes for students. However, the adoption of these strategies requires immense initial technological investment and also requires that students, trainers, and faculty have the necessary training to utilize the platforms.

KEY WORDS: Ophthalmology education, medical education, e-learning

A DILATED PUPIL SAGA: ADIE SYNDROME

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Adie syndrome, or Holmes-Adie syndrome (HAS), is a rare neurological disorder that affects the pupil of the eye. It is characterized by a unilateral or bilateral tonically dilated pupil; and pupils reacts slowly in response to direct light. There is a female predominance with absent or reduced deep tendon reflexes. Etiology is often idiopathic; however, Adie syndrome can also occur due to trauma, ischemia, or infection (viral or bacterial) causing damage to the postganglionic fibers of the parasympathetic innervation of the eye; involving damage to the ciliary ganglion.
In this case report we present a 30-year-old female who has experienced multiple episodes of right-sided non-radiating headache, with anisocoria and dilated pupil on right eye since December 2016. Pharmacological testing with dilute pilocarpine 0.1% resulted in constriction of the right pupil but no change in the left pupil. Neurological examination was otherwise normal, and a diagnosis of Adie's tonic pupil was made. More recently she is experiencing the same pain in her left eye and dilated left pupil. Dilute pilocarpine 0.1% three times a day can be considered as a pharmacological therapy for symptomatic relief.

KEY WORDS: anisocoria, Adie syndrome, Holmes- Adie syndrome, tonic pupil

STUDY ON OCULAR HEALTH DURING THE COVID-19 PANDEMIC : A SAMPLE OF MEDICAL STUDENTS IN BULGARIA

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AIM: The objective of this study was to find out if possible correlations existed between the subjects using e-learning platform during the COVID-19 pandemic and with any signs of negative ocular discomfort or manifestations. The goal is only intended to convey that there is a moderate connection,linking the two key factors,which is discussed in this research.
METHODS: The procedure used in this study involved collecting responses through sampling questionnaires among different medical students present in Bulgaria.
The form comprised of five general sections.The first section consisted of general questions concerningdemographics.The following two segments inquired on the total time spent using electronic devices, general eye health and refractive errors that the subject experienced or had at the time.The next portion was solely made up of questions of individual health in relation to vision.The last part only contained queries regarding COVID associated observations.
RESULTS: Overall, the number of respondents who completed and provided all the necessary information needed for this study, added up to 219. The most common presenting complaints were eye fatigue (83.1%), tearing (epiphora) (58.9%) & dry eyes (58.4%). Other symptoms included blurred vision (40.2%), photophobia (37.4%), itchiness (34.7%) etc.
The least recorded symptoms were diplopia (5.9%), squinting (16%).10% of the cohort had no symptoms that were observed.
CONCLUSION: The above research arrives to a conclussion that a further studying is warranted in order to confirm if there was a notable impact on eye health of medical students studying in Bulgarian universities during Covid-19 pandemic.

KEY WORDS: ocular health, COVID-19, medical students, eye fatique

A LITERATURE REVIEW OF CHALLENGES IN OPHTHALMOLOGY EDUCATION AND THE USE OF TECHNOLOGICAL APPROACHES

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AIM: The aim of the paper is to critically assess and review existing literature on the status of undergraduate ophthalmology education and the use of technology in addressing global concerns in ophthalmology education.
BACKGROUND: This paper critically reviews the use of technology in addressing the challenges faced in undergraduate Ophthalmology training before and during the COVID-19 pandemic.
METHODS: Medical databases were searched using keywords "medical education", "ophthalmology education", "online medical education", "e-learning medical education". Only research from the last 3 years was included.
Eight papers that met the inclusion criteria were included. The papers were critically appraised to identify challenges faced in ophthalmology education, e-learning strategies used to overcome challenges and the feedback from students and faculty on the use of e-learning platforms.
RESULTS: Areas of concern encompassed competency-based concerns in Ophthalmology education. Limited time in Ophthalmology training was identified as the primary concern which translated to lower confidence rates of junior doctors in ophthalmology practice. The analysis showed that the adoption of e-learning platforms improved academic retention and performance. Other advantages with e-learning platforms were ease of implementation, lower resource usage and customizability.
CONCLUSION: Our review suggests that the development of a hybrid mode of learning, that utilizes e-learning methodologies based on a multimodal, competency based approach to ophthalmology will lead to the best outcomes for students. However, the adoption of these strategies requires immense initial technological investment and also requires that students, trainers, and faculty have the necessary training to utilize the platforms.

KEY WORDS: ophthalmology education, medical education, e-learning, online medical education

SELECTIVE IMMUNOGLOBULIN A DEFICIENCY

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AIM: The aim is to emphasize the role of Selective Immunoglobulin A Deficiency (SIgAD) as the most common primary immunodeficiency and the fact that although more patients are asymptomatic, selected patients suffer from different clinical complications such as pulmonary infections, gastrointestinal disorders, allergies, autoimmune diseases and malignancy.
MATERIALS AND METHODS: A case report based on a ten-year-old patient with intermittent fever, anorexia, fatigue, lethargy and frequent respiratory infections who was diagnosed with SIgAD, has been made. All medical documentation of this patient, articles and books on the subject matter are used.
RESULTS: Selective IgA deficiency is defined as a primary immunodeficiency characterized by an undetectable level of IgA in the blood at a value under 0.05 g/L but no other immunoglobulin deficiencies. However, some patients with SIgAD may have deficiency in one or more IgG subclasses. After laboratory tests of the patient, a blood IgA level of 0.042 g/L was found with normal values of other immunoglobulins, confirming the diagnosis of selective IgA deficiency. The exact pathogenesis of this condition is unknown yet but it has been found that patients with SIgAD have a defect in immunoglobulin class switching, terminal differentiation of IgA plasmablasts into secretory cells or the long-term survival of the IgA-secreting plasma cells.
CONCLUSION: The presence of different clinical manifestations in SIgAD patients demonstrates that it is essential to understand exact pathogenesis, clinical features and treatment of these patients.

KEY WORDS: SIgAD, immunoglobulin A, immunodeficiency.

"I WOKE UP LIKE THIS" A QUALITATIVE STUDY ON ACNE EXPERIENCE

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OBJECTIVE: "I woke up like this" is a qualitative research study conducted through semi-structured interviews, primarily to discuss the psychological and social effects on individuals with acne. Specifically highlighted in this research, are the positive and negative experiences a participant may have had with acne, whether long term throughout their lives or periodically.
The data used was collected and recorded through responses on a google document and informed consent was obtained from each participant.
MATERIALS AND METHODS: A questionnaire was submitted to male and female university students between the ages of 21 to 31. A total of 17 responses were recorded and used for interpretative phenomenological analysis. The questionnaire required the response of questions pertaining to experience, social confidence and treatment of acne.
Based on the data acquired, a portion of the study group were comfortable to have their responses to certain questions published, along with a headshot on social media.
RESULTS: A majority of participants struggled with acne as teenagers, in which time they experienced emotions of low self-esteem, decreased confidence and social anxiety. A portion of participants found that medical treatment helped. While others using herbal remedies found little resolution of their acne symptoms. The dysmorphia associated with acne was found to have dissipated among participants as they aged, with some citing social acceptance and positivity as underlying themes. Thus, resulting in a better self-image alongside, dietary and lifestyle changes being described as continuous contributing factors.
CONCLUSION: Teenage acne can have a fundamentally negative effect on self-acceptance, self-esteem and overall confidence of an individual. Acknowledgement and sharing of the aforementioned experiences either through research studies or social media lead to acne normalisation. Therefore, previously negative experiences are reflected on positively and a greater self-efficacy and self-image is perceived by the participants

KEY WORDS: acne, acne positivity, self-esteem, interview, self-acceptance

NASOPHARYNGEAL CARRIAGE OF STAPHYLOCOCCUS AUREUS AND STREPTOCOCCUS PYOGENES IN MEDICAL STUDENTS AT FACULTY OF MEDICINE IN SKOPJE, REPUBLIC OF NORTH MACEDONIA

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AIMS: To inspect the carriage for S. aureus and S. pyogenes in nasopharynx, and presense of S.aureus on hands in student population of Faculty of Medicine in Skopje.
MATERIALS AND METHODS: In this study, we included 135 students of second, fourth, fifth and sixth year Faculty of Medicine in Skopje, Republic of North Macedonia. To 24 of the participants we used touch method on the hands before and after the clinical practice. The participants were divided into two groups according to their school year, in preclinical and clinical group. From the nasopharynx were collected samples that were elaborated through standard microbiologic tecniques. For validation of Methicillin resistant Staphylococcus aureus (MRSA) we used Cefoxitin, and sensitivity of the microorganisms was assessed with Chloramphenicol and Mupirocin.
RESULTS: In the preclinical group, S.pyogenes gr.A in pharynx was isolated in 2 students. In the clinical group, S.pyogenes gr.A in pharynx was isolated in also 2 students. In 6 students from this group, Methicillin sensitive Staphyloccocus aureus (MSSA) was isolated from the nose. And in the same group, there was 1 student from whom MSSA was isolated from the hands. MRSA was not isolated. The students that were carriers were treated locally with Chloramphenicol or Mupirocin for 1 week.
CONCLUSION: Our results show that the personal hygiene level as well as carriers percentage in medical students from the Faculty of Medicine in Skopje are quite satisfactory.

KEY WORDS: S. aureus, S. pyogenes, carriers, students

PHD STUDENTS SECTION

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Mikita Velikov, OC

Only those who will risk going too far can possibly find out how far one can go.

T. S. Eliot

LOW ANTERIOR RESECTION SYNDROME AFTER TRANSANAL TOTAL MESORECTAL EXCISION

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AIMS: Minor and major low anterior resection syndrome (LARS) is quite common after surgery for patients with rectal cancer. Different approaches to rectal resection (open, laparoscopic, robotic, transanal) may have an impact on LARS rates. Our aim is to study the rates of LARS in patients after transanal total mesorectal excision (TaTME) in patients with mid- and low rectal cancer.
METHODS: All patients treated in a single centre were followed and the LARS after TaTME was investigated. This work was supported by the European Regional Development Fund through the Operational Programme „Science and Education for Smart Growth" under contract № BG05M2OP001-1.002-0010-C01(2018-2023).
RESULTS: TaTME was done on sixteen patients in the department between June 2019 and July 2021. All patients filled LARS questionnaire preop, 3 months postop, 3 and 6 months after ileostomy closure. Rates of LARS were studied. No patient had major LARS.
CONCLUSION: Better visualization of nerve endings from inferior hypogastric nerve plexus in TaTME could present in lower rates of LARS after rectal resection for mid- and low rectal cancer. Initial results are promising. More research in the area is needed.

KEY WORDS: TaTME, LARS, rectal cancer

PHARMACY SECTION

CHAIRMEN:

Assoc. prof. Hristina Lebanova, PhD

Assoc. prof. Nadya Veleva, PhD

SECRETARY:

Tsvetislav Petrov, OC

Good medicine always tastes bad.

Ron Hall

FORMULATION AND EVALUATION OF DICLOFENAC SODIUM FLOATING TABLETS

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INTRODUCTION: Gastric emptying of dosage forms is highly variable process that makes in vivo performance of drug delivery systems uncertain. One of the problems caused by that is the inability to confine the dosage form in the desired area of the gastrointestinal tract. The controlled gastric retention of solid dosage forms may be achieved by the mechanism of mucoadhesion, floatation, sedimentation, expansion, modified shape systems or by the administration of agents, delaying gastric emptying. Floating drug delivery systems seem to be a promising delivery systems for controlled release of drugs.
AIM: The aim of the present study was to prepare gastro-retentive floating matrix tablets of Diclofenac sodium based on effervescent technology and evaluate the dependence of the properties on the different ratios of HPMC, and compare it with the currently found on the market hydrogel systems.
MATERIALS AND METHODS: Diclofenac Sodium tablets were prepared using tableting method after wet granulation. The tablets contain HPMC, PVP, NaHCO3, magnesium stearate, talc, MCC, citric acid and Isopropyl alcohol. As a reference drug form was used Voltaren Retard ® 100 mg produced by Novartis.
RESULTS: The granules for tableting were tested to determine their flow rate, angle of rest, compression index of Carr and Hausner factor. The compressed tablets were evaluated for tablet properties, swelling index, *in vitro* buoyancy. The *in vitro* release was determined using closed system with rotating paddle under non-sink condition. The tablet properties of Diclofenac Sodium were within the acceptance criteria.
CONCLUSION: Diclofenac Sodium tablets were successfully prepared. There is proportional dependence of the properties and solubility of the tablets on the ratio between HPMC and MCC. Floating tablets are proven to be effective drug delivery systems for drugs with high gastric resorption and poor intestinal resorption.

KEY WORDS: diclofenac sodium, floating tablets, HPMC, wet granulation, buoyancy lag time, swelling index

KNOWLEDG, ATTITUDE AND PRACTICE OF SELF-MEDICATION AMONG MEDICAL STUDENTS IN KHARTOUM UNIVERSITY 2018 IN KHARTOUM UNIVERSITY 2019

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BACKGROUND: Self-medication results in wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.
AIMS: This study aimed to assess knowledge, attitude and practice of medical students toward self-medication.
MATERIALS AND METHODS: This cross-sectional descriptive study was conducted at University of Khartoum, faculty of medicine; medical students were selected from third to sixth year. Participants were selected through random sampling. The data was collected using a self-administered, structured questionnaire, and analysed using SPSS version 22, the results expressed as proportions.
RESULTS: A total of 333 students, 238 (71.5%) females and 95 (28.5%) males were included in the study. The prevalence of self-medication was reported 277(83.4%). Most respondents used self-medication due to their knowledge about medications or used drugs according to previous experience. The most common ailments for which self-medication were used were fever/headache (77.5%) and upper respiratory tract infections (47.4%), the main source of information was from pharmacist (41.8%). Antipyretics/analgesics (79.2%), antibiotics (51%) and vitamins & supplements (39%) were the most common self-medicated drugs. Of the respondents (84.7%) reported that self-medication was helpful and they got treated while (11.4%) said the opposite. Most participants (69.7%) had been satisfied to practice self-medication and only (14.2%) said the opposite.
CONCLUSION: The prevalence of self-medication among medical students is high, facilitated by the easy availability of information.Recommendation: There is a need for potential restriction of the use of drugs and intensive education and comprehensive awareness campaign to the students.

KEY WORDS: KAP study, knowledge, attitude, practice, self-medication, medical students.

POSTER SECTION

CHAIRMEN:

Prof. Milena Karcheva, MD, PhD

Assoc. prof. Mariyana Stoynovska, MD, PhD

SECRETARY:

Yoan Ivanov, OC

Declare the past, diagnose the present, foretell the future.

Hippocrates

P1. CHITOSAN ELECTROSPUN MEMBRANES WITH ANTIBACTERIAL PROPERTIES FOR BIOMEDICAL APPLICATIONS

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INTRODUCTION

Chitosan electrospun materials are widely explored as materials for biomedical engineering due to their non-toxic, biocompatible, biodegradable, and antibacterial properties. Dichloromethane (DMC) and trifluoroacetic acid (TFA) used to improve the viscosity and spinnability of chitosan solution could change its polycationic nature.

AIMS

Evaluate the antibacterial potential of electrospun nanofibrous membranes depending on TFA/DCM ratios of solvents.

METHODS

Chitosan powder was dissolved in DMC and TFA in ratios equal to 7:3 (Sample 1) and 9:1 (Sample 2) as solvents. 3.5% (w/v) chitosan solutions were used to produce the membranes via an electrospinning system. *S. aureus* and *E. coli* bacteria were utilized for the Kirby Bauer disk diffusion method. Additionally, the samples were incubated in bacterial suspension in the concentration of 10^5 CFU/ml and then inoculated on agar plates for 2, 4, 6, and 8 h followed by colony count calculation in 24 h.

RESULTS

The membranes inhibited the growth of both microorganisms. However, Sample 2 showed a more potent antibacterial effect on *E. coli* compared to Sample 1. Noticeably, Sample 2 possessed lower antibacterial potential than Sample 1 against *S. aureus* only at 4 h point of the test.

CONCLUSION

The higher TFA content in the solution improved the antibacterial properties of membranes. Generally, Ch-TFA/DCM electrospun membranes antimicrobial properties against both microorganisms that make them applicable as an antimicrobial remedy.

KEY WORDS: chitosan, electrospinning, antimicrobial, nanofibers

P2. POLYCYSTIC OVARY SYNDOME: AN OVERVIEW

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AIMS/OBJECTIVES: Polycystic ovary syndrome is a disorder affecting females worldwide, it has a prevalence rate of up to 10%. The disorder is endocrine based and is characterised by menstrual abnormalities, hirsutism, increased testosterone levels and polycystic ovaries. The exact cause of the disorder is unknown however, there is said to be a combination of genetic and environmental factors playing a role in the etiology. Complications include infertility, and the development of metabolic syndrome. The associated co-morbidities include insulin resistance, obesity, cardiovascular disease and Type 2 Diabetes Mellitus. There is currently no treatment for PCOS, the course of action tends to focus on controlling the symptoms and preventing the development of metabolic syndrome.
METHODS: I am conducting a literature review to provide an overview of PCOS including the etiology, symptoms, diagnosis, complication and treatment.
RESULTS: PCOS is a spectrum of conditions which tend to display commonly recognised symptoms - irregular menstrual cycles or amenorrhea, hirsutism, weight gain and difficulty in conceiving. There are commonly recognised complications and treatment revolves around controlling the symptoms and aforementioned complications.
CONCLUSION: PCOS is a fairly common hormonal condition affecting the female population and there has been little breakthrough towards the treatment. It is important to continue advancements in the research of the disease to diagnose earlier and prevent the associated complications such as infertility and poor cardiovascular health.

KEY WORDS: reproductive health, gynecology, PCOS, infertility, amenorrhea

P3. PREPARATION OF SUBSTANCES TO MANUFACTURE DENTAL RAW MATERIALS USING NANOTECHNOLOGY

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INTRODUCTION: This project aims to prepare materials used in the infrastructure of dental materials, due to the increasing number of dental colleges in the public and private sectors, due to increased consumption of all materials In the Egyptian market; we had to the tendency to maximize the value of scientific research to manufacturing those materials using modern technology for nan science.
AIM: This is to enhance the value of scientific research and to manufacture low-cost vital dental materials, to reduce the phenomenon of import, encourage local industry, raise the economy, and contribute to achieving sustainable development.
MATERIAL AND METHODS: Work is being done on the production and implementation of this research in a chemical laboratory specialized in dental materials. The main work is to produce these materials from the soil, medical gypsum, and dried fish scales using x-ray defection, modern Nanoscience technology, and electronic microscope through multiple laboratory experiments.
RESULTS: This research will contribute to achieving sustainable development for scientific and applied research projects to reduce the phenomenon of import and raising the slogan of Made in Egypt.
Through field studies, it turns out that the size of those materials costs the state hundreds of millions of hard currencies, where the price of tons imported from these materials costs very high while this value can be reduced by 70% by the idea of this research.
CONCLUSION: I made this project to present it at the conference so that I can find ways to cooperate between the scientific research team and the participants from across the world to develop the Egyptian dental field and contribute to achieving sustainable development under the guidance and encouragement of Egyptian and international professors.

KEY WORDS:dental, nano science, material, technology, research.

P4. RARE SURGICAL CASE OF A DELAYED MIGRATION OF A SIGMOID COLONIC BEZOAR

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INTRODUCTION: Foreign bodies are one of the most common gastrointestinal complaints seen in the Emergency department. The diagnosis is straightforward, but symptoms of complications can occasionally be delayed therefore not related to the primary cause.
AIMS: To present a rare case of late atypical complication of bezoars in the colonic segment.
METHODS: The diagnostic dilemma in a rare case of a sigmoid bezoar of a 50-year-old patient who was admitted in the department of coloproctology and purulent-septic surgery in UMHAT Dr. Georgi Stranski-Pleven.
RESULTS: Most bezoars are located within the stomach, small intestine, or the duodenum region but rarely in the large intestine of children and adults. Most of the time, the foreign object causes no symptoms or complications immediately, however even after a year or longer period the complications are extremely rare.
CONCLUSION: Due to the prolonged time since foreign body incidence the diagnosis is set intraoperatively. Hence complete and carefully taken past medical history combined with clinical and laboratory results are of great importance.

KEY WORDS: Bezoar, sigmoid colon, abdominal, foreign body

P5. CHROMOSOME 9p DELETION SYNDROME IN A NEWBORN FEMALE: A CLINICAL CASE

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INTRODUCTION: The 9p deletion syndrome (partial monosomy of chromosome 9) is a rare chromosomal disorder, initially described by Alfi in 1973. It is estimated to occur in one in 50,000 newborns, two-third of the cases arise as a de novo(sporadic) mutation. The main clinical features of the syndrome are mental retardation, developmental and psychomotor delay, dysmorphic facial features (trigonocephaly, upward-slanting palpebral fissures, midfacehypoplasia), hypotonia, and impaired gonadal development in some male individuals.
AIM: We report the first case of the 9p deletion syndrome in the Pleven region of Bulgaria, as an activity of the Pleven Registry (EUROCAT) of congenital anomalies.
CASE REPORT: The newborn was a full-term female baby, first child of a non-consanguineous couple (second unfollowed pregnancy of a 17 years old mother). Physical examination after delivery revealed the characteristic clinical features of the syndrome: trigonocephaly, hypertelorism, upslanting palpebral fissures, high-arched eyebrows, flat nasal bridge with anteverted nares, long smooth philtrum, microstomia, micrognathia, low set, dysmorphic ears, arachnodactyly. In addition the newborn was presented with a diastasis of abdominal wall muscles and reducible haemorrhoids. Chromosomal analysis of the baby established the karyotype 46,XX, del (9)(p22-p24). The parents declined to undergo cytogenetic analysis.
CONCLUSION: The phenotype of the presented case is in accordance to the described in the literature spectrum of the clinical features of the 9p deletion syndrome. In order to provide an appropriate genetic counselling of the family it is required to karyotype the parents, to evaluate the origin of the chromosome mutation (sporadic or inherited).

KEY WORDS: 9p deletion syndrome, de novo, cytogenetic analysis, genetic counselling

P6. CLINICAL CASE OF TREATMENT OF A PATIENT WITH FIBROID DISEASE BY FOCUSED ULTRASOUND SURGERY (FUS)

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AIMS/OBJECTIVES: Our aim is to present a clinical case about a patient with uterine fibroid who underwent Focused ultrasound surgery (FUS) with High-intensity focused ultrasound (HIFU) therapy.
METHODS: This case concerns a patient who was admitted to UMHAT „St. Marina" for treatment of uterine fibroids. Ultrasound revealed an intramural myoma in the area of the posterior uterine wall. Contrast MRI of the small pelvis was performed, which confirmed the diagnosis and proved a myoma nodule measuring 7/6 / 4.8 cm. The patient underwent FUS with HIFU therapy.
RESULTS: At the control MRI of the pelvis after 45 days we found that the fibroid reduced its volume. The Quality of life (QL) of the patient was assessed by using Uterine Fibroid Symptom and Health Related Quality-of-Life Questionnaire.
CONCLUSION: We present a clinical case of a patient treated for fibroid disease by FUS. The short-term results are associated with very good response, reduction and improvement of QL followed by MRI and survey method. However, further prospective studies in this area of surgery are needed**.**

KEY WORDS: Focused ultrasound surgery (FUS), uterine fibroid, High-intensity focused ultrasound (HIFU)

P7. INFLUENCE OF THE PANDEMIC SITUATION ON THE PERFORMANCE OF MEDICAL STUDENTS IN ELECTRONIC TRAINING

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INTRODUCTION: In the present study we sought an answer to the question "How does e-learning affect medical students", "Does this have a negative effect on the results of semester exams" and whether it makes it difficult to cope with the study material. It is possible that the emergency in which our country was has influenced the assimilation of new information from the lecture courses.
MATERIALS AND METHODS: The average success of the compulsory disciplines, which are studied in the specialty of medicine, at MU-Pleven from the first to the fifth year has been studied. The data from two previous semesters with conducted lectures and practicals in regular form are compared: Winter semester of 2019/2020 and Summer semester of 2018/2019 and e-learning: Winter semester of 2020/2021 and Summer semester of 2019/2020. Statistical analysis of the data was performed with specialized software SPPS 25, using Mann-Whitney correlation analysis with calculation of U-criteria.
RESULTS: It is reported that the difference in the results obtained in conducting of the learning process in an electronic environment and in-person form of training is an exception rather than a rule. The Mann-Whitney coefficient for both analysed semesters is 163,500 for Asymtotis Sig. (2-sided test) 0.620, which is an indicator that there is no statistically significant difference in the average success per semester in face-to-face and online training.
CONCLUSION: The study reports that there is no significant difference between the success of the individual disciplines and courses in the two forms of education at MU - Pleven.

KEY WORDS: distance learning, medical students, average success, clinical disciplines.

P8. INFLAMMATORY MYOFIBROBLASTIC TUMOUR OF THE SMALL INTESTINE: A DIAGNOSTIC DILEMMA

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BACKGROUND: Inflammatory myofibroblastic tumours (IMT) are rare benign lesions found most commonly in children and adolescents that often mimic malignant lesions.
CASE DESCRIPTION: 66-year-old male presented with 1-day history of abdominal pain and vomiting. Abdominal examination demonstrated generalised tenderness and guarding. CECT and exploratory laparotomy with resection of terminal ileum was performed. Intra-operatively, intraluminal growth 4cm in size was seen at terminal ileum. On gross examination, ulcerated, infiltrative and firm lesion was seen. Cut surface was solid in consistency. Microscopic examination showed proliferation of myofibroblasts transmurally with extension to the mesentery and an admixture of inflammatory cells. It was positive for SMA, Vimentin, and Desmin stains.
CONCLUSION: Despite their rarity in the small intestine, IMT should be considered as a differential diagnosis in patients with features of acute abdomen. Histopathological diagnosis is imperative as this is a lesion that can be treated readily with surgical resection.

KEY WORDS: inflammatory pseudosarcoma, spindle cell, small intestine

P9. THE EFFECTS OF XANTHONE TO DENGUE VIRUS REPLICATION IN VITRO

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INTRODUCTION: Dengue fever is widely known as one of the global health burden. As one of the most common arthropod-borne illness, the number of the cases increases every year in Indonesia. Furthermore, when it is not treated promptly, this disease could progress into a more severe condition. Unfortunately, the treatment for dengue fever is still not specific.
AIMS/OBJECTIVE: In this research, xanthone is evaluated for its effect on dengue virus replication in vitro using the human cell line, Huh7it-1.
MATERIALS AND METHODS: The effect of the antiviral properties of xanthone is quantified using the IC50 value. The determination of the inhibition percentage is calculated using the comparison of the amount of focus assay and DMSO as its control. On the other hand, cell viability is calculated using the MTT assay and then compared with the value of DMSO control viability.
RESULTS: From this experiment, the result of the IC50 of xanthone is 13.707 μg/ml. The CC50 obtained is 2.7. It results in the value of selectivity index, which is 0.19.
CONCLUSION: Even though xanthone shows the ability to inhibit dengue viral replication, in the other hand it also exhibits toxicity towards the cell. Thus, xanthone is not a potential candidate to become dengue antiviral due to its low selectivity index.
Further research is suggested to modify xanthone's structure to reduce its cytoxicity.

KEY WORDS: xanthone, Dengue virus, antivirus, Huh7it-1

P10. KNOWLEDGE AND ADHERENCE TO WARFARIN'S TREATMENT REGIMEN AMONG PATIENTS IN ALSHAAB AND AHMED GASIM HOSPITALS, SUDAN, 2018

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INTRODUCTION: Warfarin is an oral anticoagulant drug that needs continuous clinical and laboratory monitoring due to its narrow therapeutic index and life threatening complications. This study aims to assess knowledge and adherence of patients toward their Warfarin treatment regimen and to identify barriers that prevent patients to take their warfarin therapy regularly.
MATERIALS AND METHODS: In this cross-sectional study, a systematic random sample of 307 patients was selected from Alshaab teaching hospital heart section and Ahmed Gasim Hospital. Data were collected by anonymous interview based questionnaires.
RESULTS: Male patients (52.5%) exceeded females (44.8%), the mean age was 48.79. About 57.98% of the studied patients had moderate overall knowledge score, and more than half of them had good adherence levels (62.2%). The study shows that: Forgetting (43.7%) was the main barrier preventing the patients from taking their medication, followed by drug unavailability (36.8%) and high cost (19.5%). There are statistical significant differences between patient's age/education and their level of knowledge (p=0.008/p=0.011). The correlations between patients' adherence to Warfarin Oral Anticoagulant and their level of knowledge is statistically insignificant (r=0.647 , p=0.739). There are significant association between patients' level of adherence and the time from which the patient start to take warfarin (p-value= 034).
CONCLUSION: The majority of the studied patients had moderate overall knowledge score about Warfarin Oral Anticoagulant, and more than half of them had good adherence levels. „Forgetting" was the main barrier preventing the patients from taking their medication.

KEY WORDS: warfarin, knowledge, adherence, barriers

P11. AORTIC VALVE REPLACEMENT: SEVER AORTIC INSUFFICIENCY, MINOR MITRAL REGURGITATION, MINOR TRICUSPID INSUFFICIENCY, NYHA GRADE III (NEW YORK HEART ASSOCIATION), HISTORY OF ISCHEMIC STROKE

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INTRODUCTION: We present the case of a 60-year-old patient who complains of fatigue, exertional dyspnea and palpitations. He has been known to have high blood pressure, aortic bicuspid for several years and a fully recovered ischemic stroke. The X-ray shows no congestive areas, heart with left ventricular hypertrophy and congested pulmonary hilum. The ECG (electrocardiogram) indicates sinus rhythm, QRS complex deviated to the left – concentric left ventricular hypertrophy. The angiography shows wide aortic stenosis, severe aortic regurgitation, mitral regurgitation gr I/II, tricuspid regurgitation gr I and a dilated left ventricle.
MATERIALS AND METHODS: After proper preoperative preparations the doctors performed median sternotomy and longitudinal pericardiotomy with cannulas for extracorporeal circulation in position and then performed an aortic valve replacement using a mechanical prothesis.
RESULTS: The postoperative evolution of the patient is favorable being placed in intensive care for 24 hours, he is afebrile, hemodynamic and respiratory stable, following that the patient will be discharged in a few days.
CONCLUSIONS: It was preferred to implant a mechanical prosthesis, so that the patient does not present risks for anticoagulation.

KEY WORDS: mitral, aortic, valve, mechanical

P12. STRATEGIES FOR PREVENTION OF SURGICAL SITE INFECTION IN PATIENTS FOR CIEDS IMPLANTATION – LITERATURE REVIEW

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INTRODUCTION: In the last several years a stable increase in cardiovascular implantable electronic devices (CIEDs) implantation is seen, mainly because of the expanded indications for their usage. An important complication of CIEDs implantation is the possible postprocedural infection (pocket or systemic), which is connected with high morbidity and mortality rates and caries a significant financial cost to the health systems. Although, this complication is not that frequent (ranging from 1 to over 5% in different studies), it is associated with a significant burden to the patients, clinicians and healthcare system and because of that attention should be placed on the prevention of the infection. In this article, we collected and summarized the information and data available, directly related to the problem – prevention of CIEDs infection. The results of different studies and guidelines, regarding prevention with antibiotics, antiseptics and the usage of antibacterial envelope are analyzed. Perspective is put on the new technology of using antibacterial envelope as a prevention of the infection.

AIM: The aim of this paper is to review the various infection prevention technics and to highlight the most beneficial ones according to guidelines and worldwide studies.In the last several years a stable increase in cardiovascular implantable electronic devices (CIEDs) implantation is seen, mainly because of the expanded indications for their usage. An important complication of CIEDs implantation is the possible postprocedural infection (pocket or systemic), which is connected with high morbidity and mortality rates and caries a significant financial cost to the health systems. Although, this complication is not that frequent (ranging from 1 to over 5% in different studies), it is associated with a significant burden to the patients, clinicians and healthcare system and because of that attention should be placed on the prevention of the infection. In this article, we collected and summarized the information and data available, directly related to the problem – prevention of CIEDs infection.

CONCLUSIONS: The results of different studies and guidelines, regarding prevention with antibiotics, antiseptics and the usage of antibacterial envelope are analyzed. Perspective is put on the new technology of using antibacterial envelope as a prevention of the infection.

KEY WORDS: CIED, infection, prevention, antibacterial, implantation

P13. ANEMIA, LEFT VENTRICLE HYPERTROPHY AND CHRONIC KIDNEY FAILURE - VICIOUS CIRCLE

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INTRODUCTION: Chronic renal failure (CRF) is a syndrome that significantly alters the quality of life of patients. Left ventricular hypertrophy (LVH) is a common complication of cardiac dysfunction. Patients with CRF and cardiovascular disease (CVD) have three times the risk of sudden cardiac death, shortened survival and poor quality of life compared to individuals in the general population. Anemia is also a common complication in patients with CRF, which not only worsens chronic CVD, but also impairs renal function, creating a vicious circle.
AIM: To study the relationship between anemia, CRF and LVH. To analyze the relationship between anemia and LVH in patients with CRF in predialysis and dialysis stages.
MATERIALAND METHODS: The study is retrospective and includes 212 patients with CKD treated at the Clinic of Nephrology and Dialysis, University Hospital „Dr. G. Stranski" Pleven in the period 2008-2020. Patients are aged between 20 and 81 years, with anemic syndrome and LVH, proven echocardiographically.
RESULTS: There are 100 women (47.2%) and 112 men (52.8%), the average age is 60.3 ± 14.3 years, the average duration of renal failure is 72.1 ± 56.5 months. 110 of the subjects were on dialysis, 100 (47.7%) on hemodialysis and 10 (4.7%) on peritoneal dialysis.
LVH is diagnosed in 202/212 patients (98.2%). There are 185/212 patients with anemia (87.3%), 27/212 patients without anemia (12.7%). All patients with anemia are treated with erythropoietin. Among patients with anemia with LVH are 177 (95.7%), and among patients without anemia with LVH are 25 (92.6%), the difference is not significant.
CONCLUSIONS: The connection between anemia, LVH and CRF is confirmed. CRF leads to anemia, which determines the treatment with erythropoietin. Anemia has a very small contribution to the development of LVH, for which arterial hypertension and CRF are essential.

KEY WORDS: anemia, left ventricular hypertrophy, renal failure, quality of life

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PARTNER CONFERENCES:

1. **12th YES Meeting,** Porto, Portugal
2. **Bucovinian International Medical Congress,** Chernivtsi, Ukraine
3. **9th International Student Medical Congress,** Košice, Slovakia
4. **International Biomedical Congress in Sofia,** Bulgaria
5. **ICMS,** Sofia, Bulgaria
6. **International Student Congress in Graz,** Austria
7. **Black Sea Symposium,** Varna, Bulgaria
8. **Global student's conference of biomedical sciences,** Belgrade, Serbia
9. **PHOENIX 2017,** Mangalore, India
10. **MEDICON 2017 – 11th International Undergraduate Medical Students' Research Conference,** Lucknow, India
11. **BRAINCOMS 2017,** Sao Paulo, Brazil
12. **Annual Young Medical Scientists' Conference,** Kyiv, Ukraine
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16. **European Students' Conference,** Berlin, Germany
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19. **International Conference for Healthcare and Medical Students 2018,** Dublin, Ireland
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