29th SCHMS

Scientific Congress of Hellenic Medical Students

17th International Forum for Medical Students and Junior Doctors

27th Medical Olympics

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5 - 7 MAY 2023

Astir Egnatia Hotel
Alexandroupolis

ABSTRACT BOOK

INTRODUCTION

Dear Speakers and esteemed Guests,
Dear Professors and Teachers,
Dear Fellow Students, Colleagues and Junior Doctors,
Dear Delegates,

The **29th Scientific Conference of Hellenic Medical Students & 17th International Forum of Medical Students and Junior Doctors**, which was held on **May 5th-7th, 2023**, at **Astir Egnatia Hotel**, in **Alexandroupolis** was completed with great success.

Having set the bar particularly high we aimed to meet the high expectations that accompany this particular conference. Aiming in this direction, we worked so that in the 29th SCHMS & 17th International Forum to expand the thematology, cooperate with distinguished scientists from abroad and also with groups of students from the Medical Schools and other Schools of Health Sciences in Greece and abroad so as for the conference to become a place of fruitful exchange of ideas and interdisciplinary discussion. Of course, our aim was to strengthen the workshops by holding a total of 60 as well as the Medical Olympics, while Live Surgeries, which were attended with great interest by a vast number of delegates, could not miss from the scientific program.

In this year's Congress 162 Oral Presentations and 45 E-posters was submitted for presentation.

In the current e-book you may find all the abstracts of the **presentations** which were submitted, evaluated and presented at the Conference.

We do really hope that you enjoyed your participation as much as we did and we would like to thank you once more for all your support of our venture.

Finally, let's renew our appointment to meet again at Heraklion in Crete for the 30th Scientific Congress of Hellenic Medical Students & 18th International Forum of Medical Students and Junior Doctors!

Yours sincerely,

On behalf of the Organizing Committee of the 29th SCHMS,

Anna Eleftheriou
6th year Medical Student, Democritus University of Thrace
President of the Organizing Committee of the 29th SCHMS

On behalf of the Organizing Committee of the 17th International Forum

Sevasti - Efraimia Krouskou
6th Year Medical Student, Democritus University of Thrace
President of the Organizing Committee of the 17th International Forum for Medical Students and Junior Doctors

Nikolaos Nikolaidis
5th year Medical Student, Democritus University of Thrace
Special Secretary-Programme Team Leader

Oral Presentations

29th SCHMS

Scientific Congress of Hellenic Medical Students

SOCIAL MEDICINE/ TRAINING

OP073 CURRENT TRAINING TECHNIQUES IN VASCULAR SURGERY

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Introduction - Objectives: Advances in technology are gradually leading to an enormous shift from open procedures to endovascular techniques. This results in limited surgical time for the residents and consequently in suboptimal performances in performing open procedures when needed. This review aims to present alternative training methods such as simulation training, video-based training and the potential applications of Artificial Intelligence.

Methods - Data: A search was performed on PubMed, Scopus and Cochrane databases for the terms "Vascular", "surgical", "surgery", "training", "simulation", "video", "practice", "residents", "education", "Artificial Intelligence", and "A.I.". This yielded 573 results. Having utilized the PRISMA guidelines and having set pre-defined criteria, 22 manuscripts were finally included in this study.

Results: Surgical simulation holds a vital role in surgical training. Low and high fidelity synthetic, animal and cadaveric models as well as virtual reality ones have been used. A significant number of studies have been performed, providing strong results indicating that all types of simulation are not only useful in training but in evaluating residents as well. On the other hand, Video-based training has been proved practical in improving surgical skills while reducing possible mistakes. Last but not least, A.I. can be utilized in assessing these collected data, predicting and thus avoiding possible mistakes in the OR.

Discussion: Overall, medical training has to change dramatically to correspond to modern society. Simulation holds a lot of perks since it does not put the patient at risk and is conceived to be an interactive and efficient method of surgical training. Video based training is a modern, digital, and relatively low-cost form of learning and acquiring new skills and A.I. stands as the most advanced and innovative technology used in surgical training. These new methods combined to the traditional ones need to be adopted by the surgical training centers in order to constitute the new status quo in the surgical training of young doctors.

ORAL PRESENTATIONS

OP022 **ANATOMAGE TABLE: A PROMISING ALTERNATIVE IN ANATOMY EDUCATION**

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Introduction: Anatomy has traditionally been a cornerstone of medical education. For centuries, lectures and dissection of human cadavers were the main educational practices. However, nowadays, the rising prevalence of technology has rapidly infiltrated the teaching of anatomy. Virtual dissections on life-size digital representations of the human body enable students to visualize and manipulate complex anatomical structures using detailed 3D models. Anatomage is one of the methods that are used by academic institutions in order to modernize and improve anatomy learning. Aim of this systematic review is to present the educational role of Anatomage in anatomy.

Material and Methods: A detailed search PubMed, Google Scholar, SCOPUS databases was performed by using the terms “Anatomage” AND “anatomy education” AND/OR “virtual dissection”. The criteria for the selection were: English language, year of publication between 2018-2023, full text. We rejected publications that were irrelevant to the topic. Before applying the filters, we found 198 publications, from which 18 were finally chosen from PubMed and SCOPUS and 6 from Google Scholar.

Results: The results of the present review suggest that the majority of students prefer using 3D Anatomage as an additional tool to cadaver dissection for learning anatomy. 3D Anatomage enhances learning and facilitates better understanding of the relationships between internal structures. Moreover, students who were exposed to the virtual dissection table scored comparatively better than those exposed to cadaveric dissection, proving that Anatomage improves their performance and their knowledge of extensive human anatomy. In addition, Anatomage meliorates classroom experience of learners and it is user friendly.

Conclusions: Integrating the Anatomage Table into undergraduate courses is paramount to the comprehensive learning and application of human anatomy in students’ future health careers. Learners who have utilized the table note it to be a beneficial and effective tool in preparing them to enter a health care profession.

OP135 VIRTUAL PATIENTS IN MODERN MEDICAL EDUCATION, DESIGNED FOR MOBILE NAVIGATION

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Introduction: The purpose of this oral presentation is to highlight the usefulness and usability of an application specifically designed for mobile devices (mobile application) with simulated cases of virtual patients. The result was based on the opinions of forty-eight undergraduate medical students (48) from all over Greece, who tested the application during their practice in their hospitals and university laboratories.

Methods: Primarily, the application with simulated cases of virtual patients (mobile application) was given to the respondents to explore. Then, a specially designed questionnaire based on the System Usability Scale score and open-ended questions was used, which helped all participants express their opinion about the application. This included: their positive/negative impressions on closed-ended questions and usability score formation as well as b) the multi-level descriptive assessment of the possibility of acquiring new knowledge, provided through the simulations, through open-ended questions. Finally, all responses were correlated to assess the importance of training potential physicians by similar means.

Results: Student satisfaction with the application was extracted. In particular, the positive evaluation of the cases of virtual patients was suggested as an important tool during their medical education through actual cases based on real patients and not from sterile knowledge. Finally, it was proposed to enrich the application with the above incidents and to separate them into specialties to be more useful to navigate in it.

Conclusions: The use of virtual patients in medical education nowadays can greatly enhance the educational experience of students as it creates a virtual reality that corresponds to similar real-life cases. According to the evaluation of such a mobile application, it emerged as the key to methodical knowledge and development of thinking during differential diagnosis. The students who participated in the evaluation of the usability of the application proposed its inclusion in the Medical curriculum simultaneously with their practice in the laboratories and clinics of the hospitals.

ORAL PRESENTATIONS

OP085 ASSESSMENT OF MOBILE PHONE USE AND CHANGES MADE DUE TO THE QUARANTINE IN THE COVID-19 PANDEMIC

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Background: The mobile phone is an integral part of everyday life and an important tool for work as well as for socializing. However, its reckless use may cause significant problems and lead to addiction. Aim the present research is to record and study the mobile phone usage habits of health science students and their change due to the quarantine.

Material and methods: The anonymous questionnaire of 49 questions in the form of Google Forms was shared with the help of social media to students of medicine, dentistry, pharmacy, and nursing schools from all over Greece. Basic questions were the hours of use of the mobile phone as well as questions with a graduated scale in order to ascertain the rate of addiction. It was completed by 222 students (156 women, 66 men), of which 100 are studying in the 3rd year (45%).

Results: A small increase (by 10%) was observed during the quarantine of people who were bothered by the inability to search for information when they needed it. Also, after the quarantine, the percentage (by 16%) of those who felt irritated due to isolation from their friends, since they were unable to use their smartphone, increased. Finally, after the quarantine, e-commerce increased (by 8%), due to direct access to the smartphone.

Summary: The increase in the use of mobile phones after the quarantine observed in this questionnaire is likely due to the fact that during this period it was used for social (33%), professional (2%), educational (25%), recreational (38%) purposes as well as for information (2 %).

OP143 **THE ROLE OF VIRTUAL AND AUGMENTED REALITY IN MEDICAL EDUCATION AND CLINICAL PRACTICE**

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Introduction-Objectives: Virtual and augmented reality (AR/VR) are increasingly gaining ground in Healthcare. This is due to their multiple applications in both clinical practice and training of the residents. With the continuous evolution of these technologies and their integration into the Health System, new horizons are opening up for the improvement of many specialties including Orthopaedic Surgery.

Methods-Data: In this literature review, we searched publications related to the contribution of virtual reality (VR) and augmented reality (AR) in orthopaedic surgery in PubMed and Google-Scholar databases. Additionally, we checked the sources of the selected articles to find relevant information on the topic.

Results: Virtual reality simulators can vary from simple smartphone applications to intraoperative guidance systems. Although arthroscopy simulators have been widely used in the last years, the role of this technology has a lot more to offer in education. It can be used for better preoperative planning and construction of arthroplasty stimulators as well as trauma management stimulators with automatic evaluation of trainees. On the other hand, the use of augmented reality in orthopaedics has been shown to improve surgeon's accuracy and reduce intraoperative errors. At the same time, the contribution of AR significantly reduces the duration of the surgery and thus, the radiation exposure in surgeries performed under fluoroscopy. Lastly, AR has multiple applications in the training of residents, providing the necessary tools for an excellent professional education.

Discussion: In conclusion, VR/AR should be included in the basic educational program of residents. In this way they can improve their performance in the operating room and as surgeons, to be familiar with these technologies and properly use them for the best benefit of their patients.

ORAL PRESENTATIONS

OP145 LITERATURE REVIEW; CORRELATION BETWEEN GENDER-BASED BIAS IN MEDICINE AND MEDICAL CURRICULA

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Introduction: Gender-Based Medicine, an important step in personalised medicine, was established, through the feminism movement. More emphasis was given on women's health issues, leading to the first publication of papers on male and female health separately. Its goal is the acknowledgment and understanding of the physiological and pathophysiological differences between males and females and as a result the different needs in healthcare that occur.

Methods: The main focus of the Literature Review is to investigate the correlation between a lack of Education and the lack of practical application in research and clinical practice. We studied and analysed free full text articles, clinical studies, and reviews on the Topic of Gender-Based Medicine, to gain a holistic approach.

Outcomes: Even though since 1990 there have been a lot of accomplishments towards Gender-Based Medicine, there are a lot of things that further need to be done, such as the creation of new manuals, integration of the topic in the Medical curricula, more research from pharmaceutical companies, and acquisition of knowledge for trans and non-binary people.

Discussion: The small amount of data for the female sex seems to start even from the pre-clinical phase of the research, where before the equal representation of the sexes was institutionalised, male laboratory animals were preferred. At the same time, in some parts of the clinical studies, women were excluded, while the researchers justified this decision to protect their maternity. On the other hand, for a small number of diseases like depression, data from research based on females are applied to male patients. Today, Gender Based Medicine is established in many Medical Fields and affects both male and female health. While there are specific guidelines regarding the representation of both sexes in research, the problem seems to be located in Medical Education itself.

NEPHROLOGY/ GASTROENTEROLOGY

OP141 FABRY DISEASE, A RARE CAUSE OF CHRONIC KIDNEY DISEASE

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Introduction: Fabry disease is a rare, inherited, X-linked lysosomal disorder due to reduced activity of the enzyme α-galactosidase A (α-GAL-A) resulting in the accumulation of glycosphingolipids and mainly globotriaosylceramide (GL-3) in the lysosomes of endothelial and smooth muscle cells of the vascular wall, in the epithelial cells of the cornea, renal tubules, glomeruli, as well as in myocardial cells and neurons and leads to progressive dysfunction of the above tissues, resulting in the broad spectrum of the symptomatology of the disease.

The first manifestations begin in childhood and include episodes of acrohallucinations, angiokeratomas, hypohidrosis, and cornea verticillata. The serious lesions of the disease appear in the 3rd or 4th decade of life and include strokes (ischemic or hemorrhagic type), renal failure, chronic obstructive pulmonary disease, hypertrophic cardiomyopathy, restrictive cardiomyopathy, mitral and aortic insufficiency, rhythm disorders (bradyarrhythmias, tachyarrhythmias, atrioventricular blocks) and coronary artery disease.

Case Presentation: We describe a 45-year-old male patient who came to the ED due to a fainting episode, with tonic spasms and urinary incontinence. From the objective examination, no pathological findings were found. Laboratory testing revealed anemia, severe renal failure, and hyperkalemia. During his hospitalization, the patient presented an episode of constrictive chest pain with electrocardiographic changes. Echocardiography showed concentric hypertrophy of the left ventricular walls. Personal history revealed hypohidrosis and episodes of acrohallucinations in the lower extremities since childhood. From the clinical examination, angiokeratomas were observed in the hypogastric and inguinal regions. Ophthalmologic evaluation was performed which revealed cornea verticillata, incipient posterior subcapsular cataract (wheel spoke-like). Fabry disease was suspected and α-galactosidase A activity measurement and genetic testing were performed which confirmed the disease.

Conclusion: Fabry disease is a rare, inherited, multiorgan disease that, if not detected early, is potentially fatal.

ORAL PRESENTATIONS

OP098 WHICH SUBSTANCES AND BY WHICH MECHANISM CAN CAUSE EPATOTOXICITY?

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Introduction: More than 1000 drugs are implicated in hepatotoxic reactions. 1% of hospital admissions are attributed to them. However, the incidence is difficult to estimate because either the cause-effect relationship of the drug-hepatotoxicity is not clear, or the consumption of some substances is overlooked by the physician or concealed by the patient. Thus, hepatotoxicity can be caused by a range of non-drug substances in addition to drugs.

Methods-Data: For this study, a review of the literature in PubMed/Medline and Livertox databases was performed. Studies referring to the mechanisms of hepatotoxicity from various substances were considered eligible for inclusion in the present review.

Results: Hepatotoxicity can be induced by drugs as well as by herbs, herbal preparations, substances used in traditional medical practices, metals, toxic substances, dietary supplements, energy drinks, stimulants, androgenic anabolic steroids. In addition to these, substances for whose hepatotoxic effects there is insufficient data, are also reported. The main mechanisms of induction of hepatotoxicity are: hepatocellular necrosis, cholestasis and mixed pattern and less frequently immuno-allergic, micro-vesicular, autoimmune, vascular, fibrotic, granulomatous damage. The effect of the substances is also categorised as endogenous or predictable and idiosyncratic or unpredictable. Differential diagnosis is a challenge for the practitioner, as the diagnosis of hepatotoxicity due to drugs or substances is often made by exclusion. The importance of a proper diagnosis and a detailed medical history is reinforced by the fact that treatment contains the withdrawal of the responsible substance.

Summary-Discussion: The list of substances causing hepatotoxicity is long, but the field still remains uncharted. The topic should be further investigated. Obtaining a detailed medical history of drug and substance use is considered crucial for the diagnostic and therapeutic approach.

OP018 **SPONTANEOUS RUPTURE OF THE KIDNEY: ETIOLOGY, DIAGNOSIS AND TREATMENT**

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Introduction: Spontaneous kidney rupture is a rare urological emergency, which can be potentially lethal. It can cause acute perirenal hemorrhage, the severity of which determines both clinical presentation and the management of this condition. The aim of this study is to raise clinical suspicion regarding this uncommon clinical entity and to review its etiology.

Materials-Methods: A review of the English language literature was performed using the MEDLINE (via PubMed) database combining the keywords "spontaneous kidney rupture", "Wunderlich syndrome", "spontaneous non-traumatic renal hemorrhage". Printed articles were also reviewed. The majority of the selected articles were published over the last decade (2013-2023).

Results: Diagnosis of spontaneous renal rupture requires the absence of trauma or recent medical intervention. In the vast majority of the cases, there is an underlying renal pathology with renal tumors being the most common cause. Spontaneous kidney rupture may involve both renal parenchyma and renal collecting system. Patients typically present with Lenk's triad of acute flank pain, palpable flank mass and symptoms of acute blood loss. Computed tomography (CT) is the diagnostic modality of choice, as it can detect the underlying cause and provide an accurate assessment of the exact site and extent of bleeding. Treatment management depends on the severity of bleeding as well as the underlying cause. Extensive hemorrhage accompanied by hemodynamic instability usually require surgical exploration and often nephrectomy.

Conclusion: Spontaneous, non-traumatic rupture of the kidney is a rare but life-threatening clinical entity which requires a high degree of clinical suspicion coupled with prompt intervention. Selection between conservative and surgical management is determined, almost exclusively, by the severity of clinical presentation and the underlying cause.

ORAL PRESENTATIONS

OP009 VOLUME FLOW-GUIDED ANGIOPLASTY OF DYSFUNCTIONAL AUTOLOGOUS ARTERIOVENOUS FISTULA: THE VOLA STUDY

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Introduction: One of the main causes of dialysis arteriovenous fistula (AVF) dysfunction is stenosis. Percutaneous transluminal angioplasty (PTA) is an established minimally invasive treatment option for the management of AVF stenosis. Post-angioplasty increase of vascular access VF assessed by duplex ultrasound (DUS) is considered a reliable method of access surveillance and an indicator of hemodynamic success.

Methods: A prospective, single-center, study was conducted between June 2019 and May 2020 aiming in quantifying the outcome of PTA using intraprocedural sequential DUS VF measurments following each dilation (clinicaltrials.gov: NCT04430478). Primary endpoints included 6 months target lesion re-intervention (TLR)-free rate, standard technical success, procedural success and correlation between procedural success and TLR-free rate. Secondary endpoints included 6-month lesion late lumen loss (LLL), correlation between balloon diameter used and intraprocedural VF values, and correlation between VF and LLL at 6 months follow-up.

Results: Mean VF increase was 168.5% ± 102.5% (range: 24.24-493.33%). Procedural success was 80% (16/20 cases). VFA improved procedural success by 20% (4/20 cases) compared to standard assessment. TLR-free rate was 78.3% and 67.3% at 6 and 12 months. Significantly less TLR was noted in cases of procedural success (82.4% vs. 66.7% 6 months; p = 0.041). There was a significant correlation between diameter of balloon and VF (146.9 ± 42.3 mL/min VF gain per mm of balloon diameter; p = 0.001, R2 = 0.23) and a significant correlation between LLL and VF decline at follow-up (102.0 ± 34.6 mL/min loss per mm of LLL; p = 0.01, R2 = 0.35). Optimal VF cutoff value and percentile increase to predict access failure were 720 mL/min (sensitivity 58.3%, specificity 71.4%) and 153% (sensitivity 66.7%, specificity 85.7%), respectively.

Conclusion: Intraprocedural VF assessment seems to optimize AVF angioplasty outcomes.

OP019 **RETROPERITONEAL FIBROSIS: A RARE AND UNDERDIAGNOSED DISEASE**

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Introduction: Retroperitoneal fibrosis (RPF) is a rare inflammatory disease characterised by deposition of fibrotic connective tissue in the retroperitoneal space. The aim of this study is to review modern literature and raise clinical suspicion regarding this uncommon disease which still remains underdiagnosed.

Materials-Methods: A review of the English language literature was performed using the MEDLINE (via PubMed) database combining the keywords "Retroperitoneal fibrosis", "Ormond's disease", "IgG4-related retroperitoneal fibrosis". Printed articles were also reviewed. The majority of the selected articles were published over the last decade (2013-2023).

Results: RPF develops insidiously, as the initial symptoms are non-specific. Pain is the most common presenting symptom. Involvement of the urinary tract with ureteric obstruction and subsequent hydronephrosis is very common. The majority of RPF cases are idiopathic (65-70%), whereas the rest of the cases are a result of a wide variety of identifiable causes. It is less commonly associated with malignant neoplasms with poor prognosis. The pathophysiology of RPF remains unclear. It has been recently reported to belong to IgG4-related diseases. Diagnosis is mainly based on computed tomography (CT), magnetic resonance imaging (MRI) and nuclear medicine studies. Treatment usually includes drainage of the obstructed kidneys and administration of immunosuppressive agents. Surgical treatment is recommended when conservative methods are not efficient.

Conclusion: Unfortunately, despite the progress in understanding the pathogenesis of RPF, it still remains an underdiagnosed condition and lacks a standard treatment protocol.

ORAL PRESENTATIONS

PNEUMONOLOGY/ INFECTIOUS DISEASES (I)

OP017 RE-EMERGENCE OF VACCINE-PREVENTABLE PATHOGENS: THE EXAMPLE OF POLIOMYELITIS

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Introduction: Poliomyelitis is an infection caused by the poliovirus which, due to vaccination, has recently come close to being eradicated. The aim was, through the analysis of the example of poliomyelitis, to highlight the re-emergence of pathogenic microorganisms for which there is the option of prevention by vaccination.

Methods/Data: A literature review was performed. The references were selected based on their validity and timeliness and the PubMed platform was used. The study lasted five months and was based on the selection of sources with an emphasis on their results related to the specific topic.

Results: According to studies, many infectious diseases are re-emerging, among them poliomyelitis, which is now mainly transmitted by the poliovirus derived from the attenuated poliovirus contained in the oral vaccine (VDPV). There are VDPV types 1, 2, 3, and type 2 is recognized as the most transmittable (VDPV2). Wars, economic crises, and pandemics, as the respective vaccination programs reduce, result in the resurgence of polio. According to research, the wars in Ukraine and Syria caused polio epidemics with the predominant strain VDPV2. The COVID-19 pandemic is responsible for the return of polio, particularly in Africa with the VDPV2 strain. Of course, poliomyelitis is also reappearing in developed countries. Inactivated polio vaccine adequately protects vaccinated people in developed countries. Efforts are made to develop a new vaccine, the oral polio vaccine type 2 (nOPV2).

Conclusion: Polio is now re-emerging due to wars, economic crises and pandemics. But the systematic vaccination and the effort to maintain the vaccination programs, as well as the development of a new vaccine against the poliovirus, give hope that this crisis will be faced and we will be led to a “polio-free” world.

OP039 **IMMUNOTHERAPY WITH PEMBROLIZUMAB IN NON-SMALL CELL LUNG CANCER WITH HIGH PD-L1 EXPRESSION**

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Introduction-Objectives: PD-1 protein expression in cancer cells and its binding to its receptor PD-L1 can prevent an innate cytotoxic T-cell response against tumor by inhibiting kinases that are involved in T-cell activation. Immunotherapy with anti-PD-L1 (Durvalumab) or anti-PD-1 (Nivolumab, Pembrolizumab) prevents the interaction of the PD-L1 with the PD-1 receptor and unleashes the innate immune system to react to the tumor growth. These antibodies were recently approved for NSCLC treatment. Our aim is to report 3 cases of the Pulmonary Department of Aristotle University of Thessaloniki with high PDL-1 expression (TPS≥50%) and impressive clinical response to immunotherapy with Pembrolizumab.

Methods-data: 3 patients of the Pulmonary Department of Aristotle University of Thessaloniki with NSCLC and high PDL-1 expression (TPS≥50%) were included. PET/CT with 18F-FDG was performed for the staging and reevaluation of the patients. Their clinical course was assessed until February 2023.

Results: All patients (gender: male, mean age: 62±5 years) received Pembrolizumab as first or second-line treatment. The NSCLC histology was adenocarcinoma stage III at diagnosis for 2 patients and stage IV for 1 patient. One year after the diagnosis complete response with no pathologic FDG-uptake in the primary tumor lesion, lymph nodes or extrathoracic sites. The patients still receive immunotherapy and they are clinically stable and no treatment-related severe adverse events were reported.

Discussion: Immunotherapy with anti-PD1/PD-L1 has changed the treatment paradigm of NSCLC due to its efficacy and favorable safety profile. It's worth analyzing more real-world data in routine practice and searching for a probable relation between high PDL-1 expression and overall survival after immunotherapy.

ORAL PRESENTATIONS

OP049 THE USE OF FIBROLYSIS IN COMPLICATED PARAPNEMONIAL COLLECTION DUE TO STREPTOCOCCUS PNEUMONIAE

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Introduction: According to current literature, the treatment of complicated parapneumonic pleural effusions with administration of antibiotics and the insertion of a chest drain may be insufficient. In this framework, we are presenting a case study in which fibrinolytic drugs prevented the patient from surgical treatment.

Methods: We performed a detailed analysis of the medical record of a 20-year-old patient hospitalized in the 1st Respiratory Medicine Department - Sotiria Hospital with a diagnosis of right lower lobe pneumonia with a complicated parapneumonic effusion.

Case presentation: Patient presented with a five-day history of fever and cough because of a S.Pneumoniae right lower lobe pneumonia with a complicated parapneumonic pleural effusion. On admission, she was hemodynamically stable with fever and mild hypoxemia (PO2: 69mmHg / FiO2:0,21). Chest CT scan showed an extended opacity in the right lower lobe and an encysted pleural effusion along with atelectasis, ipsilaterally. A diagnostic paracentesis revealed a serous, bloody fluid with pH:7.17, LDH:1550, GLU:11mg/dl. She was treated with ceftaroline and moxifloxacin and a chest drain was inserted (drainage of 1,5 lt). On chest ultrasound, pleural thickening and large encystments were noted. Fever and pleural effusion persisted, and thus fibrinolysis was performed for three days with alteplase and deoxyribonuclease (DNase- Pulmozyme) via the chest tube (additional fluid drainage: 1,5lt). The new CT scan showed a reduction in the loculated effusions and the drainage tube was removed. Antibiotic treatment was continued for 14 days resulting in gradual clinical improvement of the patient. Her pulmonary function tests were normal and she was discharged hemodynamically stable without requiring oxygen therapy.

Conclusion-Discussion: The use of fibrinolysis in the treatment of complicated parapneumonic effusions remains controversial, especially because of the effectiveness of the method. In our case, it resulted in the lysis of loculations and prevented the patient from undergoing pleural decortication using VATS.

OP078 **ASTHMA BEFORE AND AFTER THE PANDEMIC**

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Objectives: Although asthma is one of the most widespread obstructive pulmonary diseases, there is a limited data on how it was affected by COVID-19. The purpose of the following study is to examine the impact of the pandemic on asthma-related hospitalizations, compare their characteristics before and during the COVID-19 era and determine possible factors that are related to increased risk of an asthma attack.

Methods: This study retroactively collected electronic medical records of patients that were diagnosed with asthma at the University General Hospital of Larisa (UGHL) between 1/1/2018 - 15/11/2022. The records were collected via the program Asclepius, used by the Pulmonary Clinic of the UGHL. Demographic, laboratory and clinical data of 122 patients was collected and analyzed with SPSS statistics23.

Results: Patients admitted to the UGHL before the pandemic constituted a large percentage of total hospitalizations (90/122 = 73%). During the COVID-19 era, patients were significantly younger compared to those who were hospitalized before the pandemic (57±21 vs 48±20, p=0,041), while there was a decrease in asthma exacerbations where the patient had pneumonia during admission and/or needed to be treated in an intensive care unit (however, because there were no such hospitalizations during the COVID-19 era, this was not proven statistically). 80% of all patients in our sample were female. Male patients were more likely to be city residents than female patients (70% vs 49%, p=0,044).

Conclusions: There was a significant decrease in asthma-related hospitalizations during the pandemic. Besides the median age of the patients, no statistically significant differences were found between the two periods. There was a large percentage of hospitalizations regarding female patients, while several differences were found between male and female patients.

ORAL PRESENTATIONS

OP088 EVALUATION OF BEHAVIORS AND PERCEPTIONS OF HEALTH SCIENCES STUDENTS IN RELATION TO CONTRACEPTION AND SEXUALLY TRANSMITTED DISEASES

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Introduction: Sexually transmitted diseases (STDs) are a major public health problem. Determining health science students' attitudes and perceptions regarding contraception and STIs is a subject of interest. This research aims to record and study the common practices and the level of knowledge of health sciences students regarding contraception and STDs.

Material and methods: The anonymous questionnaire of 30 questions in Google Forms format was distributed via social media to Medical Students, Students of Dentistry, Pharmacy and Nursing from all over Greece. The basic questions were about the main method of contraception and its frequency of use and questions about the sources of information and the degree of satisfaction concerning their education from their school. It was completed by 271 students (200 women, 71 men), over half of whom study in the 2nd and 3rd year.

Results: It turns out that 72% of them always use a contraceptive method and the main method is the use of a condom (80.3%). 61% always use a condom. Furthermore, 58.3% of respondents have never been tested for STDs. Students believe that the most reliable information source about contraception and STDs is health professionals (92.9%). 28.7% state that their studies have greatly expanded their knowledge about contraceptive methods, while respectively 51.2% are about STDs. Only 22.1% strongly agree with the statement "I feel adequately informed about contraception and STDs."

Conclusion: It is critical to emphasize the need to further educate students on the above issues to both achieve safe sexual behaviors and improve future health professionals' knowledge.

OTORHINOLARYNGOLOGY

OP094 DIFFERENCES BETWEEN HPV (+) AND HPV(-) SQUAMOUS CELL HEAD & NECK CANCER

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Introduction: Head and neck squamous cell carcinoma (HNSCC) has been causally linked over the last 20-25 years to HPV infection thus developing a subset of HNSCCs. In a multicenter study by the International Agency for Research on Cancer published in 2007, a total of 70% of HNSCCs were found to contain HPV DNA, with HPV 16 being the most commonly observed type.

Methods: Search articles and studies from the PubMed, PMC and Cochrane databases, for articles from the last decade, with terms- keywords relevant to the title.

Results: HPV (+) HNSCC appears to be a distinct clinicopathological entity. It occurs in younger patients (30-50 years old), often in non-smokers with multiple sexual partners and oral-genital contact. It is most commonly located in the oropharynx, has a basal cell morphology on microscopic imaging, shows minimal p53 expression and rarely has chromosomal abnormalities. The prognosis is favorable despite frequent local lymph node metastases. The opposite is true for HPV (-) HNSCCs.

Most importantly, compared to HPV(-) tumors, HPV(+) HNSCCs show better outcomes and reduced risk of recurrence with increased radiochemosensitivity. The 5-year survival of HPV(+) HNSCCs compared with HPV(-) tumors is 57% versus 27%. This better prognosis of HPV(+) HNSCCs is attributed to: 1) Fewer or different genetic alterations that correlate with better response to treatment. 2) In the higher radiosensitivity probably due to the intact apoptotic response to radiation. 3) In the absence of field cancerization. 4) In the proven increased immune response to radiochemotherapy due to stimulation of the immune response to tumor specific viral antigens. 5) In the younger age, in the good condition of the organism and in the fewer co-morbidities of these patients.

Summary: HPV status and p16 oncogene overexpression are important parameters affecting survival. Therefore, p16/HPV testing in every case of HNSCC is of particular importance and should become a common practice.

ORAL PRESENTATIONS

OP131 CUTANEUS LEISHMANIASIS WITH ATYPICAL PRESENTATION OF RHINOPHYMA

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We present an interesting case of a 90 years old patient with Cutaneus Leishmaniasis (CL) involving the distal nose.

The patient presented as an outpatient at the University ENT clinic. The nose skin appeared erythematous, edematous and painful in palpation. Nasal endoscopy and mouth examination revealed nasal discharge and a necrotic ulcer on the hard palate. In collaboration with a Dermatologist the diagnosis of infected Rhinophyma was set and the patient received antibiotic therapy. Despite of treatment with antibiotics, patient's condition worsened and we proceeded with incisional biopsies from the nose and hard palate. Histopathological examination confirmed the diagnosis of Rhinophyma. Serological blood tests were found positive for Leishmania IgG/IgM antibodies. A treatment plan for Leishmania was scheduled but the patient passed away before treatment initiation.

CL is an infection of the skin caused by the protozoons of genus Leishmania. The average incidence of CL from 2004 to 2021 was 0,01% new cases/100.000 people in Greece. Nasal involvement is mentioned only in 9.82% of the patients with CL and rhinophyma is the less common manifestation. Rhinophyma is the final stage of Rosacea and is characterized by slow and progressive hypertrophy of the sebaceous glands and connective tissue on the distal 2/3 of nose. The typical clinical manifestation is an erythematous and irregularly swollen skin, with sebaceous dilated pores and telangiectasia. The diagnosis is set clinically, and is confirmed with Histopathological test. On the other hand, to diagnose CL is essential to find the protozoon on a sample of the patient or/and positive serological test for Leishmania. The differential diagnose includes inflammatory dermatoses, benign and malignant cutaneous lesions, infective causes etc. Amphotericin B or alternatively antimony compounds (N-methylglucamine-antimonate) are effectively used in treatment of CL.

OP064 ETIOPATHOGENESIS OF HEAD AND NECK CANCER

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Introduction: Various environmental factors contribute to the development of CCT- exogenous carcinogens as well as chromosomal factors. The purpose of this work is the description of these factors and their carcinogenic effect.

Methods: Search articles and studies from PubMed, PMC and Cochrane databases, for articles published in the English language, with terms- keywords relevant to the title.

Results: Causative and predisposing factors blamed for CCT are smoking, alcohol, chronic exposure to chemicals, solar and ionizing radiation, poor oral hygiene, nutritional deficiencies, GERD, endogenous genetic factors, and viral infections.

Smoking is the most important risk factor for CHD: consumption >10 years with 10-20 cigarettes/day leads to a risk of 7.3 compared to the rest of the population. Combustion of tobacco leads to the production of carcinogenic substances for the upper respiratory and digestive system. Alcohol metabolites interfere with DNA synthesis and repair and are the chemical substrate for the carcinogenic molecules of tobacco. The simultaneous consumption of ethyl alcohol and tobacco acts synergistically in the carcinogenesis of the CCT: the risk increases 15 times compared to the rest of the population and 38 times for the development of oral cavity cancer. GOP is blamed for the development of leukoplakia and cancer in the upper aerodigestive tract.

Of the viruses considered responsible for CCT, EBV is associated with endemic Burkitt's lymphoma and nasopharyngeal carcinoma, while the HPV virus is found in precancerous conditions and invasive carcinomas of the oropharynx in particular.

There are endogenous factors that alter the genetic material of the chromosomes that can lead to carcinogenesis such as alterations of the genetic code sequences, amplifications or deletions of parts of chromosome 3p, loss of heterozygosity of the 9p21 region.

Summary: CCT shows significant heterogeneity in terms of its etiology depending on its individual anatomical locations, age, gender and geographic origin.

ORAL PRESENTATIONS

OP124 A CASE OF MALIGNANT OTITIS EXTERNA WITH A PSORIATIC ARTHRITIS BACKGROUND

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Purpose: The purpose of this essay is to highlight a case of malignant otitis externa in the context of a newly diagnosed rheumatological disease. Through the thorough study and presentation of this case, which has otorhinolaryngological, rheumatological and infectious disease implications, we investigate the existence of an atypical and extremely aggressive form of the disease.

Material/ Methods: The case was diagnosed as malignant otitis externa at the First Otorhinolaryngology University Clinic of HiIppocratio" Hospital, operated with mastoidectomy and hospitalized. With the contribution of the Rheumatology Clinic of the Second Internal Medicine Department of the "Hippocratio" Hospital, the diagnosis of psoriatic arthritis-seronegative spondyloarthritis was made, while at the same time a neurological and dermatological assessment was carried out by the First Neurological Clinic of the "Eginition" Hospital and the First Dermatology Clinic of the "Syggros" Hospital. During her hospitalization, imaging tests were performed (lithoid CT, chest CT, sacroiliac MRI, Tc99 scintigraphy and 67Ga imaging), biopsies (external auditory canal formation, right plantar rash, and osteomyelitis), clinical and laboratory testing.

Results: A 32-year-old patient presents with a gradually worsening headache accompanied by otalgia and mastoid pain. A CT of lithoids, surgical investigation with mastoidectomy and biopsies were performed, at which point a diagnosis of malignant otitis externa is made, for which she was placed under antibiotic treatment. During her hospitalization, acropustulation of the palms and soles with accompanying back pain and low back pain emerged. After a rheumatological and dermatological assessment, a diagnosis of psoriatic arthritis-seronegative spondyloarthritis was made, for which treatment was started. Despite her initial improvement, the patient had numerous episodes of relapse, for which her antibiotic regimen was changed, a new lithoid CT, whole-body bone and joint scintigraphy, and 67Ga imaging were performed, showing an extensive osteolytic lesion of the mastoid bone with extension to the occiput and image osteomyelitis. A second canal wall up mastoidectomy surgery was performed. The patient is still hospitalized.

Conclusion/Discussion: There are few cases of persistent malignant otitis externa with extension to the occipital bone and a picture of osteomyelitis. The study of this case is therefore of great interest not only in terms of its rheumatological background, but also in terms of its infectious extension.

OP127 INVESTIGATION & TREATMENT OF NON-PULSATILE TINNITUS

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Introduction: By the term tinnitus we mean the perception of sound in the absence of an apparent sound stimulus. Tinnitus is divided into pulsatile and non-pulsatile(Non-PT).

Non-pulsatile are divided into mild and severe forms. Severe tinnitus is a very annoying symptom, which often affects the sufferer's quality of life.

Methods/Data: Search for articles and studies from the PubMed, PMC and Cochrane databases using terms- keywords relevant to the title.

Results: Non-PT causes: 1) Otitis media, foreign bodies, cell plug, noise exposure. 2) Presbycusis, Meniere's disease, otosclerosis, acoustic neuroma. 3) CEK and AMSS. 4) Temporomandibular joint dysfunction. 5) Aspirin-containing drugs and anti-inflammatory substances. 6) Stimulants, such as caffeine in coffee, coca cola and tea, and nicotine. 7) Emotional disorders: depression, anxiety.

Non-PT diagnosis: History: obtaining information related to the time of onset and any possible cause of tinnitus, with the location of the tinnitus (unilateral, bilateral, in the center of the head), its composition, intensity, discomfort, frequency (low/high). Any symptoms of depression, anxiety, insomnia and inability to concentrate are recorded. Clinical examination: 1) Otoscopy. 2) Tests with stimulators. neurinoma b) Electrocochleography in suspected endolymphatic hydrops c) Electronystagmography when vestibular symptoms coexist. Radiological examination: brain MRI in patients with contralateral tinnitus of unknown etiology and in patients with symmetrical or asymmetrical bilateral hearing loss. CT of brain and temporal bone in suspected pathological process such as otosclerosis and Paget's disease. Treatment of non-SE: A) Correct information and information of sufferers: 1/ about the "vicious cycle" between of tinnitus and fear/anxiety. 2/ That tinnitus decreases in intensity over time. 3/ psychiatric assessment in patients with a pre-existing history of depression. 4/ Hypnotherapy and Cognitive Behavioral Therapy for tinnitus. 5/ Useful general advice B) Coping techniques tinnitus: 1) Sound masking with: a) Hearing aids b) Tinnitus devices 2) Tinnitus retraining therapy C) Pharmacological treatment: antidepressants in severe tinnitus. Intratympanic injection of gentamicin and steroids in Meniere's disease. D) Transcranial magnetic stimulation with repeated low frequencies and electrical stimulation of the auditory cortex in severe chronic tinnitus. E) Surgical treatment

Summary: Tinnitus should always be treated as a symptom and not a disease, and should be thoroughly investigated to find its cause.

ORAL PRESENTATIONS

OP060 AROMATOTHERAPY AS TREATMENT METHOD OF OLFACTORY DISPORDERS: LITERATURE REVIEW

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Introduction: The sense of smell affects the quality of human life in many aspects. Olfactory dysfunction is a pathological condition that is usually caused by upper respiratory infections. In the midst of the COVID-19 pandemic, the scientific community is becoming more and more concerned about it, since this is a particularly difficult clinical problem with very limited therapeutic approaches. Aromatherapy ("Olfactory Training") is a new therapeutic method that aims to improve olfactory function in patients with loss of smell.

Aim: The aim of this study is to establish not only the effectiveness of Aromatherapy in patients with post-infectious olfactory dysfunction, but also the effectiveness of other factors, when used alongside this specific method.

Materials and Methods: An extended search in English literature was conducted in PubMed and Scopus. All papers published between February 2009 and December 2022, with an English abstract, were included in the initial stage of this study. The initial number of papers identified was 695. After rejecting those with irrelevant content and no endpoints, the final number of the papers chosen for this study was 10.

Results: In all of the selected studies, a statistically significant increase in olfactory function was observed after the use of Aromatherapy in patients with post-infectious olfactory dysfunction. Some studies reported that Aromatherapy is more effective when used alongside corticosteroids and omega-3 fatty acids, while others showed the method's effect on the Central Nervous System. Last but not least, it was observed that the total duration of the treatment was different in the studies that were selected.

Conclusions: So far, there are limited treatment options for post-infectious olfactory disorders. Studies have shown that Aromatherapy is a new therapeutic method that could contribute to improving the olfactory function in patients and this is the reason why it deserves to be studied further in the near future.

OP086 INVESTIGATION OF CERVICAL LYMPHADENOPATHY

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Introduction: Cervical lymphadenopathy (CLA) is the palpation of a cervical lymph node larger than 1 cm. Its swelling may be the result of proliferation of endogenous elements of the gland (lymphocytes or histiocytes) or infiltration by inflammatory (lymphadenitis) or by neoplastic cells. The findings from the patient's history and clinical laboratory examination will be the ones that will guide us in the diagnosis. The purpose of this work is to present a CLA investigation algorithm.

Methods: Search for articles and studies from the PubMed, PMC and Cochrane databases using terms- keywords relevant to the title.

Results: The investigation of CLA includes: 1. History: a) Details: Gender, Age, Duration of history, Occupation, Travels, Places, Living conditions, Dietary habits, Contact with animals, Sexual life, Taking medications b) Symptoms: fever, angina, weight loss, night sweats, itching, rash 2. Objective Examination: Extent, Location, Size, Consistency and Sensitivity of lymphadenopathy, Coexistence of splenomegaly and/or hepatomegaly, Examination of the skin and regional areas, Complete ENT examination 3. Necessary Laboratory Test: General blood with emphasis on lymphocyte morphology, TKE, Liver biology, Albumen electrophoresis, VCA-EBV antibodies (mainly <40 years old), Toxo-test, Chest x-ray, Mantoux skin reaction 4. Additional Laboratory Test: Pharyngeal smear culture, Antistreptolysin titer (ASO), Detection of antibodies against viruses or microbes, Antinuclear or anti-DNA antibodies, Serum calcium, Serum angiotensin-converting enzyme (SACE), N neoplastic markers: β-hCG, α-FP, PSA. 5. Fine needle biopsy (FNA) lymph node 6. Imaging tests: U/S Head Neck, Elastography, CT. 7. Open lymph node biopsy

Summary: CLA is a very common medical problem (0.5%/year). It applies to almost all medical specialties. CLA is observed in various diseases: Infectious (Virus, Bacteria, Chlamydia, Protozoa, Fungi, Rickettsia), Autoimmune (RA, SLE, Sjogren's Syndrome, MCI, Dermatomyositis, Ankylosing spondylitis), Iatrogenic causes - hypersensitivity (Heroinosis, vaccination, silicone implants, drugs), Potentially malignant (Castleman's disease, HIV-infection), Malignant (Hematological and Metastatic), Non-infectious (Kawasaki disease, Kikuchi, Rosai-Dorfman, Sarcoidosis). This rich etiology of CLA makes its investigation a particularly complex process.

ORAL PRESENTATIONS

ANATOMY (I)

OP067 SYNDROMIC CRANIOSYNOSTOSIS

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Introduction/Background: Craniosynostosis is a condition of the fetal skull, associated with premature convergence of one or multiple sutures. Fusion of a cranial vault suture limits its growth perpendicular to it - resulting in compensatory growth of the cranial bones parallel to it. Syndromic craniosynostosis includes cases where the cranial deformity is accompanied by respiratory, neurological, cardiac, musculoskeletal and audio-visual abnormalities. The most common syndromes are Apert, Crouzon, Pfeiffer, Muenke, Saethre-Chotzen syndromes and craniofrontonasal syndrome. This paper is a review of these syndromes, their pathophysiology and their surgical treatment.

Materials and Methods: A comprehensive search of the literature was performed in PubMed database with the terms “craniosynostosis AND syndromic craniosynostosis” and the filters “Free full text”, “Review” and “Systematic Review” for all works published in English. Excluded were all studies focused on “non syndromic craniosynostosis”.

Results: Syndromes associated with craniosynostosis are a result of mutations in genes including FGFR genes, the TWIST gene, and genes of the ephrin family (EFNB-1). Comprehension of each syndrome’s genetic database is not only necessary for its diagnosis, but also useful in recent pharmacological research.

Conclusion/Discussion: In this review, the genetic basis in addition to the surgical approach of syndromic craniosynostosis are examined and analyzed. While the therapeutic approach of each syndrome has evolved greatly, future research is needed in order to fabricate new approaches that take into account each patient’s specific symptoms-including their neurological and respiratory difficulties- as well as their quality of life.

OP070 **TRIFURCATION OF THE COMMON CAROTID ARTERY**

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Background: Most scientists consider the brain as the most complex, fascinating, and vital part of the human body, particularly susceptible to perfusion and oxygenation disorders. Common Carotid Artery (CCA) that emerges from the Aortic Arch is one of the main arteries of the brain and it presents multiple variations. Aim of this systematic review is to present the variations of the Common Carotid Artery, especially the vessel's trifurcation.

Material and Methods: Detailed research was performed in PUBMED and Google Scholar databases using the terms "common carotid artery AND variations", and "Common carotid artery AND trifurcation". No further filters were used.

Results: Finally, 7 case reports were identified, regarding people subjected to surgical procedures, or cadavers, which were consistent with this variation. After the description of 7 different cases, some observations were made, regarding the Trifurcation of the Common Carotid Artery, which seemed to apply to every case presented.

Conclusion: This review accentuates the volatility of the anatomic structure of the Common Carotid Artery regarding this variation, as well as the importance of knowing the existence and the form of the Trifurcation of the Common Carotid Artery, especially in patients undergoing surgical procedures. The endless possibilities of this variation of the Common Carotid Artery, create new directions for research, provide new perspectives, and motivate researchers to identify, with future studies, if there are any anatomical variants of the Common Carotid Artery, that can be pathologically relevant and imperil a patient.

ORAL PRESENTATIONS

ΕΠ081 **LARSEN SYNDROME AND ASSOCIATED SPINAL DEFORMITIES**

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Background: Larsen syndrome is a rare genetic disorder associated with multiple joint dislocations, anomalies of the spine and high mortality. Aim of the present systematic review is to examine the genetic basis of Larsen syndrome, clarify its symptoms, and define all the existing therapeutic approaches.

Materials and Methods: A comprehensive search of the literature was performed in PubMed database with the terms "Larsen syndrome AND /OR spinal diseases AND/OR deformities AND/OR anomalies", for all works published in English from 1990 to 2022. Inclusion criteria considered molecular and clinical studies, management and surgical treatment of related deformities, case reports of patients with the syndrome, and reviews of the associated anomalies.

Results: Larsen syndrome is caused by mutations in the FLNB gene, located on chromosome 3p14.3. The FLNB gene encodes the cytoskeletal protein filamin B, which has a crucial role in the development of the skeleton. Symptoms include joint dislocations, particularly in the elbows, wrists, hips, and knees, characteristic facial features such as hypertelorism and cleft palate, cervical kyphosis, kyphoscoliosis and short stature. Larsen syndrome may be conservatively treated initially, although surgical intervention is usually required. Various surgical techniques, including posterior spinal fusion and anterior decompression, have been proposed along with growth-sparing procedures.

Conclusion: This review highlights the genetic basis of Larsen syndrome, the clinical manifestations as well as the existing current therapeutic approaches. Preoperative and postoperative care and education ensure the optimal result. Further research is needed to identify novel therapeutic modalities for this condition.

ΕΠ084 **THE MENISCUS AS A SENSORY ORGAN**

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Introduction: The menisci are crescent-shaped fibrocartilaginous structures found between the femoral and tibial condyles, that improve knee stability and function by assisting in load transmission, shock absorption, nourishment and proprioception. The aim of this study is to provide an extended literature review regarding the role of menisci in the perception of joint position and motion.

Methods: A review of all relevant literature published on PubMed was performed.

Results: The presence of nociceptors and mechanoreceptors in human menisci has been identified in immunohistochemical and histological studies, suggesting that the menisci play a significant role in knee perception of position and motion. Experimental studies on mammals have also proven the presence of sensory receptors in menisci, while human observational studies have shown that patients with meniscal tears present with poorer postural stability and proprioception.

Conclusion: Besides menisci known mechanical properties, the meniscus also plays an essential afferent role in the sensory feedback mechanism of the knee, acting as a “sensory organ” and therefore assisting in joint stability and biomechanical function.

ORAL PRESENTATIONS

OP112 MUSCULOCUTANEOUS NERVE DUPLICATION AND COEXISTENCE WITH AN AXILLARY ARTERY BIFURCATION AND ATYPICAL VEINS DRAINAGE

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Background-the study aims to highlight the coexistence of the musculocutaneous nerve (MCN) duplication with an atypical axillary artery (AA) bifurcation into a superficial brachial and a brachial artery (SBA and BA) and atypical veins' drainage.

Material-Methods: The AA branching pattern was dissected in a 75-year-old male cadaver of a body donor along with the AA course and related structures.

Results: The AA after the common division into a lateral thoracic and a thoracoacromial artery, bifurcated into a superficial and a deep axillary stem (SAS and DAS) that continued as SBA and BA. SAS and DAS were located anterior to the median nerve and lateral to the ulnar nerve. The MCN duplication was located at the level of AA bifurcation. The MCN1 passed through the coracobrachialis muscle (CBM) and supplied the biceps brachii and the brachialis muscle and the MCN2 innervated the CBM. The deep brachial vein, the two superficial brachial veins, the thoracodorsal, the subscapular and the lateral thoracic vein drained into the axillary vein, with the basilic vein.

Discussion-Conclusions: Knowledge of the upper limb arterial variants is important for surgeons to avoid injuries with preoperative planning. AA variants may be combined with high origin of the radial and brachial arteries, clinically important alterations in axilla reconstruction and in therapeutic approach of aneurysms. Variants of the brachial plexus (BP) coexist with vascular variants. Nerves with atypical origin and distribution are more prone to accidental injury (during humeral fractures, mobilization of the coracoid process or peripheral anesthesia of the upper extremity) and neuropathies. In BP damage, diagnosis can be difficult when the lesions are referred to an atypical distribution of the BP branches. Knowledge of the MCN branching is useful in electrodiagnostic investigation of peripheral nerve damage, treatment of spasticity of the elbow flexor muscles or treatment of recurrent anterior instability of the shoulder.

OP133 VARIATIONS OF RADIAL RECURRENT ARTERY

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Introduction: The radial recurrent artery is usually a branch of the radial and arises at the level of the elbow triangle. It flows upwards, along the radial nerve, and it's involved to the arterial network of the elbow. However, a multitude of variations have been observed, which originate from the ongoing embryonic development, in its shape, the number of vessels encountered, and its course.

Material and Methods: To write this paper, PubMed was used as a search source, using the keywords: radial recurrent artery, radial artery, anatomical variations, embryology, brachioradial artery. The filters applied to the search results were as follows:

- English as the language of writing
- publication date: from 2000 onwards
- full text of the article
- Articles concerning humans

Then those articles were discarded that:

- did not deal with a relevant topic
- were not available

The abstract or even the full text of those that were in line with the above were studied so that their data could be presented in the paper.

Results: With regard to the its origin, the most common variation is that it is a branch of the brachial artery. In addition, cases have been recorded in which it arises either from the interosseous or from the brachioradial. As to the number, there is a possibility of its absence, as well as its duplication, while the secondary almost always originates from the brachial. Lastly, as to the course, it's been recorded, firstly its course behind the tendon of the biceps brachii muscle and secondly the 'ring' around the same tendon which forms, after the anastomosis with the secondary radial recurrent.

Conclusion: The knowledge of the different arterial patterns observed have academic and clinical importance for surgery and radiology, offering the possibility planning to mitigate complications and prevent injury. Additionally, this vessel offers a bypass route for the upper limb, which allows for both the use of one of the terminal branches of the brachial artery as a graft, as well as the ligation of the latter. Lastly, further research on its particular variants is necessary, since the present research findings aren't sufficient.

ORAL PRESENTATIONS

BIOLOGY/ GENETICS AND MOLESCULAR BIOLOGY

OP027 GENETICS OF SEXUAL ORIENTATION

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Introduction: The purpose of this paper is to analyze the sexual orientation in general and in particular to present findings on its biological and genetic nature. Despite the fact that different sexual orientations are increasingly displayed in recent years, they have always existed throughout history, not only in humans but also in over 1,500 animal species. Studies with non-heterosexual individuals have given both biological and genetic support to sexual orientation.

Material and methods: This was a literature survey, conducted mainly using international bibliographic databases ***Scopus*** and ***MEDLINE***, through the ***PubMed*** search engine. Major keywords in the study were "sexual orientation genetics". The search resulted in thousands of studies and reviews, both recent and older. Emphasis was placed on studying the most current articles and researches as possible, resulting in the current bibliography.

Results: The search results in a wealth of data, most notably: The medial nucleus of the anterior hypothalamus was observed to be larger in homosexual men compared to heterosexuals. Regarding the hormonal effect, it was found that 15-30% of women with congenital adrenal hyperplasia (***CAH***), who are exposed to high levels of testosterone during fetal life, are non-heterosexual. Concerning genetics, chromosome regions related to sexual orientation such as ***Xq28***, ***7q36***, ***8p21-p11*** and ***SLITRK5*** and ***SLITRK6*** genes on chromosome 13 were identified. While on chromosome 14, a mutation in a gene associated with abnormal thyroid gland function is correlated with homosexuality in men. Finally, the mothers of homosexual boys have significantly higher levels of the ***NLGN4Y*** protein encoded by the corresponding gene on chromosome Y, compared to mothers of heterosexual boys.

Conclusion: It becomes clear that a person's sexual orientation seems to be a biological and genetic trait and not a choice of the individual, which is wrongly believed by many.

OP031 THE BOY WITH THREE BIOLOGICAL PARENTS

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Introduction: On April 22, 2016, a boy was born to three parents, the product of an innovative IVF method. The reputation of this technique precedes itself, as it promised a cure for all mitochondrial diseases. Its further testing over the next few years in several countries yielded controversial results and received both skeptical and encouraging reviews.

Methods: 1. The method is called pronuclear transfer, and involves fertilizing both the mother's egg and a donor egg with the father's sperm. Before the fertilized eggs begin to divide into early stage embryos, each nucleus is removed. The nucleus from the donor's fertilized egg is rejected, and replaced by the one from the mother's fertilized egg. **2.** A key problem, however, is the inability to eliminate all defective mitochondria. That's why the technique from John Zhang's team took part in Mexico in the first place.

Results: 1. The Jordanian couple sought help from John Zhang as they had 2 miscarriages due to Leigh syndrome in the past. **2.** Beyond that, however, the lack of scientific understanding of many basic steps involved in the implementation of this technique, such as the result of mixing mitochondrial DNA from two different people, caused a negative evaluation by the director of the Office of Compliance and Quality of Biological Medicines of the FDA. A few months later, the Nadiya clinic in Kyiv, at a cost of 15,000 euros, has started to provide three-parent IVF to infertile couples, but with great failure. In 2019, the IVF technique was successfully carried out in Athens, but with doubts from the University of Oxford as the couple in which it was carried out did not suffer from mitochondrial disease. In 2022, Australia became the second country to legalize the technique, after the United Kingdom.

Discussion: Certainly the correct evaluation of the results of this innovation requires both the rejection of fatalism, about the beginning of the so-called designer babies era, and the demystification of this technique as the ultimate tool for the treatment of any mitochondrial disease. Let's not forget that in the past, similar triplets of in vitro fertilization techniques were abandoned, despite the partially positive results they offered.

ORAL PRESENTATIONS

OP065 THEURAPEUTIC ADVANCES IN THE TREATMENT OF FABRY DISEASE

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Introduction/Aim: Fabry disease is a rare X-linked lysosomal storage disorder caused by mutations in the GLA gene that cause deficiency of the enzyme α-galactosidase A (α-Gal A) and thus progressive accumulation of mainly globotriaocylceramide (Gb3/GL3) and its deacylated derivative globotriaosylsphingosine (lyso-GL3/Lyso-Gb3) in several cell types and body fluids, resulting in progressive, multisystemic and life-threatening manifestations.

This study aims to review the literature regarding current and investigational treatments of Fabry disease.

Methods: PubMed was searched using a combination of MeSH terms and keywords.

Results: Current treatment options for Fabry disease include Enzyme Replacement Therapy (ERT) with α-Gal A or α-Gal B and migalastat, an orally administered chaperone in patients with amenable GLA mutations that acts by binding to and stabilizing the defective enzyme to facilitate its trafficking.

ERT shows limitations, as it necessitates bimonthly IV access, has limited tissue penetration, does not halt progression of renal and cardiac fibrosis, and may be further complicated by the production of Anti-Drug Antibodies (ADAs). There are multiple therapies under development, such as pegunigalsidase alpha, a PEGylated form of a-GAL, that displays a prolonged plasma half-life (80h) and reduced immunogenicity compared to standard ERT, and moss-derived a-GAL, a recombinant form of the enzyme produced in genetically modified moss. Additionally, gene replacement therapy is undergoing clinical trials utilizing both in-vivo and ex-vivo techniques and various viral vectors.

Other potential treatments include a-GAL mRNA, encapsulated in lipid nanoparticles, to stimulate a-GAL production in several tissues and Substrate Reduction Therapies (SRT), using inhibitors of Gb-3 synthesis pathway.

Conclusion: ERT greatly improved quality of life in patients with Fabry disease but poses significant limitations and side effects. Thus, the need for development of newer, more effective therapies is acknowledged.

OP113 CRISPR-Cas9 AND REDUCTION OF IMMUNE REJECTION IN PANCREATIC B CELL TRANSPLANTS

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Introduction: To review the recently published literature regarding the usage of CRISPR-Cas9 to reduce immune rejection in human stem cell-derived pancreatic β cell grafts as a treatment for diabetes mellitus.

Material and methods: A literature search was performed in the PubMed database, with the aim of finding experiments that utilize the molecular gene editing tool CRISPR-Cas9 to improve the immune tolerance of human induced pluripotent stem cells for their use in regenerative medicine, referring to the example of diabetes mellitus.

Results: The use of stem cells of various origins and their differentiation with appropriate protocols into desired cell types to perform regenerative therapies seems promising. The issue of immune rejection arises when transplanting heterologous human induced stem cells. Thus, experiments were carried out where CRISPR-Cas9 was exploited to knock out genes related to immune surveillance, such as histocompatibility antigens (HLAs), or to overexpress genes that suppress the immune response, such as PD-L1. After processing the cells, they retain their pluripotency, allowing the generation of pancreatic β cell grafts and their administration without immunosuppressive medication. This particular therapeutic approach for diabetes is still in a phase I clinical trial and we are awaiting the results.

Conclusions: Having completed the literature research in the subject, it is understood that this particular approach will facilitate therapies based on differentiated stem cell transplants, starting with diabetes mellitus, one of the most common diseases in the West. However, given that CRISPR-Cas9 is a relatively new tool for modifying genetic material, it is necessary to conduct more experiments and clinical trials in order to confirm the effectiveness and safety of the proposed method.

ORAL PRESENTATIONS

OP119 TRIPLE-A SYNDROME, A MULTISYSTEMIC RARE GENETIC DISEASE

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Introduction: Achalasia-addisonianism-alacrima syndrome, Allgrove syndrome, or triple-A syndrome is a multisystem rare autosomal recessive genetic disorder (OMIM: 231550). Patients usually suffer from a triad of symptoms of Addison's disease, achalasia of the cardia and alacrima. and may present progressive neurological symptoms. Triple-A is caused by homozygous or compound heterozygous pathogenic variants in the ***AAAS*** gene, located on chromosome 12q13.13. ALADIN, the product of ***AAAS gene***, is a member of the WD-repeat family of proteins and is a component of the eukaryotic nuclear pore complex. Here, we describe the first case of Allgrove syndrome in Greece, diagnosed at the University Hospital of Alexandroupolis. We also present a number of cases from international literature.

Methods: Starting with this first Greek family with one affected individual, we used a number of online sources, tools and databases to expand our research. We looked for clinical and research articles, but focused on articles that included molecular and genetic techniques such as gene mapping, cloning, expression, mutational analysis and sequencing. We also recorded the ethnicity of affected families and the type and frequency of mutations.

Results and Conclusions: Allgrove syndrome has a reported prevalence of 1<1.000.000. However, a large number of mutations have been detected, indicating significant genetic heterogeneity. Nearly 100 mutations are known with the majority belonging to the missense/nonsense category, but insertions, deletions, and splicing mutations are also common. The multisystemic nature and manifestations of triple-A syndrome often confound its diagnosis and limit our understanding of the exact molecular mechanism that causes the syndrome. Clinical findings may vary from case to case, making the syndrome a great example of the importance of genetic diagnosis in a clinical environment. This is a chronic disease with only symptomatic treatment, so proper genetic diagnosis benefits the psychology of the patient and their relatives.

OP051 **HUMAN GENOME: HOW DOES IT AFFECT VIOLENT INFECTIONS?**

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Introduction-Objectives: The aim of the present review was to delve into the effect of gene polymorphisms on the human immune response to viral infection. More specifically, it was investigated whether the polymorphisms either predisposed the host to severe disease or were associated with immune protection or mild disease.

Methods-Data: Through systematic review of the present bibliography on the NCBI (National Center for Biotechnology Information) platform, human polymorphisms were found that could affect the progress of infections from viruses with high prevalence that can cause severe disease (e.g. Hepatitis Viruses, Influenza Virus, Human Immunodeficiency Virus, SARS-CoV-2, Respiratory Syncytial Virus). Consequently, the mechanisms that involve the respective gene products were studied in order to ascertain their impact on other viral infections. Finally, all the polymorphisms were arranged according to organic systems and cellular types and were further classified by their impact on the host's immune response (immune protection / mild disease, severe disease).

Results: It was found that the vast majority of the polymorphisms is associated to immune mechanisms and more specifically, to chemical mediators (e.g. interleukins, interferons), cellular receptors (e.g. Toll-like Receptors, receptors of chemical mediators), natural immune responses, the clusters of differentiation (CD), as well as non-immune cells, such as hepatic cells, alveolar cells, erythrocytes and epithelial cells. Some of the genes that were recorded are IL-10(1), IL-6(2), TNF(3,4), TLR8(5), CCR5(1), CCR2(1,6), CD4(7), CD55(8) and the surfactant protein A2 (SFTPA2)(8). Most of the polymorphisms were related to worse prognosis.

Discussion: The genetic profile is concluded to play a key role in the progression of a viral infection, while it could be a valuable therapeutic tool in the field of Precision Medicine.

ORAL PRESENTATIONS

ORTHOPAEDICS

OP007 DISTAL BICEPS TENDON RUPTURE: POSTOPERATIVE RESULTS

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Introduction: Distal biceps tendon rupture (DBTR) is a rare injury, usually the result of an eccentric hyperextension force with the elbow in 90° flexion and affects mostly middle-aged men. We present the postoperative results of the reattachment of the tendon to the radial tuberosity with the placement of two anchors, where the proximal anchor is sutured first and then the distal one, as it's applied in the 2nd Orthopedic Clinic of the GNTh "G. Gennimatas"

Material and Methods: A retrospective study was conducted at the 2nd Orthopedic Clinic of the GNTH "G. Gennimatas" from January 2018 to December 2022 including patients who underwent distal biceps tendon repair. Tendon reattachment to the tuberosity was achieved using two anchors through an anterior approach. The proximal anchor was used for the reattachment of the tendon and the distal one for the reconstruction of the footprint at the radial tuberosity. The patients were evaluated in January 2023. They were assessed clinically by measuring the elbow flexion-extension and forearm pronation-supination range of motion and functionally, based on the Disabilities of the Arm, Shoulder and Hand, Mayo Elbow, Medical Research Council scores for muscle strength and American Shoulder and Elbow. Complications were also reported.

Results: Nineteen male patients were studied. The average age was 48 years. The injury concerned the right biceps in 42% (8 patients). The majority of the patients were manual workers. The average follow-up was 26.7 month. In the majority of the patients, the range of motion was full. There were satisfying, high scores in all functional tests. No complication was reported.

Conclusion: This specific technique of distal biceps tendon reattachment is a successful technique of rehabilitation. It was associated with quick return to daily activities and satisfactory joint mobility, without any reported complication.

OP008 **RADIAL HEAD ARTHROPLASTY: POSTOPERATIVE RESULTS**

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Introduction: Radial head fractures are common intra-articular elbow fractures that can be associated with elbow instability or mechanical block to elbow motion. In the setting of three or more bone fragments (Mason III) or instability (Mason IV), replacement of the head with a synthetic prosthesis is considered. The aim of the present study was to evaluate the postoperative mobility and function of patients who underwent radial head arthroplasty for complex fractures.

Material and Methods: A retrospective study of patients who underwent a double mobility radial head replacement (ICARA Radial Head System) from January 2019 to December 2022 was conducted at the 2nd Orthopedic Clinic of the GNTh"G. Gennimatas". The patients were assessed in January 2023. They were evaluated clinically with elbow flexion-extension and forearm pronation-supination range of motion and functionally with Disabilities of the Arm, Shoulder and Hand, Mayo Elbow, Medical Research Council scores for muscle strength and American Shoulder and Elbow. Complications were also reported.

Results: Eight patients were studied. The average age was 65 years. The median follow-up was 25 months. The range of motion was found to be minimally restricted in the majority of patients. The degree of satisfaction was high with high percentages in all functional scores. One postoperative dislocation, which required revision, was reported.

Conclusions: Dual-mobility arthroplasty of the radial head for the treatment of complex fractures is associated with encouraging results, as it is connected with a quick return to daily activities, satisfactory joint mobility and minimal postoperative complications at the same time.

ORAL PRESENTATIONS

OP036 QUALITY OF LIFE IN SPINAL CORD INJURY: A REHABILITATION'S POINT OF VIEW

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Introduction: Spinal cord injury (SCI) is a serious type of trauma that is expected to challenge about half a million new patients every year in all aspects of their lives. A fundamental question is which part of their life can be given back to them considering the existing state-of-art technology and medical knowledge.

Materials and Methods: We conducted a thorough review of the existing literature including systematic reviews and meta-analyses.

Results: The process of rehabilitation serves not only as a useful adjunct for improving the operation's outcomes, but it also progressively enhances the patients' functionality and quality of life. Many rehabilitation techniques are used to prevent further damage with the ultimate goal of regaining, possibly lost, locomotion and functional independence. Electrical stimulation and weight exercises for the upper extremities, locomotor and respiratory training, Range of Motion exercises to retain joint elasticity and pharmacological agents are all examples of rehabilitative methods used for SCI, which depending on the site and magnitude of the injury have different expected outcomes. A Physiatrist's involvement in the assessment of the patient can provide some critical benefits to the trauma care team. Rehabilitation's evolving research on neuroprotection and regeneration drugs raises hopes that we can transform a previously endpoint matter into something more bearable and even at some point reversible.

Conclusion: The process of rehabilitation as we know it today with its main growing aspects that are continually evolving, provides the best and most hopeful fight for the people that have been experiencing life after spinal cord injury.

OP105 **THE BASIC APPLICATIONS OF THREE DIMENSIONAL PRINTERS IN ORTHOPEDIC SURGERY**

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Introduction-Goals: Three-dimensional (3D) printers are a valuable tool in Orthopedic Surgery, offering multiple benefits for both patients and surgeons. By utilizing imaging techniques and computer-aided design, personalized therapeutic options can be provided for each patient. In this article, we will analyze the various applications of 3D printers in orthopedic surgery and how this technology is evolving in the field.

Methods-Data: In this literature review, we searched for publications related to the basic principles of 3D printing and its applications in orthopedic surgery in the PubMed and Google Scholar databases. Additionally, we checked the sources of the selected articles to find relevant information on the topic.

Results: The capabilities of 3D printers include, initially, the construction of personalized prostheses and orthotics on the anatomy of each patient. Equally important are the benefits in training new doctors as it provides the ability to construct virtual models and real anatomical structures that surpass the limitations of mannequins and cadaveric materials used to date. Also, the design of the surgical procedure, which includes converting the image into a 3D file, cleaning the model, processing it, and printing it. Another application is surgical guides that are low-cost tools that assist the surgeon in the correct application of grafts or other surgical instruments, and finally, 3D grafts, which can be either metallic, ceramic, or polymeric and are customized for each patient.

Discussion: In conclusion, the use of 3D printers is expanding rapidly, and in today's era of computers and mobile technology, the possibilities are endless. However, like any new technique, it requires time and practice for proper application.

ORAL PRESENTATIONS

OP140 JUVENILE IDIOPATHIC ARTHRITIS

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OP066 **VARIATIONS OF THE MEDIAN NERVE AND CARPAL TUNNEL SYNDROME**

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Background: Carpal tunnel syndrome (CTS) is a common neuropathy caused by entrapmeint of the median nerve (MN) in the carpal tunnel. Since the MN has many variations regarding its course and branches, knowledge of all of them is very important to avoid injuries during the surgical treatment of the syndrome. Aim of the present systematic review study is to declare the different variations of the MN as well as the diagnostic techniques of the syndrome.

Material-Methods: Data were extracted from studies published in PubMed. A detailed search in Pubmed was performed with the terms "Variations" AND "median nerve" AND "carpal tunnel syndrome" revealed 213 results. 133 out of them were excluded. Inclusion criteria included relevance to the topic, DOI or available full text, and English Language. Furthermore, data was also extracted from the bibliography of the above mentioned literature.

Results: The main variations of the MN are classified into 2 categories, that of Lanz and that of Amadio. Lanz's classification is the mostly used in the surgical literature with Group 3 (Bifid MN) being the main cause of CTS. Branches and anastomosis of the MN which are not placed in neither of those 2 categories are also described, with the third common digital branch being the most injured nerve during carpal tunnel release surgery. Diagnostic techniques include: Physical examination combined with NSC tests, MRI, Ultrasound or Elastography. Although NCS was the most used way of diagnosing CTS in the past, in the recent literature, ultrasound and elastography appear to be the most accurate techniques.

Conclusions: This review highlights the importance of knowing the different variations of the MN causing CTS in order to reduce injuries during the carpal tunnel release surgery, as well as the existing current diagnostic approaches which make CTS more affordable and easier to recognize.

ORAL PRESENTATIONS

PSYCHIATRY

OP025 INTERNET USE, MENTAL HEALTH, AND LONELINESS AMONG STUDENTS IN GREECE

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Purpose: During the initial phase of the COVID-19 pandemic, precautionary measures closed universities and workplaces and forced millions to stay at home for an extended period of time. Public health authorities have recommended restrictions on social contact to try to limit the spread of the virus. These boundaries have profoundly changed the way people work, learn, connect with loved ones, perform daily tasks, celebrate and grieve. Technology has played a key role in this transformation. The aim of our study was to identify the prevalence rate of problematic internet use in a random sample of students in Greece and to correlate it with psychopathological factors and loneliness.

Materials and method: The sample was composed of 296 students, regardless of the university they attend, who completed the research tools on an online platform.

To collect the data, the following questionnaires were given to the students:

1. Internet Addiction Test
2. Beck's Depression Inventory
3. UCLA Loneliness Scale
4. General Health Questionnaire

The SPSS version 25.0 program was used for the statistical analysis of the data.

Results: Most students had a mild or moderate level of use, while normal use was made by 58.5% of our sample. The frequency of internet use appeared to be related to the existence of depression and the severity of self-reported depressive symptoms, increased feelings of loneliness and the possibility of having a mental health disorder.

Conclusion: The present study showed strong positive associations between degree of internet use and general psychopathology, depressive symptoms, and feelings of loneliness. The resulting correlations lead to those vulnerable individuals, candidates for the provision of professional support for the prevention of addiction.

OP062 **IS ONE BORN OR MADE VIOLENT?**

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Introduction: Violent crime is a global problem. A genetic background is considered to exist underneath violent behavior, so research has been conducted for this matter.

Data and results: The dominance of the male sex in such behavior indicates that mutations in genes in the androgen synthesis pathway are involved. Moreover, genes at the stress response pathway are blamed, since violence is linked with inability of controlling emotions. Most research has focused on the MAO-A gene, while at the same time examining the effect of childhood maltreatment on developing violent behavior.

Conclusion: The conclusion is that both the genetic background and environmental factors are responsible for developing aggressive behavior. This knowledge could help in the prevention and reduction of crime, but, for the time being, more research is needed.

ORAL PRESENTATIONS

OP068 GENDER DISORDER AND SUICIDE: AGGRAVATING FACTORS AND SUPPORTIVE INTERVENTIONS

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Introduction: Transgender individuals constitute a vulnerable group and the problems they face can often have a negative impact on their mental health. The present study aims to investigate the prevalence of suicidality, as well as depressive symptomatology, in individuals with gender dysphoria.

Methods: A search was conducted on the available literature in scientific data bases (e.g. pubmed, scholar google) and studies referring to individuals with the corresponding diagnoses from DSM-V (gender dysphoria) and ICD-11 (gender incongruence) who manifested depressive symptoms, suicidal ideation, self-injurious behaviour or suicide attempt were chosen.

Results: Increased prevalence of these adverse psychological outcomes in individuals with a gender dysphoria diagnosis compared to the general population has been reported. Various aggravating factors were identified, such as lack of familial support, bullying in school, social isolation and stigmatization, poor financial state, lack of employment and restricted access to mental health services. In contrast, acceptance of the individual by their family and community, as well as access to the proper medical gender-affirming treatment are correlated with a decrease in the feeling of dysphoria.

Discussion: Research concerning this particular group is lacking, while constant reevaluation of the diagnostic criteria on gender dysphoria hinders the grouping of results. It is essential that there be greater awareness of this particular issue in the medical community, as well as sufficient access to healthcare treatment that is considered necessary for transgender individuals and contributes to the improvement of their mental health.

OP091 **BORDERLINE PERSONALITY DISORDER AND THERAPEUTIC INTERVENTIONS**

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Introduction: Borderline Personality Disorder (BPD) is the most common among personality disorders affecting approximately 2% of the general population[1]. It is characterized by unclear identity, impulsivity, instability in relationships, emotions and behavior, high rates of self-harm and suicide, severe functional impairment and comorbid mental disorders [1]. Patients with BPD have historically been viewed as difficult to diagnose and treat using either psychotherapy or pharmacotherapy. In recent years however there has been a rich literature on the treatment of BPD itself and its comorbidities. [2]

Objective: In this article we describe the main characteristics of commonly used specialized therapies and review the literature of therapeutical interventions and their efficacy in treating patients with BPD.

Methods: We take into account clinical trials, metanalyses and systematic reviews assessing the results of different treatment approaches in patients with BPD as a primary diagnosis in regard to suicidality, hospitalizations, BPD symptoms (DSM V) and incidence of comorbid psychiatric disorders.

Results: Data shows treatments used include: Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Schema Focused Therapy (SFT), Mentalization Based Therapy (MBT), Transference Focused Therapy (TFT), System Training for Emotional Predictability and Problem Solving (STEPPS) and finally Treatment As Usual therapy (TAU)[2],[3]. The most well studied modality is DBT showing significant improvement in suicidality, self-harm, anxiety, depression, and BPD symptoms in general according to DSM V[4],[5]. Although modalities such as CBT, MBT, TFT also result in overall improvement.[6],[7]. In respect to pharmacotherapy there is no definite evidence supporting its use for patients with BPD but the American Psychiatric Association (APA) suggests the use of antipsychotics, SSRIs and mood stabilizers for symptom guided therapy of psychotic symptoms, affective lability and impulsivity respectively.[8],[9]

Conclusion: In conclusion, past conceptions perceiving BPD as a non-treatable disease should be revised as symptoms of BPD can be significantly improved or even resolved as many patients completing specialized treatment schemes do not meet the diagnostic criteria for BPD afterwards. [1]

ORAL PRESENTATIONS

OP129 PSYCHEDELIC SUBSTANCES IN THE TREATMENT OF PSYCHIATRIC DISORDERS: RECENT UPDATES AND CHALLENGES

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Introduction: Mental illness is one of the leading causes of functional disability worldwide. Since available psychiatric medications are not effective for many patients, the need to explore new treatment options arises. Recently, the role of psychedelics as a promising alternative in the treatment of psychiatric disorders is being redefined. These substances include classical psychedelics such as lysergic acid diethylamide (LSD), psilocybin and ayahuasca,and atypical ones such as 3,4-methylenedioxymethamphetamine (MDMA) and (es)ketamine.

Purpose: To highlight recent scientific evidence regarding the use of psychedelics in the treatment of psychiatric disorders, the potential benefits and concerns of their use.

Materials - Method: A literature review was conducted by collecting data from the scientific database PubMed with the keywords: psychedelics; lysergic acid diethylamide; ayahuasca; ketamine; psilocybin; mood disorders; psychiatric treatment.

Results: Increasing scientific evidence supports the potential of psychedelics in the treatment of mental illness. There is evidence for the beneficial effects of psilocybin, ayahuasca and LSD in treatment-resistant depression and in reducing depressive and anxiety symptoms, and their role in obsessive-compulsive disorder and addictive disorders is being examined. Esketamine already has an indication in severely depressed suicidal patients, while MDMA is being considered in the treatment of post-traumatic stress disorder. Although the exact mechanisms of action are not fully understood, the benefit/risk profile appears to be favorable. However, they have been associated with the occurrence of manic and dissociative episodes.

Conclusion: The use of psychedelics in clinical practice adds a new dimension to modern psychopharmacology. Whether current expectations will be fulfilled will depend on more future clinical studies of larger sample sizes and strictly defined objectives. A prerequisite is the establishment of a well thought-out therapeutic and legal framework that takes into account the concerns involved in their use.

OP055 **THE EFFECT OF SOCIAL AND DEMOGRAPHIC FACTORS ON THE LEVELS OF ANXIETY AMONG STUDENTS OF THE ARISTOTLE UNIVERSITY OF THESSALONIKI**

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Purpose: The purpose of the study is to investigate the levels of anxiety among students of the Aristotle University of Thessaloniki and the factors that affect it.

Material and method: The Hamilton Anxiety Scale (HAM-A) was used to assess stress levels. A total of 1034 students of the Aristotle University of Thessaloniki voluntarily answered an anonymous electronic questionnaire containing the questions of the Hamilton Anxiety Scale as well as additional questions concerning social, personal and demographic data of the participants.

Result: The levels of stress among students were found to be mild in 14.7%, moderate in 22.1% and severe in 23.1%. They were found to be increased, among other things, in the female population, in smokers, and in people who declared themselves unsatisfied with the subject of their studies. People who were in their 5th and 6th year of study as well as people who have exceeded their years of study were also found to have increased levels of stress.

Conclusion: The high levels of anxiety among higher education students are alarming. It is therefore necessary for primary and secondary prevention measures to be taken. Further investigation of stress levels in college students is necessary in order to develop better intervention programs and more appropriate support services.

ORAL PRESENTATIONS

OPHTHALMOLOGY

OP010 RHEGMATOGENOUS RETINAL DETACHMENT IN THE SETTING OF X-LINKED RETINOSCHISIS

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Introduction: X-linked retinoschisis (XLRs) is a congenital retinal disease with an incidence of 1 in 15,000-30,000. It is one of the main causes of macular degeneration in young male patients, while women-carriers rarely present symptoms. Various mutations have been detected in the RS1 gene, which encodes the protein retinoschisin, one of the main factors regulating the intercellular adhesion of retinal cells. The disease typically presents with reduced vision during the first decade of life. Retinal detachment and intravitreal hemorrhage constitute major complications, leading to further deterioration of vision and possibly blindness if not treated in time.

Case presentation: We present a case of a 21-year-old patient with a known history of X-linked retinoschisis, who was admitted in the Ophthalmology outpatient clinic due to progressing vision loss since four days. The visual acuity of the patient was assessed as 20/160 in the right eye (OD), without any means of correction and no improvement with the pinhole use, and 20/160 in the left eye (OS) with the pinhole occluder. The eye examination revealed rhegmatogenous retinal detachment with macular participation in the left eye. A vitrectomy with silicone oil injection in the vitreous cavity was immediately conducted. The surgery was successfully completed, without any complications and normal intraocular pressure of the left eye and the patient was discharged the first postoperative day. The prognosis was estimated as unfavorable due to the setting of the congenital disease and regular monitoring was recommended.

Conclusion/Discussion: X-linked retinoschisis is a severe disease which is mainly presented with a progressively deteriorating vision. The visual acuity usually declines by the second decade of life, then remains stable and deteriorates again from the fifth decade onwards. It is characterized by a poor prognosis, without any targeted therapy available. An annual monitoring is required as well as a high clinical suspicion index for any potential complications leading to blindness.

OP102 **MANAGEMENT OF EXTENSIVE BASAL CELL CARCINOMA OF THE MEDIAL CANTHUS WITH VISMODEGIB 29TH SCHMS**

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Purpose: To report an interesting case of a neglected basal cell carcinoma of the medial canthus, that was managed successfully only with the administration of Vismodegib tablets, sparing any surgical excision.

Material & Methods: An 87-year-old male was referred to the Oculoplastics clinics of our department, reporting a non-tendermass lesion in his left medial canthus, that has been slowly growing over the last 5 years. Clinical examination revealed a large slightly pigmented nodular mass with telangiectasias, central ulceration and extension into the medial orbit. The orbital Computerized Tomography (CT) and an incisional biopsy confirmed the diagnosis of an infiltrative basal cell carcinoma (BCC).

Results: The patient denied any surgical excision and reconstruction or radiotherapy. Therefore, he was managed conservatively with the administration of Vismodegib tablets (Erivedge®), an elective inhibitor of the Hedgehog pathway, at a dose of 150mg daily for 3 months.At 3-months follow-up a complete regression of the BCC was noticed, and the treatment was discontinued. No signs of tumor recurrence were noted after 6 months and no adverse events due to medication were recorded.

Conclusions: Vismodegib is the first approved pharmacologic agent that targets the Hedgehog signaling pathway which is involved in many basal cell carcinomas. As shown in our case,it represents an effective and generally well tolerated systemic therapy for patients with BCC that can no longer be suitably controlled with surgery and/or radiotherapy.

ORAL PRESENTATIONS

OP116 OPTIC NEURITIS IN THE ERA OF BIOMARKERS

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Introduction/Background: Optic Neuritis comprises a spectrum of inflammatory optic neuropathies and the discovery of new biomarkers is of great importance to the understanding of its pathogenesis, classification, and treatment.

Methods/Data: Bibliographic Review, using the PubMed database, for studies published from 2018 onwards.

Results: The typical form of optic neuritis is associated with multiple sclerosis and with the use of already widespread CSF biomarkers such as Oligoclonal Bands and the IgG Marker. Anti-Aquaporin 4 (anti-AQP-4) and anti-Oligodendrocyte Myelin Glycoprotein (anti-MOG) antibodies have more recently been added to the optic neuritis diagnostic algorithm. Their discovery led to the classification of atypical forms of optic neuritis, creating new clinical entities with different prognosis and treatment. Further understanding of the pathophysiological mechanisms may reveal more clinically useful biomarkers in the near future.

Conclusion/Discussion: The use of biomarkers significantly improves diagnostic ability and offers new therapeutic possibilities in the management of optic neuritis.

OP120 **TRANSPLANT OF THE CORNEA: A RATHER SUCCESSFUL TRANSPLANT**

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This oral presentation deals with the oldest, most common and most successful human tissue transplant in existence: that of the cornea.

First, some basic elements of the anatomy and physiology of the eye are listed, followed by more specialized data on the structure and function exclusively of the cornea. Then the history and development of this transplant surgery is briefly presented.

Then, the diseases that lead to deformation or clouding of this transparent and avascular tissue are mentioned, which are also indications of carrying out this type of surgery. There are also given out the appropriate protocols which are being followed regarding the selection of the appropriate recipient as well as the selection of the appropriate graft for each recipient.

Then, the different surgical techniques and interventions applied in each case are analyzed while emphasizing their intraoperative and postoperative complications.

Finally, the future prospects of corneal transplantation are examined.

ORAL PRESENTATIONS

OP123 CASE REPORT WITH INCOMPATIBILITY OF SUBJECTIVE AND OBJECTIVE FINDINGS WITH OPTIC NEURITIS SUSPICION

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Introduction/Background: Presentation of case report with suspicion of optic neuritis. Analysis of the clinical approach and explanation of the differential diagnosis.

Methods: The patient was referred by a private doctor to the Neurology department of the University General Hospital of Alexandroupolis, due to cephalalgia, blurred vision and color perception disorder, in order to examine the possibility of optic neuritis. A brain Magnetic Resonance Imaging was performed with no pathological findings and afterwards, further examination from an ophthalmologist was asked. In addition, the fundoscopy didn't reveal any pathological findings and the pupillary light reflex was normal. The examination of the central vision showed 7/10 (uncorrected) for the right eye and 10/10 for the left eye visual acuity. However, during the examination of optic fields the visual field index (VFI) for both eyes was found outside of the normal range. Finally, the Optical coherence tomography of the retinal nerve fiber layer (OCT RNFL) and of the Ganglion Cell Complex (GCC) were within the normal range.

Results: The results of the examinations confirm the exclusion of optic neuritis diagnosis, which constituted the initial clinical suspicion. Given the data, the re-examination of the patient within a 3-month period is considered necessary, setting anxiety disorder as a diagnosis of exclusion.

Conclusion/Discussion: The incompatibility between the subjective symptoms and objective signs leads to the necessity of further patient monitoring. Due to the absence of objective findings, anxiety disorder is considered as a possible cause of those symptoms.

OP061 **MOGAD-MOG ANTIBODY DISEASE: WHAT IS AYTH THE NEW CLINICAL ENTITY? REVIEW OF CLINICAL LABORATORY EVENTS AND THERAPEUTICS**

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Aim: A brief review to describe MOGAD and distinguish it from Neuromyelitis Optica Spectrum Disorders (NMOSD).

Materials and Methods: The existing literature was studied, all the information about MOGAD was collected and the current data and the modern therapeutic approaches of this specific disease were presented in a review.

Results: MOGAD is a distinct entity of NMOSD, characterized by specific clinical laboratory and imaging findings and treatment.

Conclusions: MOG Antibody Disease (Myelin oligodendrocyte glycoprotein antibody-associated disease (MOGAD) is an autoimmune demyelinating disease of the central nervous system characterized by antibodies against the MOG glycoprotein of oligodendrocytes, which is a component of the outer layer of myelin. It belongs to the Neuromyelitis Optica Spectrum Disorders (NMOSD) and appears with acute attacks of optic neuritis, transverse myelitis and Acute Disseminated Encephalomyelitis (ADEM).During the investigation of the disease, demyelinating lesions are found on magnetic resonance imaging (MRI), antiMOG-IgG are detected in the serum, and CSF is checked for oligoclonal bands. It has recently been established as a separate entity, however, its distinction from neuromyelitis optica (NMO) and multiple sclerosis (MS) remains quite difficult, without clearly defined diagnostic criteria yet. Therapeutically, in acute attacks, corticosteroid injections, plasmapheresis or intravenous gamma globulin (IVIG) are used, while for long-term remission, immunosuppressants are preferred. However, none of the current treatments are exclusively specific and there is ongoing research to find new, more specific therapeutic agents.

ORAL PRESENTATIONS

GENERAL SURGERY

OP013 HOW CAN THE DENTIST MANAGE A PATIENT RECEIVING ANTITHROMBOTIC TREATMENT?

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Introduction: The purpose of this oral presentation is to review the published literature on the management of the dental patient receiving anticoagulation and/or antiplatelet therapy.

Methods: We used "Pubmed" as a search engine and extracted information from publications that have been published from 2010 until today with keywords "anti-coagulant drugs", "anti-platelet drugs mechanism", "Antithrombotic drugs oral surgery", "Dental extractions antithrombotic therapy", "Tranexamic Acid", "Antithrombotic drugs oral surgery"

Results: The decision or not to stop the anticoagulant/antiplatelet treatment and the time it will last depends on the dosage of the drug, its active substance, the patient's medical history as well as the degree of difficulty of the dental procedure.

Conclusions: According to the latest data from the literature review, in most cases it is not recommended to stop anticoagulation and/or antiplatelet therapy, always with the aim of minimizing the patient's chance of a thromboembolic episode. The treatment of the dental patient under antithrombotic treatment includes both the cooperation between the dentist and the attending physician, as well as the appropriate intraoperative and postoperative manipulations for analgesic coverage and the reduction of major bleeding.

OP037 A PROPOSED CLASSIFICATION AND TREATMENT ALGORITHM FOR RECTUS DIASTASIS

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Background: The aim of this study is to present a classification system and treatment protocol to correct rectus diastasis during abdominoplasty.

Material and Methods: Between April 2014 and January 2023 308 patients undergoing abdominoplasty were enrolled. Patient characteristics, rectus diastasis characteristics and surgical characteristics are documented. A four-type classification system with a different treatment method for each type is described. In type A (2-3cm) a continuous interlocking suture is placed from the umbilicus to the xiphoid and another from the umbilicus to the pubis creating a one suture layer. In type B (3-5cm) the same two continuous sutures and interrupted sutures with 2cm distance between them are used creating two suture layers. In type C (5-7cm) the two continuous sutures and interrupted sutures with 1cm distance between them are used creating two suture layers. In type D (7-9cm) the continuous sutures extend from the umbilicus to the xiphoid and to the pubis respectively where they are knotted and extended back to the umbilicus. Interrupted sutures with 2 cm distance between them are placed alongside creating three suture layers. Postoperatively patients filled up a questionnaire regarding the level of pain, the postoperative day they performed specific indoor/outdoor activities and the evaluation of the aesthetic result.

Results: No statistically significant differences were observed between the four RD types regarding pain or complications. All types of RD had the same low-rate complication profile. After 2-9 years of follow-up no clinical recurrence of rectus diastasis was observed. Mean pain score levels were very low and within a week most patients returned to certain activities. Most patients were extremely satisfied with the results.

Conclusions: This study provides an updated classification system and a safe treatment protocol that ensures high-quality aesthetic results.

ORAL PRESENTATIONS

OP071 INFLAMMATORY RESPONSE OF THE INTESTINAL MUCOSA AFTER RADIOFREQUENCY-ASSISTED HEPATECOLOGY IN AN ANIMAL MODEL

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Aim of the study: Radiofrequency-assisted liver resection (RF-LR) techniques minimize intra-operative blood loss, while avoiding the Pringle maneuver. Both surgical excision and radiofrequency ablation of liver parenchyma compromise gut barrier function with subsequent bacterial translocation. Inflammatory response of the intestinal mucosa has a critical role in maintaining gut barrier integrity. The present study sought to investigate in a porcine model the impact of the two most commonly used RF-LR techniques on the inflammatory response of the intestinal mucosa.

Materials and Methods: Twenty-four pigs were subjected to either (a) partial hepatectomy (PH) in approximately 20% of liver mass employing the "sequential coagulate-cut" technique (SCC group), the Habib-4X technique (group H), or the classic "crush-clamp" technique which does not require the use of external source energy (group CC) or (b) sham operation (group Sham). At 48-h post-operation, an ileal tissue specimen was excised in order to be subjected to immunohistochemical assessment of the expression of inflammation biomarkers interleukin-6 (IL-6), tumor necrosis factor-α (TNFα), and nuclear factor-κB(NFκB).

Results: An increase in tissue expression score (mild expression) was noted for IL-6 in group CC, for TNFα in all PH groups (being lower in group H compared to group CC), and for NFκB in all PH groups.

Conclusions: RF-LR for resecting hepatic parenchyma confer mild inflammatory response of the intestinal mucosa which is lower when employing the Habib-4X technique compared to the SCC as well as the classic CC techniques.

OP072 **THE USE OF MAGNETIC TOMOGRAPHY IN EARLY PREGNANCY DIAGNOSIS AND FETUS COUNTING IN THE LABORATORY**

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Aim of the study: Pregnancy diagnosis and embryo counting are important end points in experimental reproductive, developmental biology and toxicology studies. The purpose of the present study was to assess the feasibility and efficacy of magnetic resonance imaging (MRI) for early pregnancy diagnosis and embryo counting in the laboratory rat.

Materials and Methods: Mated female Wistar rats were subjected to whole-body MRI scanning using a 1.5T MRI scanner manufactured for human use, employing a the three-dimentional 3D-STIR technique (isotropic T2- weighted 3D short-tau inversion recovery sequence) from day 8 to day 12 post coitum (pc) or without prior mating, under general anaesthesia for pregnancy diagnosis and embryo counting. MRI examination was followed by laparotomy and visual inspection of the uterus to verify MRI findings.

Results: By day 8 pc, uterine bulges in a row-of-beads layout, characteristic of pregnancy in multiparous animals, were depicted as oval-shaped structures of high intensity signal along uterine horns. By day 10 pc, embryonic vesicles were detected at the medial side of the uterine bulges. Pregnancy was diagnosed with 0% false-negative diagnosis and 100% accuracy by day 11 pc, while embryos were counted with 100% accuracy by day 12 pc.

Conclusions: MRI proved to be a feasible and reliable non-invasive imaging method of early pregnancy diagnosis by day 11 pc and embryo counting by day 12 pc in the laboratory rat.

ORAL PRESENTATIONS

OP125 ERCP-INDUCED DUODENAL PERFORATION: CASE REPORT AND LITERATURE REVIEW

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Introduction: Since its introduction in 1968, Endoscopic Retrograde Cholangiopancreatography (ERCP) has been a useful tool in diagnosis as well as treatment of various biliary and pancreatic pathologies [1]. Like any intervention, ERCP is associated with complications. Duodenal perforation particularly consists of a rare complication, with increased morbidity and mortality [2].

The case report involves a 65 year-old female patient who presented with post-ERCP duodenal perforation at the 4th General Surgery Department of Attikon General University Hospital. A thorough literature review has been performed in order to identify current studies on the assessment and management of the above rare ERCP- induced complication.

Materials and Methods: A 65 year-old woman underwent ERCP after an episode of litheasic pancreatitis. The patient reported a history of laparoscopic cholocystectomy due to symptomatic chololithiases one year ago. The Endoscopic Ultrasound (EUS) revealed litheasic content in the bile duct. Immediately post-ERCP, the patient experienced severe abdominal pain. The CT revealed free air and fluid in the peritoneum, which correlates with visceral perforation. It was decided to proceed with emergency laparotomy. The patient underwent a pyloric occlussion and gastrointestinal anastomosis (GEA) and enteric anastomosis (Braun).

Results: Delayed Gastric emptying (DGE) was observed post-operatively and treated conservatively. Late post-operative mural anastomosis ulcer bleeding was identified and managed endoscopically. Despite the prolonged inpatient care (30 days), the treatment outcome was excellent.

Discussion: The literature review confirmed the low incidence of ERCP-induced duodenal perforation. Besides the fact that Classification Systems of perforation exist, as well as algorithms and management guidelines [3,4], there is still a limited amount of high evidence- based studies (RCT, Meta-analysis). Despite the low incidence of duodenal perforation, the medical team needs to be adequately prepared and familiar with all the up-to-date International Guidelines in order to achieve the optimal treatment outcome.

OP132 PRESENCE OF UNTYPICAL CASE OF NEGLECTED PERIODONTAL SEPSIS WITH NECROTIC SOFT TISSUE INFECTION, SURGICAL INTERVENTION AND CLINICAL SEGNIFICANCE

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Purpose: Presence of untypical case of a man 44 years old with gas gangrene to his right leg. The remarkable in this case is that the potential fatal necrotic soft tissue infection is presented on ground of chronic Hidradenitis suppurativa and that the post-operative recovery with Bio-film division factor and honey produced impressive positive results.

Methods and surgical course: The patient was referred from a regional hospital after a 12 day hardship and three surgical procedures. Two surgeries of syringectomy were executed close to the right inguinal region. Also the perianal region was investigated for perianal fistulas in which remained the research incisions on his perineum and the white laparotomy and the Hartmann's operation. Upon his arrival, his right leg up to the ankle joint had much more large diameter compared to his left leg with crackling ice spot and soft fermentous oedema per flesh. The investigation and drainage formations of pus which occupied most of the muscle compartments, was decided and executed as well as the necromatectomy because of the extensive fasciitis. During the operation, multiple incisions throughout length and width of the right leg were made and also abort separation with dissension of adductor, quads, femoral biceps and calf muscles. The result was the complete drainage of sufficient quantity of purulent discharge. Moreover, near the incisions from previous surgeries, hematoma drainage was done which was the effect of cross section of major safflower vein.

Results and postoperative process: On a daily basis wound changes are performed with hydrogen peroxide and potent antiseptic dilute in combination with Bio-film division factor and honey. According to the blood cultures were isolated the following micro-organisms: Acinetobacter, Pseudomonas, Candida .

Conclusion: Hidradenitis suppurativa causes complications and afflicts patients affecting negatively their life quality but in very rare cases evolves into gas gangrene and severe necrotizing infection. Direct and targeted surgical treatment as well as the innovative post-operative wound care can be safe method in equivalent cases.

ORAL PRESENTATIONS

ANATOMY (II)/ PHYSIOLOGY

OP001 INTRACEREBRAL HEMORRHAGE

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Introduction: Intracerebral haemorrhage accounts for approximately 10% of all strokes, with mortality rates of 40-50%. Understanding the causes, pathophysiological mechanism and implications of intracerebral hemorrhage is paramount for reducing morbidity.

Materials and Methods: We conducted a thorough review of the existing literature including systematic reviews and meta-analyses.

Results: The occurrence of intracerebral hemorrhage is associated with hypertension, aneurysms, head traumas, neoplasms, arteriovenous malformation, amyloid angiopathy, and vessel wall degeneration. The majority of intracerebral hemorrhages have a common core of symptoms such as headache, dizziness or vertigo, nausea, vomiting, and epilepsy. Furthermore, depending on the location of the bleeding, symptomatology becomes more specific and may include: Broca's aphasia, visual and behavioral disturbances, muscle weakness and paresthesia. The localisation is more common in the putamen, followed by the thalamus, pons and cerebellum. It is diagnosed by MRI or CT. Subsequent treatment involves reducing intracranial pressure surgically, by blood removal and hemostasis, as well as pharmacologically, by restoring intravascular pressure.

Conclusion: The prognosis and clinical symptomatology are determined by the location and size of the hemorrhage. As far as the therapeutic approach is concerned, immediate and multidimensional treatment, both pharmacologically and surgically, is the key to limiting tissue damage, increasing the patient's chances of full recovery and survival.

OP041 **METHODS OF BRAIN MAPPING**

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The human brain consists of 10^{11} neurons. The ambitious aim of modern Neuroscience is the entire mapping of the brain connections, so that it becomes clear the way the brain determines every aspect of the human life. Therefore multiple methods of brain imaging are being used and applied to post-mortem samples, laboratory animals and healthy volunteers. Moreover scientists focus on different levels of brain organization. The aim of the present study is to review the major- recent and older- brain mapping methods, the listing of their advantages and disadvantages in relation to the research aim and the comparison of the methodology utilized by different brain mapping programs around the world. The study was based on a number of published articles and handbooks which include innovative experiments of neurophysiology, the improvement of older methods (e.g. electroencephalogram (EEG), magnetic resonance imaging (MRI) and other), the multidimensional application of recent methods (Transcranial Magnetic Stimulation (TMS), Optogenetics) and the use of Bioinformatics and automated tools in big data editing. A combination of multiple methods and data from human and other species on different levels (macroconnectomic for major anatomic brain structures, mesoconnectomic for cyto- and myeloarchitrecture and microconnectomic for defining the density of receptors and neurotransmitters) is required, in order to achieve a representative-structural and functional- brain mapping process. The preliminary results of the different brain mapping programms showed that a combination of methods and interdisciplinary cooperation is required. The prospect of these studies is very promising for the future by exploring the underlying mechanisms in various neurological diseases, the application of novel treatments and the studying of the human brain on many neurodevelopmental and behavioral states.

ORAL PRESENTATIONS

OP042 OREXIN 1 RECEPTOR: CELL LOCATION AND MORPHOLOGICAL ANALYSIS OF RECEPTOR-EXPRESSING NEURONS

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Introduction: The orexin system is related to food behavior, energy balance, wakefulness state and reward system. It consists of the neuropeptides, orexin A and B, and their receptors, orexin 1 receptor (OX1R) and orexin 2 receptor (OX2R). The OX1R has selective affinity for orexin A and is implicated in multiple functions, such as reward, emotions, and autonomic regulation. This study provides information about the OX1R distribution in human hypothalamus.

Methods: The study was carried out on post-mortem human hypothalamus specimens from 15 individuals, aged between 17 and 86 years, without any history of neurological or psychiatric disease, that had a sudden death. The hypothalamic specimens were prepared accordingly and the cytoarchitecture and neuronal morphology were studied by means of Nissl method and rapid Golgi staining, while the OX1R were detected immunohistochemically.

Results: OX1Rs were mainly detected in the lateral hypothalamic area (lateral hypothalamic nucleus and lateral tuberal region), the lateral preoptic nucleus, the dorsomedial nucleus, the ventromedial nucleus, the supraoptic nucleus and the paraventricular nucleus. Morphometric analysis revealed that neurons in these areas share common morphological characteristics. As such, the parameters for their dendritic field are uniform and can be used in neural network models to study the functions of these nuclei.

Discussion: Since OX1R has been involved in various functions related to metabolism, food intake and sleep-wake cycle, the current study's findings could, at least in part, explain how these human hypothalamus nuclei participate in these processes. Most of these hypothalamic nuclei have large and complex neurons with expanded dendritic trees, in contrast to other nuclei with less complex neurons which demonstrate little or no OX1R expression. These findings could suggest that orexin A, which is the OX1R ligand, is important for the plasticity of these neurons and the human hypothalamus neural networks in general.

OP075 **INDIVIDUALIZED PHARMACOTHERAPY ON MONOCLONAL ANTIBODIES**

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Introduction/Background: Individualized pharmacotherapy is usually required when a drug has a narrow therapeutic range and wide inter-individual variability in its pharmacokinetic parameters. Monoclonal antibodies are a prime example of such therapies, as the dose-response curve does not follow a predictable profile and is influenced by individual patient factors, such as genetic profile. This paper focuses on the molecular clonal antibodies used in cancer treatment.

Methods: This research is bibliographic, and publications from scientific sources were explored and studied.

Results: Monoclonal antibodies are types of antibodies produced by recombinant DNA techniques starting from a single cell type. This origin means that they have the ability to bind to an antigen when they recognize it and trigger an immune response. For this reason, they are widely used in cancer treatment, where they can recognize tumor-specific factors (e.g., proteins). Aiming at optimizing treatment with monoclonal antibodies, efforts have been made in recent years to individualize treatment using mainly population-based pharmacokinetic-pharmacodynamic models. The latter are advantageous because they can lead to a more accurate determination of pharmacokinetic parameters, do not require a large number of patients, and can be developed with a minimal and/or incomplete sampling scheme. Also, through modeling, the role of factors (covariates) such as demographic characteristics, disease type and severity, genetic profiles, etc. can be explored. The covariate model, determined by the characteristics of each patient, reduces between-subject variability and can more accurately describe the kinetics of monoclonal antibodies. Essentially, through the models, all important patient, drug, and disease factors are taken into account, and personalized treatment can be achieved.

Conclusion/Discussion: In recent years, a significant number of population pharmacokinetic-pharmacodynamic models have been developed for a number of monoclonal antibodies, which have been successfully applied in clinical practice.

ORAL PRESENTATIONS

OP077 ULNAR ARTERY VARIATIONS AND THEIR CLINICAL SIGNIFICANCE

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Aim: Ulnar artery is one of the two branches of brachial artery and is commonly used as an alternative to cardiac catheterization when the radial artery is not accessible. It presents 4 main variants, which may affect the procedure of percutaneous catheterization performed for the diagnosis and treatment of cardiovascular diseases. Aim of the present systemic review is to assess the possibility and safety of cardiac catheterization through the ulnar artery as well as the clinical significance of its various variations.

Material and Methods: A detailed search was performed in PubMed database, using the terms: ulnar artery anatomy, heart catheterization, transulnar catheterization, variants of ulnar artery in various combinations. Only articles in the English language were included, regardless of publication date but with access to the full text of the article.

Results: Based on the search, complications of ulnar catheterization include the following: ulnar artery occlusion, bleeding, hematomas, vasospasm, pseudoaneurysms, arteriovenous fistulas, paresthesia from nerve damage, and pain at the entry site. All complications are treatable and transient. The interventional cardiologist must be skilled and have detailed knowledge of the anatomy and the possible variations. Compared to the radial artery, it is just as safe, but it is certainly more difficult to access due to its proximity to the ulnar nerve and its deeper location, resulting thus in the need for additional punctures, prolonged interventional time and better expertise.

Conclusions: Ulnar artery can be used as an entry site for catheterization despite its particular anatomy and the existence of various variations or anomalies.

OP089 **STUDY OF THE EXTRACRANIAL AND INTRACRANIAL LIGAMENTS' OSSIFICATION OF THE SPHENOID BONE: THE CLINICAL SIGNIFICANCE OF OSSIFICATION**

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Background: The aim of the current study is to investigate the degree and symmetry of ossification of the intracranial and extracranial ligaments of the sphenoid bone. The study correlates the degree (complete or partial) and the side (bilateral or unilateral) ossification of the sphenoid bone with the gender and the age.

Materials-methods: 171 (100 male and 71 female) dried adult Greek skulls that further classified into three age groups: 20-39 years (30 skulls), 40-59 years (49 skulls) and 60 years and above (92 skulls).

Results: Extracranial ligaments' ossification

1. **Pterygospinous ligaments**- partially ossified 10% (right) and 9.4% (left side) and completely ossified 2.9% (left) and 2.3% (right side).

2. **Pterygoalar ligaments**- partially ossified 26.3% (left) and 22.8% (right side) and completelyossified 5.8% (right) and 4.7% (left side)

Intracranial ligaments' ossification

1. **Caroticiclinoid ligaments**- partially ossified 34.5% (right) and 23.4% (left side) and completely ossified 11.7% (left) and 9.4% (right side)

2. **Anterior interclinoid ligaments**- partially ossified 2.3% (left) and1.2% (right side) and completely ossified 1.7% (left) and 1.2% (right side) and

3. **Posterior interclinoid ligaments**- partially ossified 11.9% (right) and completely ossified 1.2% (right and left side, per each).

The intracranial and extracranial ligaments had a symmetrical ossification. No correlation was identified between the ossification and the gender, while the higher age groups had a higher degree of ossification. A higher incidence of ossification was identified at the caroticoclinoid ligament (intracranially) and at the pterygoalar ligament (extracranially).

Conclusions: The existence of ossified bridges at the skull base justifies the phenomena of compression and improves the knowledge of the complex neuralgias and the effectiveness of the surgical approaches. The ossified pterygospinous ligament may compress on the lingual nerve and cause numbness, anesthesia, and/or hypoesthesia at the floor of the mouth and the lingual gingivae. The ossification of the ligaments around the sella is a challenge for neurosurgeons when they have to deal with various pathologies

ORAL PRESENTATIONS

OP130 TRIPLICATION OF THE LATERAL ROOT OF THE MEDIAN NERVE: A VARIANT CADAVERIC FINDING

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Introduction-Purpose: The median nerve (MN), one of the ending branches of the brachial plexus displays two roots, the external and the internal root. The external root arises from the lateral cord of the brachial plexus (C6-C7) with the musculocutaneous nerve, while the medial root arises from medial cord of the brachial plexus (C8-T1) with the ulnar nerve (UN). The two roots merge downward at an acute angle.

The aim of the current paper is to describe an interesting MN variant formation by three lateral roots, also referred as lateral root triplication.

Methods-Data: Bilateral dissection was performed on the axilla and upper limb of a formalin embalmed male cadaver of a 76 years old that belonged to a body donor of Greek origin. The cadaver was donated at the Anatomy and Surgical Anatomy Department, Faculty of Health Sciences, School of Medicine, Aristotle University of Thessaloniki.

Results: Regarding the median nerve, except the typical lateral root of the MN, two interconnections (proximal and distal) were observed originating from the anterior division of the middle trunk of the brachial plexus. The proximal communication terminated at the level of the simultaneous origin of the medial root of the MN and the UN. The neural formation could also be characterized as the triple lateral root of the MN, that was located distal to the thoracoacromial artery origin.

Discussion: Knowledge of the possible variants of the MN is of great importance when administering regional anesthesia and performing intraoperative manipulations of the upper limb. In addition, the communications (interconnections) of the brachial plexus branches are clinically important as they may alternatively interpret the functional deficits in cases of compression of some branches, due to the accessory innervation.

PAEDIATRICS/ PAEDOPCYCHIATRY

OP003 ANAPHYLAXIS IN INFANTS AND TODDLERS

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Introduction: Anaphylaxis is a potentially fatal allergic reaction and its treatment must begin immediately. Health professionals are often unfamiliar with the management of younger-age-group patients and therefore, the necessity for adequate training in anaphylaxis in younger age groups arises

Methods: A comprehensive literature search was conducted in PubMed. The criteria used for the selection of the articles were their topic (allergy and anaphylaxis), year of publication (within the last decade) and origin (preference for European references/sources). Moreover, medical textbooks were reviewed.

Results: Anaphylaxis refers to a rapid onset generalized allergic reaction, which can prove fatal. Its manifestations cover a broad clinical spectrum, and it follows the exposure of the patient to an allergen. The first-time exposure leads to sensitisation, without evoking an allergic response, which will happen in subsequent exposures. There are many mechanisms, mainly immunologic, through which an allergen may give rise to an array of clinical manifestations. The most common mechanism is IgE-mediated. Systems most commonly involved in the anaphylactic reaction are the skin, the gastrointestinal tract, the respiratory system, and the circulatory system. The cornerstone of treatment is the intramuscular injection of adrenalin which should be provided whenever there is clinical suspicion of anaphylaxis. Corticosteroids and antihistamines are considered second-line treatments. The attending physician should counsel the patient and his/her family about the treatment priorities in the outpatient setting and give instructions on the prevention of disease,

Conclusion/Discussion: Paediatric cases of anaphylaxis present differences regarding epidemiology, clinical manifestations, and treatment that may affect short and long-term management. Therefore, education of the healthcare professionals is deemed essential, so that optimal patient care is achieved.

ORAL PRESENTATIONS

OP021 PRESENTATION OF A NOVEL EGDP-THALASSEMIA MUTATION CAUSING SEVERE PERIODIC NEONATAL ANEMIA AND AN ADULT-LIFE PICTURE OF NON-MUTATION-DEPENDENT THALASSEMIA

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Introduction: The εγδβ- thalassemia is a rare type of hemolytic anemia that, in heterozygous form, is expressed mainly in embryonic and neonatal period. In adulthood, according to bibliography, is expected a similar phenotype with that of β- thalassemia intermedia. We report a Greek family with a novel εγδβ- thalassemia deletion that causes severe transient neonatal anemia and non- transfusion dependent chronic hemolytic anemia state later in life, resembling non- transfusion dependent thalassemia.

Methods: A premature female newborn was delivered via cesarean section due to decreased fetal heart rhythm. Immediately after birth, severe microcytic hemolytic anemia was noticed. The mother and the maternal grandmother mention a history of anemia of unknown etiology and received transfusions during the neonatal and early infant period, as well a non- transfusion dependent microcytic hemolytic anemia later in life. Both had complications of chronic hemolytic anemia (gallstones, splenomegaly, hepatic hemosiderosis).

Results: The extensive screening for anemia in the newborn was negative. Erythrocyte transfusions were necessary until the age of 2 months. Hemoglobin electrophoresis was normal, and the molecular testing did not show any α- or β-thalassemia related gene abnormalities. Due to high suspicion of thalassemia, it was decided to perform the multiplex ligation-dependent probe amplification (MLPA) technique. The MLPA analysis revealed the presence of a large deletion (about 72 kb) in chromosome 11 that includes the genes for the globins ε, γ, δ and β. The same mutation was present at the mother and the maternal grandmother.

Conclusion/ Discussion: We report a new εγδβ- thalassemia deletion that is clinically presented with a non- transfusion dependent anemia later in life, in contrast with other cases of εγδβ- thalassemia that have already been described in bibliography. Despite the rarity, εγδβ- thalassemia should be part of the differential diagnosis of a neonatal with unexplained anemia. MLPA technique can be a suitable tool to confirm the suspected diagnosis due to the heterogenicity and the extent of the mutations. Adult carriers should be informed for the hereditary character of the mutation and should be attended closely during pregnancy in order to avoid fetal mortality, utilizing in utero transfusions. Moreover, adults with phenotype of non- transfusion dependent anemia should be followed up and treated for the complications of chronic hemolytic anemia.

OP087 **IMPACT OF THE COVID-19 PANDEMIC IN PATIENTS WITH JUVENILE RHEAUMATIC DISEASES**

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Introduction: Global data regarding the impact of the COVID-19 pandemic in patients with Juvenile Rheumatic Diseases (JRD) is still limited. The aim of the study was to capture this impact in Greece.

Methods: A cohort of patients with JRD was developed for the study period 6/2022-12/2022. The main domains were: a. Previous history of COVID vaccination b. COVID infection, outcome and long-term impact c. During quarantine follow-up of JRD, access to medication/ physiotherapy, compliance, continuous information in respect to pandemic, JRD and impact of this isolation to Quality of Life (QoL).

Results: 59 patients (M:F 19:40, 13± 4 yrs) mainly with Juvenile Idiopathic Arthritis (91.53%), completed a questionnaire. 59.2% were under a combination of conventional and biologic DMARDs. COVID disease was reported by 79.66%, mainly a mild course (74.47%), absence of admission (93.62%) or disease flare (86.84%). A ≥1 COVID vaccination dose was reported by 36.21%. During quarantine, 58.33% was assessed by a private physician, 8.33% at hospitalization due to a scheduled IV infusion and 25% by a telephone/internet communication with a physician. An uninterrupted access to medication had 97.73%. Non-compliance to medication (omission of IV doses was reported by 2.27%, home discontinuation of therapy by 27.3%, due to a physician recommendation by 69.23%). 60% continued physiotherapy by physical presence, 23.33% tele-rehabilitation and combination by 16.67%. Information regarding JRD and the pandemic was provided either by their private physician (61.7%), websites of either Patient RD Associations (36.2%) or Medical context-ones (34.1%). A physical activity limitation was reported by 87.27%. The unfavorable health-related impact of the isolation was: excessive internet connectivity (78.1%), food-related changes (36.59%), impaired school activities (34.2%) and anxiety (31.71%).

Conclusions: Patients with JRD NPN had an uneventful COVID-disease course, a satisfactory compliance to medication and physiotherapy, though an impaired Health Related QoL.

ORAL PRESENTATIONS

OP092 A DIFFERENT WAY OF COMMUNICATION IN THE AUTISM SPECTRUM

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Introduction: Autism spectrum disorders are neurodevelopmental disorders, that are characterised by a difficulty in social interaction, communication and imagination. The current study explores the way dramatherapy, musictherapy and dancetherapy work and contribute to the holistic approach of people with high functioning autism.

Methods: A review of the existing literature was carried out in the Pubmed and Cochrane library databases. Randomized clinical trials, systematic reviews and metanalyses were studied, based on their relevance to the subject of the study and the current affairs, their scientific validity, and their accuracy.

Results: It was shown that in terms of musictherapy, the use of techniques such as musical improvisation, imitation, singing, composing and listening to music, can improve social functioning, speech production, and possibly the severity of autism and the quality of life. Dramatherapy through theatrical play, improvisation, story building and psycodramatic techniques, can increase the ability of expression and detection of the emotional state of others and the incidental face memory, which is lower in people with ASD. Moreover it decreases trait anxiety caused by social interaction with peers. Last but not least, dancetherapy using non verbal mirroring, rhythm and moving synchronization causes alleviation of the total symptoms and improvement of the social interaction, without a signifficant effect on empathy.

Conclusion: In conclusion, given the absence of therapy in ASD, research of alternative interventions is mandatory. According to the current studies expressive psychotherapies, seem to reinforce the expressive and communicative ability, as well as the total quality of life. However, future studies with bigger samples and wider age range should be developed.

OP128 INTERNET INDUCED SEXUAL PARAPHILIA IN PEDIATRIC PATIENTS

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Goal: During the last decade the internet has revolutionized many different fields, giving users easy access to a variety of information and the chance to interact with others online without a set of rules. At the same time, the number of pediatric cases of genitourinary tract insertion of foreign bodies has increased. Consequently, we posed the scientific question posed if the internet has an impact on the presentation of pathological sexual behaviors- paraphilias among teenagers.

Method: Studying the case of a 12-year-old male who was admitted in the pediatric surgery department due to self-insertion of an electrical cable in his urethral meatus. The cable was twisted forming a coiled refractory structure. The child had to undergo general anesthesia in order to retract the foreign object. Furthermore, we performed a thorough review of the existing bibliography.

Results: After the patient's clinical and phycological evaluation, it was discovered that the real reason for the self-insertion of the cable in his urethra was an effort of auto-erotic stimulation according to information obtained via the internet, as the child interacted through social media platforms online. All things considered, the unsupervised access to the internet, that the child had, led to the presentation of paraphilic sexual behavior and later to the complication of the coiled structure's wedging. In current bibliography there are mentioned at least 239 pediatric cases with insertion of foreign bodies either through the urethra or through the vagina.

Conclusions: Insertion of foreign bodies concerns the pediatric population, especially teenagers of age between 9-13 years, while internet access is available to younger children. Perhaps, this kind of behavior should be considered as a new category of paraphilia, the "Internet induced paraphilia".

ORAL PRESENTATIONS

OP142 MINIPUBERTY: A SHORT BUT PROMISING WINDOW OF OPPORTUNITY IN SEXUAL MATURATION AND NEURODEVELOPMENT

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Introduction: Minipuberty is the transient activation of the hypothalamic- pituitary- gonadal axis between 1-6 months of life followed by the release of gonadotrophin hormones (FSH, LH) affecting the sexual and reproductive maturation. Is it possible biochemical and hormonal changes that happen during the first months of our infant life actually affect our ability to have children ourselves or even interfere with the overall neuroendocrine development, imprinting our mental, sexual and metabolic health as adults? What is the role of Nitric Oxide in hormonal production and rescue of cognitive and fertility disorders?

Methods: A systematic literature review of the latest publications in medical journals and online database (PUBMED) for the pathophysiology and regulation of minipuperty, including data analysis of cohort studies and clinical trials reflecting its effects on fertility and neuro-development.

Results: The hormones released by the GnRH neurons during minipubety have a key role in normal function and maturation of female and male gonads, influencing also speech, metabolism and sensorineural abilities. Nitric oxide, an inhibitory neurotransmitter, affects the migration and function of the GnRH system. Patients with CHH (Congenital hypogandotrophic hypogonadism), a genetic disorder impairing fertility and puberty, lacking in GnRH and mini-puberty effects, restored testicular growth and function with hormonal replacement therapy of mini-puberty. Newly discovered CHH mutations regarding genes encoding the NOS1 enzyme (Nitric oxide synthase 1) inspired for studies in Nos1- deficient mouse models that showed an exaggerated mini-puberty, similar to the one of premature babies, more susceptible for reproductive, cognitive, hearing and olfactory deficits that were cured with NO exogenous administration.

Discussion: The importance of minipuberty in reproductive health, the promising discoveries for its relation to cognitive abilities and neurodevelopment together with the determining regulatory effects of NO provide new avenues to fight the long-term complications of abnormal minipuberty and premature birth.

OP028 **CASE REPORT OF CONGENITAL SYPHILIS AND LATEST EPIDEMIOLOGIC DATA**

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Introduction: Syphilis is a sexually transmitted disease (STD) caused by the spirochaete bacterium "*Treponema Pallidum*". Vertical transmission of Treponema Pallidum can lead to congenital infection of the fetus.

Methods: A review of the literature was carried out using search engines "*Google Scholar"* and "*PubMed".* Studies relative to congenital syphilis (CS) that focused on the epidemiology of the disease were selected. We present a case of a neonate born in Aretaeio Hospital and hospitalized in Neonatal Department of the National and Kapodistrian University of Athens.

Case Report: A 28-year-old woman, gravida 2 para 2 at 40-weeks of gestation gave birth to a male neonate with birth weight of 4720gr. Her medical history was negative for any chronic illnesses. The amniotic fluid was meconium-stained. Clinical examination was normal. In the first 24h of life the infant presented episodes of hypoglycemia and jaundice. A full laboratory workup was performed, which revealed elevated CRP and total bilirubin levels. Due to inadequate prenatal testing, numerous tests were performed, including VDRL, which turned out to be slightly positive for both the infant and the mother. A confirmatory test was sent out to a specialized laboratory and penicillin was administered to the infant as per the present guidelines for the disease. Diagnosis of syphilis was confirmed, and the infant received a 10-day Penicillin treatment.

Review of epidemiological data: CS tends to increase worldwide, even though prenatal screening and adequate treatment for its eradication are available. In USA between 2015-2019 rate of syphilis increased more than 170% in reproductive age woman; in 2000 the CDC reported the lowest incidence of syphilis. Similar data are reported in Europe; in 2007 there were less than 5 cases per 100.000 inhabitants, and in 2017 they almost doubled.

Discussion: Congenital syphilis can be harmful to the newborn. The diagnosis as well as treatment are feasible during endometrial life. Intensification of screening programs could reduce the increasing number of cases.

ORAL PRESENTATIONS

OBSTETRICS/ GYNECOLOGY

OP004 CHROMOSOMAL ABNORMALITIES IN ABORTED FETRIES DURING THE FIRST TRIMESTER OF PREGNANCY

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Introduction: Spontaneous abortions constitute the most common complication of pregnancies and in more than 80 **%** of the cases occur before the completion of the first trimester of pregnancy. Chromosomal abnormalities are the most frequent cause of sporadic miscarriages. The purpose of this study is the detection of chromosomal abnormalities in the first trimester in products of miscarriage by classic cytogenetic analysis.

Material and Methods: A total of 13 samples of aborted tissue, collected from the Genesis Clinic of Athens during the period of October 1, 2021 to January 30, 2022, were studied. The gestational periods were 8-15 weeks and mother's age was 32-45 years. All samples of miscarriage products were accompanied by a maternal blood sample for testing for possible maternal contamination. Classical cytogenetic analysis was performed after culturing the products of miscarriage. In cases of 46, XX female karyotype further molecular testing was carried out.

Results-Discussion: Cytogenetic analysis was successful in all samples. In 4 cases (30.8%) a female karyotype (46, XX) was found and it was ascertained that it was of maternal origin. From the remaining 9 samples of fetal origin, 3 had a normal male karyotype (46, XY) and 6(66.7%) had chromosomal abnormalities. The most common karyotypic abnormality was autosomal trisomy in 4/6 cases (66.7%) with trisomy 22 being the most common in 2/4 cases (50%). The other trisomies concerned chromosomes 8 and 9. One fetus had a numerical abnormality of the sex chromosomes (45, X, Turner Syndrome) and another one was diagnosed with triploidy (69, XXX).

Conclusion: Classical cytogenetic analysis of the products of spontaneous abortions is considered important, as the identification of a genetic cause of miscarriage in combination with genetic counseling helps to understand the loss, gives prognostic information and correct guidance to the couple for the next pregnancy, as well as information for other members of the family.

OP047 CONCEPTION AND PREVENTION: MYTHS AND TRUTHS

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Contraception and prophylaxis contribute decisively to the limitation of unwanted pregnancies and the transmission of sexually transmitted diseases. However, there is a lack of knowledge on sexual health issues, even among students of medical professions.

The aim of this study was to seek information about how informed are young people, how they get their knowledge about contraception and what methods they choose.

Methods: A bibliographic search was carried out mainly on the Pubmed platform, using keywords for articles concerning the sexual behavior of adolescents and young adults (up to 24 years) and we found 22 eligible articles (2015-2022) that they were investigating the information and knowledge young people have, which methods they use, which are the most effective and safest, which factors influence this choice, which are the developments and trends in the field of contraception.

Results: Most studies conclude that less than half of young people (49,5%) have adequate knowledge of effective contraception and prevention of sexually transmitted diseases. The methods they choose in order of priority are the condom, birth control pills, and long-acting contraceptive methods. Dual protection with the use of long-acting contraceptives and a condom emerges as the most effective method. The main source of information is the internet.

Conclusion/Discussion: All the studies clearly showed the need for better and systematic sexual education of young people so that they can enjoy a healthy and safe sex life. The prevalence of anachronistic notions and prejudices are perhaps the most important problems the modern doctor is facing in the matter of contraception. Contraception concerns both sexes equally.

ORAL PRESENTATIONS

OP117 COMPARISON OF HYFOSY, HYCOSY AND HSG IN TUBAL PATENCY ASSESSMENT DURING INFERTILITY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Tubal pathology is a contributing factor in up to 35% of infertility cases, a fact which renders accurate and clinically applicable tubal patency assessment a vital component of the infertility workup. Currently available patency assessment methods include the traditional method of X-ray Hystero-Salpingo-Graphy (HSG), Hystero-salpingo-Contrast Sonography (HyCoSy) and the most recent, Hystero-salpingo-Foam Sonography (HyFoSy). The aim of this study is to compare HyFoSy to the other two methods with regard to diagnostic efficacy.

Methods: Relevant studies were systematically sought in Scopus, Pubmed and Web of Science, three online peer-reviewed medical research databases. Eligible studies were systematically assessed based on pre-established inclusion criteria according to the PRISMA algorithm for systematic reviews. The included studies were assessed for risk of bias and

Results: This analysis included data from 5 studies and 1433 patients, with 2336 tubes being eligible for inclusion. With regard to HyFoSy and HyCoSy comparison, pooled sensitivity was 87% and 69% respectively, with the difference being statistically significant ($p = 0.037$), while pooled specificity was 95% and 85% respectively, with the difference being statistically significant ($p < 0.001$). Regarding the HyFoSy and HSG comparison, the pooled Cohen's k statistic resulting from the meta-analysis was 0.39 ; this is interpreted as fair to marginally moderate overall diagnostic agreement between HyFoSy and HSG. Regarding procedure associated patient pain, HSG was 6.5 times more painful (OR = 6.57, CI 95% 3.11-13.89) compared to HyFoSy and the former was graded at 5.4 ± 2.5 on a 10-point scale compared to the latter that was graded at 3.1 ± 2.2 ($p < 0.001$) which was statistically significant.

Conclusion: HyFoSy has superior diagnostic sensitivity and specificity compared to HyCoSy and may be utilized as a first-line diagnostic modality, with HSG as a second-line option for more challenging cases. Further research is required to more accurately establish HyFoSy's position in the tubal patency assessment work-up.

OP100 **UTERUS TRANSPLANTATION, THE FOREFRONT OF INNOVATION**

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This paper reviews uterus transplantation surgery, a major surgical advance in the field of transplantation. Following a brief history of transplantation, its many types are presented, which differ depending on the state of the donor (living, cadaveric) and the relation of the transplant to the recipient (autotransplantation, allotransplantation, and xenotransplantation). By referring to the first clinical uterus transplantation trial, this outstanding surgical innovation is presented. The methods of anesthesia and immunosuppression are briefly discussed, followed by the in-depth description of the surgical technique used in both the donor's and the recipient's surgery. It is noted that the donor may be living or cadaveric, which affects the surgical technique used in each case. These techniques are then juxtaposed, and the advantages and disadvantages of each are presented. This is followed by a review of the outcome of the clinical trial, regarding the potential dangers to both the donor and the recipient, the success rate, the ability to conceive and carry to term, and the health of the infants. Conclusions are drawn concerning the overall effectiveness of this surgical procedure and its utility. Finally, the most recent surgical advancement, the robotic- laparoscopic approach, is introduced, which is expected to prevail as the preferred surgical method used in uterus transplantation.

ORAL PRESENTATIONS

OP109 PRIMARY PREVENTION OF CERVICAL CANCER: WHAT IS THE CURRENT SITUATION IN GREECE?

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Objectives: Human papillomavirus (HPV) is the main cause of cervical cancer, as well as other benign diseases (e.g. genital warts). Vaccination and early diagnosis against HPV constitute effective and efficient public health and primary prevention measures, and create a health policy supported by all international health organisations. The aim of this paper is therefore to review the primary prevention measures for cervical cancer that exist in Greece.

Methods: Data from the published literature, the Ministry of Health and the National Vaccination Committee of Greece were used.

Results: The following targets have been set to be achieved by 2030:

I) 90% of girls to be fully vaccinated by age 15 against HPV. Specifically, the National Vaccination Committee's opinion on HPV vaccination includes: (a) a recommendation for general vaccination of boys and girls; (b) the recommended interval for vaccination for both sexes is age 9 to 11 years; (c) if vaccination for both sexes is not administered at the recommended age, a backup vaccine can be administered ; and (d) the HPV vaccine will be fully reimbursed to boys and girls aged 15-18 years.

(II) 70% of women up to 35 and 45 years of age be tested with a high efficiency DNA-HPV test which is internationally proven to have higher sensitivity than the Pap test.

Conclusions: The World Health Organization has set a goal of eliminating HPV-related cancers by 2030. In our country, an equal-access programme of high quality pre-symptomatic screening will be implemented, which in combination with updated guidelines for HPV vaccination, is expected to lead to the elimination of new cases of HPV-related cervical cancer by 2030.

OP134 **IMMUNOHISTOCHEMICAL STUDY OF THE EXPRESSION OF TGF-β1 IN PLACENTAL TISSUES OF RECURRENT PREGNANCY LOSS**

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Introduction: A normal pregnancy requires the regulation of the maternal immune system to allow the implantation of the genetically incompatible embryo. The reduced maternal immune tolerance is an aetiology of recurrent pregnancy losses. Transforming growth factor β_1 (TGF-β_1) is a cytokine that maintains this immune tolerance by regulating cells, as well as the processes of apoptosis and proliferation of endometrial cells, during embryo implantation.

Methods: The study group consists of twenty-two (22) women with history of recurrent pregnancy losses, while the control group consists of eighteen (18) women who voluntarily terminated their pregnancies between the 6th and 12th week of pregnancy. There were used monoclonal antibodies against Cytokeratin 7 and prolactin to differentiate between trophoblast and decidual cells on the embryonic surface. Immunohistochemical staining for TGF-β_1 was conducted. Cytoplasmic expression of the marker was considered positive, while the intensity of the staining was assessed with the cross scale. Additionally, statistical analysis was performed.

Results: The expression of TGF-β_1 was detected as negative in the control group, both in the decidua basalis and the trophoblast. In contrast, in the study group, the expression was detected as moderate positive (two crosses, ++) or mild positive (one cross, +) at sites in the decidua basalis, with a predominance of the mild positive expression in most cases. Regarding its expression in the trophoblast, it was detected as mild positive (one cross, +) or moderate positive (two crosses, ++) in sites with a predominance of mild positive expression in most cases.

Conclusion/Discussion: The expression of TGF-β_1 is detected as increased in the study group compared to the control group, resulting that a further investigation may be crucial for the better understanding of the pathophysiology of recurrent pregnancy losses. This knowledge becomes important, as it may contribute to the design and effectiveness of future therapeutic methods.

ORAL PRESENTATIONS

CARDIOLOGY

OP006 IS COVID-19 THE NEW ATHEROSCLEROSIS?ACUTE AORTIC DISSECTION TYPE A IN THE EARLY PERIOD AFTER COVID-19 INFECTION

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Aim: To examine the atherosclerotic dynamics of SARS CoV 2 through the association between early COVID-19 disease and acute aortic dissection type A.

Material and Methods: Description of a case of our clinic with Acute Aortic Dissection Type A two weeks after COVID-19 infection and examination of the current bibliography,in the spectrum of COVID-19 infection and Acute Aortic Syndromes.

Results: Existence of an etiopathological relationship between recent COVID-19 infection and Acute Aortic Dissection Type A.

Conclusions: The pathophysiology of Aortic Dissociation is based on endothelial inflammation, atherosclerosis, genetic factors and connective tissue disorders. Endothelial inflammation and aortitis is an established condition in COVID-19 infection. Three of the receptors that SARS-CoV-2 uses to enter the endothelial cell, as well as the induced activation of the type 3 hypersensitivity reaction, may be responsible for disruption of the aortic intima layer and may be closely associated with the development of Acute Aortic Dissection. However, further investigation is needed to concretise this pathophysiological pathway.

OP020 **SYSTEMATIC REVIEW OF CLINICAL TRIALS FOR PCSK9 INHIBITORS IN DYSLIPIDEMIA**

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Introduction: The inhibitors of protein PCSK9 (Proprotein Convertase Subtilisin/Kexin type 9) Evolocumab and Alirocumab bind selectively to the PCSK9 protein and prevent its binding to the low-density lipoprotein receptor (LDLR) on the surface of liver cells, blocking in this way the PCSK9 degradation of LDLR. Increasing LDLR levels in the liver ultimately lead to a decrease in serum low-density lipoprotein (LDL-C). We aim to extensively study the efficacy and safety of PCSK9 inhibitors.

Methods: We performed an advanced search up to 15th January 2023 in the PubMed online library with the terms "Hyperlipidemia 'AND' Hypercholesterolemia 'AND' Dyslipidemia 'AND' PCSK9 Inhibitors 'OR' Evolocumab 'OR' Alirocumab" using the filters "Clinical Trials & Randomized Control Trials' as well as in clinicaltrials.gov with the term 'PCSK9 Inhibitor' and the filter 'Completed'.

Results: We reviewed published results of 54 clinical trials regarding the safety of PCSK9 inhibitors and their effect not only on the levels of LDL-C, serum high-density lipoprotein (HDL-C), total cholesterol (TC), lipoprotein Lp(A), but also on the risk of cardiovascular events (MACE). No significant differences in efficacy were observed between Evolocumab and Alirocumab, which achieved over 52 weeks a reduction in LDL-C by 40-68%, an increase in HDL-C by 4-8%, a reduction in TC by 35-37 %, a reduction in Lp(A) by 16-34% and a reduction in the frequency of MACE by 15-24%. In addition to all the above, both Evolocumab and Alirocumab showed an excellent safety and tolerability profile, with a low incidence of adverse effects compared to placebo. To be precise, the most commonly reported adverse effect was injection site reactions.

Discussion: In conclusion, numerous studies have been published on the efficacy of PCSK9 inhibitors as a lipid-lowering treatment option in patients who tolerate statins poorly or in patients already receiving a statin-ezetimibe combination. However, further clinical trials should be conducted to investigate the long-term safety and efficacy of this treatment option.

ORAL PRESENTATIONS

OP035 UP TO DATE ACCESS SITES - CATHETERIZATION FOR CORONARY ANGIOGRAPHIES- «ALL ROADS LEAD TO HEART»

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Introduction: During the last years transradial access (TRA) constitutes the appropriate method of coronary catheterization, replacing the transfemoral one. Currently new techniques are tested and distal radial access (DRA) via anatomical snuffbox is one of them.

Background: It is shown that DRA may reduce the incidence of future radial artery occlusion (RAO)[1],[2]

Methods: At a multicenter randomized trial (DISCO RADIAL)[3] 1307 patients were randomized (1:1) to DRA or TRA. The primary endpoint was the RAO evaluated by Doppler ultrasound. Secondary endpoints were crossover of access site, local complications and hemostasis time. Another randomized trial (ANGIE)[4] has been accomplished in University Hospital of Patras where 1042 patient were catheterized from DRA or TRA and after 60 days possible RAO was evaluated by Doppler ultrasound.

Results: DISCO RADIAL shown interestingly very low but same rates of RAO via TRA or DRA as also local complications, bleeding events or artery spasm. A statistically significant difference appeared to hemostasis time in favor of DRA. The crossover rate was significantly higher in DRA patients. ANGIE confirmed the correlations for local complications, hemostasis time and crossovers. However, ANGIE showed decreased incidence of RAO in DRA. Furthermore, an increased procedural time and dose area product (DAP) were showed in DRA.

Conclusion: DRA disadvantage to percentage of crossovers, procedural time and increased DAP. However, the possibility of decreased RAO incidence and decreased hemostasis time are important indications that justify further investigation of this technique that may place it among the guidelines.

OP046 **PERCUTANEOUS MITROID VALVE REPAIR IN A MODERN STRUCTURAL HEART DISEASE CENTER**

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In the present paper, we discussed the procedure of percutaneous mitral valve insufficiency repair with the placement of a MitraClip device, and then a statistical analysis was made of the patients in whom MitraClip placement was performed at the University Hospital. Mitral valve insufficiency (MVI) is the 2nd most common valvular disease, and is divided into primary and secondary. Patients with MVI may at some point need to have their mitral valve repaired or replaced. But in patients with primary MVI who are at high surgical risk, and in patients with secondary MVI who are symptomatic and at high surgical risk, as long as echocardiographic criteria are met, the percutaneous approach is performed. MitraClip is a cobalt-chromium-based implant-clip, delivered transcatheterically. The placement technique is based on the Alfieri ''edge to edge'' technique, with the clip inserted percutaneously through the femoral vein, and through a puncture of the mediastinal septum enters the left atrium, targeting the anterior and posterior valve leaflets which move until the desired hemodynamic effect is achieved, creating a double orifice to finally be able to reduce the reflux jet. Before and during the placement, a transesophageal echocardiogram is performed to assess the patient's suitability and the post-operative outcome respectively. Images from a transesophageal echocardiogram of a PGNI patient illustrating MitraClip placement are present in the paper. In the 2nd part, the data of patients of the B cardiology clinic of the PGNI who underwent MitraClip placement were analyzed, and demographic data such as gender, age, co-morbidities are included. Lastly, clinical and echocardiographic data such as EuroScore, survival rate, when death occurred in those who died, duration of hospitalization and some clinical-laboratory indicators were analyzed.

ORAL PRESENTATIONS

OP050 NEWER THERAPEUTIC APPROACHES TO THE TREATMENT OF AGING - A FOCUS ON NUCLEIC ACIDS

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Introduction: Atherosclerosis is a chronic inflammatory disease characterized by the formation of atheromatous fatty structures in the walls of arteries, which often rupture causing Vascular Strokes and Infarctions leading to heart failure. This disease not only has the highest frequency of cardiovascular diseases but is also the first cause of death in Western societies, with rates of more than 50% despite established, effective treatments to reduce cholesterol.

Purpose: To review the recent literature to present the latest findings of clinical studies in the therapeutic use of ribonucleic acids against atherosclerosis.

Material and methods: Literature review from the databases of Pubmed and Google Scholar with chronological criteria of the period 2016- 2023.

Results: New clinical studies are testing microRNAs (miRNAs), small interfering RNAs (siRNAs) and decoy Oligodeoxynucleotides (ODNs) as new generation therapeutics against Atheromatosis. miRNAs and siRNAs are ribonucleic acid molecules that bind to RNA molecules, related to the pathogenesis of the disease, deactivating them, and leading to their faster degradation respectively. Decoy oligodeoxynucleotides inhibit metabolic pathways by binding to the binding sites of appropriate transcription factors. The most important target molecules of the above mediators in clinical studies are ApoB, PCSK9, Lp(a), ApoCIII, and ANGPTL3. The work focuses on the therapeutic potential of the above interventions and the findings of the latest clinical research in cardiology.

Conclusions: New nucleic acid-based therapeutic interventions for atherosclerosis show encouraging results in clinical studies but also some significant adverse effects.

OP114 **THE EFFECT OF SGLT2 INHIBITORS ON THE ENDOTHELIUM AND MICROCIRCULATION: FROM THE LABORATORY TO THE CLINIC**

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Introduction: The beneficial cardiovascular effects of sodium-glucose cotransporter 2 (SGLT2) inhibitors is nowadays established knowledge. The exact underlying mechanisms accountable for these effects, however, are yet to be clarified. The direct effect on endothelial function is one of the most well-known, with intensified research trying to unravel the involved pathways. The aim of this systematic review is to link and present all the relative data concerning the effects of empagliflozin and dapagliflozin on the endothelium and the microcirculation.

Methods: A PubMed search was conducted in order to identify relevant articles in English, published between 2014 and 2022. The used terms were "empagliflozin", "dapagliflozin", "SGLT2 inhibitors", "endothelium", "endothelial function", "microcirculation", "CFR", "IMR", "FMD", as well as their combinations.

Results: 39 studies (25 preclinical and 14 clinical) met our inclusion criteria and were finally included in the study. The preclinical studies investigate novel mechanisms regarding the beneficial effect of SGLT2 inhibitors on the endothelium, among the most admissible being improvement of vasodilation, NO production, mitochondrial homeostasis, endothelial cell viability and angiogenesis as well as attenuation of oxidative stress and inflammation. However, there is still much debate about the exact mechanisms, with some research teams even presenting conflicting data. In general though, the evidence from these preclinical studies supports the demonstrated improved endothelial function of the human clinical trials. The latter, with only few exceptions, have systematically shown an improvement in endothelial function, presented as an increase in flow-mediated dilatation (FMD) and reactive hyperaemia index (RHI), in patients receiving a SGLT2 inhibitor.

Conclusions: A variety of studies have demonstrated the beneficial effects of SGLT2 inhibitors on the endothelial function. Hence, SGLT2 inhibitors have the potential to be used in the future as primary prevention of cardiovascular disease in selected high risk patients. More large-scale studies are needed in order to verify the existing evidence and define the patients who are most likely to benefit from such an intervention.

ORAL PRESENTATIONS

OP126 LONG-TERM PROGNOSTIC IMPLICATIONS OF IN-HOSPITAL CHANGES IN N-TERMINAL PRO-B-TYPE NATRIURETIC PEPTIDE LEVELS AMONG HOSPITALIZED PATIENTS WITH ATRIAL FIBRILLATION WITH OR WITHOUT HEART FAILURE

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Introduction: N-terminal pro-B-type natriuretic peptide (NTproBNP) has proven its prognostic value for cardiovascular risk stratification, especially in patients with heart failure (HF). Both baseline values and over-time changes in NTproBNP levels are predictive of several outcomes in heart failure (HF). However, the association between in-hospital NTproBNP changes with long-term outcomes in AF remains uncertain.

Objective: To evaluate the association of in-hospital changes in N-terminal pro-B-type natriuretic peptide levels and long-term prognosis in patients with atrial fibrillation with or without heart failure.

Methods: This is a post-hoc analysis of the MISOAC-AF trial (NCT02941978). Consecutive inpatients with AF who had NTproBNP values at both hospital admission and discharge were included. The relative change (%) between admission and discharge NTproBNP was calculated. Cox regression analyses with covariate adjustments were used for outcome prediction.

Results: Out of a total of 1140 consecutively hospitalized patients with AF, 667 of them were included in this study and analyzed over a median follow-up period of 32 months. HF was present in 390 (59%) patients. After covariate adjustments, the relative NTproBNP increase was associated with all-cause mortality, cardiovascular mortality, HF-related hospitalization and stroke. The prognostic value of the relative change in NTproBNP was particularly evident in patients without HF for all-cause mortality, cardiovascular mortality and HF-related hospitalization (p for interaction < 0.005, for each outcome).

Conclusion: The relative change of NTproBNP during hospitalization has significant long-term prognostic power among patients with AF, especially in those without HF.

OP118 ULTRASOUND APPROACH OF MYOCARDIAL WORK: CLINICAL IMPORTANCE AND APPLICATIONS

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Introduction: The load of the left ventricle (Myocardial work, MW), as an index of systolic efficiency, used to be measured with Frank-Starling curves after catheterization of the left heart. With ultrasound advances, it is nowadays possible to define the MW using a non-invasive method using systolic pressure curves and the Global Longitudinal Strain (GLS). Purpose of the present retrospection is to study the ultrasound approach to MW and point out the advantages and disadvantages of the method and also the clinical uses.

Methods: The study is a systematic review of the bibliography from Pubmed, Google Scholar and Cohrane. The searching terms were "myocardial work", "longitudinal strain" and "pressure-strain loops".

Results: Since the ultrasound was introduced in the calculation of MW there was observed an increasing amount of studies nominating the importance of this diagnostic tool against the classic invasive method. Also, the ultrasound approach can be used to determine the pathophysiology of various cardiovascular diseases such as cardiac failure, valvular pathology even the "heart of the athlete". Among the advantages there is included the autonomy of the result from parameters such as preload and afterload and the bloodless method. On the other hand, the disadvantages are, that only one system currently provides software to calculate MW limiting the applicability of this method and poor image quality.

Conclusion: A great body of evidence is showing the great feasibility of ultrasound in calculation of MW and supporting the use of this toll in clinical applications and in the patient's treatment follow-up.

ORAL PRESENTATIONS

MICROBIOLOGY/ INFECTIOUS DISEASES (II)

OP024 EPIDEMIOLOGICAL STUDY OF THE RESISTANCE OF MULTI-RESISTANT BACTERIA ASSOCIATED WITH BLOODSTREAM INFECTIONS

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Bloodstream infections (BSI) are the second most common category of infections in patients in Intensive Care Unit (ICU), after ventilator-associated pneumonia. In Greece, bacteremias are mainly due to multi-resistant gram-negative strains, and most of the times to the species ***Pseudomonas aeruginosa, Acinetobacter baumannii*** and ***Klebsiella pneumoniae.*** These bacteremias cause high mortality and increase the hospitalization time, but also the cost of treatment. They are divided into primary and secondary BSI, depending on the gateway of the pathogen into the circulation system. The main source of infection is Central Venous Catheter (CVC), from where the pathogens enter. The present retrospective epidemiological study was conducted at the PGNA (University General Hospital of Alexandroupolis) from June 2016 to June 2020. There where 137 cases with the majority of them appearing in the ICU. These included cases of primary, secondary, intravascular catheters' and unspecified gateways BSI.

There was observed increase in isolation of multidrug-resistant strains in ICU patients, involving 51 multi-resistant strains of ***Acinetobacter baumanni,*** 28 ***Klebsiella pneumoniae*** and 33 ***Pseudomonas aeruginosa.*** The existing antimicrobial agents are proved ineffective for those strains, excepting colistin and phosphomycin, which showed the greatest sensitivity. The absence of new drugs for multidrug-resistant pathogens' treatment, as well as the unfaithful implementation of prevention and hygiene measures make bacteremias a major and intractable problem in hospitals.

OP043 **THE USE OF BACTERIOPHAGES AS TREATMENT AGAINST RESISTANT BACTERIAL INFECTIONS / BACTERIOPHAGES - THE "ANTIBIOTIC" OF THE FUTURE?**

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Introduction: In recent years there has been an increasing incidence of bacterial resistance to antibiotics. In fact, according to the WHO, antibiotic resistance is one of the 10 most important public health threats humanity is facing. In addition, a high annual economic burden is recorded due to resistant bacterial infections. A solution to this problem seems to be bacteriophages. Bacteriophages are a distinct class of viruses whose hosts are bacteria. After infecting the bacterial cell, they multiply inside it and destroy it (lytic cycle), while in other cases they integrate their genetic material into that of the bacterium, giving it new properties (lysogenic cycle). For this reason, their use as a medicine against bacterial infections, especially those that have developed resistance to antibiotics, has been proposed.

Objective: To review the recent literature and trace the new applications of the antibacterial use of bacteriophages at the preclinical and clinical level.

Methods and Data: The recent literature on the use of bacteriophages as therapy against resistant and non-resistant bacterial infections were reviewed and data on progress in this field were collected.

Results-Conclusions: As we face the current crisis of resistant bacteria, bacteriophage therapy has the potential to alleviate the ever-increasing problem of infectious diseases, either as an alternative to antibiotics or in combination with antimicrobial therapies. Many clinical studies have been oriented in this direction with extremely positive results and minimal toxicity to human cells. However, further research is needed on the issue before it is widely applied in clinical practice.

ORAL PRESENTATIONS

OP095 HUMAN ENDOMETRIAL MICROBIOME AND IN VITRO FERTILIZATION OUTCOMES: A REVIEW OF THE LITERATURE

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Introduction-aims: The bacteria of the urogenital tract consist the 9% of the total human microbiome and most of them are not easily cultured. Uterine microbiome has a crucial role in the female reproductive health and it has been associated with poor outcomes in in vitro fertilization (IVF). The aim of this review is to investigate the role of the endometrial microbiome and its synthesis in the outcome of IVF.

Methods-data: A search of the literature was obtained in data bases. Afterward, extraction and analysis of the data from the selected studies were performed.

Results: During the luteal phase of the menstruation cycle the dominant bacteria genera in both the microbiome of the vagina and uterine is the lactobacillus. Although it has been found that the synthesis of the microbiome does not differ during the phases of the cycle and it is independent of the circulating hormone levels. The L. Helveticus seems to appear more often in the vagina than in the uterine. In the women who underwent a successful IVF, the following bacteria dominated their endometrial microbiome: Lactobacillus spp., Gardnerella spp., Burkholderia spp. And Anaerobacillus spp. On the contrary, in the women who this procedure had a poor outcome, the presence of Streptococcus spp., Ralstonia spp., Prevotella spp., Delftia spp., Enterobacteriaceae spp., Staphylococcus spp., Escherichia coli and other Gram-negative bacteria was found in significant percentages. Thus low percentages of the genera Lactobacillus in the samples have been associated with failure of the embryo to implant.

Discussion: Although not enough differences have been found in the vaginal microbiome between fertile and non-fertile women, there are significant statistical differences in the synthesis of the endometrial microbiome between the two groups that influence the outcome of IVF. So perhaps this therapeutic intervention should be considered as a “super-treatment” in women with an “hostile” microbiome for implantation.

OP053 HUMAN MICROBIOMA AND VACCINATION

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Introduction- Aims: Vaccination is one of the most efficient means of preventing infectious diseases. It is known that, immune response after vaccination varies between different populations. Studies have shown that the composition of human microbiome influence the immune response after vaccination. This review targets to evaluate the manner that human microbiome reflects on immune response after vaccination.

Methods: Research was conducted at medical bases, data were recorded and then the team of the project composed this review.

Results: Gut microbiome influence and amends immune response oral vaccines, specifically B and T lymphocytes of human recognize molecules produced from these microbiomes, thus gut microbiome amends the immune response. The human microbiome alters immune response at distal places on human body with the dislocation of PAMPs, the induction of cytokines and with the activation of second messenger pathways. Vaccination for rotavirus is more effective in people with increased levels of Proteus and Clostridium. High number of actinobacteria is associated with better immune response at oral and parental vaccines inducing higher levels of CD4+. Composition of microbiome is affected from the socio-economic status of the Country where people are being raised. The microbiome of people living at low socio-economic Countries presents higher levels of Prevotella species and of deducting enzymes. At low socio-economic Countries, only 53% of people under 18 years old produced INF-γ after BCG administration. Immune response is also affected from age, it is known that infants and elderly have a great differentiation at their microbiome.

Discussion: Environmental and acquired factors amend the composition of human microbiome, even from perinatal period. It is important to understand further the manner with whom human microbiome alters the immune response to the vaccination, in that way vaccination can become more efficient.

ORAL PRESENTATIONS

OP052 THE ROLE OF THE MICROBIOMA IN THE PATHOPHYSIOLOGY OF ACNE (ACNES VULGARIS)

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Aim: This paper aims to investigate the possible role of the microbiome in the pathophysiology of acne (Acnes vulgaris).

Methods: In order to thoroughly answer the question above, we searched for the combination of the keywords “Acnes vulgaris” and “microbiome” on PubMed. Studying the results led to a bibliography review, based on journals of Dermatology, Microbiology and Gastroenterology, such as ***the Journal of the European Academy of Dermatology and Venereology, Clinics in Dermatology, Microorganisms, Beneficial Microbes, Gut Pathology.*** Relevant systemic reviews of the last decade provided the data used for writing this paper.

Results: The relation between microbiome and Acnes vulgaris is strong and flows bidirectionally, as a disorganized microbiome can disturb the skin homeostasis, and vice versa. One of the main microorganisms involved in acne emergence is an opportunistic pathogen, the Gram(+) rod ***Cutibacterium acnes,*** which appears to be of high significance in the inflammatory process of this skin disorder. Furthermore, a pathological gut-skin axis provides a positive feedback loop for acne via immune, hormonal, and other pathways triggered by dysbiosis. In patients with acne, the composition of the skin-colonizing microorganisms is altered in a quantitative and qualitive (species) level, a finding that could be the base for the development of new anti-acne treatments.

Sum-up/ Discussion: The role of microbial dysbiosis is often not considered as a parameter in the treatment of acnes, partly due to the lack of large-scale clinical trials until this day. However, personalized acne therapies aiming at a balanced skin microbiota are probably the future of acne treatments.

VASCULAR SURGERY, CARDIOTHORACIC SURGERY, NEUROSURGERY

OP016 URGENT TRANSCATHETER EDGE TO EDGE REPAIR (TEER) IN PATIENTS WITH SEVERE MITRAL REGURGITATION AND CARDIOGENIC SHOCK: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Patients with severe mitral valve regurgitation (MR) and cardiogenic shock (CS) demonstrate a poor prognosis and a high mortality rate[1,2]. Recent evidence suggests that transcatheter edge-to-edge repair (TEER) of MR with the MitraClip system can alter patient management by reversing hemodynamic instability[3].

Methods: We performed a systematic review and meta-analysis according to the PRISMA guidelines[4]. We systematically searched the published literature in MEDLINE (Pubmed) up to January 8, 2023, for studies evaluating urgent TEER with MitraClip in patients presenting with severe MR and CS. CS was defined as 1) CS as per ICD-10, 2) inotrope use, or 3) mechanical circulatory support before TEER. The primary outcome was defined as device success and all-cause mortality rate during in-hospital/30-day follow-up and median long-term follow-up.

Results: A total of 25 studies with 5,428 patients were included in the meta-analysis. During in-hospital/30-day follow-up, device success was achieved in 86% of patients (95% CI: 80%-91%, I2 =49%), with MR severity grade ≤2+ described in 87% (95% CI: 79%-93%, I2 =75.8%). The all-cause 30-day mortality was 16% (95% CI: 13%-20%, I2 =84%). The incidence of myocardial infarction (MI) and stroke was 4% (95% CI: 1%-13%, I2=92%) and 2% (95% CI: 1%-2%, I2=0%), respectively. During a median follow-up of 10.6 ± 6.4 months, all-cause mortality increased to 31% (95% CI: 24%-39%, I2 =92%), while rehospitalization for heart failure (HF) was required in 18% (95% CI: 9%-29%, I2 =80%) of patients.

Conclusion: The use of MitraClip in patients with severe MR and concomitant CS in the acute phase is associated with favorable survival at both 30 days and long-term and significantly reduces all-cause mortality, MI, stroke, and readmission for HF in this patient population.

ORAL PRESENTATIONS

OP058 THERAPEUTIC TREATMENT OF PATIENT TRAP SYNDROME

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Introduction: Popliteal artery entrapment syndrome is an uncommon, non-atheromatic disease that mostly affects young people who have an abnormal relationship between the popliteal artery and the gastrocnemius muscles. The purpose of this study is to present our experience and results in the management of the disease.

Materials and Methods: During 2014-2021, 12.000 patients were examined at the outpatient department of the vascular clinic of Naval Hospital of Athens. 5 of them (4 male and 1 female), between 24-32 years old, presented with popliteal artery entrapment syndrome. The patients suffered from heaviness, numbness and cramping pain during extension and flexion of the lower extremity. Intermittent claudication during walking was noticed in three patients and during running in two of them. The physical examination revealed absent of pulses during hyperextension and temperature difference between two legs. Our diagnosis was confirmed by color doppler scan, MRI scan and DSA angiography.

Results: After full preoperative examination, 4 patients underwent surgical treatment. In three of them a femoral- popliteal bypass with vein graft was performed. In one patient a dissection of the muscle, was our only intervention. No death perioperatively occurred and in one patient damage of the peroneal nerve was noticed. All other patients returned to their physical activities 20 days postoperatively and remain free from symptoms until today.

Discussion: Popliteal artery entrapment syndrome is an uncommon disease that mainly affects young people. Surgical treatment is the treatment of choice. The proper diagnostic investigation is necessary for surgical planning and preoperative examination is mandatory to reduce complications. All patients should be followed-up for potential recurrence.

OP108 THE USE OF A TAILOR-MADE BOVINE PERICARDIAL GRAFT TO TREAT AN AORTOBIFEMORAL GRAFT INFECTION

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Introduction: The Infection constitutes as a severe complication after the placement of a synthetic endovascular graft. The replacement of the infected graft by a new one is currently the best available solution, but still is an operation with many technical difficulties and high morbidity and mortality rates. Grafts derived from biological materials are more resistant to infections and seem to be the best choice for these patients. We are presenting a case study of a patient, where an infected aortobifemoral graft was treated by replacing it with a "tailor-made" bifurcated bovine pericardial graft.

Methods: We performed a detailed analysis of the medical record of a patient, hospitalized in the Department of Vascular Surgery at "Attikon" University General Hospital in late 2022, due to an infection of the aortobifemoral graft.

Case Presentation: A 73-year-old patient, with a history of open abdominal aortic aneurysm repair, by using an aortobifemoral aortic graft 15 years ago, presented with evidence of infection, which included pus discharge from the left inguinal region and the presence of a large pseudoaneurysm in the right femoral anastomosis of the graft. From the patient's medical history, multiple operations on the existing graft were done in the past to treat a small pseudoaneurysm initially and persistent lymphorrhea thereafter. The infection was confirmed by a positive Positron Emission Tomography test. The patient was initially treated surgically by replacing the old graft with a new one. The new graft came from a biological material, namely, bovine pericardium. The graft was shaped in the operating room (tailor-made), as there are not any grafts of this type available in Greece to date. After surgery, the patient received prolonged antibiotic treatment. Postoperative hospitalization lasted 18 days, without remarkable problems. The patient discharged in excellent clinical condition. Six months after surgery, the patient is in a good condition without having any problems.

Summary - Discussion: Bovine pericardial grafts can be a solution for synthetic vascular graft infections. The main problem is the unavailability of such grafts in the Greek market. Studies are needed to assess the long-term course of these patients.

ORAL PRESENTATIONS

OP045 CORONARY SINUS NARROWING: A NOVEL TRANSCATHETER OPTION FOR REDUCING REFRACTORY ANGINA

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Objective: Refractory angina, according to the latest definition of the European Society of Cardiology, is the type of angina in which patients remain symptomatic and cannot be treated with further pharmacological or interventional options, including chronic total occlusion interventions. In Europe, it is estimated that 30,000-50,000 new cases are annually diagnosed. Recently, a new invasive method, coronary sinus narrowing with the Reducer device, appears to offer symptom relief and improvement of patients' quality of life. The aim of this study was to review the literature on the mechanism of action and the latest clinical data from the use of the Reducer device.

Methods: A literature review of the PubMed/Medline database was performed to search for all relevant articles. The references of relevant articles were also reviewed to ensure that any relevant literature not found in the initial searches was not omitted.

Results: Transcatheter narrowing of the coronary sinus using the Reducer device, by reducing its diameter, causes a retrograde increase in coronary venous pressure, resulting in vasodilatation of the coronary vessels, reduction in resistance of the subendocardial arteries, and better perfusion of the myocardium. So far, 12 clinical trials have studied the device in patients with refractory angina, and all of them have reported improvement of anginal symptoms, with a reduction of 1 or 2 classes of the CCS angina classification in the majority of patients. The most recent meta-analysis on the topic, including 9 of the aforementioned studies, supports the positive results of the method, with 76% of patients achieving a reduction equal to or greater than 1 CCS class, 40% equal to or greater than 2 CCS classes, and a significant increase in 6-minute walking test distance.

Conclusion: The coronary sinus narrowing method with the Reducer device appears to be a safe and effective treatment option for patients with refractory angina.

OP103 SUBCUTANEOUS EMPHYSEMA: TWO INTERESTING CASES AND THE MODERN APPROACH

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Introduction: The term emphysema was firstly used by Hippocrates, describing the accumulation of air bubbles in the tissues. The subcutaneous emphysema (SE) is a multifactorial clinical entity that requires individualized approach from the physician. The aim of this report is to present the appropriate treatment options according to the etiology and the clinical status of the patient.

Materials-Methods: Two cases were studied that differ in etiology. Moreover, a review of the modern literature took place using the online database MEDLINE (via PubMed) by searching relevant keywords such as "subcutaneous emphysema management", "subcutaneous emphysema treatment options". The majority of the chosen articles was published the past decade (2013-2023) in English.

Results: The first case refers to a 67year old man that was admitted with SE in the chest, neck and face, one week post operatively from lobectomy after presenting cough. The CT did not reveal the location from which air leaks. Firstly, the patient was treated with negative pressure treatment (VAC) and next with subcutaneous incision and placement of drainage tube with negative pressure. The second patient was an 88 year old man admitted to the emergency department referring dyspnea. The imaging showed a bronchopleural fistula with empyema and pneumothorax. During the bullau placement, the patient presented rapid air accumulation subcutaneously that spread to the head. The tube was not draining air. With CT guidance it was relocated and negative pressure was applied. Along with the usage of decompression needles, the SE withdrew. Those treatment approaches are included among others in the international bibliography.

Discussion: The SE presents with severe clinical manifestations, although it is not a life threatening condition, as it does not cause severe obstruction to crucial structures in adults. The choice of therapeutic strategy depends on the underlying cause of the air leak, which needs to be addressed.

ORAL PRESENTATIONS

OP023 RESPONSIVE NEUROSTIMULATOR SYSTEM: EMERGING TREATMENT MODALITY FOR MEDICALLY REFRACTORY EPILEPSY

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Introduction/Objectives: Responsive Neurostimulator System (RNS) is a minimally invasive neuromodulatory system for treating medically refractory epilepsy. It is an implantable closed loop system that uses electrical stimulation each time it detects pathologic electrographic activity in certain areas of the brain, thus inhibiting epileptic crisis triggering. The objective of this project is to present the 3 major clinical studies that led to the U.S FDA approval of the NeuroPace RNS System for the treatment of refractory epilepsy.

Methods: A PubMed search was conducted using the terms "NeuroPace", "FDA", "FDA approval", "RNS", "responsive neurostimulator system" and the Boolean operators "AND", "OR". A total of 3 multicenter prospective studies was retrieved.

Results: The initial population consisted of 256 individuals that were implanted with a responsive neurostimulator and were followed in a 2-year safety and efficacy study. 230 patients were enrolled in the long-term treatment study. In the first 5 months (blinded period) there was a 37.9% reduction of seizures in the active stimulation group followed by a 44% reduction at 1 year (open-label period), and 53% at 2 years. In the long-term study the reduction rate ranged from 48% to 66% on the 3rd to 6th year. The most common adverse effects were site infections, device lead damage or explantation, which did not exceed the anticipated rate.

Conclusions: Responsive Neurostimulator System showed significant efficacy and safety for patients with medically refractory partial onset seizures. It consistently improves quality of life over time and is well tolerated by the patients, providing thus a new treatment option for this target group.

Conflicts of interest: The author declares no conflicts of interest with Neuropace.

OP015 INVASIVE TREATMENT FOR MITRAL ANNULAR CALCIFICATION : CASE REPORT AND LITERATURE REVIEW

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Introduction: Mitral annular calcification (MAC), a chronic degenerative process of dysregulated calcium metabolism, is one of the most common incidental findings on echocardiography and of increased frequency in women and in patients with renal disease or atherosclerosis[1]. Clinically, it may be asymptomatic or present as mitral stenosis and/or mitral regurgitation, endocarditis or embolic episode.

Methods: A 51-year-old male with history of untreated hypertension and dyslipidemia presents with dyspnea on effort during the last month (NYHA II). Echocardiography shows diffuse calcification of the anterior and posterior mitral annulus, with involvement of the aortic valve, causing obstruction of the left ventricular outflow tract (LVOT). The mean transmitral pressure gradient was 5 mmHg at rest and 11 mmHg at stress echocardiography, which is indicative of severe mitral stenosis.

Results: The patient was placed on triple therapy and was found to be clinically improved (NYHA I-II) at follow up. MAC, in the absence of persistent symptoms, is usually managed conservatively, with monitoring and medications, as long as the patient remains asymptomatic[2]. However, severe MAC may progressively lead to severe mitral dysfunction, which will require medical intervention. Cardiothoracic replacement is proposed as the gold standard; however, it is related with increased technical difficulty and mortality[3]. Recently, transcatheter interventions, such as transcatheter mitral valve replacement, are of particular interest, as although also associated with increased complications rates due to LVOT obstruction phenomena, new prevention techniques such as LAMPOON and alcohol septal ablation increase the success of such techniques[4,5]. Finally, the use of transcatheter edge to edge repair devices, such as MitraClip, also seem to offer clinical benefit in patients with MAC[6].

Conclusion: Even though conservative treatment is currently considered most appropriate; it is necessary to explore interventional options that improve patients' long-term symptoms. Transcatheter interventions are promising; however, further research and experience is needed for everyday clinical use.

ORAL PRESENTATIONS

INTERNAL MEDICINE

OP002 EARLY- ONSET TYPE 2 DIABETES MELLITUS: AN UPCOMING THREAT

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Introduction - Background: The incidence of Type 2 Diabetes Mellitus (T2DM) in young adults (aged <40 years) has significantly increased in recent years. This review summarizes the up-to-date knowledge in regard to the natural history of the disease, the morbidity and mortality associated with the young age of diagnosis.

Methods: A PubMed search was conducted to identify the risk factors for early diagnosis of T2DM, as well as the epidemiology, natural history and complications of the disease compared with the later- onset T2DM. Search terms included ("Diabetes Mellitus, Type 2" OR "T2DM" OR "type 2 diabetes") AND ("early-onset" OR "young-onset" OR "early adulthood") AND ("complications" OR "long-term effects"). All articles published within the last 5 years were perused, and relevant data was extracted.

Results: Diagnosing T2DM in a younger age is associated with a more rapid deterioration in pancreatic β-cell secretory function and, as a result, an insulin replacement therapy is required in earlier stages. Risk factors contributing to a younger age of onset include severe obesity, female sex, family history, specific ethnic groups, and gestational diabetes. The lifetime risk of developing microvascular and macrovascular complications is increased and these are often developed at earlier stages, but whether this is due to the more aggressive phenotype of the disease and/or the longer exposure period still remains unclear. Cases of depression, early cognitive impairment and infertility have been reported.

Conclusion - Discussion: The diagnosis of T2DM in young adults is a clinical entity that requires further investigation in terms of prevention, diagnosis and treatment as it presents with a more aggressive phenotype and is associated with increased morbidity. It is essential to also consider the public health consequences of the disease as well as the effects on patients' quality of life.

OP012 **SEX AND HEALTH: YOUNG PEOPLE AND KNOWLEDGE**

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Introduction-Objectives: Sexually transmitted diseases (STDs) are a major public health problem. The creation of optimal strategies for STDs' prevention and for population informing aims at modifications of behaviours, habits and practices. In this context, the knowledge of a sample of the presumably sexually active population is recorded, regarding the mode of transmission and prevention of STDs as well as vaccination and access to it.

Methods-Data: For this purpose, 155 questionnaires were randomly distributed and were completed by men (29.7%) and women (70.3%). 57.7% of participants were under 25 years old and 42.3% were 25-45 years old. The statistical processing of the results was done by the use of the SPSS software.

Results: Most respondents (73.5%) are informed about STDs from the internet, considering HIV, HBV and HCV as the most dangerous viruses. Most believe that pain and/or burning sensation during urination (67.3%), genital itching (57.7%), increased vaginal discharge (49.4%) and dyspareunia (57.1%) are the most common disease symptoms, with vaginal and anal sex being the main ways of transmission. Regarding vaccination against STDs, insufficient information (53.5%) and fear of possible side effects (27.6%) were considered as the main factors for avoiding vaccination of their children. In addition, almost half believe that different social groups do not have the same opportunity to be vaccinated against STDs, while many have a misconception about the existence of vaccines such as against HIV (17.9%), syphilis (9.6%) and hepatitis C (42.9%). Finally, for almost all (98.1%) condom use is the best way to be protected against STDs.

Discussion: Overall, a significant lack of knowledge about STDs' prevention and vaccination was found. Adequate informing and creation of critical points of information and control in the city were considered by the majority as the most useful solutions to limit the spread of STDs.

ORAL PRESENTATIONS

OP030 HISTOLOGIC LESIONS CAUSED BY COVID-19

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This is a literature review study to showcase the pathoanatomical lesions caused by SARS-COV2 virus in different organs (especially in the cardio-respiratory system). More specifically, reference is made, with the help of pictures (histological and anatomical), in histologic lesions of liver, kidneys, pancreas, stomach, central nervous system, and certainly of myocardium and lungs. One of the most characteristic is the presence of alveolar edema with viral cytopathic effects in type II pneumocytes, that warrant the shortness of breath in patients. In addition, perivascular hemorrhages are observed along with the presence of red blood cells in the tube of terminal bronchioles, which demonstrates the impact of the disease in the bronchial and vascular walls. In a myocardium level, we observe the form of thrombi, coronary vessels blockage, and degeneration with perivascular fibrosis- findings relatively routine related to the high death rate caused by cardiopulmonary complications of COVID-19. However, not so common, target-tissue lesions of the virus make their appearance, with a crucial impact in functions such as the metabolism, the absorption and secretion of substances and the hormonal control. Some of them are the fatty liver degeneration followed by hepatocytes necrosis, the atrophy and fatty change of the exocrine pancreas which is added by islets of Langerhans hypertrophy, the renal fibrosis with glomerular hyalinosis, etc. Finally, effects on the central nervous system have also been found with degenerative changes of brain neurons, and edema followed by gland cells necrosis in the pituitary. The systemic analysis of pathological findings that COVID-19 causes in different organs, therefore, becomes urgent, and also the detection in disease cases, in order the overall action of the SARS-COV2 virus to become more comprehensive and to be more effectively addressed.

OP040 **OBESITY AND ATHEROSCLEROTIC HEART DISEASE IN PATIENTS WITH HETEROZYGOUS FAMILIAL HYPERCHOLESTEROLAEMIA: DATA FROM THE HELLAS-FH REGISTRY**

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Aims: To investigate the association of obesity with prevalent ASCVD in individuals with heterozygous FH (HeFH) enrolled in the Hellenic Familial Hypercholesterolemia Registry (HELLAS-FH).

Methods: FH diagnosis was based on Dutch Lipid Clinic Network (DLCN) criteria. Adults with at least possible FH diagnosis (DLCN score ≥3) and available body mass index (BMI) values were included. Homozygous FH individuals were excluded.

Results: 1655 HeFH adults (mean age 51.0±14.4 years, 48.6% female) were included; 378 (22.8%) and 430 (26.0%) were diagnosed with probable and definite FH, respectively. Furthermore, 371 patients (22.4%) had obesity and 761 (46.0%) were overweight. Prevalence of ASCVD risk factors increased progressively with BMI. Prevalence of coronary artery disease (CAD) was 23.4% (3.2% for stroke and 2.7% for peripheral artery disease, PAD), and increased progressively across BMI groups. After adjusting for traditional ASCVD risk factors and lipid lowering medication, individuals with obesity had higher odds of established CAD (OR: 1.52, 95% CI: 1.03-2.25, p=0.036) as well as premature CAD (OR: 1.72, 95% CI: 1.15-2.58, p=0.009) compared with normal BMI. No association was found with stroke or PAD.

Conclusions: Over half of individuals with HeFH have overweight or obesity. Obesity was independently associated with increased prevalence of CAD in this population.

ORAL PRESENTATIONS

OP054 MEASUREMENT OF TIBIOBRAMIC INDEX IN INDIVIDUALS WITH AND WITHOUT DIABETES DIABETES

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Introduction: Ankle Brachial Index (ABI) is the ratio of systolic blood pressure to the posterior tibial or dorsalis pedis artery to the brachial artery. ABI is a tool for the diagnosis of peripheral arterial disease (PAD) of the lower limbs. The aim of the present study was to evaluate the presence of PAD based on ABI in people with and without diabetes.

Materials / Methods: A total of 100 individuals with type 2 diabetes and 77 individuals without diabetes were examined. ABI was measured at both lower limbs with a small portable 5-10 Hz Doppler ultrasound. ABI values ≤0.9 were considered as indicative of PAD presence, while values 1.3 indicate Mönckeberg's sclerosis. The definitive diagnosis of PAD was made by colored duplex ultrasound.

Results: The demographic characteristics and laboratory findings of the participants are presented in Table 1.

Table 1. Demographic characteristics and laboratory findings

	People with Diabetes	People without diabetes	p
n	100	77	-
gender (female/male) n (%)	38 / 62 (38,0 / 62,0)	46 / 31 (59,7 /40,3)	<0.001
age (years)	66,6 ± 8,7	62,8 ± 8,7	<0.001
duration of Diabetes (years)	14,0 ± 10	-	-
ABI	0,97 ± 0,25	1,05 ± 0,15	<0.001
PADn (%)	41 (41,0)	12 (15,6)	<0.001

Data are presented as n (%) or mean ± standard deviation.

In the group of people with diabetes, normal ABI was measured in 66 individuals (66.0%), values <0.9 in 27 individuals (27.0%) and values> 1.3 in 7 (7.0%) individuals. In the group of people without diabetes, normal ABI values were measured in 68 individuals (88.3%), values <0.9 in 9 individuals (11.7%), and no participants with values >1.3 were found.

Conclusion: ABI is a reliable method of screening for people with and without Diabetes. The calcinosis of the arteries in the lower limbs of people with diabetes lowers the reliability of the method and all patients with ABI values> 1.3 require further monitoring.

OP122 THE ROLE OF LONELINESS IN THE DIAGNOSIS AND REGULATION OF ARTERIAL HYPERTENSION IN THE ELDERLY

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Introduction: Both arterial hypertension (HTN) and loneliness show an increased prevalence in the elderly population. The aim of this study is to investigate the role of loneliness in the diagnosis, treatment, and control of hypertension in the elderly population of a Greek village.

Methods: The study involved 154 out of 191 (81%) residents aged ≥ 65 years of Paliouri, Halkidiki, with a mean age of 74 years. Blood pressure (BP) measurements were obtained at two visits and HTN was defined as mean systolic BP ≥ 140 mmHg and/or mean diastolic BP ≥ 90 mmHg at the second visit, and/or recieving antihypertensive medication. Loneliness was assessed by the University of California, Los Angeles (UCLA) Loneliness Scale questionnaire and by recording their living conditions as elicited by asking whether they live alone.

Results: Of the total participants, 22.7% lived alone, while 77.3% lived with someone. According to the UCLA scale, 29.9% of the total experienced loneliness while 70.1% did not. Loneliness was negatively correlated (p=0.027) with participants' self-rated health status, which was rated on a scale of 1 (poor) to 4 (very good). Both prevalence and control of HTN showed no difference depending on whether they felt lonely. However, the receiving of antihypertensive treatment was statistically significantly increased in those who lived with someone (92%), compared to those who lived alone (77.4%), (p=0.047).

Conclusions: Loneliness as determined by the UCLA scale was not associated with any outcome in terms of prevalence, treatment, or control of HTN. On the contrary, the living conditions appeared to negatively affect the receiving of antihypertensive treatment by possibly limiting their access and decision for assessment in health facilities. The present study could be a trigger for the vigilance of health professionals aiming for more effective care of the elderly living alone.

ORAL PRESENTATIONS

NEUROLOGY

OP076 DIAGNOSIS AND TREATMENT OF EPILEPSY USING NANOTECHNOLOGY, ARTIFICIAL INTELLIGENCE AND INTERNET OF THINGS (IoT)

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Purpose: The purpose of this announcement is to highlight the advantages of innovative methods of diagnosing and treating epilepsy.

Background: Over 60 million people worldwide suffer from epilepsy. Despite the high prevalence of the disease, a clinical problem is emerging: The development of resistance to drug therapy. Drug delivery nanosystems, Artificial Intelligence (AI) and the Internet of Things (IoT) appear promising both at the diagnostic and therapeutic levels.

Methods: This announcement is a review of clinical studies published in authoritative databases. These studies examine the application of drug delivery nanosystems in clinical therapy and diagnosis. At the same time, Artificial Intelligence (AI) and the Internet of Things (IoT) seem to give significant advantages to the treating physician.

Results: The application of Artificial Intelligence (AI), the use of Big Data through IoT-based networks, and the utilization of "smart" nanodevices can assist in clinical diagnosis and treatment. Also, drug delivery nanosystems improve biostability, reduce toxicity and control the release of the entrapped drug with better pharmacological effects. A typical example of diagnostic optimization is iron oxide nanoparticles as contrast agents in Magnetic Resonance Imaging (MRI). In addition, in the future, it is sought to design nanosensors that record an epileptic seizure, but have the ability to predict it by informing the patient from his mobile phone.

Conclusion: Early and accurate diagnosis of the disease with the help of new technologies (Artificial Intelligence & IoT) as well as treatment using Nanotechnology can significantly improve the patient's quality of life.

OP144 DEMYELINATION AND ALZHEIMER'S DISEASE: WHICH CAME FIRST? THE CHICKEN OR THE EGG?

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Introduction: In recent years, studies have shown that, contrary to what was previously known, Alzheimer's disease (AD) is not only related to gray matter, but also white matter degeneration. We aim to investigate whether demyelination and degeneration in Oligodendrocyte Progenitor Cells (OPCs) contribute to AD pathogenesis, or whether white matter degeneration and demyelination is just another step in the disease progression "ladder" that further reinforces AD neuropathology.

Methods: This research work is a review of the literature in PubMed and MedLine databases. The search was made according to the following algorithm: ((myelin) OR (demyelination) OR (remyelination)) AND (Alzheimer) AND ((Oligodendrocyte) OR (NG2))

Results: AD causes damage to oligodendrocytes through several mechanisms. One of the most important is oxidative stress, which probably affects both mature oligodendrocytes and OPCs. Other possible mechanisms are hypoxia, excitotoxicity, DNA damage, and damage caused by astrocytes and microglia. However, many studies have shown that white matter lesions first appear at the very early stages of the disease and long before symptoms even appear. Possible causes of these initial lesions are the oligodendrocyte glycolytic deficiency and impairments in the insulin and Insulin-like Growth Factor signaling.

Discussion: The data to date, although by no means sufficient to conclude with certainty, suggest that the damage to oligodendrocytes is likely linked to AD progression through a positive feedback loop. The failure of treatments on classical targets, such as Aβ and tau, combined with the new data showing not only secondary, but also primary oligodendrocyte damage, may change the landscape of disease pathogenesis and shape a new field of research for therapeutic interventions.

ORAL PRESENTATIONS

OP074 THE ROLE OF MITOCHONDRIAL DYSFUNCTION IN THE PATHOGENESIS OF PARKINSON'S DISEASE

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Objective: The study of the role of mitochondrial dysfunction in Parkinson's disease.

Material and methods: Relevant papers were evaluated after a search in Medline and a PhD thesis from the National Archive of PhD Theses.

Results: Mitochondria are organelles that have their own DNA, produce ATP, participate in innate immunity and mitophagy (encapsulation in membrane vesicles and degradation in lysosomes). Parkinson's disease (PD) results from the progressive loss of dopaminergic neurons in the seminal vesicle (SN), due to high levels of mutant mtDNA and mainly deletions (mitochondrial dysfunction). In addition, mutations of the PARK2 and PARK6 nuclear genes which encode the Parkin and PINK1 proteins respectively are responsible for autosomal recessive forms of early onset PD (reduced mitophagy). PINK1 detects damage and activates Parkin, which promotes ubiquitin coupling to outer mitochondrial membrane proteins, enhancing the degradation of dysfunctional mitochondria. Also, alpha-synuclein accumulation is associated with PD due to the presence of protein aggregates, mainly composed of alpha-synuclein (a protein expressed in the brain) in mitochondria, destabilising their inner membrane and causing respiratory chain complex I dysfunction.

Conclusions: In conclusion, mitochondrial dysfunction is associated with PD as mutations of mtDNA, PARK2, PARK6 nuclear genes and α-syn accumulation in mitochondria cause dysfunction of dopaminergic neurons.

OP099 **FEMORAL NERVE VARIATIONS AND ENTRAPEMENT SYNDROME**

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Aim: The femoral nerve entrapment syndrome is a disorder in which the nerve is compressed mostly in the adductor canal and is characterized by symptoms such as pain and loss of sensory or motor function. This review aims to bring together most of the reported cases of the aforementioned syndrome (causes, symptoms, diagnosis, treatment) and provide a multi-prismatic view of the subject.

Material and Methods: A detailed search performed in PubMed basis using the key words: femoral, nerve, entrapment syndrome, variations and iliacus compartment syndrome in various. The selection criteria for published studies included written in English language, any date of publication and studies involving humans. On the other hand, articles that were not relevant to the topic as well as articles for which access to the full text was not available were excluded. From the investigation of the above literature, based on the methods mentioned, 14 studies were finally selected, the data of which will be presented in detail in the paper.

Results: Femoral nerve entrapment can be categorized into post-operative, associated with bleeding disorders or diseases and associated with iliopsoas muscle fibers. Namely the causes are hematoma, hip arthroplasty, female operations, glomus tumor, pregnancy, osteoarthritis. Characteristic symptoms are selective pressure pain, paresthesia, paralysis. Diagnosis is mainly made by electromyography and treatment includes ice therapy, use of corticosteroids and neurolysis.

Conclusion: Femoral nerve entrapment syndrome is a rare pathogenic condition with diverse causes that is not so widely reported in the literature. However, it can be life-threatening for the patient and should not be ignored, as not only does the femoral nerve supply important sensory and motor innervation.

ORAL PRESENTATIONS

OP101 ANATOMICAL BASIS AND CLINICAL SIGNIFICANCE OF ATLAS STENOSIS

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Introduction: The present literature review refers to the stenosis of the vertebral canal at the level of atlas as a pathomechanism of cervical myelopathy. The anatomical abnormalities related to atlas stenosis and their embryological development are represented as well as their clinical impact. In addition, the diagnosis and treatment methods are mentioned.

Materials and Methods: A literature search in the PubMed database was carried out. At first, the keywords “cervical spinal stenosis”, “atlas hypoplasia” and “atlas stenosis” were used and with a filter for humans 31 relative results were taken. Subsequently, the keywords “atlas”, “stenosis”, “hypoplasia”, “cervical myelopathy” were used and 36 relative results were taken, out of which 18 were duplicates. Finally, 49 relative studies were collected. After an extensive evaluation of all the available data, 24 literature sources were excluded due to paid access, exclusive references in surgical techniques and references in atlas stenosis as a symptom of genetic syndromes.

Results: Congenital abnormalities of atlas are result of failures of the embryological development. The spinal cord, the odontoid process of axon and the space with cerebrospinal fluid must occupy 1/3 each of spinal canal ‘s diameter at atlas level, while a sagittal diameter below 14mm can cause a severe spinal cord compression. The anatomical abnormalities of atlas include hypertrophy of the posterior tubercle, midline cleft, unilateral and bilateral clefts, even a total absence of the posterior arch. For diagnosis, except for CT and MRI scans, special test are used either. The treatment methos include surgical decompression with laminectomy or laminoplasty. At last, neurological disorders and headaches due to the obstruction of the flow of cerebrospinal fluid are present in the clinical profile.

Conclusions: In case of atlas stenosis the spinal cord is susceptible to injuries even with mild mechanical pressure or instability due to aging. In addition, anatomical abnormalities of atlas cause instability of the atlanto-occipital and the atlanto-axial joints. Consequently, atlas stenosis should be taken into account in case of cervical trauma.

OP090 **ATLANTO-OCCIPITAL FUSION: CHARACTERISTIC CASES IN DRIED SKULLS**

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Backround: The aim of the case series is to present characteristic cases of complete and incomplete fusion of the atlas (1st cervical vertebra) with the occipital bone. The fusion (occipitalization) occurs at the point where the occipital condyles articulate with the atlas inferior articular processes. The fusion can be partial or complete, depending on the part of the occipital bone that fuses with the atlas.

Materials-Methods: Six dried adult skulls were identified, and the fusions were studied and captured both extracranially and intracranially. The anatomy of the area was further studied.

Results: Occipitalization of atlas vertebra was identified in 6 skulls. One case had a complete fusion, while the other cases had a partial fusion with bilateral asymmetry. In 2 cases, an incomplete posterior arch of the atlas was identified. Coexisted adjacent complete or partial ossified ligaments of the sphenoid bone were also investigated.

Conclusions: Variations and congenital anomalies of the craniocervical junction are rare and most commonly asymptomatic, being randomly identified. Atlanto-occipital fusion may lead to compression of the vertebral artery and may affect the brain supply. Blood circulation symptoms include syncope, vertigo, and sudden loss of vision due to injury of the vertebral or anterior spinal arteries. Occipitalization may compress on the 1st cervical spinal nerve resulting in headache, pain in the cervix, numbness, and a malposition of the head. Findings from cranial nerves may include visual disturbances, lower cranial nerves palsy combined with dysphagia and dysarthria. Knowledge of variations in the upper cervical spine is of paramount importance for orthopaedic surgeons, neurosurgeons who handle cerebellar tumors and radiologists who diagnose cervical spine abnormalities. Interventionists should have a high index of clinical suspicion in order to consider variants of the region in their differential diagnosis.

ORAL PRESENTATIONS

OP121 THE ROLE OF ELECTROPHYSIOLOGICAL SCREENING IN THE NEONATAL FORM OF SPINAL MUSCULAR ATROPHY

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Introduction: This review article investigates the importance of electrophysiological screening in the diagnosis of spinal muscular atrophy (SMA) in neonates. SMA is an autosomal recessive disorder, which affects α-motor neurons' function in the anterior horn of the spinal cord. It is caused by a homozygous mutation of the ***SMN1*** gene, responsible for the production of SMN protein, essential for motor neuron function. The disorder's subdivisions are five types, 0 to IV, depending on age of onset and symptom severity. Symptoms range from generalized muscle weakness and hypotonia to respiratory failure.

Methods: The most recent bibliography was studied within three months. Keywords searched in PubMed included: spinal muscular atrophy, electrophysiological study, biomarker.

Results: Latest relevant studies have identified the existence of a second gene, ***SMN2***, which produces an isoform of the SMN protein, as it differs from ***SMN1*** by one base, disrupting the splicing of exon 7. As a result, its existence in the genome of the patient, especially in four or more copies, causes milder symptoms. The electrophysiological screening of newborns contributes adjunctively to the diagnosis of the disease. It is performed by both epidermal electrodes and intramuscularly, via a needle. The electrodes translate the captured electrical signals from the motor neurons to the corresponding muscles into graphs, thus depicting the decreased activity of the neuron. Studies indicated that ulnar CMAP amplitudes were <1,5mV in early symptomatic patients and >1,5mV in pre-symptomatic.

Conclusion/Discussion: The aforementioned data support that screening is particularly important, as it permits immediate therapeutic intervention which may not only prolong but also improve the quality of life. Therapy of the disease relies on new-drug development that enhance the levels of functional SMN protein.

OP136 AN IMMUNOHISTOCHEMICAL STUDY OF THE EFFECT OF SALICYLIC ACID IN THE CEREBBELUM OF WISTAR RATS AND THE ROLE OF NMDA RECEPTOR BLOCKERS

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Introduction: Acetyl-salicylic acid is one of the most widely used analgesic, antipyretic and anti-inflammatory agents. Salicylic acid is its fundamental metabolite. The purpose of the present study is to investigate the possible toxic effect of salicylic acid on the cerebellar tissue after intraperitoneal administration and the possible reversible effect of memantine, an NMDA receptor blocker with neuroprotective action.

Material and methods: 40 adult male Wistar rats were used and divided into four groups of 10 animals each. All groups received the drugs intraperitoneally for 5 days. Group (A) received salicylic acid (300 mg/kg/day), group (B) simultaneously salicylic acid and memantine (Ebixa, 10 mg/kg/d), group (C) twice the concentration of salicylic (compared to A), while group (D) did not receive any substance (control group). Animals were then euthanized, cerebellar tissues were obtained and processed appropriately for observation under the optical microscope and application of immunohistochemical stainings for IL-6 and TGF-b2 markers.

Results: Eosin-hematoxylin staining did not reveal pathological histological changes in the control group (Group D). Mild disturbances of the architecture of the layers of the cerebellar cortex were observed only in some sites mainly in the A and more in the C group and specifically mild swelling of the Purkinje cells. In group B, no particular morphological changes were observed. Immunohistochemical stainings of IL-6 and TGF-b2 confirm the eosin-hematoxylin findings with negative expression in the control group and group B and mild intensity positive staining locally mainly in group C.

Conclusion/discussion: There are limited data on the histological effects of systemic co-administration of salicylate and memantine on the nervous system. The neuroprotective effect of memantine has been proven as it is widely used in many neurodegenerative diseases. Our findings support the prophylactic co-administration of an NMDA receptor blocker due to its neuroprotective effect on cerebellar tissue but further research is needed to demonstrate the potential toxic effect of salicylic acid at high doses.

ORAL PRESENTATIONS

PLASTIC SURGERY

OP032 BIBLIOGRAPHIC REVIEW OF THE HAND VASCULAR MALFORMATIONS

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Background: Detailed presentation of upper extremity vascular malformations and their management through a thorough review of international bibliography.

Materials: There was a thorough internet research in last decade's international bibliography through the PubMed and Cochrane library search engines using keywords/phrases: vascular malformations, upper limb, upper extremity.

Results: In accordance with the classification of the International Society for the Study of Vascular Anomalies (ISSVA), vascular anomalies include vascular tumors (abnormal proliferation of endothelial cells) and vascular malformations (structural vascular changes). This classification abolishes the previous ones and is particularly important, since it establishes a common language of communication for their description, diagnosis and treatment. Vascular malformations are congenital, abnormally developed vessels, often dilated and tortuous. They are a subcategory of a larger group of slow-growing vascular malformations and they should not be mistaken for hemangiomas, which show rapid onset and growth. They are distinguished in low and high flow. Low-flow malformations are classified as venous, lymphatic or capillary, while high-flow malformations are arteriovenous. The symptoms of vascular malformations vary and depend on the type of malformation (pain, thrombosis, compression of important structures, aesthetic problems). The first step in their management is moderate treatment, while further treatment (surgery and/or interventional radiology) is based on the histology of the lesion, the experience of the multidisciplinary team and the patient's choice. Surgical treatment options include surgical excision, embolization, sclerotherapy and laser. In addition, recent advances in genetics have enabled the development of targeted therapies for patients with diffuse and classical treatment-resistant lesions.

Conclusion: Vascular malformations of the upper extremity are rare (prevalence 4.5%). They are associated with somatic mutations (such as PIK3CA) of significant phenotypic and genetic heterogeneity. There is a particular discordance in their management, which includes sclerotherapy and surgical treatment.

OP034 **SENTIMENTAL ANATOMY AND BOTOX**

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Introduction: Sentimental anatomy of the face refers to the complex expression of human emotions. Facial expression is affected by emotions, mimetic movements, psychological and exogenous factors eg botulinum toxin or the use of protective masks.

Methods: A few studies exist in the current literature. They were collected from the data base PubMed and the articles were chosen according to Boolean logic. Keywords and their combinations revealed current studies on the topic from 2008 to 2022.

Results: Any sentimental facial expression is universally recognized by surrounding humans whether it expresses a positive or a negative emotion. Identification of emotional facial expressions, leads to congruent reaction of the observer without being established whether the reaction is automatic or reflects an emotion from the observer. Negative emotions are mostly expressed in the glabellar region of the face, while positve ones in the perioral region. Due to the use of protective masks during Covid-19 pandemic, humans express more negative (glabellar) than positive (perioral) emotions, making communication difficult. With the use of botulinum toxin in the glabellar region, there is a decrease in the perception of negative emotions. Botulinum toxin treatment of the glabella showed a therapeutic effect on patients with depression. Following botulinum toxin therapy, they move less their glabellar muscle complex, expressing fewer negative emotions. This leads to more positive feedback from people.

Discussion: Emotions are expressed by the dynamic movements of the face, that cause similar feedback expressions. In cases where protective masks are used or when patients with depression are considered, negative emotions are overexpressed. The use of botulinum toxin in the glabellar region seems to have a positive impact, masking the negative emotions and yielding social acceptance. The role of botulinum toxin in the treatment of depression and its impact on positive emotions needs to be further studied.

ORAL PRESENTATIONS

OP033 BIBLIOGRAPHIC REVIEW OF THE HAND VASCULAR MALFORMATIONS

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[1]*Department of Plastic Surgery, AUTh*
[2]*Medical student, AUTh, Greece*

Background: Detailed presentation of upper extremity vascular malformations and their management through a thorough review of international bibliography.

Materials: There was a thorough internet research in last decade's international bibliography through the PubMed and Cochrane library search engines using keywords/phrases: vascular malformations, upper limb, upper extremity.

Results: In accordance with the classification of the International Society for the Study of Vascular Anomalies (ISSVA), vascular anomalies include vascular tumors (abnormal proliferation of endothelial cells) and vascular malformations (structural vascular changes). This classification abolishes the previous ones and is particularly important, since it establishes a common language of communication for their description, diagnosis and treatment. Vascular malformations are congenital, abnormally developed vessels, often dilated and tortuous. They are a subcategory of a larger group of slow-growing vascular malformations and they should not be mistaken for hemangiomas, which show rapid onset and growth. They are distinguished in low and high flow. Low-flow malformations are classified as venous, lymphatic or capillary, while high-flow malformations are arteriovenous. The symptoms of vascular malformations vary and depend on the type of malformation (pain, thrombosis, compression of important structures, aesthetic problems). The first step in their management is moderate treatment, while further treatment (surgery and/or interventional radiology) is based on the histology of the lesion, the experience of the multidisciplinary team and the patient's choice. Surgical treatment options include surgical excision, embolization, sclerotherapy and laser. In addition, recent advances in genetics have enabled the development of targeted therapies for patients with diffuse and classical treatment-resistant lesions.

Conclusion: Vascular malformations of the upper extremity are rare (prevalence 4.5%). They are associated with somatic mutations (such as PIK3CA) of significant phenotypic and genetic heterogeneity. There is a particular discordance in their management, which includes sclerotherapy and surgical treatment.

OP044 **LASER HEAT REMOVAL: WHERE DO WE STAND?**

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Introduction: Tattooing is a practice with a long historical tradition, which has undoubtedly become part of human culture. As the number of people with tattoos increases, so does the number of people who wish to remove them. Among tattoo removal methods, Laser removal remains the treatment of choice, with minimal side effects.

Methods-Materials: Publications related to laser tattoo removal were searched in PubMed and SCOPUS databases. At the same time, we also reviewed the sources of the selected articles to find information related to the topic.

Results: After numerous failed attempts of tattoo removal such as dermabrasion, cryosurgery, TCA chemical peels and surgical excision, Plastic Surgery has focused in Laser treatments. Laser removal targets ink particles on the skin with highly concentrated light waves, fragmenting them into smaller pieces that are easily cleared by the immune system. Among the various Laser techniques, recent studies have highlighted the superiority of the QS Nd:YAG Laser, as well as the newer picosecond Lasers for the removal of black and colored tattoos. Side effects of both are minimal and are limited to mild hyperpigmentation of the exposed skin area after treatment.

Discussion: It seems that the safest and most reliable method of tattoo removal is the newer picosecond laser or QS Nd:YAG laser treatment. Future blinded randomized clinical studies are expected to reveal the best between these methods and contribute to the establishment of guidelines in the field of tattoo removal.

ORAL PRESENTATIONS

OP106 **THE EFFECT OF COVID-19 ON THE DEVELOPMENT OF THE DISEASE IN A PATIENT WITH MALIGNANT SKIN MELANOMA**

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OP139 GUIDELINES FOR BASAL CELL AND SQUAMOUS CELL CARCINOMA

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Introduction: Basal cell carcinoma (BCC) is a locally invasive tumor of epithelial origin. It is the most common type of skin cancer in the white race, is characterized by slow growth and rarely metastasizes. It is most often found on the head and neck. In most cases, the clinical picture is sufficient to establish the diagnosis, while sometimes histological confirmation is required.

Squamous cell carcinoma (SCC) is a tumor of epithelial origin with malpighian differentiation. Although in the majority of cases the tumor is not life-threatening, there is a possibility of metastasis. SCC can occur de novo or in the setting of a precancerous lesion such as actinic hyperkeratosis and Bowen's disease.

Methods/Data: Search articles and studies from the PubMed, PMC and Cochrane databases for articles with terms- keywords relevant to the title.

Results: Both the prognosis and the choice of the most appropriate treatment for BCC and SCC depend on certain prognostic factors: size, location, clinical tumor margins, primary or recurrent lesion, immunosuppression, point of previous radiotherapy, perineural infiltration, degree of differentiation, point of chronic inflammation, rapidly growing tumor, neurological symptoms, histological characteristics. An important role in the selection of the most appropriate treatment is played by the general physical condition of the patient, possible coexisting serious diseases, the reception of anticoagulant treatment, the existence of trained personnel and suitable equipment as well as the patient's preference.

Summary: The goal of the initial treatment of BCC and SCC is to treat the tumor by preserving the functionality of the adjacent tissues to the greatest extent possible and achieving an acceptable aesthetic result. The treatments that can be used are divided into invasive and non-invasive. They seem to be used more often surgery and radiation therapy. Patients who develop a BCC or SCC have a 30-50% chance of developing a second one within 5 years. In addition, they have an increased risk of developing melanoma. They should therefore be monitored at regular intervals (every 6-12 months) and informed about photoprotection and self-examination. The period of the first 2 years is particularly important as 70-80% of SCC recurrences occur within this period.

ORAL PRESENTATIONS

ONCOLOGY, HAEMATOLOGY

OP079 PERIOPERATIVE THROMBOPROPHYLAXIS OF SURGICAL ONCOLOGY PATIENTS WITH FONDAPARINUX, SAFETY AND EFFICACY

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Introduction: Venous thromboembolic disease is the second leading cause of death in cancer patients. The present study is the initial part of a prospective observational study of the Hellenic Society of Surgical Oncology to document the efficacy and safety of prophylactic antithrombotic therapy with fondaparinux in surgical cancer patients.

Methods: The study includes 300 patients. 121 are men (40. 33%) and 179 are women (59. 66%). The age range is 29-92 years, 65% are >61 years old. All patients underwent postoperative thromboprophylaxis with Fondaparinux 2. 5 mg or 1. 5 mg on a daily basis, starting on the first postoperative day and lasting 28 days. Recording of efficacy was done weekly, with clinical screening for thromboembolic disease (symptomatic or asymptomatic deep vein thrombosis and /or pulmonary embolism) and Triplex ultrasound at the end of treatment and recording of side effects (bleeding) for the first trimester postoperatively.

Results: 3 cases of superficial venous thrombosis of the lower limb and 2 cases of superficial thrombophlebitis of the upper limb were recorded. All tested patients with vein triplex were negative for deep vein thrombosis of the lower limb venous system at the end of the first postoperative month. One patient was diagnosed with peripheral pulmonary embolism (asymptomatic) on chest CT two months after surgery. 3 patients developed postoperative hematoma in the area of the surgical incision and 1 patient diffuse abdominal wall hematoma. 1 patient developed major bleeding complication after total gastrectomy (patient with coexisting conditions, high surgical risk). There were no fatal complications or death during the period of observation.

Conclusions: It is sufficiently safe to administer Fondaparinux to surgical oncology patients for the prevention of thromboembolic events, starting treatment within 24 hours after surgery. It is associated with reduced bleeding complications and is safe to administer at advanced ages (>65 years).

OP080 **SARCOPENIA IN SURGICAL, ONCOLOGICAL PATIENTS**

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Introduction: Patients with gastrointestinal cancer have high rates of malnutrition and sarcopenia even before the diagnosis of the disease. The aim of the present study is to estimate the prevalence of sarcopenia in a sample of patients with gastrointestinal cancer and to investigate the factors that are correlated with its occurrence.

Methods: The study sample consisted of 233 patients with gastrointestinal cancer that came in for surgery at the Surgical Oncology clinic of the hospital "Agios Savvas" from January 2012 until October 2019. Sarcopenia was assessed by calculating the muscle surface area at the level of the 3rd lumbar vertebra from the available upper abdominal CT scans using Tomovision software. The findings were correlated with haematological and biochemical parameters.

Results: Of the 233 patients, 106 were men and 127 were women. 58 out of 106 men (55%) and 68 out of 127 women (53%) were over 65 years old.91 out of 106 men (85%) and 76 out of 127 women (60%) were sarcopenic. Regarding body mass index (BMI), all malnourished patients with BMI <20 were sarcopenic, while among the obese only 18 of 31 men (58%) and 10 of 27 women (37%) were sarcopenic. Exacerbating factors for sarcopenia were older age, male sex and BMI <20. All sarcopenic patients received nutritional support. Of particular interest are the re-evaluations of 47 patients. 16 of them showed an increase in muscle mass after receiving nutritional support.

Conclusion/ discussion: The prevalence of preoperative sarcopenia is high in patients with gastrointestinal cancer. Male gender and BMI <20 are aggravating factors for sarcopenia in this population, while obese patients have a smaller proportion of sarcopenia. Postoperative nutritional support was associated with improved muscle development and partial recovery of sarcopenia, highlighting the importance of early and targeted nutritional care in patients with gastrointestinal cancer.

ORAL PRESENTATIONS

OP093 INHIBITION OF THE PD-1/PD-L1 PATHWAY AS A KEY TO CANCER TREATMENT

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Objective: The study of the PD-1/ PD-L1 pathway, (programmed death receptor 1, (PD-1) / programmed death ligand 1, (PD-L1)) and their side effects.

Material and methods: During the literature study articles from the international literature were reviewed, according to the way the data were presented and the year of publication.

Results: Immunotherapy promises dramatic results against cancer. PD-1 inhibits immune responses and promotes autoimmunity by regulating T-cell activity, activating the apoptosis of antigen-specific T-cells and inhibiting the apoptosis of regulatory T-cells. PD-L1 is a transmembrane protein, considered a co-inhibitory factor of the immune response, that can, together with PD-1, reduce the proliferation of PD-1 positive cells, inhibit their cytokine secretion and induce apoptosis. PD-L1 also plays an important role in malignancies, where it can weaken the host's immune response to cancer cells. Therefore, the PD-1/PD-L1 axis is responsible for the immune escape of cancer and contributes to its treatment. Immunotherapy aims to remove the inhibition of the immune response against cancer and increase its recognition by the immune system. Immunotherapies with the anti-PD1 antibodies Pembrolizumab, Nivolumab, Atezolizumab, an anti-CTLA4 inhibitor of Ipilimumab and others have shown significant therapeutic effects.

Conclusion: Recently, the use of immunotherapy in patients receiving some newer oncological therapies, such as checkpoint inhibitors, specifically PD-1 or PD-L1 inhibitors, has become problematic. This review attempts to summarize the role of PD-1/ PD-L1 in cancer, looking forward to improving cancer treatment.

OP097 INFLAMMATORY MYOFIBROBLASTIC TUMOURS: DIFFERENTIAL DIAGNOSTIC RIDDLE AND THERAPEUTIC CHALLENGES

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Objective: Inflammatory myofibroblastic tumors are a rare category of sarcomas, most often found in the lungs and soft tissues of the abdomen of children and young adults. The present study aims to present the pathophysiological background of these tumors, the difficulties of their differential diagnosis, as well as the available or under study treatment options.

Material and Method: For this study, a literature review was conducted in the PubMed/Medline database, aiming to retrieve articles related to pathogenesis and available modern therapeutic approaches of inflammatory myofibroblastic tumors. The articles in question included people and were published in English.

Results: Through the review of the literature, the diagnostic challenges in the approach of inflammatory myofibroblastic tumors are highlighted, since their clinical picture is characterized by nonspecific findings. At the same time, the gradual decoding of the pathophysiological background of the disease with the discovery of tyrosine kinase receptors in several cases of patients, as well as by finding a possible association with exposure to viruses, such as human herpesvirus-8, lays the foundation for a better understanding of both its biological behavior and clinical picture, as well as its epidemiological characteristics. In addition, bibliographic data highlight the need to adjust treatment modalities in order to integrate molecular data in the effort of a more targeted and effective treatment.

Conclusion: The results of the present study reveal the differential diagnostic difficulties that inflammatory myofibroblastic tumors may present, as well as emerging molecular tools as treatment adjuncts. Finally, the need for further research on pathophysiology and the application of innovative therapeutics in the context of personalised treatment and precision medicine is underlined.

ORAL PRESENTATIONS

OP110 PRIMARY SIGNET RING CELL CARCINOMA OF THE BREAST: A CASE REPORT AND LITERATURE REVIEW

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Introduction: Signet ring cell carcinomas are a rare subtype of adenocarcinomas with a poor prognosis, typically due to advanced disease at diagnosis. The characteristic feature of a signet ring cell is the abundant intracystoplasmic mucin which pushes the nucleus to the periphery of the cell. The gastrointestinal system, and especially the stomach, is the most common site for this type of carcinoma, while its description in other sites, such as the breast in this particular case report, is rare.

Materials and methods: A case of a 41-year-old woman with primary signet ring cell carcinoma is presented on this report, with an emphasis on the results of the medical imaging performed. The patient presented with symptoms of ascites (swelling of the abdomen, sense of fullness) The imaging studies performed, with a CT scan and MRI scan of the abdomen being among them, showcased the massive abdominal fluid collection, a sizeable tumor of the right ovary, peritoneal carcinomatosis, spinal column metastasis, pleural effusion and breast edema, all being results of a primary breast carcinoma. We also present a brief literature review and differential diagnosis.

Results: The diagnosis was confirmed when peritoneal fluid analysis was performed and signet ring cells were found, while the imaging studies (MRI studies of various sequences and abdominal CT scan) confirmed the findings which were mentioned before, results of which are presented. The patient underwent surgical removal of the ovarian tumor, drainage of the abdominal and pleural fluid and chemotherapy. Despite of all efforts, the patient passed way the year of her diagnosis.

Conclusions: Differential diagnosis is crucial, not only to distinguish this particular type of carcinoma from other primary breast tumors, but also to distinguish the primary from the metastatic signet ring cell carcinoma, as it will lead to different treatment options and outcomes.

OP057 LARGE LOCAL LYMPHOCYTE LEUKEMIA (T-LGL) IN A PATIENT WITH Psoriatic Arthritis

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Introduction: Large granular lymphocytic leukemia (LGLL) is a rare chronic lymphoproliferative disorder defined by persistent (> 6 months) clonal expansion in the blood of lymphocytes with the characteristic morphology of large granular lymphocytes (LGL). There are 2 subtypes based on the origin of the lymphocytes: T-LGL leukemia, which accounts for approximately 85% of cases, and chronic lymphoproliferative natural killer cell disorder (CLPD-NK). One-third of patients are asymptomatic, whereas, in the rest, cytopenias are observed. The disease often manifests in the setting of autoimmune diseases, particularly in patients with rheumatoid arthritis.

Aim: Presentation of a clinical case of T-LGL leukemia in patient with psoriatic arthritis and review of the relevant literature.

Materials and methods: Use of patient's medical records after informed consent and literature search in the National Library of Medicine via PubMed with the terms "T-LGL leukemia", "T-LGL, and Psoriatic Arthritis".

Results: A 71-year-old patient with a history of psoriatic arthritis (recent methotrexate discontinuation) was admitted to the Hematology Clinic of our hospital due to febrile neutropenia. Large granular lymphocytes were observed in the peripheral blood smear and blood and marrow flow cytometry showed a predominance of monoclonal T-lymphocytes with immunophenotype CD3+, CD8+, CD57+, CD16dim+, CD4-. Imaging revealed mild splenomegaly and bone marrow biopsy showed T-lymphocyte infiltration immunohistochemically compatible with T-LGL leukemia. Testing for T cell receptor (TCR) clonality revealed TCR β monoclonality and TCR γ biclonality. The patient was treated with methotrexate and methylprednisolone, with a subsequent increase in neutrophils from 290/μL to 2400/μL within 15 days.

Conclusions-Discussion: The diagnosis of T-LGL leukemia requires a high degree of clinical suspicion and flow cytometry, bone marrow biopsy and search for TCR monoclonality are useful. We note that although the disease has been mainly associated with rheumatoid arthritis, it can accompany other autoimmune diseases such as psoriatic arthritis. In patients with neutropenia, the combination of methotrexate and corticosteroids is effective.

ORAL PRESENTATIONS

OP014 **THE ODONTOGENIC KERATINOCYST IN GORLIN-GOLTZ SYNDROME**

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Introduction/Purpose: The odontogenic keratinocyst (OKC) is a developmental cyst of the jaws with a biologically aggressive behavior and an increased tendency of recurrence. Although more commonly seen as a solitary lesion, it is a characteristic finding of Gorlin-Goltz syndrome in which multiple cysts are present. The syndrome is inherited with an autosomal dominant character, it can be recognized initially only by keratinocysts and occurs with a frequency of 1/56000-1/164000 in the population.

The purpose of this oral presentation is to investigate the literature on odontogenic keratinocysts in Gorlin-Goltz syndrome and their therapeutic approach.

Methods: We used "Pubmed" as a search engine with keywords "odontogenic keratinocyst", "Gorlin syndrome" "Gorlin Goltz syndrome" "nevoid basal cell carcinoma syndrome", and a selection of publications in the English language from 1975 to 2021.

Results: Keratinocysts, due to their differentiated behavior in relation to odontogenic cysts, are a frequent subject of publications, with surgical treatment that varies from simple enucleation to partial gnathectomy, in cases of recurrence. In the publications referring to the syndrome, the treatment of OKCs is always surgical, of lesser or greater extent, depending on the dimensions of the lesion and whether they involve recurrence. Regular monitoring of these patients and further treatment if necessary is also required, as they may develop OKC in new locations and the removed cysts may recur.

Conclusions: According to the latest data, in patients with Gorlin Goltz, jaws keratinocysts are surgically removed and patients are followed regularly. In general, after the diagnosis of the syndrome, these patients are systematically monitored for the other effects of the syndrome, such as skin carcinomas, any neurological findings, etc.

ORAL PRESENTATIONS

OP001 PREVALENCE AND RISK FACTORS OF SMOKING AMONG SECONDARY SCHOOL STUDENTS

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Background: Smoking is the main preventable risk factor for many diseases. This risky behavior is common among adolescents. Secondary students are at high risk of smoking as they become exposed to greater availability of cigarettes, Vapes and Shisha also intimate association with smoking peers. ***Objectives:*** to estimate the prevalence and risk factors of smoking among secondary school students and to find out if there was any association between these risk factors and smoking of this group.

Patients and Methods: A cross-sectional study was conducted in Baghdad city, of one year duration, eight high schools were chosen. A total of 1200 students responded to the pre-designed questionnaire.. SPSS were chosen to analyze data. Chi square test were chosen to show if there was any significant relation between studied variable of smoking and certain demographic variables of students

Results: the study found that among 1200 students (600 male, 600 female), the prevalence of smoking was 19.3%, the smokers were 29% of male students and 9.7% of female students. A significant association has been found between smoking and older age, male, twelfth stage, increasing in the pocket money especially for male also the larger family size, presence of smokers in the family. The dominant type of smoking was cigarette smoking followed by hookah" shisha"

Conclusions: he high prevalence of smoking was revealed among secondary school students, and some factors like Family, friends, social life and psychological problems play a major role for initiation. Hence, preventive measures need to be applied).

ORAL PRESENTATIONS

OP002 NOVEL SCREENING AND DIAGNOSTIC STRATEGIES FOR PANCREATIC CANCER

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Pancreatic ductal adenocarcinoma (PDCA) is considered the deadliest tumor among all digestive system malignancies. It has the lowest survival rate of any other cancer type in Europe, with five-year survival less than 7%. Despite the significant progress in understanding the underlying molecular mechanisms leading to PDCA, the vast majority of affected patients are diagnosed in an advanced stage when none of the treatment modalities appear beneficial at this stage. An early diagnosis of pancreatic cancer is crucial since it improves its prognosis. A population based screening method is not currently available and screening is mostly applied in high-risk individuals. The golden standard for pancreatic cancer diagnosis is biopsy by means of endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) or endoscopic retrograde cholangiopancreatography (ERCP). There are no biomarkers sufficiently sensitive and specific for the diagnosis of PDCA applied in clinical practice; even the serum biomarker carbohydrate antigen 19-9 (CA19-9) or the carcinoembryonic antigen, which have gained approval from the United States of Food and Drug Administration, is not used in clinical practice due to decreased specificity. This has led to extensive research for novel biomarkers used in combination with CA19-9 and carcinoembryonic antigen or independently. Furthermore, biomarkers in the urine, saliva and blood appear promising. Specifically, for the detection of biomarkers in the blood, the technique of liquid biopsy has enabled the identification of circulating tumor cells, circulating tumor DNA (ctDNA), microRNAs (miRNAS) and exomes. Novel technologies such as computer-aided diagnostic systems using artificial intelligence, ion mobility spectrometry (IMS) associated technologies as well as the use of nanomedicine have shown promising prospects in early PDCA detection. Therefore, the aim of this review is to summarize the novel strategies developed for the early screening and diagnosis of pancreatic cancer from advanced imaging techniques, to serological and pathological examination, liquid biopsy and new biomarkers.

OP003 TUMOR MUTATION BURDEN (TMB) AS A PREDICTIVE BIOMARKER FOR IMMUNOTHERAPY IN LUNG CANCER

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Immune checkpoint inhibitors (ICIs) have provided a significant advance in cancer immunotherapy which led to improved responses, prognosis and survival in most lung cancer types. PD-1 immune checkpoint inhibition has become part of the first-line treatment in patients with lung cancer and mostly non-small-cell lung cancer (NSCL). An increased variability in meaningful responses to cancer immunotherapy has led to a compelling need for predictive biomarkers in order to facilitate the selection of the most efficient therapeutic approach. Significant progress has been made in the identification of potential biomarkers, with tumor mutation burden appearing to be a promising predictor biomarker for ICI prognosis in multiple tumor types and especially in NSCLC and melanoma. Particularly anti-programmed cell death protein-1/programmed cell death ligand 1 (PD-1/PD-L1) and anti-cytotoxic T lymphocyte- associated antigen-4 (CTLA-4) monoclonal antibodies have been extensively studied and clinically utilized for Non-Small Cell Lung cancer (NSCLC) and other malignancies. Despite the clinical effectiveness reported of ICIs in NSCLC, the majority of patients would be resistant to therapy, while the overall efficiency of ICI therapy remains unsatisfactory. This called for the investigation of novel immune checkpoint inhibitors (ICIs) such as lymphocyte activation gene-3 (LAG-3), T cell immunoglobulin and mucin-domain containing-3 (TIM-3), T cell immunoglobulin and immune- receptor tyrosine-based inhibitory motif (ITIM) domain (TIGIT), which will be used either as a monotherapy or synergistically with the traditional ICIs. In this article, we provide a comprehensive review of the role of tumor mutation burden (TMB) as a predictive biomarker for the prognosis and response of lung cancer patients to immune checkpoint inhibition therapy with a special focus on novel immune checkpoints including LAG-3, TIM-3, TIGIT-1. We also reviewed other potential biomarkers in cancer immunotherapy for lung cancer, as well as the limitations and challenges that demand future investigation.

ORAL PRESENTATIONS

OP005 GENDER EQUALITY CHALLENGES IN ORTHOPEDIC SURGERY: A SYSTEMATIC REVIEW

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Background: Gender-equality challenges have been major issues in recent years, with several studies investigating the barriers and opportunities for further balancing equal representation and management. In terms of both physicians and patients, gender equality in orthopaedic surgery lags behind that of other surgical specialties.

Methods: Search of the PubMed, Embase and Cochrane databases was carried out to find human studies investigating the gender gap in orthopaedic surgery, trying to highlight the equality challenges that orthopaedic surgery faces. Patients with comorbidities in which gender is considered a proven risk factor (osteoporosis etc.) or pregnant women were excluded.

Results: This systematic review included 59 studies (58 observational studies and 1 clinical trial) involving 692435 people (females/males ratio mean: 4.44 (min: 0.003; max: 132), spanning the years 1987-2023. Regarding the targeted population, 35(59.32%) studies focused on patients, while 24(40.68%) on physicians. Reconstructive orthopaedics (12 studies, 20.34%), sports medicine (12 studies, 20.34%) and paediatric orthopaedics (4 studies, 6.78%) were discussed regarding both patients' and physicians' gender-differences influencing the quality of healthcare services provided. Studies on musculoskeletal trauma (5 studies, 8.47%), spine surgery (5 studies, 8.47%) and musculoskeletal oncology (1 study, 1.69%) evaluated the patients' perspectives. A single study (1.69%) on foot and ankle and hand surgery respectively as well as 6 studies (10.17%) academic field problems and 12(20.34%) of general orthopaedic interest reported the underrepresentation of women in orthopaedics.

Conclusions: Gender differences influence the provision of orthopaedic services regarding both the interaction of the patient with the healthcare system and the physician's daily clinical practice. Via recognizing biases and establishing norms of conduct to avoid them an impartial, tolerant, and equal, workplace for physicians and a healthcare system providing the best services to its patients will be revealed.

OP006 **NEUROBIOLOGICAL ASPECTS OF RADICALIZATION**

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Objective: The identification of possible personal and environmental contributing factors to violent radicalization, beyond the over-simplistic approach of ideological and social predisposition.

Materials and Methods: Critical review of english literature at the PubMed and Web of Science data bases and open-source military documentation.

Results: There are numerous biological factors like those identified as promoters to aggressive behaviors of other mammals that contribute to the transition of a person from sympathizer to an ideological supporter of radical ideas, and finally to a violent perpetrator.

Conclusion: Aggressive and violent actions are constructed within the brain and represent the neurobiological integration of the genetic inheritance, the internal and external environment, the complex social interactions. According to such assumptions, the creation of beliefs that can overcome pivotal humanitarian norms as the preservation of human life is by far more complex, particularly when there is a domestic terrorist act, by perpetrators who have long-lasting social ties with their communities.

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EP001 EXPRESSION OF FMRP-ASSOCIATED MIR-125B AND ITS TARGET GENES AND THEIR RELATION TO THE REGULATION OF OVARIAN FUNCTION

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Introduction:

- FMRP (Fragile-X-Mental-Retardation 1 Protein), a selective RNA-binding protein, translational inhibitor.
- *FMR1* (Fragile-X-Mental-Retardation Type 1 Gene) codes for FMRP
- MicroRNAs interact with FMRP, play a role in follicular development and are involved in translational repression via RISC (RNA interference silencing complex).
- miR-125b and miR-132 associate with FMRP in. neural cells, but this relationship is unevaluated in the female germline.
- *TP53* and *LIN28A* are targets of miR-125b, the former regulating cell cycle and apoptosis, the latter involved in germ cell formation.
- Investigating these molecules more thoroughly may provide insight into the pathogenesis of poor ovarian response.
- Good response to ovarian hormonal stimulation is one major factor of successful IVF and ICSI treatment outcomes.

Methods:

- RNA from granulosa cells (GCs) and follicular fluid (FF) from poor (POR, N_{GC} = 26, N_{FF} = 12) and normal (NOR, N_{GC} = 31, N_{FF} = 16) ovarian responders was transcribed into cDNA and qRT-PCR was performed.
- Relative expression levels were compared between NOR and POR.

Results:

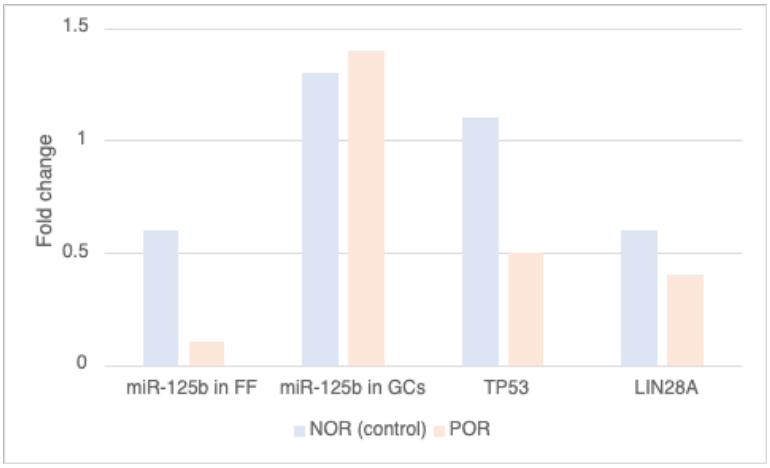
- miR-125b and miR-132 in FF and GCs

miR-125 is significantly downregulated in FF of POR compared to NOR (p=0.019).

- TP53 and Lin28A expression in GCS

TP53 is significantly downregulated in GCs of POR compared to NOR (p=0.0086).
Lin28A is expressed less in POR than NOR, but not significantly.

E - POSTERS IN ENGLISH



Conclusions:

- Significant downregulation of miR-125b in FF of poor ovarian responders implies it may engage in cell-to-cell communication between the oocyte and its somatic, follicular cells (granulosa cells) via follicular fluid.
- Significant downregulation of TP53 in GCs of poor ovarian responders may show an impairment of cell-cycle regulation in their group supposedly transmitted via miR-125b.
- *TP53* and *FMR1* expression moderately correlated in GCs of normal ovarian responders. This correlation was evidently weaker among poor ovarian responders.
- Results suggest the existence of regulatory mechanisms involving miR-125, TP53, FMRP and FMR1 that may be disrupted in case of poor ovarian response.

Prospects: For the first time, the role of miR-125b together with its target TP53 was investigated in the human ovary. Further experiments evaluating larger patient groups and researching exact roles of miR-125b and TP53 in the FMR1/FMRP regulatory loop are planned.

EP002 IMPAIRED ANXIETY-LIKE BEHAVIOR IN AN EXPERIMENTAL MODEL OF ALZHEIMER'S DISEASE

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Alzheimer's disease (AD) is a neurodegenerative disorder that is the most common cause of dementia. The pathophysiology of AD is characterized by decline in memory, continuous changes in mood, behavior and the ability of the patients to orientate and react adequately in an unfamiliar environment. Intracerebroventricular injection of streptozotocin is accepted as an experimental model of sporadic AD (STZ-ICV model) in rats, which coincides with the pathophysiology of human AD. In this work, we aimed to study the long-term effects of STZ-ICV injection on the abnormalities in the exploratory and anxiety-like behavior in female Wistar rats.

The "Open Field" test was used to study the exploratory behavior, and the "Elevated Plus Maze" test to estimate anxiety-like behavior.

STZ-ICV rats developed motor hyperactivity, accompanied by a reduced level of anxiety in the unfamiliar environment of the Open Field test. The results of "Elevated Plus Maze" confirmed the reduced anxiety in the aversive environment in rats with STZ-ICV injection compared to healthy controls.

Some of the behavioral abnormalities first appear in the first week after the introduction of the model and are maintained for up to three months. However, the anxiolytic effect of STZ-ICV was significantly lower in the third month than in the first month after the injection.

Our data show that ICV-STZ is an experimental model with lasting adverse effects on behavior that can be used to study the mechanisms of development and comorbidity of mood disorders with AD.

E - POSTERS IN ENGLISH

EP003 ADRESSING SYNERGIES BETWEEN CHEMICAL AND BIOLOGICAL POLLUTANTS AT SCHOOLS - THE "SYNAIR-G" HYPOTHESIS

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Background: It is well-known that polluted air has negative effects on human health. However, these effects may be reversible. Numerous studies refer to outdoor air pollution, but nowadays we spend most of our time indoors. Consequently, the research interest in the study of indoor air quality has increased significantly. Among the population, individuals with hypersensitivities and particularly children, are more susceptible to the harm that air pollution causes. Pollutants can be chemical, physical or biological agents. These can potentially interact and, in some cases, synergise, considerably augmenting their negative health impact. Allergens act also as pollutants for the allergic population.

Methods: Randomized and observational clinical studies have been thoroughly examined for the last 10 years in the English language. The database that has been used the most is PubMed and the search was based on key-words such as: "Pollutant", "Allergen", "Respiratory virus" and "Synergy". A review of abstracts was first performed, followed by review of full articles that assessed the combined effect of two or more factors relative to each factor alone on any asthma-related outcome.

Results: Synergestic interactions have been studied between diesel exhaust products and some allergens, as well as between viral infections and allergens in people with asthma. Additionally, there is data, especially after the COVID-19 pandemic, that underline interactions of viruses with chemical pollutants. Regarding the pediatric population, it is confirmed that in many schools the construction protocols are not followed and as a result children are exposed to high levels of air pollutants, including particulate matter and polycyclic aromatic hydrocarbons. Schools are also ideal places for the transmission of allergens, as children are constantly in touch and consequently carry with them animal, mite and mold allergens.

Conclusion: Data support the potential additive or synergestic interactions of pollutants; however specific interactions between agents require more detailed study. This is the aim of the European project "SynAir-G", which brings together groups from 11 countries. The implementation of appropriate measures and the adoption of better habits, through insightful information, is key to improve human health.

EP005 LEGALIZATION OF CANNABIS FOR RECREATIONAL PURPOSES. IS IT SAFE?

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The use of cannabis has been known and widespread throughout most of the world for thousands of years. In the present, an ever-increasing demand, for recreational reasons use of cannabis is observed. Cannabis users, estimated between 150-300 million, by different authorities worldwide. Cannabis has managed to make progress in the court of science opinion in a very short time, while WHO supports relevant research.

Cannabis use is prohibited in most countries. However, most of them has adopted a decriminalization policy. At the same time cannabis use, for recreational reasons, is legal in seven countries, namely Canada, Georgia, Malta, Mexico, South Africa, Thailand, and Uruguay, twenty-one States in the USA and the capital area in Australia. In response to the legalization movement, many authorities around the world have expressed concerns about the consequences of the widespread use of cannabis psychoactive products.

There are two active substances of the plant, that are of main interest, tetrahydrocannabinol (THC) & cannabidiol (CBD). They act on the cannabinoid receptors in the brain CB1 & CB2, respectively. CB1's have a role in the higher cognitive functions and CB2's are related to the immune functions of the body.

The major risks of cannabis use, in addition to the addictive potential, relate to severe psychiatric disorders resulting in documented potential risks for children and adolescents, males, polydrug users, people with a history of serious mental illnesses (SMIs), and other substance use. At the same time, there is a continuous increase in the percentage of THC concentrations, the main active euphoric ingredient, in the plant products. THC poses some documented risks to a vulnerable part of the user population.

There is a strong correlation between cannabis use and psychosis, although the underlying mechanisms are unclear.

The predisposing risk factors are:
1. Pre-existing neurocognitive deficits
2. Younger age of onset of use (<14)
3. Pre-existing history of behavioral disorder or positive family history
4. Time of exposure to cannabis
5. Higher concentration of THC in the product

Furthermore, THC has a clear adverse direct effect on psychomotor activity in both experimental animals and humans. The degree and individual effects vary in different studies. Unfortunately, studies in experimental animals cannot provide accurate information on the consequences of the effects of THC. Therefore, clinical cognitive and behavioral study models are needed, especially with high-risk populations.

Freedom of choice for individuals needs to be balanced against societal risk and based on rational decisions not emotion or political expediency. In any case, the scientific evidence suggests that the risks from cannabis are significantly lower than other highly prevalent substances such as alcohol and tobacco.

E - POSTERS IN ENGLISH

EP006 FACTORS ASSOCIATED TO DDH LATE PRESENTATION AND INTERVENTION UNDER ANESTHESIA - TEN YEARS' EXPERIENCE IN A SINGLE CENTER IN GREECE

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Background: Developmental dysplasia of the hip (DDH) refers to a spectrum of anatomical abnormalities of the hip. Late diagnosis (>6 month old) of DDH frequently necessitates intervention under anesthesia (IUA).

Materials & Methods: DDH hospitalized cases were searched in hospital's IT system for the period 01/2012- 08/2022 and medical records were used to determine IUA and record other parameters. The acetabular index of each leg was measured by two pediatric-orthopaedic experts.

Results: Fourteen first-born full-term infants were eligible: 13(93%) girls, median age at diagnosis 7 (IQR: 4.5-17) months and 11(79%) rural residents. None had previously undergone Pavlik harness treatment. Low birth weight children (6, 42%) were diagnosed later compared to the rest (4.5 vs 12 months, p-value=0.03). 5(36%) children had bilaterally DDH. Children with bilaterally DDH were diagnosed at 2 months median age compared to 7.5 months for children with unilateral DDH (p<0.1). Multivariable logistic regression showed that being low-birth-weight newborn and born in the province are risk factors while bilateral deformity act as a protective factor for late diagnosis (p<0.1). The acetabular index was 37.5° (34- 40) in the affected limb and all had reduced abduction. Time between diagnosis and IUA was 1 month (0.5- 4). The treatment protocol included losed reduction-arthrogram-hip spica, adductors' percutaneous tenotomy (12 cases, 85%), 3-month of hip spica and part-time Tübingen splint until normal imaging. Five children, all diagnosed after 1 year, ultimately underwent open reduction. For each month diagnosis was delayed, the risk for open reduction increases by 1.17 times (p<0.05).

Conclusions: Most children with DDH who had IUA were diagnosed late and possessed risk factors already described in the literature. Further screening for rural inhabitants, particularly in cases of newborns with low birth weight, should be explored, as children whose diagnosis is delayed for nearly a year have a greater risk of necessitating open reduction.

EP007 **CONGENITAL CLUBFOOT TREATED WITH THE PONSETI METHOD AND SURGICAL INTERVENTIONS FOR RELAPSE - MAY WE PREDICT THE OUTCOME?**

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Background: Real practice predictors ofr favorable outcome or relapse after Ponseti serial casting (PSC), percutaneous Achilles tenotomy (TAL), and foot abduction orthoses shoes (FAOs) are limited in children with clubfoot.

Materials & Methods: Spanning the period 2006-2022 demographics, PSC, TAL and follow-up data, including time of relapse and surgical interventions regarding children with clubfoot treated in our department were collected. Ankle dorsiflexion (ADF) was recorded from the medical records and talocalcaneal (TC) and talus-to-first-metatarsal (TFM) angles were measured if plain radiographs were available.

Results: 87 feet (53% right) have been treated with 7 (IQR: 6-8) casts. TAL was performed at 65 (56-78) and FAOs were placed at 85 (77-102) days old. ADF was 9° (8°-11°), 11°(10°-12°) and 11°(10°-13°) at the time after PSC, at FAOs placement and removal. Plantigrade observed before FAOs removal was related to age of diagnosis and treatment initiation (OR 0.9, p<0.1) and ADF after PSC (OR 1.6, p<0.1). Fourteen (23%) children relapsed at 4 (3-6) having ADF 7.5° (7°-8°), TC 13°(10°-15°) and TFM-8°((-10°)-(-5°)). Relapse is related to plantigrade age (OR 2.1, p=0.003) and ADF at FAOs removal (OR 0.3, p=0.01). 33% of relapsed children had ADF<10 compared to 3% of non-relapsed ones (p<0.001). Seven (11%) feet were in dynamic supination, 14(16%) in residual equinus and 8(9%) re-presented cavus deformity. Posterior capsulotomies (76%), plantar aponeurosis release (53%), TAL (53%) and spring ligament release (24%) were used. Tendon transfers include tibialis anterior (36%), peroneus longus (35%) and posterior tibialis (24%). Surgical intervention improved ADF by median 4°(3°-6°). Four (2-6) years post-op ADF is 11°(10°-11°) while children without relapse 12°(11°-14°) (p<0.01).

Conclusions: Early diagnosis and PSC initiation is the key factor for a favorable result. FAOs use should be strongly monitored for their proper use. Gait should be monitored together with ADF and other possible objective parameters of deformation to assist early diagnosis of relapse.

E - POSTERS IN ENGLISH

EP008 ANTIBIOTIC USE IN SURGICAL PROPHYLAXIS: A RETROSPECTIVE STUDY IN THE DEPARTMENT OF SURGERY OF GENERAL UNIVERSITY HOSPITAL OF PATRAS, GREECE

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Introduction: Antibiotic prophylaxis is used to decrease bacterial load in the surgical wound and assist the natural host defenses in preventing the occurrence of surgical site infections. It is essential to ensure wounds are cleaned and appropriately dressed to limit the spread of infection and further injury. The purpose of this study was to assess antibiotic prophylaxis (ABP) compliance with national guidelines in a tertiary surgical unit.

Methods: This is an internal audit in a case series of 317 patients who underwent surgery during the time period from June to August 2022. A retrospective analysis was conducted, examining data concerning the use of antibiotic prophylaxis* from patients' medical records, Ramma (the hospital's electronic medical record), and Medilab (the hospital's lab record) from the surgical ward of Patras General University Hospital. Surgeries were classified into four categories based on the risk of contamination in the operating room (I-Clean, II-Clean- Contaminated, III-Contaminated, IV-Dirty-Infected). Taking into account the national guidelines, the analysis aimed to estimate the compliance rate of the following: type of surgery, type of antibiotics administered, and duration of administration. The review is based on the gold standard of guidelines for perioperative chemoprophylaxis and incorporates local resistances.

Results: A significant rate of non-compliance was observed in terms of the type of antibiotics, especially in clean-contaminated surgeries, and inconsistency among the members of the clinic in terms of the type of antibiotics and the number of different regimens administered. This shows the need to follow a common antibiotic treatment strategy according to the surgical category by the guidelines, but also to reevaluate the perioperative antimicrobial treatment at three and six months, to close the audit loop.

EP009 **STATIN THERAPY IN CHRONIC KIDNEY DISEASE PATIENTS UNDERGOING HEMODIALYSIS**

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Introduction: Patients receiving hemodialysis present significantly higher risk for cardiovascular events and, futhermore, benefits of statins are controversial in these patients (Fellström et al., 2009). The aim of the study is to analyze data of statins use in patients from different Latvian hemodialysis centers.

Methods: A cross-sectional study included consecutive patients from four hemodialysis centers from June till October 2022. Data was analyzed with SPSS statistics.

Results: Among 113 included patients, 64.6% were man, mean age was 62.8±14.9 years. Current smokers were 14.2%. Most common primary cause for hemodialysis (47.2%) was glomerular diseases. Comorbidities as primary arterial hypertension and diabetes were diagnosed in 39.8% and 17.7% of patients, respectively. History of arterial vascular disease was present in 47 (41.6%) patients, 26 (23%) patients underwent revascularization. Anamnesis of kidney transplantation was present in 17.7%. Mean plasma concentration for total cholesterol, LDL cholesterol and triglycerides were 4.4±1.3 mmol/L, 2.5±1.1 mmol/L and 1.7±1.3 mmol/L, respectively. Statins were used in 60 (53.1%) patients, majority of them (68.3%) were using atorvastatin. Patients who had transplantation were associated with 2.4 times increased usage of statins ($p>0.05$). No significant lipid concentration difference was observed between patients who underwent transplantation and those who did not. ($p>0.05$). LDL concentration with and without statin use was 1.97 and 2.73 ($p=0.03$), respectively. Patients with history of cardiovascular events had 8.4 times higher probability of using statins than patients without cardiovascular events ($p<0.001$, Cl 3.47-20.53) and 10.3 times higher probability of using statins after revascularization than patients without revascularization ($p<0.001$, Cl 2.98-37.11).

Discussion: Statin therapy was related to history of cardiovascular events and revascularization, as well expressing significantly lower LDL concentration, that might be beneficial in secondary prophylaxis. History of transplantation was associated with increased statin administration.

E - POSTERS IN ENGLISH

EP011 EVALUATION OF PERIPHERAL BLOOD HEMATOPOIETIC STEM CELLS (HSCS) AND VERY SMALL EMBRYONIC-LIKE STEM CELLS (VSELS) IMPACT ON THE FUNCTION OF THE PANCREATIC BETA CELLS IN CHILDHOOD TYPE 1 DIABETES

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Introduction: Type 1 diabetes (T1D) is an autoimmune disease characterized by gradual destruction of pancreatic beta cells. Due to the complexity of its pathogenesis, underlying mechanism is still not fully described. Nonetheless, current research suggests that spontaneous regeneration and recovery can maintain functional portion of the beta cell mass. In accordance, strategy promoting regeneration processes may be a promising novel therapeutic approach. Thus, we aimed to investigate the impact of peripheral blood hematopoietic stem cells (HSCs) and very small embryonic-like stem cells (VSELs) on the function of the pancreatic beta cells in childhood type 1 diabetes.

Methods: 59 patients with newly diagnosed T1D were recruited and monitored during two-year treatment. The control group consisted of 31 healthy children. First, we established metabolic status of patients and remission occurrence using C-peptide, HbA1C and daily insulin requirement levels measurement. Next, peripheral blood was used for flow cytometric analysis of VSELs and HSCs population frequency. Subsequently, plasma levels of SDF-1 were measured using the ELISA technique.

Results: At first, we showed that VSELs and HSCs levels did not differ significantly between diabetic and control groups. Interestingly, patients with higher C-peptide demonstrated decreased values of HSCs and increased levels of peripheral VSELs. Furthermore, patients with lower HSCs demonstrated a tendency for higher possibilities of partial remission during first 6 months of the therapy, but decreased levels of VSELs may be associated with better remission prevalence only within first 3rd months. Finally, SDF-1 concentrations seemed to follow increasing prevalence of the remission occurrence.

Conclusions: Cumulatively, VSELs and HSCs demonstrated significant association with metabolic parameters reflecting pancreatic beta cells' function. Therefore, regenerative processes involving stem cells might be essential in preserving proper function of the remaining pancreatic cells. Nevertheless, further research is required to verify HSC and VSEL potential as biomarkers of the remission in T1D.

EP012 ASSESSMENT OF THE BASOPHIL ACTIVATION TEST (BAT) DIAGNOSTIC POTENTIAL IN MONITORING THE COURSE OF IMMUNOTHERAPY IN PATIENTS ALLERGIC TO HYMENOPTERA VENOM

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Introduction: Overreactivity to hymenoptera venom is a leading cause of severe allergic reactions in adults. A bee/wasp sting can evoke various responses ranging from mild pain and swelling to life-threatening anaphylaxis. Allergen-specific immunotherapy (AIT) relies on inducing tolerance to specific allergens and is the leading approach in the treatment of the patients. Basophil degranulation is one of the most crucial factors in initiating allergic reactions. The basophil activation tests (BAT) measure the reactivity of these cells in response to specific allergen exposure and may indicate the severity of a patient's state. Currently, no specific marker exist that could detect the achievement of tolerance to the allergen following AIT. Therefore, we aimed to verify the diagnostic value of BAT implementation in establishing the outcome to the immunotherapy.

Methods: Peripheral blood samples from bee and wasp venom-allergic patients were collected at admission and during AIT. Furthermore, flow cytometry was used to assess the reactivity of basophils in the BAT assay- based on the expression of surface markers (CD63 and CD203).

Results: Initially, we showed a statistically significant higher percentage of CD63+ and CD203+ activated basophils in studied allergic patients compared to the healthy control. Subsequently, we established that BAT test could be helpful in monitoring hyperreactivity to a specific allergen in the course of AIT. Interestingly, we also reported an importance of proper allergen dose selection, as higher subcutaneous values (20000ng/ml) seems to block basophil activation and lead to false negative results.

Discussion: In conclusion, our study supports the diagnostic potential of BAT in monitoring hymenoptera venom-allergic patients. Moreover, basophil-based tests may be a promising tool in the assessment of AIT effectiveness. However, it is important to remember that the procedure must be carefully adjusted for specific allergen doses to obtain fully reliable results.

E - POSTERS IN ENGLISH

EP013 SURGICAL ADVANCES IN TREATMENT OF LYMPHEDEMA

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Objective: The initial objective of the presentation is the definition of secondary lymphedema and the staging scale that is being used to classify the function of the lymphatic vessels within the affected limb. Furthermore, we aim to review the current available surgical procedures, their indications and contraindications as well as the effectiveness they present based on the stage of lymphedema.

Material and methods: A literature review was conducted from the databases PUBMED, Google Scholar as well as the "Plastic and Reconstructive Surgery" Journal.

Results: There are two main surgical technique subtypes, namely the physiologic and the reductive. Physiologic procedures, consisting of lymphovenous bypass and vascularized lymph node transplant procedures, intend to reestablish the fluid drainage within the affected lymphatic vessels and are used to cure patients in early-stage lymphedema. The latter, debulking procedures, including suction-assisted lipectomy, direct excision (modified Homan's procedure) and in extreme cases excision and skin grafting (Charles procedure),aim to remove the excessive fibrofatty tissue, deposited by lymphedema. These techniques are indicated when conservative measures have failed,more advanced-stage lymphedema is present or when the physiologic procedures are unsuccessful. In conclusion, regarding to the stage of lymphedema combination of surgical and novel therapies can be implemented.

Conclusion: Surgical treatment has shown significant results in improving patients' quality of life and appearance and diminishing the risk of cellulitis, in lymphedema refractory to conservative therapy. Currently the role and benefits of not only therapeutical but also prophylactic surgical interventions are under evaluation in specific cases. Simultaneously, several studies are being conducted, investigating the combined advantages of novel surgical and pharmaceutical therapies. Most importantly, the therapeutical management of patients with lymphedema should be personalized based on the individual characteristics of the underlying lymphatic disease and patient's health status.

E - POSTERS IN GREEK

EP001 THE CLASSIFICATION, EVALUATION, AND MANAGEMENT OF BURN INJURIES: AN OVERVIEW

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Introduction: According to the World Health Organization (WHO), 11 million people all over the world suffer from burn injuries to that level, that they require medical attention. From those, an estimated 180,000 deaths annually are caused by sever burns [1]. Severe burns can be challenging to manage as they may lead to permanent damage, but also multiple organ failure (MOF) [2]. Taking into consideration the importance of this disease, this study gives an overview of the classification, evaluation and management of burn injuries.

Materials - Methods: The study was conducted by searching in PubMed for articles describing the approach to burn injuries. The keywords used on the searching machine were "Burn Injury, Evaluation, Classification, Management, Overview".

Results: Major factors when evaluating the burned skin include the extent and the depth of the burn [2- 6]. Extent is the percentage of total body surface area burned (%TBSA) and can be estimated with several methods include the rule of nines, Lund & Browder chart, and palmar surface [2, 3, 5]. The classification of depth is based on how deeply into the epidermis or dermis the injury extends [2, 3, 5]. Superficial thickness burns are the first-degree ones, partial-thickness burns can be categorized as second-degree, while full thickness deep burns are the third-degree ones. Full thickness burns involving deeper lying tissues are classified as fourth degree [2- 4, 6- 8]. Mild burns require only conservative treatment, while for burns defined as moderate to severe, fluid resuscitation, physical and occupational therapy, surgery, and psychological support might be needed [2- 6, 8- 9].

Discussion: Burn injuries can cause death, but also permanent morbidities. Thus, immediate pre-hospital care and the seeking of professional health care is of major importance in the effective management of burn cases.

E - POSTERS IN GREEK

EP002 COMPARISON OF QUALITY OF LIFE OF PATIENTS WITH IMPLANTABLE PACEMAKER AND PATIENTS WITH IMPLANTABLE PACEMAKER AND DEFIBRILLATOR SUMMARY

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Introduction: Pacemaker implantation has been a vital tool for the treatment of rhythm disorders for the last 50 years, while cardioverter-defibrillator implantation has been applied for three decades with the aim of primary and secondary prevention of cardiac death.[1] At the same time, quality of life is an area of increasing interest in health sciences and leads to the adoption of a holistic approach by health care professionals.[2]

Aim: The aim of the current study was to assess the quality of life of patients with an implantable pacemaker and to compare it with that of patients with a combined pacemaker and defibrillator device.

Material and Methods: The sample consisted of 100 subjects with a pacemaker, or a pacemaker and defibrillator, monitored by the University Hospital of Ioannina. [1] To collect data, the participants completed the SF-36 questionnaire.[3] Statistical t-test and anova test were applied and statistical significance was set at ($p < 0.05$). Statistical analysis was performed using the SPSS program (v.25).

Results: The overall quality of life score of the sample ranged at a satisfactory level in most dimensions of the SF-36 scale (above 66/100), with the exceptions of the dimensions of general health and vitality which scored 38.5 and 45.1 respectively. No statistically significant differences were found on the basis of the type of implantable device in any dimension of the scale ($p>0.05$). In most dimensions of the scale, higher scores were obtained by men, younger people, working people, married people, more educated people, those more informed about the disease and medication, as well as people living with family members ($p>0.05$).

Conclusion: The quality of life of patients with implantable pacemaker and combined implantable pacemaker-defibrillator did not show statistically significant differences. Various demographic, social and clinical factors negatively affect the quality of life of these patients.[4]

EP003 **DENTIGEROUS CYST INFECTION AND AIRWAY OBSTRUCTION: TWO CASE REPORTS**

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Introduction-Objective: Dentigerous cyst is a common type of developmental odontogenic cyst, which appears in the jaws of young adults. It usually is asymptomatic, unless it gets infected. Extension of this infection at cervicofacial spaces can be fatal, especially if the swell causes airway obstruction. The aim of this study is to present two cases and a short literature review of secondary head and neck infections, caused by dentigerous cyst and lead to airway collapse and tracheostomy.

Design and Methods: An analysis of the patients' medical records was performed and more information was retrieved from the PubMed and Google Scholar databases with keywords "dentigerous cyst", "deep head and neck infections" and "tracheostomy". Articles were selected from the last twenty years.

Case reports: The first patient was a 21 male who presented dental pain and trismus, which remained after antibiotic treatment. The diagnosis was pterygomandibular-submandibular abscess, caused by a dentigerous cyst of the left third molar #38 with extension to the mediastinum. Treatment included extraction of #38, enucleation of the cyst, fission of the abscess and tracheostomy.

The second patient was a 42 female who presented similar symptoms and was diagnosed with pterygomandibular abscess, Ludwig's angina and dentigerous cyst associated with the right third molar #48. The empirical treatment failed and neck ruddiness showed up. Treatment included extraorally fission at submandibular space and drainage of the abscess, stent suturing, extraction of #48, #47, enucleation of the cyst and intubation. In both patients antibiotic coverage was administered.

Conclusion: The cases that infected dentigerous cysts lead to head and neck infections, airway obstruction and tracheostomy are really few in the literature. That proves the rarity of the condition and necessitates the immediate intervention of oral and maxillofacial surgeons.

E - POSTERS IN GREEK

EP004 THE EFFECTS OF SEMAGLUTIDE IN OBESE ADULTS: A SYSTEMATIC REVIEW

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Introduction: A body mass index (BMI) equal or above 30 classifies a person to the obesity group. According to the World Health Organization (WHO), obesity is defined as abnormal or excessive fat accumulation that may impair health, due to the energy imbalance between the calories that are consumed and burned. Diabetes, cardiovascular diseases, musculoskeletal disorders or even some cancers are consequences of overweight and obesity. (1) Semaglutide, a glucagon-like peptide-1 (GLP-1), is an incretin mimetic. This drug binds to GLP-1 receptor and stimulates the release of insulin. (2-4) We conducted this systematic review to evaluate the effects of semaglutide in obese people.

Methods: We conducted a literature search in PubMed for randomized, double-blind trials on obese adults, who used subcutaneous semaglutide or placebo. The collected data were published between March 2018 and October 2022. The keywords were “semaglutide”, “obesity”, “adults” and “GLP-1”.

Results: The studies indicate changes in body weight between patients who received semaglutide and placebo, with an estimated treatment difference between -14.8 and -12.6 percentage points. (6,7,8) Improvements in fasting and postprandial glucose and lipid metabolism were noted. A delayed first-hour gastric emptying after meal was noticed in the group with semaglutide but the overall gastric emptying showed not statistically differences. (5) Additional improvements were seen in waist circumference, systolic blood pressure, SF-36 physical functioning score and cardiometabolic risk factors. (6,7) Nevertheless, gastrointestinal adverse events, mostly mild-to-moderate in severity, were observed more often in the semaglutide group than in placebo group. (6,7,8)

Discussion: Obesity is a complex disease and needs proper treatment to decrease the risk of other disorders. This systematic review provides evidence for the effectiveness of semaglutide to continuously reduce the body weight in obese adults. (6,7,8) In addition, it improves the fasting and postprandial glucose and lipid metabolism. (5)

EP005 **PLATELET-RICH PLASMA (PRP) INJECTIONS FOR THE MANAGEMENT OF ANDROGENETIC ALOPECIA: A SYSTEMATIC REVIEW**

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Introduction: This systematic review aims to extract and interpret data from published studies on managing Androgenetic Alopecia (AGA) with Platelet-Rich Plasma (PRP) injections. AGA, also known as Pattern Hair Loss, is a common chronic and progressive hair loss condition, affecting both males and females, because of an uncontrolled response to androgens [1]. PRP is the autologous concentration of human platelets [2] and has been gaining traction because of its regenerative potential. The intradermal RPR injections supply the affected areas with several growth factors aiding the development of new hair follicles and promoting neovascularization [3].

Materials - Methods: The study was conducted by searching on PubMed for articles describing the effect of PRP in androgenetic alopecia compared to placebo, between April 2016 and November 2021. The keywords used on the searching engine were “alopecia“, “PRP”, “androgenetic” and “hair”.

Results: We found 5 studies, randomized placebo-controlled double-blind clinical trials, that met our inclusion criteria with a total number of 211 patients enrolled suffering from AGA [2-6]. Despite the heterogeneity of the different studies, the majority demonstrated a positive effect of the use of PRP injections in the treatment of AGA by promoting hair growth [2-6].

Discussion: AGA is a very common hair loss condition. Through this systematic review of different trials it was noticed the positive effect of PRP used in AGA patients [2-5]. The absence of major adverse effects considered this treatment a safe choice [2, 4]. Because of the lack of information on other related factors, like growth factors, further randomized controlled studies should be completed.

E - POSTERS IN GREEK

EP006 BIOMARKERS IN THYMIC EPITHELIAL TUMORS

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Introduction: Thymic epithelial tumors (TETs) are divided into thymomas and thymic carcinomas. The use of biomarkers can contribute to both the clinical diagnosis and prognosis of TETs and the selection of a personalised therapeutic approach. The aim of this study is to collect and present new data on representative biomarkers with potential clinical utility.

Methods: Recent studies on biomarkers in thymic epithelial tumors selected from the PubMed database were used.

Results: Information was collected on indicative biomarkers that were associated with specific TETs. Specifically, BMP-7 protein expression was found to be significantly increased in B3 thymomas and thymic carcinomas. Increased serum levels of HSP90 protein were found in higher stage TETs according to Masaoka-Koga and TNM stages. Increased expression of PD-L1 was found in B3 thymomas and to a lesser extent in thymic carcinomas. SOX9 expression correlated with the histological type of thymomas. Increased levels and expression of BPAs/BPTPs may be closely associated with high stage Masaoka-Koga thymomas or thymic carcinomas. High levels of p53 expression were more frequent in invasive thymomas and thymic carcinomas. Finally, p21 expression was found to be significantly increased in thymic carcinomas.

Conclusions: There is a great research interest in biomarkers of epithelial thymic tumors. Several studies have already taken the first step towards the identification and potential use of biomarkers that will contribute clinically to the diagnosis, therapeutic approach and assessment of prognosis of patients with TETs.

EP007 TREATMENT WITH SODIUM-GLUCOSE CO-TRANSPORTER INHIBITORS IN PATIENTS WITH CHRONIC HEART FAILURE WITH REDUCED EJECTION FRACTION: REAL WORLD DATA

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Introduction: Sodium-glucose co-transporter inhibitors (SGLT2i, empagliflozin and dapagliflozin) are the novel therapy for patients with heart failure with reduced ejection fraction (HFrEF), recommended to reduce the risk of heart failure (HF) hospitalization and cardiovascular death[1,2,3].

Purpose: To address the percentage of patients with chronic HFrEF receiving SGLT2i, based on the data of the HF Clinic of General Hospital "G. Papanikolaou" of Thessaloniki.

Methods: We retrospectively recorded all patients with HFrEF who had at least one follow-up visit to the HF Clinic from September 2021 (first indication for SGTT2i) to December 2022. Patient's characteristics and overall treatment were recorded.

Results: 136 patients with HFrEF, mean age 65±15 years, 102 (75%) men, were studied. 98 patients (72%) were treated with SGLT2i. The remaining 38 patients were not treated with SGLT2i mainly because of chronic kidney disease, low systolic blood pressure and urinary tract infections. 56 patients (57%) had ischemic HF, 48 (49%) diabetes and 38 (69%) were in functional NYHA class II. Systolic blood pressure was 115±15 mmHg, ejection fraction 28±8%, and creatinine clearance 68±23 ml/min/1.73m^2. Patients received angiotensin-converting enzyme inhibitor or angiotensin receptor blockers in 42%, neprilysin inhibitors in 45%, aldosterone inhibitors in 90%, and β-blockers in 95%.

Conclusions: Based on our data the percentage of patients with HFrEF treated with SGLT2i is particularly high, which indicates the wide acceptance of this drug class in the real world. The characteristics and overall treatment of our patients were similar to the large trials[1,2].

E - POSTERS IN GREEK

EP008 THE EVALUATION OF PULMONARY FUNCTION IN POST-COVID PATIENTS

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Aristotle University of ThessalonikiIntroduction/Background: Infection with COVID19 has been associated with long-term symptoms and pulmonary functional changes. The aim of this retrospective study is to evaluate the pulmonary functions in post-COVID patients during a follow-up visit.

Methods: At the general hospital of Thessaloniki "G.PAPANIKOLAOU", during 09/2020-11/2022, post-COVID patients were accessed. Patient's evaluation included spirometry (FVC, FEV1, FVC/FEV1), determination of lung volume (TLC), 6-Minute-Walk-Test (6MWT) and diffusing capacity of lung for carbon monoxide (DLCO). Demographic characteristics such as age and sex were also collected. The results of the pulmonary function tests (PFTs) are used in the present retrospective study. The Statistical Package for the Social Sciences (SPSS) was used to analyze the data.

Results: Sixty-nine(69) patients were included in the study with a median age of 57±14.0 years and with 57.6% of them been women. Statistical analysis revealed, among others, that FVC and FEV1 values corresponded to 95.5%±19.7 and 98.5%±18.0 of the predicted values, respectively. Total lung capacity (TLC) was equal to 89.6%±22.0 of the predicted and the DLCO variable showed a decrease of the predicted, standing at 75%±18.5. Furthermore, the walking test showed an average distance of 463 meters in those who completed the procedure. It is also worth noting that the average time between COVID19 illness and clinic check-up was 152 days (accompanied by a significant variation).

Summary/Discussion: Re-examination of individuals with a history of SARS-CoV-2 disease showed statistically that FVC, FEV1 and TLC values remain relatively preserved with marginally reduced diffusing capacity (DLCO). Further research is needed to validate and generalize these findings and also to correlate them with the quality of life of these individuals.

EP009 **TRANSCATHETER TRICUSPID VALVE INTERVENTIONS: A TRIUMPH OF INTERVENTIONAL CARDIOLOGY?**

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Objective: Tricuspid regurgitation (TR) is a common valvular disease, estimated to affect 1.6 million people in the United States. Although international guidelines recommend either pharmacological or surgical treatment, the misconception of the disease as benign and the high rates of surgical mortality have led to undertreatment of the disease. Recently, the development of novel transcatheter devices and interventions has provided promising options for clinical improvement and symptom relief in patients with TR.

Methods: A literature review of the PubMed/Medline database was performed to search for all relevant articles. All references of relevant articles were also reviewed to ensure that any relevant literature not found in the initial searches was not omitted.

Results: Transcatheter interventions for the treatment of TR can be divided into two broad categories, valve repair and valve replacement procedures. Regarding repair procedures, more experience has been gained with the use of transcatheter edge-to-edge (TEER) techniques, mostly with two devices, the TriClip and PASCAL, that showed a safe and effective profile in large studies, with significant reduction in TR grade and severity, as well as symptom relief, which lead to their FDA approval. An alternative repair technique also showing positive results is annuloplasty, mainly with the Cardioband device. For valve replacement, many prosthetic valves are being investigated. The Evoque valve is the most studied and also shows positive safety and efficacy results. Finally, the success of these techniques is also evident from their recent recommendation in the European Society of Cardiology guidelines, with an indication in symptomatic, inoperable patients.

Conclusion: Transcatheter management of TR seems to be gaining ground. Given the plethora of options, the interventional cardiologist's focus should be on finding the appropriate procedure for each individual's anatomy, the optimal timing as well as the type of patients who will benefit from the procedure.

E - POSTERS IN GREEK

EP010 X SEX CHROMOSOME DEFICIENCIES IN WOMEN WITH FERTILITY

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EP011 **CYTOKINE RELEASE SYNDROME IN A PATIENT WITH CHRONIC LYMPHOCYTIC LEUKEMIA, FIFTY DAYS AFTER COVID-19 INFECTION: A CASE STUDY**

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Background: Cytokine release syndrome is an acute complication associated with CAR T-cell therapy, antibodies treatment and severe infections including COVID-19[1]. We report this case of cytokine release syndrome fifty days after COVID-19 infection in a patient with chronic lymphocytic leukemia.

Case presentation: A 77-year-old woman with chronic lymphocytic leukemia treated with venetoclax and obinutuzumab is presented. Six months after the initiation of treatment, the patient tested positive to COVID-19 and stopped therapy. Fifty days after COVID-19 infection the patient presented with high fever and was treated with amoxicillin-clavulanic acid, clarithromycin and then switched to levofloxacin with no improvement. Her condition deteriorated and got admitted to the hospital. She continued to be pyrexial with T 38.2 °C, oxygen saturation of 92% on air, her blood pressure was 82 over 60 and CRP was found to be 213 mg/L. She was treated with clarithromycin and meropenem intravenously. A bronchoscopy with BAL were performed and specimens and tissue were collected for culture and biopsy. Amphotericin B was added to her treatment plan prophylactically. Repeated CT of the lungs showed consolidation at the base of the right lung being persistent. The diagnosis of bronchiolitis obliterans organizing pneumonia was established, and prednisolone 40 mg was provided. Five days after Amphotericin B's addition, the patient's CRP was 211 and a new CT showed bilateral base consolidations. Change of antibiotics to ceftazidime-avibactam and linezolid followed but high fever and CRP persisted. IL-6 was ordered and was found to be 220 pg/mL. The patient was offered tocilizumab 8 mg/Kg. Four days later, fever completely resolved along with her observations.

Discussion: This case report highlights the existence of delayed cytokine release syndrome, and it should always be suspected in the differential diagnosis as its early identification can be life-saving.

E - POSTERS IN GREEK

EP012 VELAMENTOUS CORD INSERTION

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Introduction: Velamentous cord insertion is an umbilical cord attachment to the membranes surrounding the placenta instead of the central mass. It is a disease that affects 1%- 1.5% of singleton pregnancies. However, the severity and high mortality of the complications require high suspicion on behalf of the physician. The aim of our poster is to present two clinical cases and a brief literature review that will focus on the diagnosis, complications and the management of this condition.

Materials/ Data: The study of two singleton IVF pregnancies which were diagnosed with velamentous cord insertion during the diagnostic second trimester ultrasound examination, at 22 weeks of gestation. A systematic review of databases such as pupmed, google scholar as well as a review of the textbooks of "Obstretics and Gynaecology", 2nd edition, Aristeidis Antsaklis, 2011, "Obstretics and Gynaecology", Dimitrios Loutradis, 2018, was also performed.

Results: The most common complications of velamentous cord insertion are fetal growth restriction, preterm labor and preeclampsia. This condition is strongly associated with abnormalities in the function and development of the placenta. The prevention of premature birth is of highest importance in the management of these patients.

Conclusion: Velamentous cord insertion can be diagnosed on routine second trimester ultrasound, thus preventing perinatal complications. It is highly associated with the presence of vasa previa, in fact 90% of women with vasa previa present with velamentous cord insertion

EP013 **ACHOLOGICAL APPROACH OF ADULT PATIENTS**

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Introduction: Analysis and description of subjective and objective methods for the assessment of hearing acuity in adult patients.

Methods: Systematic review of the literature on audiology, the tests it includes, their indications of action and the information they provide us.

Results: Objective audiometry includes: 1) Tympanometry: checks the mobility of the tympanic-osteal system and through it we evaluate conditions such as fluid in the middle ear, dysfunction of the Eustachian tube, the integrity of the tympanic membrane. 2) Auditory reflex: contributes to the diagnosis of middle ear diseases as well as cochlear and retrocochlear lesions. 3) Electroaudiometry: a) Electrocochliography: records the potentials of the cochlea and the auditory nerve caused by the administration of sound clicks. b) Evoked Acoustic Brainstem Dynamics (ABR): recording of the neuroelectrical activity of the cochlear nerve and the auditory pathways of the brainstem, observed after the administration of sound stimuli to the ear. c) Auditory steady-state responses (ASSR): a test with the same characteristics as ABRs. But they give a different result (waveform) for each examined frequency. 4) Evoked Otoacoustic Emissions: acoustic energy generated by the cochlea in response to the delivery of sound stimuli of moderate intensity to the external auditory canal. They are absent when there is pathology of the middle ear and in conductive or sensorineural hearing loss at 30-35 dB.

Subjective audiometry includes: 1) Tone Audiometry: psychoacoustic test that determines the threshold, which is the minimum intensity of pure tones that the examinee hears and perceives at each frequency. 2) Toners to determine the type of hearing loss. 3) Speech Audiometry: tests the auditory function with speech stimuli and reveals the impact that a damage of the auditory system has on a person's communication ability

Summary: Audiometry is a complex process of assessing hearing ability that includes various tests aimed at establishing or not hearing loss, its degree, type and differential diagnosis.

E - POSTERS IN GREEK

EP014 DISTAL URETERIC STONES: CONSERVATIVE MANAGEMENT AND MEDICAL EXPULSIVE THERAPY

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Introduction: Observational treatment can be an attractive option for small ureteral stones in patients with controlled symptoms. Medical expulsive therapy (MET) refers to the administration of medical agents in order to relax the smooth muscle of the ureter and inhibit peristaltic activity. The aim of this study is to review the indications of conservative management for distal ureteric stones and to investigate available options in the application of MET.

Materials-Methods: A systematic review of the English language literature was performed using the MEDLINE (via PubMed) database combining the keywords "medical expulsive therapy for distal ureteral stones", "MET for distal ureterolithiasis", "distal ureteral stone management". The majority of the selected articles were published over the last decade (2013-2023).

Results: Spontaneous stone passage has been reported for almost 70% of distal ureteral stones. In general, it has been supported that the use of MET can achieve higher stone expulsion rates and lower analgesic requirements at the same time. MET usually involves the use of a-blockers, calcium channel inhibitors and phosphodiesterase-5 inhibitors with the first being used more often. The role of MET in the spontaneous passage of ureteric calculi has recently been called into question as it seems to have shown limited benefit. On the other hand, current guidelines recommend the use of MET as one of the treatment options, in particular for distal ureteral stones >5 mm. Nevertheless, treatment should be discontinued if complications develop (infection, refractory pain, deterioration of renal function).

Conclusion: Expectant management has undeniable role in the treatment of distal ureteric stone patients. The outcome is largely determined on the stone size. Patients should be informed about the possible, but as yet unproven benefit of using MET in this situation, as well as their off-label use.

EP015 MONOCLONAL ANTIBODIES: A NEW THERAPEUTIC APPROACH IN ALZHEIMER'S DISEASE

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Purpose: Alzheimer's disease (AD) is the most prevalent form of age-related dementia that affects millions of people globaly. However, nowadays only a few drugs have been approved for its treatment, but even these do not affect the pathophysiological substrate of the disease. For this reason, we focus our attention on the effectiveness of new anti-Aβ monoclonal antibodies (mabs) both in symptomatic relief and in altering the pathophysiological substrate of the disease, with the aim of treating it.

Materials and methods: PubMed search of all registered research papers was performed.

Results: Alzheimer's disease is a chronic neurodegenerative disease with the main pathological features of amyloid-β (Aβ) plaque deposits and neurofibrillary folds of hyperphosphorylated tau protein. These lead to progressive memory loss, cognitive impairment through neuronal atrophy in the hippocampus and cortical areas, dementia and synaptic dysfunction. In the amyloid pathway, Aβ peptides are products of the sequential cleavage of amyloid precursor protein (APP) by β- and γ-secretases, which are folded into insoluble fibrillar aggregates of beta plaques and deposited extracellularly in the brain parenchyma and vasculature

The immune system has also been implicated in the deposition of Aβ proteins in the brain and abnormally folded tau proteins. Therefore, monoclonal antibodies (IgG) selectively target aggregates, Aβ oligomers and plaques removing them from plasma and reducing their cytotoxicity and pathogenicity.

Conclusion: The new monoclonal antibodies targeting Aβ have been used as a treatment for Alzheimer's disease in several clinical trials. Although most results from the clinical trials were unsuccessful, the mabs offer an additional possibility of therapeutic options with mild to moderate effects on declining brain Aβ levels and improving cognitive impairment. Combined with further research on Alzheimer's pathophysiological mechanisms mabs could be a very promising new therapeutic approach.

E - POSTERS IN GREEK

EP016 **OCULAR T- AND NK-CELL LYMPHOMAS: REVIEW**

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Introduction-Objectives: Extranodal natural-killer/T-cell lymphomas (ENKTL) are rare non-Hodgkin lymphomas. The invasion of nasal-origin NK-cells into the ophthalmologic field is sometimes observed, but primary ocular NK/T-cell tumors are rare. Our objective is to review the literature concerning the classification, diagnosis, and management of ocular NK/T-cell lymphomas.

Methods-Data: Search in PubMed using NK/T-cell ocular lymphomas, conjunctiva, orbit, immunohistochemistry, and histopathology as key words.

Results: Ocular lymphomas can be divided into those that are external to the eye (ocular adnexae) and those that are internal (vitreoretinal and uveal).[1] The ocular adnexal resion is the site of 1% of all lymphomas and 5-15% of extranodal lymphomas, 25% of which include the conjunctiva. T/NK-cell extranodal lymphomas are rare, more often observed in Asia and South America, characterized by acute inflammatory signs, such as vitritis, followed by anterior uveitis and serous retinal detachment (SRD). Patients with orbital T-cell lymphomas were mostly presented with gradual progressive orbital swelling, unilateral orbital dystopia, and superior medial displacement of the globe, while those with intraocular NK-cell lymphomas are presented with unilateral blurred vision. In patients with intraocular T-cell lymphomas systemic symptoms, SRD, and vitreoretinal involvement were frequently observed, while nasal type (ENKTL-NT), predominantly presented initial unspecific clinical manifestations involving the nasal cavity, with main clinical feature the rapidly progressive facial destruction. Treatment modalities included systemic chemotherapy, intravitreal methotrexate, globe radiotherapy, and intrathecal chemotherapy. Mean survival from diagnosis was 21.7 months (range: 2-69).

Discussion: Ocular adnexal NKTL is a rare but seriously fatal disease. While most lymphomas are localized to the ocular adnexa at the time of presentation, systemic examination is of particular importance in the long-term patient's care Clinicians should include these lymphomas in the differential diagnoses in cases with sinonasal or orbital inflammation, regardless of the patient's age and careful histopathological examination should be performed to establish the diagnosis with subsequent early treatment.

EP017 EVALUATION OF THE IMPORTANCE OF THE ANATOMAGE TABLE IN ANATOMY TEACHING

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Aim: Anatomage Table is a modern teaching method in which the real corpse is replaced by a digital interactive representation of it, on a large screen. Students can interact with it, choosing different sections, angles, combinations and a multitude of functions which help to understand shapes, sizes, adjacencies, structures, and relationships in space. Aim of the present research is to evaluate the effectiveness and the effect on understanding of the digital anatomy table (Anatomage Table) in Anatomy courses.

Material and methods: 2nd year medical students who participated in Anatomage Table courses were asked to fill in a short questionnaire. The questionnaire was in Google Forms format, shared with students through social media. A total of 94 responses were collected.

Results: 48.9% of the students consider the use of Anatomage to be very effective, with 57.4% stating that they showed the same concentration both during the cadaver exercise and in Anatomage. In terms of information flow, 41.4% claimed that the flow is smoother in Anatomage, while 38.2% felt the flow was the same. 62.7% of participants would prefer a combination of cadaver and anatomage in teaching, with 51.06% stating that they would prefer more class time on anatomage and 30.8% more time on cadaver.

Conclusion: Anatomage Table helped significantly the students to understand anatomy lessons. For this reason, most of the students would prefer having more courses in anatomage, and suggest thatdigital technology should be introduced more into the educational process.

E - POSTERS IN GREEK

EP018 VIRTUAL REALITY IN LAPAROSCOPIC COLORECTAL SURGERY TRAINING

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Introduction: Laparoscopic colon surgery presents significant advantages over traditional open surgery as it reduces post-operative pain, accelerates recovery and shortens hospital stay. This systematic review gathers existing knowledge regarding virtual reality as a training method in laparoscopic colorectal surgery and provides evidence for existing training programs as well as the learning curve.

Material and Methods: The literature contained in the PubMed database was searched using the terms "Virtual reality and colorectal laparoscopic surgery training". Initially 42 articles were found, while 22 finally met the inclusion criteria and were included in the study.

Results. The vast majority of publications included in the current review support the advantages of laparoscopic colon surgery compared with classic open surgery. It is also suggested that virtual reality is necessary for all surgeons to familiarize themselves with laparoscopy, while training on cadaver or animals also appears to have significant educational value.

Conclusions: Laparoscopic colon surgery which presents significant advantages such as safety, quick recovery, reduced post-operative pain and many more requires proper skills from the surgeons. Training in laparoscopic surgery refers to trained surgeons and can be significantly advanced through appropriate training programs developed in virtual reality simulators.

EP019 SUDDEN SENSORINEURAL HEARING LOSS AS THE PRESENTING SYMPTOM IN NEUROFIBROMATOSIS TYPE 2. A CASE REPORT AND LITERATURE REVIEW

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Introduction: Neurofibromatosis type 2 (NF2) is a genetically inherited disorder characterized by the presence of multiple nervous system tumors. Diagnosis typically occurs during childhood or early adulthood. Symptoms usually include progressive hearing loss, tinnitus, vertigo, facial nerve palsy, visual disturbances and peripheral muscle weakness.

Case report: A, 22-year-old, woman was referred to the ENT outpatient department, of General Hospital of Chania, due to sudden sensorineural hearing loss (SSNHL). The patient was admitted for intravenous steroid administration according to our protocol and underwent a complete neuro-otological examination. Pure tone audiogram revealed a profound low frequency hearing loss on the left side (upslopping pattern) and a mild sensorineural hearing loss on the right ear. Auditory brainstem response (ABR) thresholds, with click stimulus, were bilaterally found within normal. No significant interaural difference of the wave V absolute latency was found. The patient completed the treatment without any improvement. Magnetic resonance imaging performed as standard diagnostic procedure and showed bilateral vestibular schwannomas (maximal diameter 3 cm on the right and 1,5 cm on the left side), as well as, multiple meningiomas. With the diagnosis of NF2 the patient was referred to a Neurosurgical department for further management. She underwent tumor resection on the right side via retrosigmoid approach. Follow-up examination revealed a deaf right ear with ipsilateral normal function of the facial nerve.

Conclusions: NF2 may arise sporadically from a de novo mutation in the 22q12.2 chromosome. Sudden sensorineural hearing loss may rarely be the presenting symptom, even with a nontypical pure tone audiogram curve. Imaging is considered necessary for differential diagnosis, especially when the response to systemic therapy is poor.

E - POSTERS IN GREEK

EP020 AIRSHOT INJURY IN THE ZYGOMATIC REGION: CASE REPORT

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Introduction: Air gun is considered to be a children's toy. However, incidents of air gun injuries, intentional and unintentional, are constantly increasing. Air gun pellets are gas-propelled projectiles of low velocity and regarded as having little penetrating power. Depending on the type of air gun, the velocity of the projectile, the distance at which it is fired and the anatomic site of penetration are the factors that determine the gravity of injury to the affected person. The purpose of this study is to present a clinical case report of an air gun shot in the zygomatic region.

Case presentation: A 61-year-old female, presented at maxillofacial department of general hospital «G.Papanikolaou» with an air gun injury to the right zygomatic area. Clinically, appeared right mild periorbital ecchymosis, swelling, eyelid hematoma, diplopia, right ruptured eardrum and necrosis of the soft tissues. Radiographically, numerous pellet fragments were observed in the soft tissues, as well as near the right eyeball. The patient was treated initially with an intravenous combination of broad-spectrum antibiotics and analgesics, however a relapse occurred with cheek and lower eyelid cellulitis. It was treated with incision, drainage of the abscess and finally surgical removal of two projectiles.

Conclusion: Air guns are soldas play things, but cancause unexpected life-threateninginjuries. In the head and neck area the pellets often end up in the sinuses through a seemingly insignificant entry wound.

EP021 **BIOMARKERS OF PEDIATRIC HYDROCEPHALUS**

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Introduction: Hydrocephalus (HC) is a common, debilitating neurological condition that results from an imbalance in cerebrospinal fluid (CSF) production and resorption, and typically causes enlargement of the cerebral ventricles and increased intracranial pressure. Untreated or inadequately treated HC results in significant neurological morbidity, developmental disability, or death. Particularly in pediatrics where infants may be unable to convey their symptoms, making an accurate diagnosis of HC or shunt malfunction may be extremely challenging. Moreover, the existing diagnostic tools, even in combination, do not eliminate subjectivity in clinical decisions. In order to improve the management of infants and children with HC, there is an urgent need for new biomarkers to complement currently available tools and enable clinicians to confidently establish the diagnosis.

Methods: We conducted an electronic literature search using MEDLINE/PubMed. The keywords included the following: “Biomarkers” AND “Pediatric Hydrocephalus”. The reference list was reviewed for potential relevance and duplicates were removed.We also examined the references of our selected studies for relevant papers that weren’t included in our search results. The bibliographies of included studies were also searched for missed articles.

Results: Based on initial discovery-validation proteomics pathway results, the relationship between validated candidate CSF biomarkers and PHH has been investigated. Upon examination of lumbar CSF levels of APP, soluble APPα (sAPPα), sAPPβ, NCAM-1, L1CAM, Tau, phosphorylated Tau (pTau), and total CSF protein (TP) among infants with no known neurological disease, intraventricular hemorrhage (IVH) grades I/II, IVH grades III/IV, PHH, hypoxic-ischemic injury, and ventricular enlargement without HC, CSF APP, sAPPα, L1CAM, and TP were found to be selectively increased in PHH compared with the other conditions. Importantly, the findings suggest that these markers may be able to discriminate PHH from other conditions that affect preterm infants.

Conclusion: Novel biomarkers of pediatric HC are urgently needed to improve the outcomes of infants and children affected by this disease. Significant progress has been made in developing CSF biomarkers of pediatric HC, especially in the areas of PHH and CHC. A multidimensional instrument that integrates clinical factors, radiological parameters, and CSF and/or serum biomarkers would greatly improve the management of pediatric HC and should be the focus of future research.

E - POSTERS IN GREEK

EP022 LYMPHOMA: THE PRESENTATION OF A RARE CASE

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Introduction: Breast lymphoma is a rare type of malignancy of the mass gland, which arises from the lymph tissue of the breast. It can belong to Hodgkin or Non-Hodgkin lymphomas. It accounts for less than 1% of all breast cancers, with Non-Hodgkin occurring in 85% of cases and Hodgkin in 5%. It is more common in female patients aged 50 to 60 years and may occur with the usual clinical picture of breast cancer.

Case description: A 71-year-old patient with a known history of Non-Hodgkin's lymphoma in remission since one year after chemotherapy presented with clinically painless palpable mammary masses. As part of the annual review, the imaging test with PET-CT, Chest-Abdomen CT and mammography revealed no evidence of malignancy.

Nevertheless, due to strong clinical suspicion, a fine needle aspiration biopsy (FNA) and a core biopsy of the right breast were performed where the results were considered inconclusive.

On suspicion of the above, the patient underwent an open biopsy-tumorectomy and the histopathological report revealed a malignant transformation of the lymphatic tissue of B-cell origin.

Results: Breast lymphoma is a fairly rare case of malignancy and may go undiagnosed. In addition, the recurrence of a systemic hematological disease can manifest itself mimicking a primary mammary gland.

The involvement of the breast is not frequent, which demonstrates the difficulty in the differential diagnosis and identification of lymphoma, at the same time raising questions about what should be the appropriate line of treatment and monitoring of the patient's course.

Discussion: The topic of breast lymphoma raises questions about the adequate investigation of patients with systemic hematological disease and also about what the follow-up of the patient for new recurrence after surgical treatment will include. Therefore, expert vigilance and collaboration between hematologists and breast surgeons is essential.

EP023 APPLICATIONS OF INTERVENTIONAL RADIOLOGY IN INOPERABLE INTRAHEPATIC CHOLANGIOCARCINOMA

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Introduction: Intrahepatic cholangiocarcinoma is the second most common type of primary hepatic malignancy after hepatocellular carcinoma. Plethora of patients are unresectable due to disease stage, anatomic conditions, medical comorbidities and small future remnant liver if operated. Interventional radiology offers alternatives for these patients.

Case description: A 56 year old man visited the Computed Tomography (CT) department of our institution for an abdominal scan to investigate elevated transaminase levels found in a random checkup. He mentions a weight loss of 8 kg in the last three months. Abdominal CT with intravenous contrast media unveiled an extensive multifocal liver malignancy mainly located at the right lobe, which presented peripheral enhancement and internal necrotic regions. A percutaneous needle biopsy under CT guidance and a histopathological exam indicated cholangiocarcinoma, which was defined as inoperable due to its extent. The patient was treated with a session of percutaneous transcatheter embolization (PME) using acrylic particles which were loaded with doxorubicin, as well as an emulsion of lipiodol and doxorubicin. On frequent follow-ups with CT, there were numerous sites of relapse, the aforementioned liver lesions contained extensive necrotic areas and small splenic infarcts were noted as a result of embolic sphere escape, with no clinical significance. Two more sessions of PME and rounds of chemotherapy followed, with no remarkable complications. The 30 month follow up revealed extensive necrotic sited with atrophy of nearby liver parenchyma, while some residual lesions remain and are monitored and treated with systemic chemotherapy.

Methods: PME or chemoembolization includes the intra-arterial injection of chemotherapeutic agents in an emulsion of lipiodol and infusion of particle embolic materials to block vessels within tumors. Obstructing arterial flow and storing chemotherapeutic agents in tumors leads to cytotoxicity, local ischemia and necrosis. The main types of PME are the classic, the ischemic, with particles eluding chemotherapeutic agents and radioembolization.

Conclusion: Liver PME provides local treatment of hepatocellular carcinoma, metastatic disease and intrahepatic cholangiocarcinoma. The best approach is with combined local as well as systemic treatment.

E - POSTERS IN GREEK

EP024 BRAIN DEATH AND ORGAN DONATION

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Introduction - Background: Brain death (BD) is defined as the loss of functionality of the brainstem and its confirmation is carried out exclusively by clinical criteria. This review summarizes the up-to-date data currently in force in Greece for the brain death determination criteria and for the organ donation process, which according to Law 2737/1999 (Official Government Gazette 174A) begins after the diagnosis of BD, as long as the patient is eligible to be a donor and consent has been expressed from the patient's relatives.

Methods: A PubMed search was conducted. Key words included ("criteria" OR "medical examination") AND ("brain death" OR "brain stem death") as well as ("organ donation" AND "criteria"). Relevant data was also extracted from the Greek National Transplant Organization website (EOM).

Results: In order to determine BD with the following examinations, specific preconditions should be present. The clinical examination begins with the confirmation of persistent coma.

After that, the absence of brainstem reflexes is assessed (II, III, IV, V, VI, VII, VIII, IX, X cranial nerves). The final step is an apnea test, which verifies the loss of functionality of the brainstem's respiratory center. Certain ancillary tests (electrophysiological, imaging) complete the diagnosis of ED. After the completion of the above, and since consent for organ donation has been expressed, vital organs are properly supported in order for the transplantation process to be followed successfully.

Conclusion - Discussion: Brain death is considered the borderline between life and death. After the determination of BD, the potential donor's organs undergo proper support in order to be preserved in the best possible condition. The idea of organ donation in modern Greek society hides serious concerns and questions. A sensitive approach to the matter from health care workers as well as spreading accurate information are considered of great importance.

EP025 MULTILEVEL FRACTURES OF 3 COLUMNS OF THE SPINE: A CASE REPORT

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Introduction: Multilevel noncontiguous spinal fractures. (MNSF) are defined as multiple fractures of the vertebral column while there are at least 3 intact vertebrae in between.[1,2]

Case Presentation: A 52- year- old female patient with a history of osteoporosis, was admitted to the OR with a cervical hard collar after a reported car accident with ejection from the car. On arrival, she was hemodynamically stable, no motor deficits are noted, with a GCS of 8/15. A large left frontal hematoma with extension around the eye socket and severe edema was initially assessed. Toxicology tests came back positive for alcohol and cannabis. She was immediately intubated and she underwent a full body CT. The medical examination showed multiple fractures of the left eye socket, foci of subarachnoid hemorrhage in the right temporal, multiple fractures of the right ribs, sternum fracture, minimal pneumothorax but also an unstable fracture in T9 with an explosive unstable in L1 vertebra. Subsequently, the patient was transferred to the ICU where she remained for 21 days. The patient was operated on for the multiple fractures of the Spinal Column, performing posterior spinal fusion of T7-L3 with placement of transpedicular vertebral screws in 6 levels bilaterally and connecting rods respectively. Finally, she was transferred to the orthopedic department from the High-dependency unit to continue her treatment.

Conclusion: It is important to always perform imaging control throughout the Spinal column in high-energy injuries in order to identify or exclude additional fractures since MNSF, as a clinical entity, can pose a threat to the patient's neurological status. In these types of fractures, each fracture should be evaluated separately for the need of surgical intervention, while especially for MNSFs with ≤4 intact vertebrae between them, stabilization of one segment should take into account the participation of the 2nd fracture in the stabilization system.[1]

E - POSTERS IN GREEK

EP026 THE CROSSTALK BETWEEN GUT MICROBIOME AND COMPLEMENT ACTIVATION IN MULTIPLE SCLEROSIS

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Introduction: Multiple sclerosis (MS) is a chronic demyelinating inflammatory autoimmune disease accompanied by neurodegeneration. The complement, a mechanism of innate immunity, has a key role in pathology of MS as it acts as an important regulator of neuroinflammation. Recent data support the existence of an association between complement activation and microbiome in various tissues. The gut microbiome is involved in MS pathology affecting immune homeostasis and the integrity of the blood-brain barrier (BBB). In this review article, we investigated the vital role of the complement in the gut-microbiome effect on the central nervous system (CNS) in MS.

Methods: The bibliography was studied within three months and the keywords searched in PubMed and other research databases included indicatively the following terms: microbiome, gut-brain-axis, complement, multiple sclerosis.

Results: Studies carried out in transgenic mice have shown that intestinal dysbiosis induces, through an increase in IgM, the activation of complement factor C3, which has been associated with the onset of autoimmunity. C3 factor induces the activation of monocytes and macrophages that contribute to the pathophysiology of MS and reduces the expression of Treg-associated genes responsible for immune response regulation. Moreover, both plasma and CSF studies of MS patients and healthy controls have shown increased levels of the complement lectin pathway components, wherein microbiome dysregulation may be involved. Furthermore, there is an indication that Akkermansia muciniphila, which appears elevated in the microbiome in a plethora of MS patients is associated with upregulation of neuroinflammatory pathways.

Conclusion: The gut microbiome is involved in the growth and function of both the intestinal barrier and BBB. The above data advocate that intestinal dysbiosis may cause intestinal barrier dysruption and complement activation. Thus, it affects the inflammatory CNS microenvironment and may act as a risk factor for autoimmunity.

EP027 **A REVIEW OF THE ETIOLOGY, DIAGNOSES AND THERAPY FOR CHRONIC ANAL PAIN**

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Abstract: Persistent anal pain can be challenging to identify and manage, especially when there is no clear anorectal cause on clinical examination. Three main diagnostic subgroups for chronic anal pain are identified in this review: local etiology, functional anorectal pain, and neuropathic pain syndromes. These classifications cover proctalgia fugax, levator ani syndrome, pudendal neuralgia and coccygodynia. Each condition's primary symptoms, indicators, diagnosis, and therapy are reviewed.

Methods: The aim of this review was to gather information from data bases such as PubMed and UpToDate and to cross reference them with the knowledge of physicians in order to conclude to the solutions of chronic anal pain. The review was completed on 25/02/2023.

Results: Although a difficult diagnostic workup is frequently used to rule out organic pathology, the diagnosis relies on a thorough clinical history and DRE (digital rectal exam). Chronic proctalgia management may be a challenging process for both patients and doctors because no single treatment has been shown to consistently be effective in all cases. The mainstay of treatment focuses on symptom relief rather than cure and consists of conservative therapies, lifestyle advice and local medication. Other promising techniques that aim to the reduction of pelvic floor hypertonia are botulinum toxin injection, electrogalvanic stimulation and biofeedback. Finally, next-line theories are sacral-nerve stimulation or surgery, depending on the cause of proctalgia.

Conclusion: Prior to diagnosing chronic anal pain, it is important to exclude certain diseases. Referral to a pain management professional is advised for people who continue to experience unrelieved pain despite receiving treatment. Yet, in order to minimize the confusion brought on by simultaneous or contradictory management efforts, it is vital to first establish the diagnosis and exhaust all available treatments.

E - POSTERS IN GREEK

EP028 OXIDIZED-MULTIWALLED CARBON NANOTUBES AS NON-TOXIC NANOCARRIERS FOR HYDROXYTYROSOL DELIVERY IN NIH/3T3 CELLS

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Background: Multiwalled carbon nanotubes (MWCNTs) are cylindrical molecules consisting of several graphene sheets. Their size ranges from 2-100 nm.[1] These molecules seem to be biocompatible and non-toxic and can be ideal drug carriers. MWCNTs can be used as efficient drug delivery vehicles because they can adsorb and conjugate a range of pharmaceutical drugs, biomolecules, proteins and enzymes.[2] Hydroxytyrosol (HT) is a phenol and is a natural antioxidant molecule found in extra virgin olive oil and olive leaves. It has a wide range of potential pharmacological activities, including antioxidant, anti-inflammatory, neuroprotective, antimicrobial, cardioprotective and anti-cancer effects.[3,4] The aim of this study was to examine the cytotoxic activity of oxidised MWCNTs (oxMWCNTs) and oxMWCNTs conjugated with HT (oxMWCNTs_HT) in albino Swiss mouse embryo fibroblasts (NIH/3T3 cells).

Methods: The cytotoxic activity of oxMWCNTs and oxMWCNTs_HT against NIH/3T3 cells was assessed employing cell viability (MTT) and clonogenic formation assays. Reactive oxygen species (ROS) formation and cell cycle arrest were quantified with flow cytometry.

Results: oxMWCNTs were non-toxic and did not affect NIH/3T3 cell growth in any of the above experimental procedures (up to 100 μg/mL and 50 μg/mL in the MTT and the clonogenic assay, respectively). When oxMWCNTs acted as carriers for HT delivery (oxMWCNTS_HT) short-term cell viability was high and no changes in cells' cycle arrest were evident. However, the long-term viability of the cells was slightly reduced (almost 25% decrease after exposure to 20 μg/mL). Flow cytometry revealed that oxMWCNTS_HT scavenge intracellular ROS (22% reduction at 20 μg/mL).

Conclusion: The reduction of intracellular ROS indicates that oxMWCNTs acted as an efficient platform for the delivery of HT. Nonetheless, complementary data regarding the HT release rates from oxMWCNTs, endocytosis mechanisms, and signal transduction pathway activation are required to completely assess the safety and efficiency of these promising nanocarriers.

EP029 **DIGITAL NERVE LOOPS (DNL)**

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Introduction: Digital nerve loops (DNLs) are an anatomical variant in the palmar surface of the hand, detected in a large percentage of the general population. The DNL is formed by one of the palmar digital nerves and is crossed by one of the palmar digital arteries. The DNLs are categorized either by topography, depending on their location and orientation, or by morphology, depending on how they are divided and the position at which they are perforated by the palmar digital artery. The present report investigates the existence and morphology of this variant and examines its clinical significance.

Material and methods: Dissection of the upper limb of a a 76-year-old formalin-embalmed male cadaver of a body donor was performed. The dissection was performed at the Anatomy and Surgical Anatomy Department, School of Medicine, Aristotle University of Thessaloniki. The cause of death is not related to the study.

Results: A variant DNL of the second palmar digital nerve being perforated by the common palmar digital artery of the superficial palmar arch has been identified. This DNL is located on the middle finger with ulnar orientation (classification according to Lee 2010).

Conclusions: The identification of this type of DNL is of great value to hand surgeons to avoid any complications during soft tissue flaps' dissection in cases of reconstruction. Their importance is particular in surgeries of the palmar surface of the hand, including excision of fascia and ligaments in Dupuytren's disease, where there is a high risk of complications. In addition, the existence of data literature regarding the presence of DNL and their perforation by palmar digital arteries may justify symptoms like numbness and/or pain, due to neurovascular compression.

E - POSTERS IN GREEK

EP030 **AORTIC SEPARATION TYPE A**

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EP031 **INVESTIGATION & TREATMENT OF PULSATILE TINNITUS**

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Introduction: Pulsatile tinnitus (PT) most commonly originates from vascular structures within the cranial cavity, head, neck and thoracic region and is transmitted to the cochlea through bony or vascular structures.

Methods/Data: Search for articles and studies from the PubMed, PMC and Cochrane databases using terms- keywords relevant to the title.

Results: PT originate from either increased blood volume or narrowing of the vascular lumen. Depending on the vessel of origin they are classified as arterial or venous. In rare cases they may arise from other non-arterial structures and are classified as non-vascular tinnitus. They can be subjective or objective depending on whether they are heard only by the patient himself and/or by the physician and not only by the patient. The diagnosis of PT includes:

Taking a detailed history: patients describe the symptom as hearing 'their own heart' or 'heart-beat'.

Clinical examination: 1) Otoscopic examination to find pathology in the middle ear. 2) Oropharyngoscopy: visible myoclonic contractions of the soft palate in palatal myoclonus. 3) Auscultation of the external auditory canal, posterior auricular region, cervical region and chest with a stethoscope to find objective PT and compare their rhythm with the arterial pulse. 4) Gentle finger pressure on the corresponding internal jugular vein: in venous etiology, PT are reduced or completely eliminated with this manipulation, while in arterial etiology they do not change. 5) Neurological examination in case of suspected cerebral pseudotumor syndrome. 6) Acoustic control. 7) Blood test to rule out hyperthyroidism and anemia. 8) Carotid and heart triplex. 9) CT-Angiography to detect various diseases. Patients with venous type PT undergo MRI or magnetic venography.

The treatment of PT depends on the cause that causes them and is individualized for each patient.

Summary: PT are a rare form of tinnitus but their correct diagnosis is vital because the majority of patients who experience them have a treatable underlying cause.

E - POSTERS IN GREEK

EP032 TREATMENT AND PREVENTION OF COVID-19 DISEASE IN HIGH-RISK PATIENTS WITH HEMATOLOGICAL DISEASES

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Introduaction/Background: Patients with hematologic malignancies (HM) are among the individuals with highest risk of COVIS-19 complication. Most of them showed a low immune response after vaccination against SARAS-CoV-2. In addition, the treatment with monoclonal antibodies leads to immunosuppression. The patients who have undergone a transplant of hematopoietic cells or CAR T-cells are most at risk of severe disease. The aim is to present the experience from the daily practice (Real World Data- RWD) of dealing with hematological patients during the pandemic.

Methods: We accessed 57 patients with HM, who either suffered from COVID-19 (40/57) or received prophylaxis with the combination of monoclonal antibodies tixagevimab/cilgavimab (Evusheld®) (17/57) between 11/2020-12/2022. The patients had a median age of 68.5 years, 15 (45%) men. 25(76%) had HM [DLBCL 8(24%), Multiple Myeloma 6(18%), CLL6(18%)], one patient had received CAR T-cells, Non-Malignant HM 8(24%). All patients were treated according to appropriate guidelines of each period. Since 8/2022 the Evusheld® was available for prophylaxis against COVID-19, 17(29.8%) patients were eligible to receive Evusheld® intramuscular. They had a median age of 67,3 years (range: 58083 years), 11(64,7%) men.

Results: The 5 (15%) patients who fell ill at the beginning of the pandemic ended up after hospitalization. All were receiving advanced-line immunochemotherapy for their refractory or relapsed disease, had comorbidities, and were elderly. With the start of vaccination, everyone was vaccinated. When they became ill, 13(40%) received remdesivir(Veklury®) i.v. and although some became seriously ill, they eventually recovered. 15(45%) were given nirmatrelvir/ritonavir(Paxlovid®) p.o, were not hospitalized and all recovered. Of the 17 patients receiving Evusheld® prophylaxis, none became ill in the six-month follow-up period after administration.

Discussion: It is important to present RWDs from the use of specialized treatments against COVID-19, in the special Patient Groups. Our results agree with those of the international literature. Before the availability of vaccines and antiviral treatments, mortality was high in hematological patients. Vaccines reduced the rate. However, it remained higher than in the general population. Administration of remdesivir(Veklury®) helped reduce in-hospital mortality, while Evusheld® effectively prevented disease. Today, nirmatrelvir/ritonavir (Paxlovid®) is used as first-line therapy. Direct administration to hematological patients reduces hospitalization and mortality rates.

EP033 **ROBOTIC SURGERY IN PANCREATIC SURGERY**

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E - POSTERS IN GREEK

EP034 PATIENT WITH MALIGNANT PLEURAL EFFUSIAN DIAGNOSED WITH ADENOCARCINOMA OF THE LUNG - PATIENT WITH MALIGNANT PLEURAL EFFUSIAN DIAGNOSED WITH ADENOCARCINOMA OF THE LUNG

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Introduction: Malignant pleural effusion (MPE) is defined as an effusion which contains malignant cells evidenced by cytological examination or biopsy of the pleural membrane. The presence of MPE is a sign of an advanced cancerous stage. The frequency of MPE has increased in recent years and a significant percentage of patients with different kinds of malignancies will at some point develop MPE.

Case description: We present a case of a 72-year-old male smoker around <5packs/years who admitted to the ER of the university clinic at 20/05/2021 with referring backache from 3 days past and normal vital signs. His medical history includes hypertension, benign hyperplasia of prostate and albuminuria from 10 years past. X-ray was performed which showed right pleural effusion and coin like shadowing on the right lung. The following chest CT showed a proliferation of the lower lobe of the right lung (LLRL) and the already known MPE. The cytological examination of the pleural fluid was positive for malignancy and especially adenocarcinoma and the same result came out from the percutaneous biopsy of the mass. Because of the rapid production of the fluid, after the drainage the patient had pleurodesis. Therapy consisted of chemotherapy (carboplatin, pemetrexed and an angiogenetic factor) with great success against the tumor. At the PET/CT scan there was found only one hypermetabolic proliferation at LLRL and followed total radiotherapy and immunotherapy because the mass was augmented in size before the radiotherapy.

Conclusion: This case illustrates the importance of accurate treatment of MPE and especially the individualized patient with advanced lung cancer.

EP035 **SPECIFICITY AND SENSITIVITY OF IMAGING DIAGNOSTICS IN BREAST CANCER**

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Purpose: The objective of present study is the comparison between the diagnostic imaging tools for breast cancer and the evaluation for which has the greatest specificity and specialty. The methods compared are mammogram (MMG), ultrasound (US) and magnetic resonance imaging (MRI).

Methods: The study is a systematic review based on bibliography from Pubmed, Google Scholar and Cohrane. The searching terms used were "breast MRI", "mammogram", "ultrasound" and "breast cancer".

Results: Following a thorough review, MRI is suggested as the most specific and specialized technique when used in stand alone. In a recent trial Schelfout et. al., found that MRI detected 96% of multifocal disease, while MMG and US could only detected 28% and 26% respectively. Even though MMG is the most common method for the clinical approach, when used individually does not provide accurate results due to disrupting parameters, such as breast density. According to ACR, MMG has greater sensitivity in patients >50 years old, low breast density and tumor size >1 cm. However, there was no important difference in sensitivity among age groups and density groups for the US. MRI showed sensitivity and specialty around 98% no matter the age, the subtype or density.

Conclusion: As the research shows, MRI stands to be the most efficient method as it can detect especially larger tumors, and all subtypes. The main disadvantage though is the high cost of the technique. The ultrasound can be used supplementarily to the MMG to determine the exact position of the lesion and the MMG has limited diagnostic sensitivity with small tumors. The combination of US and MMG provides great accuracy and should be recommended first.

E - POSTERS IN GREEK

EP036 A VARIANT FORMATION OF THE MEDIAN NERVE: A CADAVERIC FINDING

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Introduction-Objectives: The identification of anatomical variants of the origin, course and interconnections (communications) of the brachial plexus' branches is not uncommon. The median nerve (MN), one of the terminal branches of the brachial plexus, has two roots, the lateral and the medial. The lateral root originates from the lateral cord (C_6-C_7) together with the musculocutaneous nerve and the medial one from the medial cord (C_8-T_1) of the brachial plexus together with the ulnar nerve. The two roots fuse under an acute angle and a descending course.

The current oral presentation is the description of a unilateral variation in the formation of the MN.

Methods-Data: A dissection was bilaterally performed at the axilla and the upper limb in a formalin-embalmed male cadaver of a body donor, at the Anatomy and Surgical Anatomy Department, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki. The 75-year-old body donor was of Greek origin.

Results: At the left side, a double lateral root of the MN was identified. The accessory lateral root originated from the lateral cord, 2 cm proximal to the typical lateral root origin. The accessory lateral root had a medial descending oblique course and terminated 1 cm anterior to the origin of the medial root. Alternatively, the variant could be characterized as an interconnection of the lateral and medial cord of the brachial plexus.

Discussion-Conclusion: The knowledge of the possible variants of the MN has clinical significance in regional anesthesia and in intraoperative manipulations.

EP037 **ATYPICAL VEINS BETWEEN THE LATERAL AND MEDIAL ROOT OF THE MEDIAN NERVE: CLINICAL SIGNIFICANCE OF THE CADAVERIC FINDINGS**

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Introduction-Objectives: The axillary vein (AV), a deep vein of the upper limb, is formed by the conjunction of the two brachial veins and receives blood from the cephalic, the lateral thoracic and the thoracodorsal vein. The AV extends from the lower edge of the pectoralis major muscle's tendon, infraclavicularly and courses anteromedially to the axillary artery. The latter lies between the lateral and medial root of the median nerve (MN).

The purpose of the presented cases is to describe the atypical course of the veins between the MN's roots.

Methods-Data: Bilateral dissection in the axilla and upper limb of two formalin-embalmed male cadavers, 75 years of age and of Greek origin, was performed. The body donation was performed at the Anatomy & Surgical Anatomy Department, Faculty of Health Sciences, School of Medicine, Aristotle University of Thessaloniki.

Results: In the 1st dissected cadaver, an atypical course of the AV, at the same level (and not anterior as usual) with the MN formation was identified. The AV was located above the fusion of the lateral and medial root of the MN and followed an ascending medial course until its drainage to the subclavian vein. In the 2nd dissected cadaver, the basilic vein was found to drain into the brachial vein between the MN medial and lateral root.

Discussion-Conclusion: The above-described anatomical variants are of pivotal clinical importance due to the existing risk of compression on the underlying branches of the brachial plexus -and especially the MN- in the presence of venous disorders, with all the consequent implications for hand mobility and sensation.

E - POSTERS IN GREEK

EP038 ADVANCES IN THE TREATMENT OF AGE-RELATED MACULAR DEGENERATION

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Introduction-Objectives: Age-related macular degeneration (AMD), the main cause of low vision in individuals older than 50 years in the Western world, constitutes a serious disease leading to gradual loss of the central vision. There are two types of AMD: dry and wet, with the latter being associated with a worse prognosis. The present study aims to highlight the latest advances in the treatment of AMD.

Methods-Data: Literature review was conducted in the online database PubMed with the use of 'key-words', such as 'age-related macular degeneration', 'treatment', 'therapy'.

Results: As far as wet AMD is concerned, in an attempt to overcome the need for regular intravitreal injection of anti-VEGF agents, that hinders the adequate compliance to the treatment, new methods for intraocular administration of anti-VEGF agents have been suggested, such as the Port Delivery System, an implantable refillable (1-2 times per year) device that slowly releases the drug. Longer-lasting anti-VEGF injections such as Beovu (Brolucizumab) have also been developed. Meanwhile, much promising appears to be the design of the drug Faricimab that targets both VEGF and the protein angiopoietin-2, thereby treating multiple causes of wet AMD simultaneously.

For the treatment of dry AMD, the following have been proposed: a formulation of antioxidant vitamins (AREDS2 formula)-that reduces the risk of vision loss in people with intermediate-stage dry AMD, the intraocular injection of drugs that target proteins of the complement cascade (Pegcetacoplan (APL-2), Zimura) as well as the replacement of dead retinal cells with stem cells.

Lastly, gene therapy seems promising for the treatment of both types of AMD with five drugs being currently under investigation.

Discussion-Conclusion: To date, the effective management of both types of AMD remains challenging. It is expected that new innovative drugs are to be approved in the near future.

EP039 **THE EFFECTIVENESS OF THE HPV VACCINE AS PART OF PRIMARY PREVENTION FOR CERVICAL AND GENITAL CANCER**

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E - POSTERS IN GREEK

EP040 INGUINAL HERNIA WITH FALLOPIAN TUBE CONTENT; A SYSTEMATIC REVIEW

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Introduction: Gynecological structures such as the fallopian tubes, ovaries and uterus are rarely encountered inside a hernial sac, while the prevalence of groin hernias containing parts of female genitalia remains unknown. The purpose of this systematic literature review was to synthesize all available data on inguinal hernias with fallopian tube content

Material and Methods: A systematic search approach was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement in the MEDLINE, SCOPUS and CINAHL databases from 1/1/2020 to 1/1/2023 Reports and studies involving patients diagnosed with inguinal hernia with fallopian tube content (pre-, intra-, or postoperatively) were considered eligible for inclusion in this review.

Results: 27 studies were retrieved, while only 17 (15 case reports and 2 series study) comprising twenty patients (mean age 26,4 years) were evaluated. The basic findings involved the following: in eleven cases (55%) a left sided hernia was noted whereas 9 patients (45%) had a right-sided hernia. Eighteen patients (90%) underwent preoperative imaging with ultrasonography, computerized tomography, magnetic resonance imaging or combination of them. In 15 patients (75%) the content was repositioned and 5 had a salpingo-oophorectomy. Infertility was presented only in two cases and seven cases were children under four years old. Six patients underwent hernia repair with mesh placement and no deaths or serious post-surgical complications were recorded.

Discussion: Inguinal hernias with fallopian tube content should be considered among the differential diagnoses of a groin mass or swelling. Especially in women of reproductive age, repair of the hernia with the intent to preserve fertility is of critical importance. Actual mechanisms that are responsible for the insertion of the fallopian tube inside the inguinal hernia should be further investigating to avoid strangulation.

EP041 **TEENAGE PREGNANCY**

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Introduction-Objectives: Bibliography defines adolescent pregnancy as the pregnancy of a woman younger than 19 years old. The objective of this project is informing about the dangers that adolescent pregnancy reserves and its social repercussions.

Methods-Data: Within the chosen subject of our semester named: "Child and Adolescent Gynaecology and Family Planning", we engaged with the theme of adolescent pregnancy so as to search for the reasons that such a pregnancy is characterised as a" high-risk" one, according to the bibliography.

Results: A notable result of this research is the fact that adolescent pregnancy is a common phenomenon, especially in countries of medium and low financial and educational level, according to World Health Organisation. Even the picture coming from the Greek hospitals can"shake" us.

The most worrying points of this reality are that pregnancies occur during adolescence are unplanned, adolescents may not have access to health services and most of the teen girls will proceed to abortion.

Discussion: In the present literature review that we accomplished, the authors agreed that an adolescent pregnancy is one of "high-risk" and the main reasons for this are the immaturity of the genital system, the bad eating habits, the use of smoke, alcohol and substances and, on top of these, the emotional immaturity.

Moreover, an adolescent pregnancy can have important consequences on the health condition of both the mother and the embryo and these are the increased danger of preeclampsia, anaemia and even premature placental abruption. Furthermore, teenage mothers have increased possibility of giving birth prematurely to babies of low weight.

The social aspect of the theme is remarkable since teenage girls are likely to abandon their family home because of fear, to find shelter in a hasty marriage. Depression and abandonment of school are also remarkable.

The right orientation of children from an early age which prepares them for a safe, productive and full life is very important. A lot of emphasis must be put on the sexual edification at schools. Pregnant teenagers must be informed about the safe care of their health during pregnancy, birth, the period following birth and abortion.

E - POSTERS IN GREEK

EP042 PRESENTATION AND COMMENTARY OF THE COHORT STUDY BY RÖNNEGÅRD ET AL. ON THE ASSOCIATION BETWEEN CHRONIC PAIN AND CARDIOVASCULAR DISEASE RISK

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Aim: It is not fully understood how different types of chronic pain interact with cardiovascular disease (CVD). Our aim was to present and comment on the recent study by Rönnegård et al. on the relationship between different levels of chronic or non-chronic pain and cardiovascular disease risk.

Methods and Results: According to the severity and duration of the pain, participants in the UK Biobank were classified into three groups. Control participants reported no pain. The relationship between pain and the occurrence of myocardial infarction, heart failure, stroke, cardiovascular mortality, and composite CVD was examined using multivariable Cox regression (defined as any of the before-mentioned cardiovascular events). 475 171 participants reported 6336 chronic widespread pain, 191 716 chronic localized pain, 189 289 no pain, 87 830 short-term discomfort, and 191 716 no pain (CWP). After adjusting for age, sex, known cardiovascular risk factors, physical activity, stress, depression, cancer, chronic inflammatory/infectious disease, pain/anti-inflammatory medications, socioeconomic status, and chronic localized pain, participants with CWP had a significantly higher risk for complex cardiovascular disease [hazard ratio (HR) 1.14, confidence interval (CI) 1.08-1.21, P 0.001; and HR 1.48, CI 1.28-1.73, P 0.001]. The population attributable risk ratio for diabetes and chronic pain as risk factors for composite CVD was 8.6 and 7.3%, respectively.

Conclusion: Independent of known cardiovascular risk factors, socioeconomic factors, comorbidities, and medicines, chronic pain is linked to an increased risk of myocardial infarction, stroke, heart failure, and cardiovascular death. The cohort study we present strengthens and adds to our understanding of chronic pain as an underestimated cardiovascular risk factor with significant public health implications.

EP043 USE OF SUNSCREEN PRODUCTS AND THE RISK OF DEVELOPING

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Introduction: Melanoma - one of the most aggressive malignancies - is etiologically associated with solar radiation. Sunscreens are among the most popular measures used to prevent melanoma and non-melanoma skin cancers. Despite the ever-increasing use of sun protection (1), the incidence of melanoma has been steadily increasing in the recent decades. (2-4) The purpose of this work is to search the literature for available evidence on the efficacy of sunscreens to reduce melanoma risk.

Materials and Methods: Publications relevant to the subject were searched in Pubmed and SCOPUS with the use of appropriate keywords, and after analyzing the full papers, we included studies that provided data related to our primary outcome, without the use of automation tools.

Results: A review of the current literature revealed data suggesting an uncertain efficacy of sunscreens to reduce melanoma risk. (4,5) The impaired efficacy is attributed to the intentionally exposed person's false belief that sunscreens provide complete and long-lasting protection against radiation. (4,5) Nevertheless, the importance of sun protection is undisputable when sunscreens are correctly applied, frequently renewed (6) and combined with avoiding direct exposure to the sun. (7)

Conclusion: Despite the clear protection offered by sunscreen products against solar radiation, it seems that their incorrect use leads to a reduced efficacy. However, familiarizing the general population with the correct use of sunscreen products can contribute to the prevention of melanoma.

E - POSTERS IN GREEK

EP044 JJ STENTS RELATED SYMPTOMS: ETIOLOGY AND MANAGEMENT

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Introduction: Double-J stent insertion is a routine procedure in endourology for many decades, and it is normally performed in order to ensure unobstructed drainage of the renal collecting system. However, it is known that these stents are related to several bothersome symptoms that have a severe impact on patients' quality of life. The aim of this study is to investigate the pathogenesis of these symptoms and to explore possible prevention and treatment options.

Materials-Methods: A systematic review of the English language literature was performed using the MEDLINE (via PubMed) database combining the keywords "ureteral stent related symptoms", "ureteral stent discomfort", "double J stent related symptoms". The majority of the selected articles were published over the last five years (2018-2023).

Results: Besides their known benefits, JJ stents are responsible for a range of bothersome symptoms in the majority of cases (70-80%). The most common of them are lower urinary tract symptoms such as urinary frequency, urgency, urge incontinence and dysuria. However, other symptoms such as hematuria, pain and dyspareunia have also been described. Although the exact pathophysiology is not fully understood, most of these symptoms are attributed to lower ureter and bladder spasm due to bladder irritation. Main risk factors involve patient's physical activity and characteristics of the stent (length, diameter, material). Treatment is mainly based on medication and includes a1-blockers, antimuscarinics and b3-agonists, either as monotherapy or in combination. Prevention strategy depends on applying principles of good clinical practice that stents should be used under evidence-based indications and on reducing exposure to risk factors.

Conclusion: Despite significant advances in research regarding JJ stent composition and design, the ideal stent has not been developed as yet. Prevention and management of stent-related symptoms still remain a demanding challenge for the modern urologist.

EP045 CARCINOGENIC BEAUTY PRODUCTS

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Introduction: In the sector of hygiene and beauty customers almost never doubt the safety of this market, as health has been determined the primary purpose of development. However, the laws governing cosmetics are so limited that known carcinogens, are legally allowed in personal care products.

Methods: On the 27th of September 2022, the court demanded answers from the international multi-billion company Johnson-Johnson, which tried to block the lawsuits of 40000 cancer patients throughout the last decade. The lawsuits were filed against the enterprise after cohort studies proved a strong link between their products and ovarian cancer. Biomonitoring studies have shown the presence of BPs in various human biological samples, raising health concerns. They are approved by the FDA as active ingredients, with a dose allowance of 6% concentration. Moreover numerous brands such as L'Oreal, Neutrogena, and Clinique have had a bad ranking lately by their customers, due to under covered PFA use, the famous "forever chemicals". Formaldehyde-releasing preservatives (FRPs) are also widely used in personal care products with California EPA's Proposition 65 classifing formaldehyde as a human carcinogen.

Results: It is alleged that the talc-based powder is contaminated with asbestos. The obvious reasoning for this is that the mines in which talc is mined are often lined with asbestos. A number of cosmetic and beauty brands also began removing talc from their makeup products last year after a FDA study revealed the presence of asbestos in around 18 percent of products tested. Furthermore other cosmetics that are being sold solely for cancer preventing purposes, such as sunscreens, are facing huge controversy because of benzophenone use. A consumer class action lawsuit, last year alleges that dry shampoo under the company's Klorane brand contains dangerous amounts of PFA.

Discussion: To sum up, consumers are most of the time responsible for their own health, and thus awareness should be raised about some of the most harmful ingredients that came to the surface in the latest years. This is of utmost importance as activism and actions concerning the law have been determined as the primary regulatory methods of this market.

E - POSTERS IN GREEK

EP046 WHERE HAVE THE OTHER RESPIRATORY VIRUSES BESIDES SARS-COV2 GONE IN RECENT YEARS?

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Introduction-Objectives: The respiratory infections are airborne contagious diseases of varying severity, usually caused by a variety of viruses. This study presents their activity-mainly influenza-during 2019-2023 and the effect of the COVID-19 pandemic on it.

Methods-data: The data sources include the ECDC and NPHO (Hellenic National Public Health Organization) annual, monthly and weekly surveillance reports for 2018-2019, 2019-2020, 2020-2021, 2021-2022 and 2022-2023. Corresponding weeks of each year were compared, as the annual report for the current year is not yet published.

Results: During the 2019-2020 season, influenza activity in Greece and Europe started and peaked within the expected timeframe but seems to have returned to baseline levels earlier than in the past seasons. During the 2020-2021 season flu activity remained below inter-seasonal levels, without the typical seasonal distribution in Europe; in Greece there were no laboratory confirmed cases. Throughout the 2021-2022 season, Europe and Greece reported low activity that increased and peaked later than expected. Unusual activity was detected in Greece, especially in the touristic zones, during the summer 2022. During the current season until week 5/2023, influenza cases increased earlier and reached higher levels in Europe, while in Greece remained in similar levels compered to season 2018-2019 until the week 2/2023 and decreased earlier. The circulation of RSV followed a similar pattern.

Discussion: The 2019-2020 season had an early onset with an overall shorter duration and throughout the seasons of 2020-2021 and 2021-2022 influenza activity remained at a very low level. The impact of COVID-19 pandemic and the lockdowns since March 2020 were catalytic. The de-escalation of anti-COCID-19 measures and the reduced population immunity due to the lack of circulating respiratory viruses raised a high chance of changes in their activity and a possibly higher peak during the 2022-2023 season, confirmed by the current data.

EP047 **ASCITES AS A RARE COMPLICATION OF PREGNANCY**

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Introduction: Occasioned by a patient of the University General Hospital of Patras, we will discuss the way of managing ascites in pregnancy, which is due to preeclampsia. A 23-year-old primigravida woman is admitted to the UGHP due to Intrauterine Growth Restriction and, after physical examination and laboratory testing, is diagnosed with preeclampsia, which will develop into ascites within 24 hours.

Background: Ascites is an extremely rare complication of pregnancy and it is caused by preeclampsia. Preeclampsia occurs in 2-8% of pregnancies. It is a pathological condition with high fetal and maternal morbidity and mortality. This clinical case needs immediate treatment.

Material-Methods: In cases like this, the doctor in charge must perform a caesarean section, when medical treatment (administration of antihypertensive drugs, magnesium) has not contributed to the control of the condition.

Results: Since maternal and intrauterine life are threatened, often ultrasounds of the pregnant woman is required. With the appearance of edema or even anuria, as it happened in our clinical case, the doctor must suspect preeclampsia and act with an immediate caesarean section, protecting the lives of both.

Conclusion: Since this is a pathological condition of pregnancy, the rareness of ascites may be due to lack of reporting, and since it has serious effects on both mother and fetus, we will present the methods of how we were called to cope with this situation and with our announcement we would like to raise awareness for further research.

E - POSTERS IN GREEK

EP048 ADMINISTRATION OF CAPLACIZUMAB WITHOUT PLASMAPHERESIS IN A PATIENT WITH THROMBOTIC THROMBOCYTOPENIC PURPURA

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Introduction: Thrombotic thrombocytopenic purpura (TTP) is a microangiopathic hemolytic anemia characterized by severe deficiency of ADAMTS13 metalloprotease, whose role is to break down von Willebrand factor polymers. Its deficiency causes the formation of microthrombi and ultimately damages target organs. The therapeutic management includes plasmapheresis together with immunosuppressive treatment and coadministration of Caplacizumab. TTP is characterized by high mortality and morbidity without early therapeutic intervention.

Aims: Presentation of a patient with TTP who was treated with Caplacizumab without plasmapheresis upon relapse.

Methods: We reviewed the patient's medical record following her consent, and performed a literature search in the National Library of Medicine via PubMed using the terms "Thrombotic thrombocytopenic purpura", "Caplacizumab", "Plasmapheresis".

Case presentation: A 55-year-old woman was admitted to the Hematology Clinic of our hospital due to microangiopathic haemolytic anaemia and thrombocytopenia, PLASMIC score 7, and was initially suspected and subsequently diagnosed with TTP due to low ADAMTS13 activity. She underwent daily plasmapheresis, corticosteroid administration, and weekly Rituximab infusions with good response. Adverse events during plasmapheresis were severe allergic shock and angina pectoris. Two weeks after discharge she relapsed again and due to the previous complications and the patient's wish, it was decided to administer Caplacizumab without performing plasmapheresis. She received 10 mg intravenously in the morning and 10 mg subcutaneously in the afternoon on day 1 followed by 10 mg subcutaneously/day for a total of 30 days, without complications. At follow-up, she remains in excellent clinicolaboratory condition, with normal ADAMTS13 activity and no relapse.

Conclusions/Discussion: Caplacizumab with plasmapheresis and immunosuppression has been associated with faster platelet recovery, reduced recurrence or thromboembolic events, and fewer hospitalizations. In the literature, only 4 other cases have been reported to have been treated with Caplacizumab without plasmapheresis with positive outcomes. Results of clinical studies on the use of caplacizumab without plasmapheresis are awaited.

EP049 **RECORDING OF HEALTH PROFESSIONALS' PHYSICAL ACTIVITY BEFORE AND DURING THE LOCKDOWN IN THE AREA OF LARISSA**

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E - POSTERS IN GREEK

EP050 TOPOGRAPHIC AND FUNCTIONAL ANATOMY OF THE WRIST - A LITERATURE REVIEW

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Introduction - Objectives: The anatomy and biomechanics of the wrist joint are two inextricably intertwined concepts that are essential in order to thoroughly understand the joint function. The aim of this study is to obtain a comprehensive review of the topographic anatomy and basic kinesiology of the wrist joint.

Methods - Data: A literature search was carried out at PubMed for the time period 1976-2022, related to the topographic and functional anatomy of the wrist. The keywords used were: «((wrist) OR (radiocarpal joint)) AND (anatomy) AND (biomechanics) AND (kinematics)».

Results: The wrist joint is distinguished in the distal radioulnar, the radiocarpal and the midcarpal joints; the distinct ligamentous elements, muscles, nerves and vessels of the area contribute to the combined wrist joint function, that performs multiple movements, such as flexion, extension, adduction, abduction and rotation.

Discussion: The wrist is an extremely complex joint and further knowledge of the anatomical elements and their biomechanical properties is important for the understanding of its function and pathological conditions.

EP051 **IS CANNABIS AN INDEPENDENT RISK FACTOR FOR PSYCHOSIS?**

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Introduction: Many previous studies have reported that cannabis use can increase the risk of having a psychotic episode. The purpose of this study is to investigate the association between cannabis and psychosis and to determine whether there is evidence that the former is an independent risk factor for the latter.

Methods: A search was carried out in scientific databases (pubmed, scholar google), and studies about the use of cannabis and its association with the manifestation of psychotic symptoms were selected. Studies that investigated the possible neurobiological mechanisms of the connection between them were included.

Results: Systematic reviews have reported a statistically significant association between cannabis use and psychotic episodes with odds ratios as high as 2 for general use (i.e., twice as likely to develop psychosis as non-users), and approximately 3.5 for the most frequent users. Age at the start of use, positive family history, the type of cannabis used, and gene polymorphisms also emerged as risk factors. Moreover, interactions were found between the endocannabinoid system and the biological basis of psychotic symptoms.

Discussion: The studied association meets the majority of Bradford-Hill criteria for causality, such as strength of association, temporality, increase in incidence of the effect with increasing dose (dose-response), and biological plausibility. Consequently, our research tends to support that cannabis use may be an independent risk factor. However, there are still some aspects that need further investigation, among which are reverse causation (self-medication hypothesis) and confounding factors (common genetic factors).

E - POSTERS IN GREEK

EP052 EVALUATION OF THE SMOKING AND ALCOHOL CONSUMPTION HABITS AMONG MEDICAL STUDENTS OF GREECE

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Aim: Aim of the present study is to evaluate the habits of Greek medical students regarding smoking and alcohol consumption and the possible correlation with the school.

Material and Method: To carry out this research, an anonymous questionnaire in Google Form format was sent to students of various Medical Schools in the country, with greater participation from the students of NKUA and AUTH. About 500 answered questionnaires were collected. The collected data were processed using the SPSS statistical analysis program.

Results: The most important results are the following. 80% of medical students do not smoke (with a percentage of them having smoked in the past). 60% of smokers smoke daily while 50% of them started smoking before entering school. Also, 78% of students consume alcohol, mostly occasionally (3-4 times a month). Only 23% of those who started smoking in school say that their decision was positively influenced by attending medical school. Regarding smokers, it seems that their immersion in medical knowledge worries them about the long-term effects of their habit (63% of smokers).

Conclusions: The findings of the present study suggest concerning tobacco and alcohol consumption that there is no significant positive correlation with Medical schools in Greece.

EP053 **CORACOBRACHIALIS MUSCLE VARIANTS: POSSIBLE LATERALITY AND CLINICAL SIGNIFICANCE**

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The study aims: to detect the coracobrachialis muscle (CBM) variants, their relationship with musculocutaneous nerve (MCN) and associated variants with emphasis on clinical significance.

Materials and methods: Twenty-eight sides from 17 cadavers of body donors (11 cadavers bilaterally-22 paired and 6 free sides) were dissected in the axilla and arm.

Results: Five CBM variants were identified: 1. with two heads (20/28; 71.4%), 2. with one head (5/28; 17.8%), and 3. three rare variants with 3 heads (1/28; 3.6%), 5 heads (1/28; 3.6%), and 6 heads (1/28; 3.6%). In 11 out of 17 cadavers (22 sides), 6 symmetrical CBMs with two heads were identified (54.5%), 4 asymmetrical cases with a two-headed and one-headed CBM (36.4%) and a rare asymmetry with a five headed and six headed CBM (10%). In cases of a two-headed CBM, three different MCN courses were recorded (a MCN with a course between the two heads in 21/23 cases, 91%, a medial course of the MCN in relation to the CBM 1/23, 4.5% and the lateral cord of the brachial plexus between CBM heads 1/23, 4.5%).

In cases of one-headed CBM, the MCN had a medial course in relation to the muscle (5/5; 100%). The commonest variant was the MCN and median nerve interconnection.

Discussion: CBM variants were identified in 7 cadavers (41.1%), and MCN abnormal course in 6 cadavers (35.3%). No MCN absence was identified. The prevalence of the MCN medial course in relation to CBM ranges from 0% to 11.1%, contrariwise to the present study that recorded a prevalence of 21.4%. The accessory CBM heads may compress the MCN, during its course between them, leading to numbness in the elbow joint and deficits in motion at the glenohumeral joint. The MCN may be compressed between biceps brachii and brachialis muscles, although its course medial to CBM.

E - POSTERS IN GREEK

EP054 WHAT IS HEALTH SCIENCE STUDENTS' OPINION ON BLOOD DONATION?

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Introduction: Blood donation is one of the most important volunteering actions. Determining health science students' habits regarding blood donation is a subject of interest.

Materials and methods: A questionnaire consisting of 17 questions made in Google forms was used to collect data (257 completed questionnaires), which was distributed via social media to Medical Students, Students of Dentistry, Pharmacy and Nursing all around Greece. This search aims to determine and study the habits of health science students of Greece, as well as compare medical students' habits with those of other health sciences students.

Results: 95.5% of students were aware that people from all blood groups can be blood donors, whereas 83.3% knew that the bare minimum of sleep the night before blood donation is 6 hours. 73.1% of students answered correctly that blood donation can occur every 3-4 months, depending on sex. The lowest percentage was recorded in the maximum quantity of blood during a donation; 58.37% answered up to 0.5L. Highest percentages of ignorance were recorded in the least amount of weight of a donor (25.3%), in the time of abstention of blood donations after a piercing or a tattoo (15.5%) and in the maximum amount of blood that can be given during a donation (15.5%). 60% of students do not donate blood and the main reason was that, while they want to, they don't meet criteria (58.8%). 83.3% believes that there shouldn't be some type of reward for donors, while 16.4% agreed with rewards, since they would attract more donors.

Conclusion: Our data suggest that students' knowledge on blood donation is adequate since the majority of them are already blood donors or thinking to be. No significant difference was detected between medical students and students of other health sciences. Appropriate education and information may be valuable to increase donors.

EP055 **DEPRESCRIBING AS A CRUCIAL PRESCRIBING TOOL**

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Introduction: Polypharmacy constitutes a great challenge for the medical doctor, since health-care systems are oriented towards the initiation of prescribing. At the same time, guidelines provide recommendations only for the initiation of medication, without including recommendations for a possible de-escalation or discontinuation. The process where a drug is discontinued or adjusted to the minimum effective dose, known as deprescribing, is a fundamental factor for proper prescribing.

Materials & Methods: A review of the international literature on PubMed database was performed, in order to investigate the current guidelines and the existing instructions for the de-escalation of prescribing.

Results: The individualized de-escalation of administered medication focuses on five main axes: the identification of the potentially "unnecessary" drugs, the dose adjustment and the progressive tapering of a drug, the long-term follow up for possible symptoms due to the discontinuation of medication and the frequent assessment for a possible restart if needed.

Conclusion: Polypharmacy can outweigh the benefits that each drug offers separately, because of the increased risk of interactions and the possible cumulative harms. De-prescribing needs to be established in modern clinical practice, as patients end up receiving multiple medications prescribed by doctors of different specialties, often, without a clear medical indication. In this process, the contribution of the general/family doctor is considered crucial, due to the immediacy of his relationship with the patient and the trust rebuilt between them over time.

E - POSTERS IN GREEK

EP056 THE ROLE OF VIRTUAL AND AUGMENTED REALITY IN MEDICAL EDUCATION AND CLINICAL PRACTICE

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Introduction-Objectives: Virtual and augmented reality (AR/VR) are increasingly gaining ground in Healthcare. This is due to their multiple applications in both clinical practice and training of the residents. With the continuous evolution of these technologies and their integration into the Health System, new horizons are opening up for the improvement of many specialties including Orthopaedic Surgery.

Methods-Data: In this literature review, we searched publications related to the contribution of virtual reality (VR) and augmented reality (AR) in orthopaedic surgery in PubMed and Google-Scholar databases. Additionally, we checked the sources of the selected articles to find relevant information on the topic.

Results: Virtual reality simulators can vary from simple smartphone applications to intraoperative guidance systems. Although arthroscopy simulators have been widely used in the last years, the role of this technology has a lot more to offer in education. It can be used for better preoperative planning and construction of arthroplasty stimulators as well as trauma management stimulators with automatic evaluation of trainees. On the other hand, the use of augmented reality in orthopaedics has been shown to improve surgeon's accuracy and reduce intraoperative errors. At the same time, the contribution of AR significantly reduces the duration of the surgery and thus, the radiation exposure in surgeries performed under fluoroscopy. Lastly, AR has multiple applications in the training of residents, providing the necessary tools for an excellent professional education.

Discussion: In conclusion, VR/AR should be included in the basic educational program of residents. In this way they can improve their performance in the operating room and as surgeons, to be familiar with these technologies and properly use them for the best benefit of their patients.

EP057 **OBTURATOR NERVE VARIATIONS**

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Aim: Knowledge of the anatomy and variations of nerves and vessels is important for the patients' treatment. The aim of present study is to present the obturator nerve variations and the possible association with common pathologies.

Materials and Methods: A systematic review in PubMed basis was performed. We used the terms "Obturator nerve AND variations" which provided 53 articles. Moreover after applying the inclusion criteria (that included english language, full paper and anatomy studies) only 8/53 articled full filled them and selected for the review.

Results: In total 10 variations have been described furthermore. These variations referred to the point of the obturator nerve bifurcation, the number of the muscular branches which arose either from the anterior or posterior branch, the number of articular branches and their origination and the point where the common obturator nerve is consisted. Last variation referred to the length and width of the obturator nerve in human fetuses.

Conclusion: The obturator nerve is providing a numerous variation which are quite important for especially in an operative treatment in the inguinal region or the inner tight, the knowledge of the obturator nerve variations has a significant meaning for the best patient treatment.

E - POSTERS IN GREEK

EP058 ACCESSORY PHRENIC NERVE: A BILATERAL PRESENCE AND ASYMMETRY AT THE LEVEL OF ITS INTERCONNECTION WITH THE PHRENIC NERVE- CADAVERIC FINDINGS

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Background: The accessory phrenic nerve (APN) is an inconstant nerve that originates from the ansa cervicalis (45%) or the subclavian nerve (43%). The APN typically courses lateral to the phenic nerve (PN), with which is interconnected usually anterior to the subclavian vein (SCV) (45.5%) and rarely posterior to it (22.2%). The right APN is more commonly identified (75.8%) compared to the left APN (24.2%).

The current report: highlights the bilateral presence of the APN and the asymmetry at the level of the interconnection of the APN with the PN.

Material and method: In a 90-year-old cadaveric donor body, the APN and PN were dissected, and their origin and junction were identified.

Results: Variations were identified at the level of junction of the APN with the PN. The right APN was coursing anterior to the SCV and joined the PN, at the level of the brachiocephalic artery origin. The left APN was coursing anterior to the SCV and joined the PN at the level of the heart.

Discussion - Conclusions: Clinicians should consider the possible occurrence of the APN and its possible sites of origin. This knowledge is of clinical importance, as it could explain the various symptoms after injury during neck (scalenectomy) and thorax surgery or during regional anesthesia. The detailed knowledge of the possible APN variants could reduce the risk of iatrogenic injury. The possible presence of the APN should be considered during phrenicotomy, while treating diaphragmatic hernia and chest wall tumors, when performing coronary artery bypass grafting of the internal thoracic artery and in supraclavicular nerve blocks. Extensive application of the subclavian venipuncture is associated with a risk of APN direct injury because of its location.

EP059 TEMPORAL BONE FRACTURES

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Introduction: Fractures of the temporal bone or lateral base fractures based on their pathogenesis are distinguished into: direct when they are caused directly by the application of an external force concentrated on a small surface, such as gunshots, and indirect when they are due to blunt external forces. Depending on the time of the fracture line are distinguished into: longitudinal, transverse and mixed fractures. They differ from each other by the mechanism of their cause, by the clinical picture and by the imaging findings.

Methods/Data: Search articles and studies from the PubMed, PMC and Cochrane databases for articles with terms- keywords relevant to the title.

Results: Longitudinal fractures are the result of skull injuries in the temporal and parietal region. The fracture line is parallel to the long axis of the petrous bone. The structures of the middle and outer ear and less often the labyrinth are affected by this. The clinical picture is characterized by: conductive or mixed hearing loss, ear bleeding, paralysis of the facial nerve in 20% of cases. Transverse fractures are rarer, they are caused when violence is applied from the side of the forehead or the occipital region. Usually these fractures are affected the structures of the labyrinth or internal auditory canal. The clinical picture of transverse fractures is characterized by sensorineural hearing loss, balance disorders, automatic nystagmus towards the healthy side, hematotympanic paralysis of the facial nerve in a higher percentage than in longitudinal fractures (50%). The diagnosis of temporal bone fractures is based on history, clinical picture, otoscopy and imaging. The most serious complication of these fractures is meningitis, either early or late due to infection. For this reason, administration of high doses of antibiotics is recommended intravenous.

Summary: Fractures of the temporal bone are frequent due to the increase in traffic accidents and cause serious damage to the organ of hearing and balance. Their early diagnosis and treatment helps to avoid the serious complications they may present.

E - POSTERS IN GREEK

EP060 THE FIRST OF THE FIRST: GLANCES INTO THE HISTORY OF MILITARY MEDICAL SCHOOL

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Purpose: The purpose of this paper is to present the first admitted students to the military Medical School based in Thessaloniki, (M.M.S., today's Military School of Officer Corps or M.S.O.C.) in the academic year 1946-1947 after the transfer of the school from Athens. At the same time, difficulties and upheavals that a historical research shows, will be demonstrated.

Material / Methods: The main primary source is the archive of the Department of Medicine of the Aristotle University of Thessaloniki, from which we used, among other things, the grades, the student register book and the individual files of the students, from which, information was taken on their demographics. An aid to the work were the books΄΄ History of the Military medicine in Greece΄΄ and΄΄ The history of the Military Medical School of Thessaloniki (1947-1970): the emblematic period of the Greek Military Medicine΄΄ of the Health Scientific Association of the Armed Forces. The process of the data in a depth of 6 months, began with the search for the numbers of individual files in the register book, which was followed by their study in combination with verbal informations dy General Chief Medical Officer mr. Vourvoulakis Georgios.

Results: The number of the first students amounts to 124, entered as four different series: 40 sophomores (32 selected in August 1947 and 8 in January 1948), 68 freshmen (in November 1947), 7 third year students and 1 fourth year student (in January 1948) and 8 fifth year students (in April 1948) . They were students who had completed their first academic years of studies as citizens at the Medical School of the Kapodistrian or Aristotelian University. The main results are the high grade of degree attainment, the completion of studies for most in 6 years and the low social economic classes from which students from all over Greece came.

Conclusions: The conduct of this historical research has become quite difficult due to the complexity of the available primary material in term of finding and identifying the first students. It is clear that in most cases the Military Medical School was the only way to avoid paying tuition fees to study medicine for people from weaker social layers.


SCIENTIFIC SOCIETY OF HELLENIC MEDICAL STUDENTS
1993