

ORIGINAL ARTICLE

- Abstracts of the International Medical Students' Congress Sarajevo (SaMED) 2021
- Abstracts of the UNICAMP Academic Medical Congress - Online Edition (e-CoMAU), 2020
- Abstracts of the Connect Medical Students' Congress (Connect MSC) 2021



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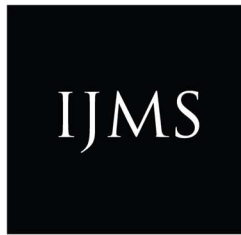
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Abstracts of the International Medical Students' Congress Sarajevo (SaMED) 2021

01. THE ASSESSMENT OF HYPOXIC ISCHEMIC BRAIN INJURY IN NEWBORNS WITH HISTORY OF PERINATAL ASPHYXIA USING MAGNETIC RESONANCE IMAGING

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BACKGROUND: HIE is a significant brain injury due to perinatal asphyxia. The diagnosis of HIE is based on neurological and radiological examinations. MRI can be utilized to evaluate extent of injury, while MRS is widely used to assess the level of metabolites in the brain. **AIM:** To select patients diagnosed with perinatal asphyxia and evaluate the frequency of MRI use, results, and associations with clinical symptoms and the neurologist's conclusion regarding HIE. **METHODS:** This retrospective study was developed by analysing the CCUH database for medical histories of patients diagnosed with perinatal asphyxia (ICD-10 P21.0), born .37th week between 2015 and 2019. MS Excel, IBM SPSS Statistic 26.0 were used for data analysis. **RESULTS:** Of 172 patients, 82% (n = 141/172) underwent MRI, generally performed on the 5th day of life. 20.3% (n = 27/133) of MRI findings constituted to HIE, while 79.7% (n = 106/133) had other findings. There was no statistically significant association between MRI findings and seizures, neonatal reflex pathologies, changes in muscle tone (p > 0.05). Of 27 patients with HIE-specific findings on MRI, cytotoxic oedema was detected in 87% (n = 20), while elevated lactate metabolite levels on MRS in 76.9% (n = 10). A statistically significant association between signs of cytotoxic oedema on MRI, elevated lactate metabolite levels on MRS, and diagnosis of HIE by a neurologist was found (p = 0.018, p = 0.001, respectively). There was a statistically significant association with 5-minute APGAR score (p = 0.005). **CONCLUSION:** Most patient with prenatal asphyxia underwent MRI. No statistically significant association between clinical symptoms and MRI findings was observed. The most characteristic findings of HIE were cytotoxic oedema and elevated lactate metabolite levels in the brain, which in turn had a statistically significant association with the neurologist's conclusion. A statistically significant association was observed between MRI findings and 5-minute APGAR score.

Key words: hypoxic ischemic encephalopathy (HIE), magnetic resonance imaging (MRI), magnetic resonance spectroscopy (MRS), hypoxic ischemic injury (HII)

02. COVID-19 AND BREASTFEEDING; COULD THE VIRUS BE SPREAD THROUGH LACTATION?

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BACKGROUND: SARS-CoV-2 is a new betacoronavirus, a positive-sense single-stranded RNA-virus, member of the Coronaviridae family. The first cases were reported in Hubei province, China, and it continued spreading uncontrollably worldwide, currently having affected almost 55 million people, of whom more than 1.3 million died. **AIM:** The virus is likely transmitted through air droplets. However, there have been reported cases where SARS-CoV-2-RNA was found in other samples, such as blood or stool. Nonetheless, there is limited information concerning the presence of viral-RNA in pregnancy-related samples, specifically breast-milk. However unlikely, there is still uncertainty regarding the possibility of vertical-transmission from mother to infant through breastfeeding. This review aims to synthesize the literature written so far on this topic. **METHODS:** Electronic databases such as PubMed, SCOPUS, Embase have been reviewed. Search strategies included using keywords such as: "SARS-CoV-2", "COVID-19", "breastfeeding", "pregnancy", "vertical transmission" etc. The articles obtained were case reports, case series and reviews on pregnant women infected with SARS-CoV-2, or of infants born of COVID-19-positive mothers. **RESULTS:** Despite not being extensively researched, vertical transmission through breast-milk seems unlikely. Case series showed that milk samples from mothers with COVID-19 were almost entirely negative. So far there have

been only 8 recorded cases of viral shedding in milk samples, uncertain however of the viability of the particles. Furthermore, WHO and UNICEF strongly encourage commencing breastfeeding after parturition, underlining the benefits of lactation on both mother and infant. Moreover, some studies have proven the existence of IgG and IgA anti-SARS-CoV-2-antibodies in the maternal milk that could possibly play an important part in the neonate's protection against the virus. **CONCLUSION:** Vertical transmission through lactation seems unlikely. However, for a better understanding of the topic, further larger-scale researches need to be performed in order to clarify a yet uncertain matter.

Keywords: breastfeeding, COVID-19, newborn, pregnancy, SARS-CoV-2

03. HOW MUCH DOES EXTENDED SCAN RANGE INFLUENCE THE EFFECTIVE DOSE RECEIVED DURING PAEDIATRIC HEAD COMPUTED TOMOGRAPHY?

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BACKGROUND: Head Computed Tomography (CT) is a standard choice for paediatric head trauma evaluation. In fear of missing a neck pathology, radiographers often include vertebrae in the scan, however guidelines suggest scanning only the target area, in order to reduce effective dose (ED) received during the examination. **AIM:** Our aim was to calculate extra ED received by the patient when excessive neck area is scanned. **METHODS:** This study included head CTs performed on infants (0-12 months old) after head trauma in a children hospital from January of 2016 until September of 2020. Scan ranges were measured, dose length products (DLPs) were registered and EDs received were calculated for the scanned area and for tissues exposed to scattered radiation. For each excess centimetre, extra DLPs and ED were calculated. A dedicated software was used for calculating the ED. **RESULTS:** Only two of 131 examinations were performed with an appropriately scanned neck area, the excess scan lengths of other 129 patients were 1-6 cm, the DLP range was 200.6-767.2 mGy*cm. ED of the head slightly exceeds the annual natural background radiation, however, ED of the salivary glands, skeleton, thyroid, bone marrow, skin and lymph nodes exceeded ED of the head 8.5, 4.9, 4.7, 2.8, 2.4 and 1.6 times, respectively. Each excess centimetre increased ED by 0.06-1.68 mSv, depending on the tissue type. **CONCLUSION:** Even with one extra centimetre scanned DLPs exceed Paediatric Diagnostic Reference Levels. ED from scattered radiation may be several times higher than the ED for the scanned area, although while increasing the scan range, the rise in secondary radiation is relatively low. The scan range is most easily changeable parameter to decrease CT doses.

Keywords: CT, paediatrics, dosimetry, effective dose

04. RISK FACTORS FOR NECROTIZING ENTEROCOLITIS IN MODERATELY PRETERM NEONATES: A FOUR-YEAR RETROSPECTIVE STUDY

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BACKGROUND: Necrotizing enterocolitis (NEC) is the most common gastrointestinal emergency in neonates, with extremely preterm neonates (EPT, 28 weeks) considered at highest risk. With increasing gestational age, the risk for NEC decreases. **AIM:** Our aim was to identify the risk factors for NEC in moderately preterm (MPT) neonates (28-34 weeks). **METHODS:** This is a retrospective study done in a four-year period from 2015 to 2019. The only inclusion criterion was clinical presentation and radiologic confirmation of NEC. Radiologically proven 53 NEC cases were observed in our study, however only risk factors for MPT neonates were assessed in this study. The Bell criteria which are based on clinical, radiologic and laboratory

findings were used to stage the severity of NEC cases. We reviewed the medical records of NEC cases in the aforementioned period on Neonatal intensive care unit (NICU) of Pediatric Clinic University Medical Center Sarajevo. **RESULTS:** Classification of infants according to gestational age is: EPT (< 28 weeks), MPT (28-34 weeks), LPT (late, 35-37 weeks) and T (term neonates, >37 weeks). Majority of the infants with NEC were EPT (66.03%). The percentage of MPT, LPT, and term neonates with NEC was 22.6%, 7.5%, 3.7%, respectively. Mean gestational age at onset of NEC was 31 weeks, average age 12 days, and mean birth weight, 1,460 g. The most common age (mode) at onset of NEC was 3 days. Of the survivors, 3% had recurrent disease 1-20 days after reinitiation of enteric feeding. Among MPT neonates, maternal hypertensive disorders (34%) and small for gestational age (SGA-21%) were more common than in EPT neonates (10.5 and 4.2%, respectively). **CONCLUSION:** SGA MPT neonates born to mothers with hypertensive disorders should be closely monitored for signs of NEC. Identifying the risk factors specific to each gestational age may help clinicians to prevent NEC.

Keywords: NEC, maternal hypertension, neonates, Small for Gestational Age

05. OUTCOME OF SMALL FOR GESTATIONAL AGE INFANTS BORN BEFORE 32 GESTATIONAL WEEKS

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BACKGROUND: The most common cause of fetal outcomes in neonatal period is premature birth. When it is combined with small for gestational age (SGA), those infants have tendency to develop more complicated clinical course. **AIM:** Determine the impact of SGA on the outcome of preterm infants born before 32 gestational weeks. **METHODS:** The research was conducted in the NICU, Pediatric Clinic, UCC Sarajevo. The inclusion criterion was met by 371 patients. The information on birth weight, gestational age, NEC, sepsis, PDA, congenital anomalies and outcome were collected. **RESULTS:** Out of 371 patients, 192 (51.75%) are males. According to the birth weight and gestational age, the respondents were divided into two groups: AGA and SGA. The SGA group consists of 17 patients (4.58%), with the average birth weight 854.71 g (500-1180g) and average gestational age 29.95 weeks. As expected, there was a significant difference between SGA and AGA group considering birth weight ($p < 0.05$). Statistically significant difference was found in the frequency of sepsis, persistent arterial duct (PDA) and necrotizing enterocolitis (NEC) ($p < 0.05$). Comparison between genders did not reveal any significant difference in representations three listed conditions ($p > 0.05$). Our data didn't show significant difference in survival rate ($p = 0.052$). This may be repercussion of a small SGA sample, but as it is very close to significant level, we can consider this parameter as significant. SGA infants who have died are 13.33 times more likely to have had NEC, CI 95% (1.07-166.37) and 6 times more likely to have had sepsis, CI 95% (0.72-49.84). The most common associated congenital anomaly was atrial septal defect (ASD). **CONCLUSION:** SGA is associated with several life-threatening illnesses, including sepsis, NEC and PDA, as well as undesirable outcome. These findings highlight the importance of detecting and preventing factors that may lead to SGA.

Key words: preterm infants, small for gestational age, appropriate for gestational age

06. ESTIMATE OF CERVICAL CANCER INCIDENCE IN ZENICA-DOBOJ CANTON

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BACKGROUND: Cervical cancer is a type of cancer that occurs uncontrolled growth of cells in the lower part of uterus. The risk factor for this malignant

disease is infection caused by various strains of the human papillomavirus (HPV). Cervical cancer ranks second, both in frequency and mortality, from gynecological cancers, just after breast cancer. **AIM:** The study has 3 aims. First was to present the most common age interval for this malignant disease. Second was to resolve the prevalence of cervical cancer in Zenica-Doboj Canton by municipalities in period of 5 years. Third aim was to determine positive and negative Pap tests presence in the Canton through a given period and to compare it. **METHODS:** Used data were from the Public Health Institute of the Zenica-Doboj Canton and Central Laboratory for Screening of the Cantonal Hospital in Zenica. Five age groups of patients were considered. The number of reported cases of malignant neoplasm covers the period of 2007 to 2012. Descriptive statistical data was performed. Cervical swabs were used as a material in this research. The methods we came up with for statistics inserted the results of the Pap test. **RESULTS:** The interval from age 46 to 60 represent the period of the most frequent incidence of cervical cancer. The presence of malignant cervical neoplasm is the highest in the municipality of Zenica, Zavidovići, Tešanj and Maglaj, comparing to the number of inhabitants and registered patients. There were 85,1% negative Pap tests and 14,9% positive Pap tests, which we have divided in 7 subgroups, 3 for negative diagnoses and 4 for positive diagnoses. **CONCLUSION:** The correct incidence of cervical cancer in Bosnia and Herzegovina is unknown as there is no National Cancer Register. Therefore, study has shown urgent require of quality registry for future prevention and treatment.

Keywords: cervical cancer, Human Papillomavirus, Pap test, incidence

07. MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN ASSOCIATED WITH COVID-19 – META-ANALYSIS

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BACKGROUND: Multisystem inflammatory syndrome in children (MIS-C) is a serious condition that appears to be associated to coronavirus disease 2019 (COVID-19). Most children that become infected with COVID-19 virus have only a mild disease. But, in children who go on to develop MIS-C, some organs and tissues become severely inflamed. **AIM:** systematic analysis of demographics, clinical features, management and outcomes. **METHODS:** We conducted a metaanalysis searching PUBMED electronic database from June 14th to November 19th, 2020, following the Preferred Reporting Items for Systematic Reviews and Metaanalyses guidelines. **RESULTS:** The term that was used for the search is Multisystem inflammatory syndrome in children. Out of 249 identified articles, 25 retrospective, prospective, and cohort studies with 1489 participants were included in the final analysis. Sixty-six percent of patients were previously healthy, and 33% percent had comorbidities (chronic lung diseases 66%; obesity 55%). SARS-CoV-2 infection was confirmed in most participants (53,9% had serology tests positive, 34,9% were positive by RT-PCR, and 3,9% had both). The most common clinical presentations of MIS-C were: fever, gastrointestinal symptoms, mucocutaneous signs, and hypotension. Prime laboratory parameters were elevated inflammatory markers (CRP, ESR, ferritin), leukocytosis with lymphopenia; mild anemia, thrombocytopenia, elevated transaminases, abnormal coagulation (prolonged APTT, D-dimer), and elevated markers of cardiac dysfunction (BNP or pro-BNP and troponin). Currently, the most widely used medications to treat MIS-C are intravenous immunoglobulins (56% of patients), 51% enoxaparin, 35% corticosteroids, 29% acetylsalicylic acid, 6% recombinant IL-1 receptor antagonist and 2% monoclonal IL-6 receptor antibody. Seventeen patients (1,1%) had a lethal outcome. **CONCLUSION:** MIS-C is a serious and potentially life-threatening condition mostly described in previously healthy children. If recognised and treated on time, in most cases had a short-term favorable outcome. Questions for future studies still remain regarding risk factors, pathogenesis, management, and long-term outcome of MIS-C.

Keywords: MIS-C, SARS-CoV-2, COVID-19, Kawasaki disease, toxic shock syndrome

08. ANEMIA IS ASSOCIATED WITH CARDIAC DYSFUNCTION IN PATIENTS WITH ACUTE CORONARY SYNDROMEFARUK OSMANKADIĆ¹, Alma Pecikoza¹, Emina Hrnjić¹, Sara Hodžić¹, Prof. Amina Valjevac²¹ Medical Faculty, University of Sarajevo, 71000 Sarajevo Bosnia and Herzegovina² Department of Physiology, Medical Faculty, University of Sarajevo, 71000 Sarajevo, Bosnia and Herzegovina

BACKGROUND: Anemia can aggravate a myocardial injury in patients with an acute coronary syndrome (ACS), through both decreased oxygen supply and increased oxygen demand resulting from increased cardiac output. **AIM:** To investigate the effects of anemia on the cardiac function and cardiac damage in patients with ACS. **METHODS:** The study was designed as a cross-sectional, observational study which included 82 patients (mean age 68.1±12.1) presenting with ACS at the Clinical Center University of Sarajevo. STEMI was diagnosed in 43, NSTEMI in 25, and unstable angina in 13 patients. Blood pressure, blood count, C-reactive protein, and cardiac damage markers were determined. Anemia was defined if hemoglobin values were <12g/dL for females and <13g/dL for males. Doppler echocardiography was used to assess the left ventricular function (LVF). The degree of LV dysfunction was determined by ejection fraction (EF) as normal (>50%), mildly (41% to 50%), moderately (31% to 40%), or severely (<30%) decreased. **RESULTS:** The prevalence of anemia in ACS patients was 29.3%. Anemia was more frequent in patients with NSTEMI (54.3%) compared to patients with STEMI (25.0%) and unstable angina (20.8%) ($\chi^2=11.6$; $p=0.003$). The median EF was significantly lower in patients with anemia [0.35 (0.3–0.4) vs. 0.41 (0.3–0.48); $p=0.031$]. The systolic dysfunction and combined systolic/diastolic dysfunction was present in 87.5% and 66.7% of patients with anemia ($p<0.05$). Hemoglobin values were significantly negatively associated with the degree of LV systolic dysfunction ($\rho=-0.27$; $p=0.014$). Patients with anemia had significantly higher CRP levels compared to patients without anemia [22.5 (10.9–51.1) vs. 8.5 (3.3–25.0) mg/L; $p=0.023$]. However, no significant difference in cardiac damage markers between patients with and w/o anemia was observed. **CONCLUSION:** Anemia is associated with both systolic and combined systolic/diastolic dysfunction suggesting that anemia might present an additional risk factor for comorbidities related to the left ventricular dysfunction in patients with an acute coronary syndrome.

Keywords: anemia, acute coronary syndrome, ST-segment elevation myocardial infarction, non ST-segment elevation myocardial infarction, unstable angina, C-reactive protein

09. AMIODARONE PRETREATMENT FOR DIRECT CURRENT CARDIOVERSION IN PATIENTS WITH ATRIAL FIBRILLATION – EFFECT ON SHORT-TERM SINUS RHYTHM MAINTENANCEBAIBA KOKINA¹, Oskars Kalejs^{2,3}¹ State University of Piauī Faculty of Medicine, Riga Stradins University, Riga, LV-1007, Latvia² Department of Internal Diseases, Riga Stradins University, LV-1007, Latvia³ Latvian Centre of Cardiology, Pauls Stradins Clinical University Hospital, LV-1002, Latvia

BACKGROUND: Direct current cardioversion (DCCV) for atrial fibrillation (AF) is commonly facilitated by antiarrhythmic drug (AAD) premedication, nevertheless early arrhythmia recurrence poses problem. Amiodarone is widely used, however its major adverse effects, i.e., pulmonary, thyroid, hepatic, ocular toxicity, should be emphasized, especially considering its potential for accumulation. **AIM:** To evaluate the effect of amiodarone premedication and the impact of its dosing regimen on short-term (one-month) sinus rhythm maintenance after DCCV in patients with persistent AF. **METHODS:** Study was conducted among patients with persistent AF hospitalized for elective DCCV in Latvian Centre of Cardiology. Enrolled patients were taking AADs preprocedurally, without long-term amiodarone intake history. Baseline interview with 1-month follow-up was conducted to compare amiodarone and other AADs effectiveness in sinus rhythm maintenance. For dose-dependent evaluation, total received amiodarone dose prior to DCCV was taken into account, with cutoff value of 4000 mg, corresponding to its common preprocedural regimen – 200 mg b.i.d. for 10 days. Software SPSS was used for statistical evaluation and logistic regression analysis was conducted to obtain main results (significance level $\alpha=0.05$). **RESULTS:** Among 94 patients, one-month sinus rhythm maintenance rate was 80.9%, with corresponding value of 84.4% among amiodarone users specifically. Amiodarone intake (31.9% patients) prior to DCCV, compared to other AADs (sotalol, propafenone, etacizine), demonstrated no statistically

significant superiority for sinus rhythm maintenance likelihood (OR 1.964, 95%CI 0.685–5.632, $p=0.209$). When evaluating dose-dependent outcomes among patients taking amiodarone, total received dose exceeding 4000 mg did not result in statistically significantly improved sinus rhythm maintenance prospects (OR 1.160, 95%CI 0.301–4.475, $p=0.829$). **CONCLUSION:** Compared to other AADs, amiodarone premedication did not show any superiority, and, additionally, no beneficial effect on arrhythmia recurrence prevention in patients taking its higher dosage was established. Results highlight necessity of thorough consideration of patient eligibility for alternative AADs, or, at least, of favour of amiodarone lower-dose therapy.

Keywords: atrial fibrillation, direct current cardioversion, antiarrhythmic drugs, amiodarone

10. METHOD OF DIFFERENTIAL DIAGNOSIS AND PROGNOSIS OF FAILURE ATTEMPTS OF EXTRACORPORAL FERTILIZATION IN WOMEN WITH THROMBOPHILIAKHUSHBOO KALANI¹, Diana Tarawneh¹, Keshav Kumar¹¹ Kharkiv National Medical University, Kharkiv, 61000, Ukraine

BACKGROUND: Over recent years, the point of active discussion of researchers is the issue of improving IVF cycles effectiveness. Relation between thrombophilia and failed IVF attempts is actively discussed in the literature, but the mechanisms of thrombophilia effect on IVF results are still unclear. **AIM:** Development of a method for differential diagnosis and prognosis of failed IVF attempts based on determination of pathological markers of thrombophilia, which lead to pathological changes in endometrium and to impossibility of implantation of an embryo in uterine cavity. **METHODS:** We examined 48 women with thrombophilia participating in the IVF program. Twenty of them have failed IVF attempts (Group 1) and 28 women who became pregnant after IVF program (Group 2). Patients underwent laboratory studies: analysis of the hemostasis system, detection of genetic forms of thrombophilia by PCR (mutations of MTHFR-C677T, prothrombin (G20210A), Factor V Leiden mutation, polymorphism in PAI, polymorphism in the glycoprotein gene, polymorphism in the angiotensinogen gene, polymorphism in the fibrinogen gene, tissue plasminogen activator); determination of the concentration of AFA and coagulation factors in blood plasma. **RESULTS:** According to our data, we have found a significantly higher frequency of various structural forms of thrombophilia in patients of the Group 1 compared with the Group 2, namely: presence of a high percentage of AFA (40%), hyperhomocysteinemia (23.5%), Factor V Leiden heterozygous mutations (10.0%), MTHFR-C677T (60.0%), PAI-1 polymorphism (70.0%), heterozygous form of polymorphism '807 G/T of platelet receptor GP Ia' (55.0%), polymorphism '1166 A/C' in angiotensin II receptor gene. **CONCLUSIONS:** Thus, hereditary thrombophilia predominates in patients with a history of failed IVF attempts, with severe mutations in the hemostasis genes being more common than in patients with high IVF efficacy.

Keywords: Extracorporeal Fertilization, thrombophilia, hemostasis genes, failure attempts of IVF

11. KNOWLEDGE, ATTITUDES AND BEHAVIOUR REGARDING ANTIBIOTIC USE AMONG GENERAL POPULATION OF HERZEGOVINA REGIONLeonora Bedekovic¹, MONIKA GLIBIĆ¹, Mirko Maglica¹, Ilija Marijanović¹, Mirko Janković², Damir Vukoja³¹ The School of Medicine University of Mostar, Mostar, 88000, Bosnia and Herzegovina² The Faculty of Humanities and Social Science University of Mostar, Mostar, 88000, Bosnia and Herzegovina³ Health Center Grude, Grude, 88340, Bosnia and Herzegovina

BACKGROUND: Bacterial resistance to antibiotics emerges as one of the leading global health issues in recent years. Thus, the awareness and comprehension of the community regarding their proper use becomes a major factor in respond to this public health concern. **AIM:** This study aims to determine the level of knowledge as well as attitudes and behavior regarding the use of antibiotics among general population of Herzegovina region based in its main city of Mostar. **METHODS:** A questionnaire-based survey was conducted from January to November 2020 by convenience sampling technique among people who visited health centers, malls and also via web. Out of 1209 distributed questionnaires, 920 questionnaires were completed with response rate 76.1%. Statistical analysis was performed to process the results. **RESULTS:** Average age of the participants

was 39.3±14.3. Among them, 65.2% were women. The median antibiotic knowledge score was 9 out of 12. Accordingly, 76.5 % showed adequate knowledge. The significant difference was shown in gender and education in favor of women and higher education degree. Although 84.8% of respondents claimed that antibiotic treatment should be started after a visit to a doctor and receiving a prescription, up to 36% of respondents used antibiotics without prescription. The prevailing reason for taking unprescribed antibiotics was sore throat. Only 43.6% of respondents kept taking antibiotic therapy as doctor advised even though therapy showed no noticeable effect. Participants with a health worker in family tend to use antibiotics without prescription more often. **CONCLUSION:** While a large number of respondents show adequate knowledge regarding the use of antibiotics, there are obvious behavioral mistakes. Measures should be taken with emphasis on additional education to better prevent antibiotics overuse, consequently providing better status of antibiotics in the future.

Keywords: antibiotics, resistance, global health, education

12. INFLUENCE OF GESTAGENS USED IN HORMONAL CONTRACEPTION AND BODY MASS INDEX ON MENTAL AND SEXUAL SIDE EFFECTS

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BACKGROUND: Medical products containing estrogen and progesterone components are, apart from their common use as hormonal contraception, also used to regulate the monthly cycle and to alleviate undesirable symptoms associated with it, as well as to treat other hormonal disorders. However, they cause many adverse effects. **AIM:** The aim of the research was to explore mental and sexual health adverse effects associated with single or multiple use of hormonal contraception in women. **METHODS:** Our research relies on a detailed online survey distributed among Polish women aged 17 to 55 years who use or once used hormonal contraception. Survey was divided into five sections as follows: characteristics of the respondent, hormonal products used mental state and mood changes while using hormonal contraceptives, sexual life and other side effects. Women were divided into subgroups depending on the type of gestagen component of the preparation used as well as on body mass index (BMI). **RESULTS:** In total, 629 women who have ever used hormonal contraception took part in survey. Of them, 63.7% used the combined hormonal pill, 18.7% used progestin-only pill and a lower percentage of women used other contraceptives (vaginal ring 5.2%, intrauterine contraceptive device 5.7%, contraceptive patch 5.3%, implant and injection both 0.7%). 64.4% of women experienced mental or sexual side effects while using hormonal contraception. Most commonly mentioned adverse effects were decreased libido (40.6%) and mood swings (39.3%). 2.4% mentioned appearance of suicidal thoughts. Women who took medications containing desogestrel experienced the least side effects (70% reported no side effects) while women who took specifics with etonogestrel reported the most side effects (reported by 91.6%). Correlation between woman's Body Mass Index and occurrence of side effects wasn't proved in our research (p value 0.95). Despite side effects, only 35.5% of women report their complaints to doctor. **CONCLUSION:** Hormonal contraceptives impact the mood and sexual health of the majority of women who took part in the survey. Frequency of side effects vary depending on gestagenic component and woman's BMI. Based on our results, we can make a conclusion that However, despite side effects, only 35.5% of women report their complaints to doctor.

Keywords: hormonal contraception, gestagens, mental health, sexual health

13. THE KNOWLEDGE, ATTITUDES, AND PRACTICES TOWARD COVID-19 AND COVID-19 VACCINE AMONG STUDENTS OF THE UNIVERSITY OF SARAJEVO

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BACKGROUND: Global pandemic of SARS-CoV-2 has shown the importance of educating each country's citizens on measures to prevent the spread of the virus. Since the discovery of the COVID-19 vaccine, the next major step in controlling the pandemic is vaccination, with its own set of questions and misconceptions. **AIM:** The purpose of this study was to assess the knowledge, attitudes, and practices toward COVID-19 among students of the University of Sarajevo, as well as their knowledge and attitudes towards the

COVID-19 vaccine and to identify factors related to them. **METHODS:** The cross-sectional study was conducted among students of the University of Sarajevo (February 5th to February 10th). Using purposive sampling, the link of specially design anonymized questionnaire for this study was sent out to each faculty's student association then distributed among its students. Descriptive and inferential statistical analyses were performed by using Microsoft Excel and SPSS statistical package, version 20. **RESULTS:** Out of 782 students who completed the online administrated questionnaire, 579 (74.4%) were female. Among them, 221 (28.3%) and 207 (26.5%) of students were from the second and third year, respectively. The preliminary results show adequate knowledge related to the mode of transmission, symptoms, and preventive measures of COVID-19, and nearly half of the students said they would not get vaccinated or would not get vaccinated except if it would be mandatory for travel, work, and attending to public events. **CONCLUSION:** Education about COVID-19 has shown its importance over the last 12 months and data that was acquired will greatly help create educational programs for our students focused on providing scientifically proven findings and breaking misconceptions about the disease and its vaccine.

Keywords: COVID-19, vaccine, knowledge, practice, attitude, university students.

14. MID-UPPER-ARM CIRCUMFERENCE AND MID-UPPER-ARM-TO-HEIGHT RATIO AS INDICATORS OF CENTRAL OBESITY IN HEALTHY YOUNG ADULTS: A CROSS-SECTIONAL STUDY FROM BOSNIA AND HERZEGOVINA

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BACKGROUND: Most commonly used measurement for analyzing central obesity is Waist Circumference (WC) which is affected by respiratory movements and postprandial abdominal distension. Mid-upper arm circumference (MUAC) and ratio of mid-upper-arm circumference-to-height (AhtR) are independent of these factors and ought to be further investigated as indicators of central obesity in young adults. **AIM:** The aim of this study was to estimate relationship between MUAC and AhtR and other anthropometric measurements in order to determine whether these are superior in assessment of central obesity. **METHODS:** Study was established as cross-sectional study that included 252 students and was conducted from February to April 2019, at the Department of Human Physiology, Faculty of Medicine, University of Sarajevo. MUAC was measured with subject in standing position at the midpoint between the olecranon and acromial process on relaxed right arm. AhtR was calculated as MUAC (cm) to height (cm). Other parameters were performed following the WHO guidelines. Receiver operating characteristic (ROC) curve analysis was used to determine the suitable cut-off of MUAC and AhtR for central obesity. **RESULTS:** MUAC was significantly correlated with BMI ($r=0.696$; $p<0.0005$ in males; $r=0.819$, $p<0.0005$ in females) and WC ($r=0.677$, $p<0.0005$ in males; $r=0.783$, $p<0.0005$ in females). A significant positive correlations were seen between AhtR and BMI ($r=0.699$; $p<0.0005$ in males; $r=0.801$, $p<0.0005$ in females) and WC ($r=0.600$, $p<0.0005$ in males, and $r=0.718$, $p<0.0005$ in females). The best cut-off of MUAC to identify participants with central obesity were . 32.55 cm (AUC=0.870; $p<0.0005$) and . 26.95 cm (AUC=0.862; $p<0.0005$) among the males and females respectively. AhtR . 17.68 (AUC=0.847; $p<0.0005$) for males and . 16.55 (AUC=0.813; $p<0.0005$) for females were the optimal cut-off values to determine subjects with central obesity. **CONCLUSION:** Obtained results suggest that MUAC and AhtR should be considered as an alternative to WC in detecting central obesity among healthy young adults.

Keywords: Mid-upper arm circumference, Mid-upper-arm circumference-to-height ratio, Central obesity

15. OBESITY-RELATED INFLAMMATION AND ITS IMPACT ON DEPRESSION AND ANXIETY TRAITS IN ADOLESCENTS

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BACKGROUND: The prevalence of overweight and obese teens in Ireland is increasing. There is also increasing recognition of mental health needs within this adolescent population. Obesity and mood disorders are

associated with increased levels of the pro-inflammatory cytokine, TNF-alpha. Based on this association, TNF-alpha can potentially be used as a biomarker for depression and anxiety. **AIM:** To investigate the relationship of obesity-mediated TNF-alpha with depression and anxiety traits in adolescents. **METHODS:** This was a cross-sectional study which recruited 50 adolescents between 10-14 years of age. 50% of the recruited participants were female, and 50% of the participants were overweight or obese. Participants had their TNF-alpha levels, Body Mass Index (BMI) percentiles, state and trait anxiety and depression scores measured, along with their Revised Children's Anxiety and Depression Scale (RCADS) depression and anxiety scores. Linear regression models were performed on SPSS. **RESULTS:** 39 participants completed the study, 21 males and 18 females. Mean age in months was 148 months. Mean BMI percentile was 57.69%. After controlling for age in months, sex, positive and negative affect scores, there was a correlation between BMI percentile and TNF-alpha levels with RCADS depression score ($r=-.59$; $p=.022$). There was also a correlation between BMI percentile and TNF-alpha levels with RCADS total anxiety scores ($r=-.75$; $p=.001$). However, negative affect scores had the greatest association with the RCADS depression scores (beta coefficient $-.588$) and RCADS total anxiety scores (beta coefficient $-.741$). The regression showed that TNF-alpha was not significantly associated for either RCADS depression scores or RCADS anxiety scores. **CONCLUSION:** Our study revealed there is no significant difference between increased levels of TNF-alpha and higher levels of both depression and anxiety traits in adolescents. This association is largely influenced by negative affect scores. This demonstrates the complexity of mood disorders within adolescents and further studies are warranted to determine if inflammation plays a role.

Keywords: pediatric obesity, mood disorders, inflammation

16. IMPACT OF FAMILY FUNCTION AND PSYCHOSOCIAL FACTORS ON ANXIETY AND DEPRESSION IN POPULATION OF MEDICAL STUDENTS

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BACKGROUND: Anxiety and depression are common mental disorders in the student population. Among university students, mental disorders can cause different problems, affecting motivation, perception of self-worth, and basic daily activities. **AIM:** This study aimed to explore the presence of anxiety and depression symptoms in first year medical students and investigate how family cohesion, flexibility and psychosocial factors influence anxiety and depression. **METHODS:** 149 medical students (76.5% female and 23.5% male) took part in a cross-sectional study. All participants were in the first year of education at the Medical Faculty University of Sarajevo. The survey was conducted via the sociodemographic questionnaire, Multidimensional Scale of Perceived Social Support, Rosenberg Self-esteem Scale, the short version of Loneliness Scale, Family Adaptability & Cohesion Scale, Beck Anxiety Inventory, and Beck Depression Inventory. **RESULTS:** The prevalence of moderate and severe anxiety and depression symptoms among medical students was 53.8% and 19.5%, respectively. Female students experienced higher levels of anxiety and depression compared to their male colleagues. Students who practice sport activities at least once a week showed significantly lower anxiety and depression scores. Anxiety and depression were positively associated with loneliness and negatively associated with perceived social support from family and self-esteem. Depression was also negatively associated with family cohesion and adaptability. Moreover, the results revealed that family cohesion was a strong predictor of the severity of depression symptoms. **CONCLUSION:** This study shows that variables such as gender, sports activities, feeling of loneliness, low self-esteem, and perceived social support from family play an important role in the experience of anxiety and depression among medical students. Family environment, especially cohesion, is a strong predictor of depressive symptoms. This study raises awareness about mental disorders in medical students, especially anxiety and depressive, and invites the placement of these problems among the top priorities of public health policies.

Keywords: anxiety, depression, self-esteem, cohesion, students

17. MULTIPLE SYSTEM ATROPHY - CASE REPORT

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INTRODUCTION: Multiple system atrophy is adult onset, fatal neurodegenerative disease characterized by progressive autonomic failure, parkinsonian and/or cerebellar features with pyramidal features in various combinations. **CASE DISCUSSION:** A 61 year old woman was admitted to Department of Neurology, General hospital „Prim.dr. Abdulah Nakaš“ in September 2019 due to speech impairment, unsteady gait, progressive weakness of both extremities and urinary incontinence. Her family noticed irritability and depression. Symptoms lasted for 2-3 years and the deterioration occurred in the last year. Levodopa and ropinirole were without effect as was an operation due to urinary incontinence. Orthostatic hypotension and hypothyroidism were previously diagnosed. In neurological examination mildly dysarthric and reduced speech were found. Cognitive functions were well preserved. Hypomimia was present without abnormalities in the cranial nerves. On the extremities there was spastic quadriparesis with hyperreflexia(++), more pronounced on right side with reduction of muscle strength(3-/5) on both arms and legs. Babinski sign was bilaterally positive. Cerebellar coordination tests were normal. Bradykinesia and axial stiffness were present as well as orthostatic hypotension and urinary incontinence. Cranial MRI suggested early cortical atrophy due to microischemic lesions. DAT scan showed hypometabolism pattern in left nigrostriatal complex. Laboratory findings were normal. **DISCUSSION:** Patient's medical history, physical signs and auxiliary examinations suggested MSA-P (parkinsonian) type was most likely diagnosis. The diagnosis is based on a clinical picture that represents a combination of autonomic failure and parkinsonism or cerebellar symptoms. Early autonomic failure as well as poor response or lack of response to levodopa are mandatory diagnostic criterion for multiple-system atrophy diagnosis which our patient met. **CONCLUSION:** In this case, the onset of the patient's disease was concealed because her condition worsened gradually, and she was mistakenly diagnosed as idiopathic Parkinson disease. Therefore, the proposed therapy was not effective. Further monitoring of patient is necessary as well as possible therapy adjustments.

Key words: Parkinson plus, multiple systemic atrophy, MSA, dat scan.

18. THE RELATIONSHIP BETWEEN INSOMNIA SEVERITY AT THE START OF THE SEMESTER AND DURING THE EXAM PERIOD IN MEDICAL STUDENTS FROM THE FIRST TO LAST YEAR

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BACKGROUND: Insomnia is a sleep disorder in which you have trouble falling and/or staying asleep. Students can often suffer from insomnia due to their lifestyle, exams, daily stress and worries. **AIM:** The aim of this study was to determine the existence and/or worsening of insomnia in medical students comparing the two weeks at the beginning of the year and two weeks into the exam period. Our secondary goal was to determine if stress combined with CNS stimulating substances plays a role in the day-to-day life of a medical student. **METHODS:** The study was designed as a cross-sectional study that included 418 respondents, aged 19 to 36 from the 1st to the 6th year of the Faculty of Medicine, University of Sarajevo, conducted through a Google Forms survey, with 16 questions. Insomnia questions were done following the official "Insomnia Severity Index" (ISI) questionnaire which offers an objective score for the severity of this condition. **RESULTS:** Paired Samples t Test was used to test statistical difference between two time points. ISI score worsened from pre-exam ($M=1.72$, $SD=0.84$) to during the exam period setting ($M=2.57$, $SD=1.02$). This change was statistically significant $t(419) = -18.093$, $p=0.001$. The relationship between variables was assessed using Pearson correlation analysis. Test showed low but significant positive association between worsening of ISI score during the exam period and students of female gender ($r=0.223$, $p=0.0001$). There was low negative correlation between worsening of ISI score and following variables: student's age ($r=-0.107$, $p=0.029$), frequency of nicotine consumption ($r=-0.183$, $p=0.0001$) and ISI score pre-exam ($r=-0.162$, $p=0.001$). **CONCLUSION:** With all

of this data, we conclude that, stress suffered during medical exams, combined with the intake of CNS stimulating substances, has a positive effect when it comes to the worsening of sleep and life quality in medical students.

Keywords: insomnia, insomnia severity index, CNS stimulation

19. ASSESSING IMPACT OF COVID-19 ON THE CHRONICALLY ILL PATIENTS: SARAJEVO CANTON EXPERIENCE

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BACKGROUND: Since the first confirmed case was reported on 5 March 2020, there has been over 113,000 cases and 4200 deaths. Bosnia and Herzegovina have been fairly affected by the COVID-19 epidemic. Thus, it is important to determine patients' perception and experience towards their access to healthcare facility during COVID-19. Due to restrictions on movement and physical interaction among the population, online survey has been an effective tool for this purpose. **AIM:** Our objective is to assess and compare changes in the access number of chronically ill patients who require continuous treatment and checkups in public and private health institute from 2019 and 2020. **METHODS:** Between December 2020 and January 2021, an online survey was distributed via public and social posts on patients' perception and experience in Sarajevo canton health facilities. The convenience online survey method of nonprobability sampling was used, the mean responses were calculated as overall percentage score. Further data about hospital visits within 2019 and 2020 have been attained from several public and private medical institutes in Sarajevo. **RESULTS:** The response rate was 27.6% (52/188). Baseline survey characteristics showed that 72% of participants had concerns visiting health care units and 43% postponed their visits due to exposure of COVID-19 and from low protective measures of their surroundings. Furthermore, we identified a significant raise in visit to private clinics, nearly no change in hospital visits, whereas outpatient clinics had reduced number of patient visits. **CONCLUSION:** Despite the uncertainty and concerns in visiting hospitals, participants have still met their health needs. Moreover, they were tentative about the health facility not taking the necessary steps to ensure a safe and healthy work environment during COVID-19. Online population surveys could be used as a fast and cheap approach to improve healthcare system toward hospital staff and patients' satisfaction, safety, cooperation, and treatment.

Keywords: COVID-19, survey, healthcare, chronic patients

20. PSYCHOLOGICAL DISTRESS IN PEOPLE WITH MULTIPLE SCLEROSIS DURING COVID-19 PANDEMIC

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BACKGROUND: COVID-19 pandemic affects people's mental health by increasing the rate of psychological distress including depression, anxiety and sleeping problems. Individuals with multiple sclerosis (MS) already have maladaptive coping strategies which make them more sensitive to the psychological effects of the outbreak. **AIM:** The aim is to evaluate psychological distress caused by COVID-19 outbreak in MS patients. **METHODS:** Search algorithm was obtained by combining terms „multiple sclerosis“, „COVID-19“, „depression“ and „anxiety“. We searched PubMed and found 14 applicable articles published from April 2020 to January 2021. **RESULTS:** Studies show that MS patients are more prone to become depressed and anxious during COVID-19 pandemic which is followed by the increased use of antidepressants. Females and the younger population are at higher risk of developing psychological distress. MS patients with somatic and psychiatric comorbidities are more susceptible for serious psychological consequences. Also, patients with MS are reporting poorer sleep quality. The quality of life before and during the lockdown is reduced in terms of health changes and emotional problems causing limitations. On the contrary, some patients with relapsing-remitting MS experience better quality of life considering social functioning and sexual satisfaction, especially females. But, people with progressive MS report little or no change in mental health since they are used to take extra careful preventive measures that are possibly reducing psychological distress. Also, due to considerable physical disability there are no extreme and forceful changes

in everyday lives in MS patients with progressive disease. They were already socially isolated before the pandemic and have already lived with increased uncertainty due to the unpredictable nature of their condition. **CONCLUSION:** MS patients, especially females, younger people, and those with additional comorbidities are at higher risk of developing psychological distress, while patients with progressive type of disease are less prone to supplemental psychological distress caused by COVID-19 pandemic.

Keywords: multiple sclerosis, COVID-19, psychological distress, depression, anxiety

21. THE PREVALENCE OF NEUROTIC LEVEL'S DISORDERS DURING THE COVID-19 PANDEMIC

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BACKGROUND: In the context of the global expansion of the COVID-19, all the experienced negative emotions result in a stress, i.e., a physiological adaptation process, which arises as a response to assumed and real threats. New evidence from psychiatrists evidence that we are currently on the verge of a pandemic of mental disorders. **AIM:** to assess the prevalence of anxiety and depressive disorders in patients with COVID-19 and in people who have not had COVID-19. **METHODS:** the analysis of anonymous questionnaires (n = 200) using the HADS scale from June until November, 2020. **RESULTS:** the patients were divided into 2 groups. The first group (n = 100) included patients who underwent COVID-19. The prevalence of increased levels of anxiety and depression (.8) in the study group was 72%. The prevalence of increased levels of anxiety and depression (.8) in the comparison group was 60%. The pre-pandemic results in our region for depression and anxiety before the pandemic were 30.2% and 31.5%, respectively. In our study, the prevalence of these conditions (average of two groups by results of HADS scale) is 1.8 and 1.3 times higher than before the pandemic. **CONCLUSION:** The prevalence of anxiety-depressive disorders in patients who underwent a COVID-19 is 2 times higher than in patients before the pandemic. Also, patients who underwent COVID-19 of are significantly more likely to suffer from symptoms of clinical anxiety and depressive disorders.

Keywords: depression, anxiety, HADS, COVID-19

22. AN EVALUATION OF SURGICAL TECHNIQUES FOR THE TREATMENT OF DECUBITAL ULCERS

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BACKGROUND: The medical management of decubitus ulcers became an important issue in recent years because they still represent a serious surgical problem with frequent complications and recurrence. Choosing the appropriate surgical technique is essential for proper healing, which could be postponed due to the patient's coexisting pathology. Myocutaneous and fasciocutaneous flaps are the most commonly used reconstructive techniques. **AIM:** This study aimed to evaluate the advantages of myocutaneous flaps for the treatment of patients who developed stages III and IV decubital ulcers compared to fasciocutaneous flaps and free skin grafts. **METHODS:** In a retrospective clinical study we analyzed 40 patients with decubital ulcers who were surgically treated at the Clinic for Plastic and Reconstructive Surgery in the period from January 1st 2014 to December 31st 2018. **RESULTS:** Decubital ulcer was more common in men with 55% of cases. When it comes to age, 40% of cases were in the age group of 40 to 60 years. In 57.5% of cases, neurological disorders were the most common cause of plegia or paresis. The most common location of the decubital ulcers was the sacral region in 41% of cases. Musculocutaneous flaps were used in 57% of cases for the reconstruction of decubital wounds. 32.5% of patients had early complications, while late complications occurred in 17.5 cases. **CONCLUSION:** Stages III and IV of deep decubital ulcers require surgical treatment. The best results in the reconstruction of decubital wounds can be achieved with the use of musculocutaneous flaps. This surgical technique reduces a big number of complications.

Keywords: decubital ulcer, surgical treatment, musculocutaneous flap

23. COMPARISON OF LAPAROSCOPIC SENTINEL LYMPH NODE IDENTIFICATION AND OPEN PELVIC LYMPHADENECTOMY IN LOW-RISK UTERINE CANCER

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BACKGROUND: uterine cancer is one of the most common cancers in the world. In order for women to experience as few complications as possible, alternative surgical treatments have been sought. **AIM:** to compare treatment outcomes in laparoscopic hysterectomy with sentinel lymph node (SLN) and open hysterectomy with systemic pelvic lymphadenectomy in patients with low-risk uterine cancer. **METHODS:** data of women with low-risk uterine cancer treated in National Cancer Institute from 2019 was retrospectively analyzed. Data differences were considered statistically significant with $p < 0.05$. **RESULTS:** 76 patients were divided into two groups: patients who underwent laparoscopic hysterectomy with SLN removal ($N = 29$) and patients who had hysterectomy with systemic pelvic lymphadenectomy ($N = 47$). SLN was found in 29 of 29 patients (100%). 86.2% patients had SLN on both sides and 13.8% patients had SLN detected only on one side. In the second group, the average of lymph nodes removed was 11.1 ± 5.96 . LNMets were not found in either group. The average duration of surgery in the first group was 160.5 ± 42.52 minutes, in the second 124.1 ± 40.53 ($p = 0.00039$). No complications were found in the SLN group while 12.8% patients in the second group experienced complications ($p < 0.05$) and were evaluated according to the Clavien-Dindo classification and corresponded to: two 4a, two 3a and two 2. The average number of bed days in the first group was 6 ± 3.06 days, in the second group 8.9 ± 3.4 days ($p = 0.00168$). **CONCLUSION:** endoscopic surgery is the first-line method for the treatment of early-stage uterine body cancer. Identification of the sentinel lymph node is an alternative way of surgical staging of low-risk uterine cancer. Considering the frequency of complications and hospitalization time, a minimally invasive technique is superior to an open surgery.

Keywords: sentinel lymph node, uterine cancer

24. APPLICATIONS OF ARTIFICIAL INTELLIGENCE TO DERMATOLOGY

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BACKGROUND: Artificial intelligence (AI) has contributed to dramatic progress in medicine via convergence of the availability of large data sets and graphics-specific computer hardware. Global healthcare augmented reality market is anticipated to quadruple from 2020 to 2025. Dermatologists are expected to encounter such technologies to a greater extent due to the visual focus of the field, which is associated with opportunities and challenges. **AIM:** Aim of this research is to inspire future medical professionals to understand the basic features of AI for effective utilization in clinical practice, collaborating with experts in AI research, and playing an active role in policy making to ensure patient safety. **METHODS:** Research databases of PubMed, Central and Google Scholar are searched with the keywords AI, deep learning, virtual reality, augmented reality, dermatology. Results are grouped and analysed in compliance with the fields of application, current challenges and points for potential growth, educational and medicolegal context, as well as interpreted and illustrated accordingly. **RESULTS:** Deep learning tools produce higher diagnostic consistency and accuracy, and provide an opportunity for earlier diagnosis, treatment, and improved access to dermatologic care. Most prevailing applications analyze and classify images differentiating between benign and malignant skin lesions and measuring precise wound boundaries, distinguishing the types of tissue involved. In addition, other dermatologic tools such as risk assessment calculators, allergen exposure and gene expression profiling are becoming increasingly available. **CONCLUSION:** AI technologies outperform physicians under certain conditions and promise substantial development for future dermatological care. Nevertheless, there are crucial limitations pertaining to these advancements such as selection bias, generalizability and standardization predicaments, lacking holistic approach and insufficiency of the black box rationale. In an attempt to overcome these obstacles, beyond the most prevailing current research consisting of in silico studies, it is necessary to arrange further research prospectively validated in real-world clinical settings with the contribution of dermatologists.

Keywords: artificial intelligence, augmented reality, virtual reality, innovation, dermatology.

25. SIGNIFICANCE OF DIAGNOSTIC MODALITY PET/CT IN PATIENTS WITH DIFFERENTIATED THYROID CARCINOMA

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BACKGROUND: Positron emission tomography/computed tomography (PET/CT) is a valuable imaging technique which is an important tool in oncology. While PET reveals the metabolic abnormalities, CT is used to locate the anatomical abnormalities, so combined functional and anatomical imaging techniques can improve the ability to detect thyroid recurrence/metastases. **AIM:** The aim is to evaluate significance of diagnostic modality PET/CT in patients with differentiated thyroid carcinoma (DTC). **METHODS:** We are reviewing available literature and published studies (database PubMed). We used methods of analysis of 7 pivotal studies. **RESULTS:** Studies are showing that PET/CT is significant for early detection and monitoring and follow up of patients with DTC. PET/CT has the ability to identify cases of recurrence / metastasis of the DTC after thyroidectomy where are elevated thyroglobulin (TG) and negative Iodine 131 whole-body scanning (WBS) Patients in stage 3 and 4 are at higher risk of recurrence and metastasis. A positive fluorine-18-fluorodeoxyglucose (F18 FDG) PET / CT is also a good tool for poorly differentiated thyroid cancer, because the level of FDG uptake shows the process of dedifferentiation. Therefore, this method can serve as an early predictor for therapeutic management. Not only that, it can change the patient's current aspect of the treatment. For example, radioiodine (RAI) treatment is usually given after thyroidectomy, however if these cells are poorly differentiated iodine cannot enter it and kill the cancer cell. Based on this, we can use PET/CT as one of the decision tools to make treatment decisions. Otherwise, the exclusion of this treatment was based on clinical manifestations which in this case may mean disease progression. **CONCLUSION:** PET / CT can be considered in the case of radioiodine – negative DTC patient with elevated and rising TG.

Keywords: PET/CT, differentiated thyroid carcinoma, metastasis, treatment

26. PATIENT WITH MULTIPLE NEUROENDOCRINE TUMORS WITH POSSIBLE MULTIPLE ENDOCRINE NEOPLASIA TYPE 1 SYNDROME-CASE REPORT

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INTRODUCTION: Neuroendocrine tumors (NETs) are neoplasms of neuroendocrine system mostly located in gastroenteropancreatic tract. All NETs can be classified in two main groups: functioning or non-functioning NETs. Multiple endocrine neoplasia type 1 (MEN1) syndrome is characterized by a trias: parathyroid and pituitary adenomas with NETs. Incidence of MEN1 syndrome is 0,25% and the prevalence is 2/100 000 capita. **CASE DESCRIPTION:** We present the case of 33 year-old female patient with DM type 1, sideropenic anemia, Hashimoto thyroiditis, pituitary microadenoma and C677T mutation of MTHFR gene. In 2018, esophagogastroduodenoscopy procedure showed a gastric polypoid formation that turned out to be a NET (Grade 1; Ki-67<20%; synaptophysin positive). Two years later, a new polyp was found, that once again was a NET (Grade 1; Ki-67<5%; Chromogranin A (ChA) and synaptophysin positive). Whole body PET/CT Ga⁶⁸ DOTA-TATE scan showed malignant soft tissue lesion located in fatty planes adjacent to stomach that was a metastasis of NET in omental lymph node. Because of oval hypoechoic area found on thyroid ultrasound, fine needle aspiration (FNA) was indicated and it couldn't confirm either follicular hyperplasia of parathyroid gland or a metastasis of NET (ChA negative, CD56+ positive). Serum chromogranin levels were always higher than normal. After third recidive, it is concluded that therapy with octreotide is needed. In few months, after second parathyroid biopsy, it'll be known if it's MEN 1 syndrome or metastasized neuroendocrine tumor. **DISCUSSION:** In regards of producing active substance or not, NETs elicit symptoms of carcionoid syndrome that our patient didn't show. Constant high levels of chromogranin would correlate with tumor burden and bad prognosis. **CONCLUSION:** The diagnostic and therapeutic approach has to be multidisciplinary with laboratory, imaging and endoscopic procedures to

determine NETs. NETs can be discovered with their mitotic activity, Ki-67 index, synaptophysin and ChA markers. Chromogranin is recommended as general serum marker for NETs.

Keywords: Neuroendocrine tumors, MEN 1 syndrome, chromogranin A

27. BECOMING A SURGEON: WHAT DRIVES MEDICAL STUDENTS' CAREER CHOICES?

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BACKGROUND: The interest of medical students in surgical career is constantly declining. In the face of growing demand for surgical procedures it is essential to find the reasons responsible for that situation. **AIM:** The aim of the study was to identify the level of interest in surgery career among medical students and to identify factors influencing their decisions. **METHODS:** The anonymous questionnaire distributed electronically among students from 16 medical universities. Comparison between surgical and non-surgical groups was established using Mann-Whitney U and Chi-square tests. **RESULTS:** We surveyed 595 individuals (190 male and 405 female). 48% of students declared interest in surgical subspecialty as a career whereas 65% considered it before medical school. Surgery was chosen more frequently by male individuals at the beginning of studies (2nd year: 67% vs 33%, $p=0.002$; 3rd year: 62% vs 38%, $p=0.005$). Students interested in surgery tend to assess their predispositions as very good (21% vs 5%, $p<0.001$). Additionally, they were more likely to perform practical activities and be involved in research work (54% vs 44%, $p=0.026$). Significantly more students choosing surgery reported positive experience with surgical environment (83% vs 52%, $p<0.001$). Whilst most of students considered surgery at least interesting (59%), surgical education was described as insufficient (49%). Students who considered it poor were more likely to choose non-surgical specialty (1% vs 16%, $p<0.001$). The most appreciated features of surgery were: rapid effects of treatment (85%), job satisfaction (83%) and using manual skills (67%), while the most discouraging were standing position (82%), work-life balance (73%) and high stress level (66%). **CONCLUSION:** Most medical students are interested in pursuing a surgical specialty at some time during their education. However, being discouraged by surgical training quality and working conditions, they often resign from such career path.

Keywords: surgery, surgical education, risk factors, career choice, medical students

28. INTESTINAL OBSTRUCTION WITH TWO INTESTINAL NEOPLASMS

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INTRODUCTION: In geriatric patients, mechanical bowel obstruction is one of the most common reasons for hospital presentation and in 50% of cases, the reason for emergency surgery. Mechanical intestinal obstruction is most often caused by colorectal cancer, intestinal herniation or intra-abdominal adhesions. The clinical presentation of a patient with intestinal obstruction consists of symptoms such as emesis and nausea, colicky pain and lack of bowel movement. Computer tomography and endoscopy serve as useful in locating intestinal obstruction. **CASE DESCRIPTION:** A case of an 85-year old man, admitted to a surgical department because of bowel obstruction. The patient shares symptoms such as: emesis, nausea, lack of bowel movement and oliguria. The research was extended by computed tomography with contrast, which showed a tumor in the recto-sigmoid area and distension of the caecum. Huge distension (up to 11-12 cm) and profuse vomiting required emergency surgery. The patient was qualified for laparotomy, during which two intestinal tumors were found: rectal tumor which closed the lumen of the intestine and a second tumor in the small intestine. A loop sigmoidostomy was made to decompress the intestines and excise the neoplastic lesion of the small intestine. The next stage was colonoscopy with biopsy, which showed a cauliflower rectal tumor covering the entire circumference of the intestine without the possibility of the endoscope to pass. The patient was qualified for another laparotomy, which was performed using the Hartmann method. **DISCUSSION:** A main impediment in these surgeries was the abnormal width of the patient rectum (12 cm) in

CT result. Additionally, the presence of two tumors in the intestinal is uncommon for the intestinal obstruction. **CONCLUSION:** Nowadays it is necessary to get as much preoperative data as possible with preoperative extensive diagnostics in order for the surgeon to be as little exposed to surprises as possible during the operation.

Keywords: colorectal cancer, ileus, intestinal obstruction

29. THE ROLE OF CYTOGENETIC METHODS IN THE DIAGNOSIS OF HAEMATOLOGICAL DISEASES

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BACKGROUND: Conventional cytogenetics by the use of standard karyotyping allows the study of numerical and structural chromosomal aberrations. Hematological malignancies include a number of cancer types that originate in the blood cells of the bone marrow or of the lymphatic system. In the diagnosis of hematological diseases, cytogenetic methods are used for the sake of diagnosis and prognosis. **AIM:** The aim of this study was to evaluate the role of cytogenetic methods in the diagnosis of hematological diseases. **METHODS:** We performed a statistical analysis of cytogenetic findings of 200 patients with various hematological diseases. All of the findings were made over a period of three years at the Center for Genetics at the Medical Faculty of the University of Sarajevo. **RESULTS:** Our results show that the use of conventional cytogenetic analysis is a good diagnostic method for 43% of our subjects (86/200 patients) in whom chromosomal aberrations were detected. **CONCLUSION:** Cytogenetics remains the most comprehensive method for assessing chromosomal abnormalities and is an important aid in the detection and diagnosis of hematological diseases. However, in clinical practice, conventional and molecular methods complement each other and should be performed simultaneously for optimal results.

Keywords: cytogenetics, chromosomal aberrations, diagnostics, hematological diseases

30. CASE REPORT: BALANCED TRANSLOCATIONS 46,XY, t(8;17)(p23;q11) IN BROTHERS WITH AZOOSPERMIA

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BACKGROUND: Reproductive failures include a wide variety of problems such as infertility, pregnancy loss, abnormal pregnancy, and birth defects. Infertility is one of the most significant human health problems of the reproductive years. The causes of infertility are diverse and numerous including non-genetic and genetic factors. **CASE DESCRIPTION:** A balanced translocation was found in two brothers diagnosed with azoospermia. The older brother's wife had one miscarriage and could no longer conceive. The younger brother and his wife, after being unable to conceive, did an IVF, which unfortunately failed. After the cytogenetic analysis was performed in both pairs, it was shown that the cause of their infertility was the same balanced translocation in the brothers. The females showed a normal (46, XX) karyotype whereas the males were found to carry balanced reciprocal translocation [46, XX, t(8;17)(p23;q11)]. **DISCUSSION:** The studies agree that the most common structural rearrangement is a translocation, found in about 5% of couples experiencing repeated losses. This is the first time that this translocation has been described in men with infertility. In the literature, this translocation was described twice, both time in women who had multiple miscarriages. **CONCLUSION:** Our study supports a correlation between balanced translocation and azoospermia. Therefore, patients with azoospermia and other reproductive problems should do cytogenetic analysis and genetic counseling, as this would allow them to have healthy offspring.

Key-words: balanced translocation, azoospermia, karyotype

31. MAXILLARY SINUS LIFT - TECHNIQUES, INDICATIONS AND CONTRAINDICATIONS

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BACKGROUND: Sinus lift is a procedure which, by subantral augmentation, by inserting a bone graft between the floor of the sinus and the sinus mucosa, provides the necessary amount of foundation for the installation of endosseous implants. **AIM:** This paper presents indications and contraindications, various sinus lift techniques, advantages and disadvantages of these techniques, and the complications that can occur due to this procedure through a systematic review of the literature. **METHODS:** Analysis of the available literature and articles, articles published within the databases of Google Scholar and PubMed, and on the topic of sinus lift, were reviewed. **RESULTS:** Literature research on the topic of sinus lift shows that this technique is a relatively simple procedure with good results. The degree of resorption of the alveolar bone directly affects the planning of the surgical technique of sinus augmentation and the application of the most suitable material for grafting. Allogeneic and autologous bone, alloplastic bone substitutes and a combination of these materials are used for sinus grafting. **CONCLUSION:** The sinus lift technique is widespread among clinicians, is very often practiced, and shows very good results, provided that the basic principles of the technique are strictly adhered to. The risks involved are minute, with possible postoperative complications which can be treated with medication and / or surgery.

Keywords: maxillary sinus, maxillary sinus augmentation, direct lateral window, sinus lift technique, dental implants

32. HEREDITARY HEMORRHAGIC TELANGIECTASIA (RENDU-OSLER-WEBER SYNDROME) RELATED TO IRON DEFICIENCY ANEMIA

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INTRODUCTION: Hereditary hemorrhagic telangiectasia (HHT) or Rendu-Osler-Weber syndrome is a rare genetic disorder with autosomal dominance, characterized by the typical pathological and clinical findings as telangiectasias and arteriovenous malformations. Epistaxis is often the first and leading manifestation. In this case will be presented a male patient with iron deficiency anemia as a result of multiple angiodysplastic injuries. **CASE DESCRIPTION:** A 78-year-old patient presented to the Department of Hematology, due to severe shortness of breath and fatigue, with worsening of the clinical picture in the past month, having had epistaxis episodes. Symptoms were followed by low hemoglobin level 69 g/L, serum iron 2 mol/L, ferritin 9 g/L and decreased levels of hematocrit 0.2 L/L, demonstrating iron deficiency anemia. During the physical exam, we noticed telangiectasia throughout his face, ears and hands. Computed tomographic scan showed hypodense liver and spleen structures that were described as telangiectasias. Next, endoscopy was performed. The results indicated multiple gastric and duodenal angiodysplasias with recent bleeding. Therapy approach included catheter embolization, proton pump inhibitors, oral iron supplementation and red blood cell transfusion. **DISCUSSION:** Data from the personal history of our patient revealed episodes of repeated periodic palpitations, a fatigue, dizziness and severe shortness of breath. Recidivant epistaxis episodes, resulting from telangiectasia of the nasal mucosa, up to 90% during infancy, are usually misdiagnosed. This condition led to hypoxemia, dyspnea and especially iron deficiency anemia as a result of intermittent gastrointestinal bleeding, caused by angiodysplasia lesions. Gastrointestinal angiodysplasias occurs in 11-40% of the patients and are more commonly situated in the stomach or duodenum than in the colon. **CONCLUSION:** To conclude, clinical manifestations of this disease are often under-recognized so it is crucial to perform correct diagnosis to prevent systemic complications. We emphasise awareness-raising in the clinical management and improvement of quality of life for those patients.

Keywords: angiodysplasia; epistaxis; iron deficiency anemia; telangiectasia

33. RESULTS OF SPLENIC ARTERY ENDOVASCULAR EMBOLIZATION IN PATIENTS WITH TRAUMATIC SPLEEN RUPTURE

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INTRODUCTION: Splenic artery embolization (SAE) is a common treatment of low-grade traumatic splenic rupture (TSR) (I-II), whereas in hemodynamically unstable patients or high-grade TSR (III-V) open surgery is preferred. **AIM:** To compile reasons of TSR in Latvia. To evaluate injury grade (IG) distribution in patients receiving SAE and to analyze association between splenic IG and changes of blood analysis before/after SAE. **MATERIALS:** In this single centre, retrospective case control study patients with TSR treated by SAE between 2014 and 2020 were included. IG was assessed with *American Association for Surgery of Trauma (AAST)* scale. Blood sample analysis performed on admission and 1st, 4th, 7th, 10th hospitalization days. Data analyzed by IBM SPSS program. Statistical significant confidence level of 90 % was chosen ($p < 0.01$). **RESULTS:** 20 patients were included in this study: 5 (25%) female and 15 (75%) male. Mean age was 45.30 (SD ± 17.35 , range 23- 88). In 50% of TSR polytraumatic event registered, fall from height-35%, forensic trauma-15%. According to AAST scale: 5% (n=1) had I IG, 15% (n=3) - II IG, 45% (n=9) - III IG, 35% (n=7) - IV IG. SAE was performed mean 2,6 days after admission (range 0-5 days). Patients with IV IG had the highest rate of progressive anemia ($p < 0.01$) thus requiring SAE. 7 (35%) of all patients received erythrocyte mass transfusion. Highest trombocytosis level and increased post-treatment inflammatory activity was found on 7th day after SAE in III IG. One patient developed splenomegaly followed by splenectomy; no other cases of significant complications requiring laparotomy after SAE were found. **CONCLUSION:** The most common reason of TSR in Latvia is polytraumatic event. SAE can be used in both low-grade and high-grade TSR with minor rate of complications. Further studies are necessary to compare postoperative results of SAE versus open surgery in patients with equal TSR grades.

Keywords: trauma, splenic artery, embolization

34. A CASE REPORT OF GIANT LEFT VENTRICULAR THROMBUS IN PATIENT WITH ULCERATIVE COLITIS

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INTRODUCTION: Giant intracardial thrombosis is a rare condition usually connected with hypercoagulable state. Its incidence is very low in young population with normal systolic function. Ulcerative colitis is a form of inflammatory bowel disease (IBD) which targets predominantly the gastrointestinal tract. Cardiovascular manifestations are mostly considered immune-related. Among others, patients have increased risk endomyocardial fibrosis (EM) which is a form of restrictive cardiomyopathy of unknown etiology. **CASE DESCRIPTION:** A 36-year-old male patient previously diagnosed with ulcerative colitis presented with chest discomfort and fever. Cardiac enzymes were elevated and electrocardiography showed negative T-wave in precordial leads V3-6. Echocardiography revealed normal systolic function of the left ventricle with gentle hypokinesia of septal part, without "strain" signs for ischemia and showed the suspected thrombi. Coronarography showed normal epicardial artery. CT showed three masses up to 2 cm in diameter. MRI confirmed mild apex hypokinesia but presented a single 22x8 mm triangular thrombus. Therefore, MRI proved to be more precise. Fibrotic changes in the apex endocardium suggested possible endomyocardial fibrosis. Patient was identified as MTHFR heterozygous for C677T and homozygous A1298C variant indicating higher risk for blood clots. He was treated with β -blockers, antibiotics and initially with Heparin and then with Warfarin. During the hospitalization patient developed an embolus in popliteal artery, threatened with embolectomy. **DISCUSSION:** Cases of intracardial thrombosis in young population are rarely described in literature. They are often associated with pre-existing hypercoagulable state or cardiac disease. In this case endomyocardial fibrosis damaged heart wall making it susceptible to thrombus formation. Furthermore, MTHFR mutations resulted in higher risk for clotting as well. **CONCLUSION:** In rare cases with multiple risk factors combined, such as endomyocardial fibrosis and inherited MTHFR mutations, giant ventricular thrombus may be formed

in patients with normal systolic function. It is crucial to start prompt treatment to prevent further thrombus growth and possible embolic events.

Keywords: left ventricular thrombus, ulcerative colitis, endomyocardial fibrosis, MTHFR mutations

35. DIFFERENCES BETWEEN NON-OPERATIVE AND OPERATIVE TREATMENT OF PROXIMAL HUMERAL FRACTURES IN ELDERLY PATIENTS

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BACKGROUND: Proximal humeral fractures (PHF) are fractures of the proximal third of the humerus. These fractures commonly occur in older age adults, mostly over age of 60. Treatment options for PHF are conservative and surgical. While conservative approach is approved for non-displaced PHF, approach for comminuted and displaced fractures is still to be determined. **AIM:** The aim of this study is to provide information about comparison of conservative and operative treatment. **METHODS:** This study is based on literature review of studies comparing operative and non-operative treatment, performed in January 2021, with a focus on effectiveness of both types of treatment in older patients. **RESULTS:** The review included 6 randomized clinical trials (RCTs) and one meta-analysis which involved 1208 patients with mean age of 69,91 years. Majority of patients were women (f: 948, m: 260). 503 patients were treated surgically while 565 received conservative treatment. There is no shown statistically significant difference between groups operative and non-operative treatment. Previous studies showed no statistical difference between conservative and operative treatment in elderly patients in a time range from 6 months to 5 years. Studies from 1997, 2001 and 2009 showed no statistical difference in functional ability between conservative and non-operative group. A study from 2019 showed no statistical difference between 2 groups consisting of 44 patients each treated conservatively and operatively. **CONCLUSION:** Studies so far show that non-operative treatment for PHF can be as effective as operative treatment. Considering complications connected with operative treatment and emotional stress we should start to consider non-operative treatment as a primary treatment. Studies with bigger test groups are needed to determine if there are any statistical differences between the two approaches. If the non-operative treatment should be proven more beneficial the new protocol for assessing and treating PHF in elderly patients should be constructed.

Keywords: proximal humeral fracture, conservative treatment, surgery

36. TREATMENT OF A PATIENT WITH LATE PRESENTING SEVERE BILATERAL CLEFT LIP AND PALATE

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INTRODUCTION: Of all congenital anomalies of the oral cavity, one of the most severe from an aesthetic, functional and sociological point of view is the cleft lip and soft palate. This phenomenon occurs due to disorders of embryonic development during the first three months of intrauterine life. **CASE DESCRIPTION:** Male patient, 9 years old, from a very remote mountain area of East Turkey, presented with a severe bilateral cleft lip and palate. Neglected due to socioeconomic and geographical reasons. Non syndromic, otherwise healthy, speech is disordered; low intelligibility, eating and drinking well. During the examination wide cleft lip and palate, severely protruded premaxilla and dento maxillary development is in normal range compared to his peers. Laboratory and radiology otherwise nonspecific. Two stage surgical closure, first stage lip closure along with projected premaxillary setback and the second stage total palate closure along with radical veloplasty. Full recovery without any complications. Patient gone back home 3 months later, doing better socially and speech is much more understandable. **CONCLUSION:** Services and treatment can vary depending on the severity of the cleft; the child's age and needs; and the presence of associated syndromes or other birth defects, or both. The surgical approach to each child is individual, but the main goal is to achieve anatomical muscle reconstruction, also to ensure normal breathing, swallowing and speech, as well as to prevent hearing damage.

Keywords: cleft, defect, lip, palate, veloplasty

37. LIVER TRANSPLANTATION AFTER COMPLICATED CHRONIC HEPATITIS B, FOLLOWED BY COVID-19

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INTRODUCTION: We present a case of a 75-year old male with chronic, HBeAg negative hepatitis B who developed complications of chronic liver disease, despite the long-term antiviral therapy and undetectable HBV DNA, and underwent orthotopic liver transplantation (OLT). Afterwards, patient got mild COVID-19 and recovered. **CASE DESCRIPTION:** The patient was diagnosed with chronic hepatitis B in 2009, presenting with compensated liver cirrhosis (Child Pugh score 6). The antiviral treatment with lamivudine was started and switched to tenofovir disoproxil fumarate in 2013 achieving complete HBV DNA suppression ever since. In 2019 he presented with symptoms of a first stage encephalopathy, was hospitalized and underwent diagnostic workup. MSCT of the abdomen showed a solitary hypervascular area (3 cm) which was later diagnosed as hepatocellular carcinoma meeting Milan criteria for liver transplantation. He underwent 2 cycles of transarterial chemoembolization and OLT afterwards. Patient is under immunosuppression, takes prophylactic therapy for PCP and CMV and has continued with tenofovir. One month after OLT patient was diagnosed with mild COVID-19 and fully recovered. **DISCUSSION:** This is a rare case of a patient in a good physical condition despite consecutive severe diseases and operative procedures. Liver transplantation solved both of his chronic hepatitis complications; liver failure and hepatocellular carcinoma. It is also one of the rare reported cases of COVID-19 in liver transplant patients. Although this patient has fully recovered, reported mortality rate of transplanted immunosuppressed patients with COVID-19 is up to 30%. **CONCLUSION:** Chronic hepatitis B is a progressive disease with oncogenic potential. One fourth of those with chronic hepatitis B develop cirrhosis, liver failure or cancer, which demand liver transplantation. Those who undergo transplantation, need constant monitoring and therapy for HBV as well as immunosuppressive and prophylactic therapy. Because of immunosuppressive therapy, patients are often more susceptible to infectious diseases, such as COVID-19 and therefore special precaution is needed.

Keywords: COVID-19, hepatitis B, liver transplantation

38. A RARE CASE OF COLLET-SICARD SYNDROME SECONDARY TO BOERHAAVE'S SYNDROME

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INTRODUCTION: We report a case of a patient presenting with Boerhaave's syndrome who developed a rare neurological complication, Collet-Sicard syndrome. **CASE DESCRIPTION:** A 30-year-old male presented with a two-day history of acute onset, severe abdominal pain, and vomiting. On admission, he was pyrexial and tachycardic. A CT of the chest, abdomen, and pelvis showed air in the mediastinum and upper abdomen as well as considerable mediastinitis extending into the neck. CT with gastrografin showed extravasation of contrast into the mediastinum, indicating an oesophageal perforation. The patient was diagnosed with Boerhaave's syndrome and admitted to the ITU. The patient then underwent a diagnostic laparoscopy with washout and drain placement, followed by an OGD with insertion of a fully covered oesophageal stent. The stent was removed after two weeks but the patient had residual dysphagia related to neuromuscular palatal and tongue dysmotility. **DISCUSSION:** The patient was diagnosed with Collet-Sicard syndrome, a very rare condition involving unilateral palsy of the lower cranial nerves. In this patient, it was likely caused by mediastinitis that extended to the internal jugular foramen and led to temporary paralysis of cranial nerves IX, X, XI, and XII. Eventually, control of the perforation led to the patient regaining normal neurological function. Known causes of Collet-Sicard syndrome include various tumours, traumatic events, and inflammatory processes. However, we believe this to be the first case highlighting that Collet-Sicard syndrome can arise as a complication of an oesophageal perforation and its treatment. **CONCLUSION:** Clinicians should consider this possible complication when managing patients with oesophageal perforations.

Keywords: Boerhaave's syndrome, Collet-Sicard syndrome, cranial nerve dysfunction, oesophageal perforation

39. HICCUPS: PSYCHOSOMATIC SYMPTOM, ATYPICAL SYMPTOM OF COVID-19 INFECTION OR SIDE EFFECT OF DEXAMETHASONE – CASE REPORT DORA HERCEG¹

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INTRODUCTION: As the coronavirus pandemic continues to ravage worldwide, new data shows a multitude of symptoms that were not reported previously. Persistent hiccups were also reported as an unusual COVID-19 symptom as a first case published in American Journal of Emergency Medicine. Hiccups are involuntary spastic contractions of the diaphragm and intercostal muscles followed by the rapid closing of the glottis and, generally, a self-limited disorder. **CASE DESCRIPTION:** A 68-year-old male with a past medical history of obesity, hypertension and stroke had COVID-19 infection. He was febrile to 38.6 °C and mildly tachycardic with a heart rate of 110 beats per minute. He was placed on contact and airborne isolation and started on 500 mg paracetamol and 10 mg dexamethasone twice daily. Symptomatic care was continued and the patient was emotionally altered and anxious due to the disease. Two days after starting therapy he started to have persistent hiccups. **DISCUSSION:** In this case, the question of the cause of hiccups arises. Is it an atypical symptom of COVID-19 infection, a side effect of dexamethasone, or is it a psychosomatic symptom due to the patient's strong anxiety and fear related to the infectious disease. The patient did not respond to conventional clomipramine therapy. However, the patient responded well to treatment with the atypical antipsychotic sulpiride with continued dexamethasone and paracetamol therapy. Regardless of what caused the hiccups, the antipsychotic sulpiride proved to be the drug of choice. It is a low-potent atypical antipsychotic which acts as a neurovegetative stabilizer when applied in low doses in the range of 50-200 mg. **CONCLUSION:** Psychosomatic disorder should be considered in the underlying cause of intractable hiccups. Antipsychotic therapy can be considered for patients with intractable hiccups refractory to conventional therapy.

Keywords: antipsychotics, corticosteroids, COVID-19 infection, hiccups

40. PALLIATIVE AND SUPPORTIVE THERAPY FOR PATIENT WITH CANCER OF UNKNOWN PRIMARY - CASE REPORT

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INTRODUCTION: Cancer of unknown primary (CUP) is a clinico-pathological syndrome characterized by a histologically proven metastatic cancer without a clinically found primary site of origin. In 2017., 604 newly diagnosed patients with CUP accounted for 2.4% of all newly diagnosed cancer patients in Croatia. Of these, patients with squamous cell carcinoma accounted for about 5-8%. **CASE DESCRIPTION:** A 53-year-old male presented with a large cervical mass (10x15cm) on the left side of the neck. After the examination by ENT specialist, MSCT imaging revealed an extensive conglomerate of cervical lymph node masses, infiltrating the surrounding tissue and with foci of necrosis. A cytological needle aspiration was performed and a metastatic squamous cell carcinoma was identified. Even after a detailed clinical and radiological investigation, a primary origin of cancer could not be identified. The patient was in a good overall clinical condition but had lost 20kg in the past 3 months due to the inability to eat solid food as a result of the tumor expansion. For this reason, nasogastric tube was inserted and nutritional support was introduced. Palliative radiotherapy (RT) with 39Gy divided in 13 fractions was performed. **DISCUSSION:** RT was used as a palliative therapy for this patient. Other palliative treatment modalities include surgery and/or chemotherapy. Multimodal approach represents the best treatment modality for patients with CUP. However, combined therapy is associated with enhanced mucosal toxicity; loss of 8 to 10 percent of body weight is common, even with early nutritional support. Immunonutrition refers to enteral formulas that are supplemented with L-arginine, RNA nucleotides, and omega-3 fatty acids. RT combined with immunonutrition seems like a promising approach for CUP patients. **CONCLUSION:** RT combined with immunonutrition was beneficial for this patient. However, decisions still need to be undertaken on a case-by-case basis.

Keywords: cancer of unknown primary, head and neck tumor, immunonutrition, radiotherapy

41. PRESENTATION OF A YOUNG PATIENT WITH EAR FULLNESS AND TINNITUS DUE TO A RARE TUMOR

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INTRODUCTION: We present a case of a young female patient (19 years old), who experienced ear fullness and tinnitus regarding her right ear which were present for one year. **CASE DESCRIPTION:** The patient reported unilateral ear fullness and tinnitus in the last year. She had no other medical or family history. The pure tone audiometry showed normal hearing on the left while on the right ear hearing was normal in lower frequencies and sensorineural hearing loss was present at 4kHz of 90 dB. Tympanometry showed no abnormalities. Otoscopy discovered red discoloration under the eardrum. MR imaging of the head was done earlier and showed no abnormalities. Due to the clinical image and because the symptoms did not abate, another MR image was performed, but this time MR of the temporal bone with contrast. A formation dimensions 8x5 mm in middle ear was discovered. Surgical procedure was indicated. It included exploration and extirpation of the tumor. **DISCUSSION:** Middle ear adenoma is a rare benign tumor that develops from the epithelial mucosa. It can occur at any age with no age predilection. Furthermore, it has no specific signs or symptoms, making the diagnosis difficult. It is necessary to perform PHD and immunohistochemical tests for the confirmation of the diagnosis, after the suspicion of the disease was set based on the clinical findings, audiometry and imaging (CT, MR). The differential diagnosis to cholesteatoma and other tumors (schwannoma, meningioma) is important due to the mode of treatment. **CONCLUSION:** Adenomas of the middle ear are rare. Since the clinical presentation is not specific, the diagnosis is challenging and even microscopic examination and immunohistochemistry sometimes do not give the clear diagnosis. Surgical exploration and extirpation is the treatment choice and regular follow-up including clinical examination and MR imaging are recommended.

Keywords: impaired hearing, tinnitus, adenoma

42. NEUROLOGIC SIGNS AND SYMPTOMS IN PATIENTS POSITIVE FOR COVID-19

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BACKGROUND: Infectious disease, caused by the most recent strain of coronavirus, SARS-CoV-2, first appeared on 31st of December, 2019., in Wuhan, China. By March 2020 it had spread over the globe. Various symptoms have been associated with it, including neurologic. **AIM:** To examine frequency of neurologic symptoms during the COVID-19 infection; and to create statistics for B&H. **METHODS:** By using online questionnaire we have collected data necessary for the statistics. Prior to answering questions, examinees had been well-informed about the project and had been given the chance to ask questions. Informed consent has been obtained. Research has excluded juveniles. Project has been approved by Bioethical committee of SSST. **RESULTS:** Research has included 155 examinees; 128 women (82.6%) and 27 men (17.4%). Majority of the examinees (36.8%) were of age range 31-44. The most common first symptoms were: fever (59.4%), body aches (51.6%), headache (49%), generalized weakness (48.4%), cough (26.5%), loss of taste (ageusia, 11.6%), loss of smell (anosmia, 22.6%) or loss of both (59.4%). For the majority of respondents (72.3%), the symptoms of COVID-19 had persisted for 1-5 days before the infection has been confirmed by the PCR test, and in 3.2% of respondents the symptoms had persisted for more than 15 days. During the infection, other neurologic symptoms appeared. Disorders of concentration were noted in 62% of examinees, dizziness in 54.2%, confusion in 52.9%, discoordination in 34.1%. **CONCLUSION:** This statistic has confirmed increased frequency of neurologic symptoms in patients positive for COVID-19 in our population. Some other studies have shown the same and suggest that SARS-CoV-2 can reach the central nervous system and peripheral nervous system most likely from the bloodstream or olfactory pathway. For the particular mechanism and more detailed data, further research is required.

Keywords: COVID-19, neurologic signs and symptoms, SARS-CoV-2

43. PULMONARY THROMBOSIS/EMBOLISM IN A PATIENT WITH CORONAVIRUS DISEASE-2019 (COVID-19)

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INTRODUCTION: Several reports have described significant procoagulant events, including pulmonary embolism (PE) in patients with coronavirus disease-2019 (COVID-19). **CASE DESCRIPTION:** A 61-year-old female, RT PCR positive for SARS-CoV-2 was admitted to the University Hospital for Infectious Diseases „Dr. Fran Mihaljević“ Zagreb for fever and nonproductive cough lasting for 14 days. In the last 2-3 days she complained of shortness of breath and vomiting. Her medical history was unremarkable. On admission, the clinical examination showed altered general health status, dyspnea, tachypnea and low an O₂ saturation in hemoglobin (SaO₂) of 86%. The pathological findings of the laboratory tests consisted of slight C-reactive protein (49.3 mg/L) elevation and increased plasma level of d-dimer (>4.45 mg/L). Chest radiograph revealed bilateral interstitial infiltrates. Multi-slice computer tomography (MSCT) pulmonary angiography revealed multiple larger postcontrast filling defects in the distal portion of the right main pulmonary artery, right interlobar artery, right upper lobe and middle lobe segmental branches. Smaller filling defects were seen in the left main pulmonary artery as well as upper and lower lobe segmental branches. Postcontrast filling defects are probably consistent with large vessel pulmonary embolism and distal pulmonary microvascular occlusion. In the pulmonary “parenchymal” window, subpleural “ground glass” and “crazy paving” opacities are seen in all pulmonary segments, bilaterally. Parenchymal consolidations are present bilaterally in the posterior segments of lower lobes. **DISCUSSION:** We found out in our study that patient with COVID-19, without risk for developing PE, are more susceptible to get PE during the second and third week of the disease. Clinical deterioration with elevated value of CRP and D-dimer suggests possible PE and requires urgent MSCT pulmonary angiography to confirm or exclude PE. **CONCLUSION:** Our study suggests that COVID-19 patient, without risk factors, can develop acute PE during the second and third week of the disease due to procoagulant effect of SARS-CoV-2.

Keywords: Covid-19, pulmonary embolism, MSCT pulmonary angiography

44. UNUSUAL CASE OF FACIAL NERVE NEUROMA AND FACIAL REANIMATION AFTER REMOVAL

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INTRODUCTION: We present a case of a 38-year-old male with unilateral facial palsy persisting after treating acute otitis media. **CASE DESCRIPTION:** A 38-year-old male patient was admitted to our department for the treatment of unilateral acute facial palsy. For 10 days he had been treated in another hospital for acute otitis media with parenteral antibiotic therapy but the facial palsy persisted. This was the second time in 5 years he had facial palsy caused by otitis media. The first time it caused a slight sensorineural hearing loss which was still present. Otoscopy showed macerated ear canal and eardrum. Peripheral facial palsy was graded 4/6 on the House-Brackmann scale. Myringotomy was immediately performed, unknown mass was noticed in the middle ear. MSCT and MR imaging suggested cholesteatoma. Tympanoplasty was performed, no cholesteatoma was found, but inflamed mucosa and unknown tissue in projection of the facial nerve. Pathohistological diagnosis was schwannoma. In the next surgical procedure the tumor was removed from the internal auditory canal to the mastoid. Facial reanimation was performed using anastomosis of the distal part of the facial nerve with the masseteric nerve. **DISCUSSION:** Facial nerve neuromas are uncommon benign neoplasms of Schwann cells. They compose 0.8% of all temporal bone tumors. Depending on the localization, which can be anywhere along its pathway, they can cause different symptoms including facial palsy, dizziness, hearing loss, tinnitus and taste disorder. The most common approaches for reconstruction are direct facial nerve repair with or without grafting, nerve transfer, cross-facial nerve grafting, and muscle transfer. **CONCLUSION:** Facial nerve neuromas are rare tumors. They can be treated surgically or using gamma knife and are followed-up using MR imaging. Facial nerve reconstruction after removal of the tumor should be performed.

Keywords: facial palsy, facial reanimation, neuroma

45. NON MELANOMA SKIN CANCER IN HEART TRANSPLANT PATIENT

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INTRODUCTION: Nonmelanoma skin cancers (NMSC) are the most frequent malignancies in solid organ transplant recipients. Most common type of NMSC in these patients are squamous cell carcinoma (SCC) and they tend to be more aggressive compared to general population. **CASE DESCRIPTION:** A 71-year-old Caucasian male was admitted to Department of Dermato-oncology with a crusty, scaly lesion which was located all throughout midscalp of his head, with the exception of the place where skin graft has previously been inserted. Before coming to our clinic, the patient has already undergone 3 surgical removals of SCC on his scalp. Surgical removal of the new lesion was no longer possible because of its size and localization so radiotherapy was suggested as the treatment of choice. 11 years prior to his first dermatological examination at our unit, the patient has had a heart transplant. Because of that, he has been undertaking continuous immunosuppressive therapy (Cyclosporine 2x150mg, Prednisone 10mg and Azathioprine 2x10mg daily). Biopsies were taken from three different locations on the lesion and pathohistological analysis confirmed the diagnosis of SCC. The whole area affected by SCC was successfully treated by superficial x-ray therapy (SXRT) with a total dose of 60 Gy. The primary lesion healed adequately, but in the following year five more SCCs occurred throughout the patient's head and body and all of them were removed surgically. **DISCUSSION:** Patients after heart transplantation are at higher risk of developing skin cancer in comparison to other transplant patients. They occur because chronic immunosuppression can lead to decreased immune-mediated tumour surveillance. Surgery is usually first line-therapy for SCC, but in our patient, radiotherapy was administered because, after three surgical removals, SCC relapsed and spread throughout the scalp. **CONCLUSION:** Management of NMSC in organ-transplant recipients should focus on aggressive treatment of established malignancies, regular full-skin examination, educating post-transplant patients, and prophylactic measures.

Keywords: non melanoma skin cancer, heart transplant, immunosuppressants, radiotherapy

46. THE ROLE OF MACHINE LEARNING IN CONSTRUCTION OF PREECLAMPSIA PREDICTION MODELS

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BACKGROUND: Preeclampsia is a pregnancy-associated disorder with new-onset hypertension, which occurs most often after 20 weeks of gestation and frequently near term. The estimated prevalence is 2-8% and attributes to 16% of maternal deaths. Machine learning (ML) is a computer science discipline focused on algorithms that improve automatically through the experience without being explicitly programmed. **AIM:** Literature review of machine learning generated models for preeclampsia prediction. **METHODS:** The searches using a combination of "machine learning", "deep learning", "vector machine", and "preeclampsia" as topics were conducted through Web of Science, including all bases. The search yielded 39 results from which 9 were included in this paper. Only full-text articles that developed prediction models for preeclampsia were included. **RESULTS:** All of the reviewed studies established models for the prediction of preeclampsia. Studies included one prospective cohort, four retrospective cohort, two nested case-control, and two case-control studies, with sample sizes ranging 77-58276 patients. Smaller sample sizes limited the power of machine learning, as overfitting of a model could have occurred. Eight of nine studies divided data into training and test sets. Four studies constructed models using electronic health records, with the remaining five studies using novel concepts with urinary proteins, plasma metabolites, DNA microarray data, cell-free DNA, or circulating-RNA as their model-building data. The replicability of the four studies was questionable as protocols and data used for model construction are complex. The models examined accuracies of 72-100% with AUC ROC ranging from 0.57-0.964. One study examines conventional regression methods yielding a more accurate

preeclampsia prediction, being the only study with such results. **CONCLUSION:** Results of the reviewed studies indicate the need for reevaluation of the current risk assessment guidelines. Validation of models and the replication of studies on larger cohorts is needed, where machine learning would operate better. Novel biomarkers can also serve in further research into preeclampsia pathogenesis.

Keywords: preeclampsia, machine learning, prediction model

47. CEREBRAL DURAL ARTERIOVENOUS FISTULA: A CASE REPORT

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INTRODUCTION: We present a case of an older woman who developed symptomatic intracranial dural arteriovenous fistula following chronic transverse sinus thrombosis. **CASE DESCRIPTION:** A 73-year-old female patient was hospitalized in another regional hospital after experiencing an ischaemic stroke presented with dysphasia and confusion. Resolution of symptoms was observed during the hospital stay. MR showed no signs of acute ischemia. CTA and MRA were then performed, showing dural arteriovenous fistula (dAVF) of the left transverse sinus and the absence of the ipsilateral sigmoid sinus. After transfer to our Hospital, digital subtraction angiography (DSA) was performed for detailed characterization of the dAVF. Via the transarterial approach, an extensive dAVF of the left transverse sinus was visualized, vascularized predominantly by the left middle meningeal artery (MMA). Total occlusion of the left sigmoid sinus with the retrograde flow into the dilated and tortuous cortical veins was shown. The fistula site was reached through the MMA and two ampules of endovascular nonadhesive embolic agent were injected. Postembolization angiograms showed complete occlusion of the fistula. **DISCUSSION:** Intracranial dural arteriovenous fistulas are abnormal shunts between dural arteries and dural sinuses, cortical or meningeal veins. They are mostly idiopathic, although sinus thrombosis, previous trauma or craniotomy can trigger their formation. Symptomatology depends on the fistula site and pattern of venous drainage. Our patient had hypoperfusion symptoms of the left temporal and occipital lobe due to venous stasis and consequently reduced arteriovenous pressure gradient which caused less arterial blood to be delivered. Treatment-wise, the endovascular approach has become the mainstay in the past few decades. **CONCLUSION:** Cerebral dural arteriovenous fistulas are a complex pathology that requires comprehensive knowledge of anatomy, pathophysiology, pathology and neurology. It is essential to keep them in mind as they can cause impressive clinical presentations but could be treated successfully in most cases and reverse the clinical course.

Keywords: cerebral dural arteriovenous fistula, sinus thrombosis, endovascular treatment

48. ACUTE SOLAR MACULOPATHY – CASE REPORT

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INTRODUCTION: Acute solar maculopathy is a result of acute harmful photochemical effects of focused sunlight on the photoreceptors and retinal pigment. Risk factors for developing solar maculopathy include young age, clear intraocular lens, photosensitizing drugs and psychiatric diseases. Although solar maculopathy is an acute accident, it is interesting because of its acute changes and possible connections with chronic changes associated with permanent solar exposure and recently more frequent screen and technical light exposure (microscope, lasers, etc.). **CASE DESCRIPTION:** A 35-year-old woman presented with acute, bilateral vision loss after staring directly at the sun for several minutes in the Alps in summer, while performing solar yoga for the first time. On examination a day after, her visual acuity (VA) was 4/25 in both eyes, which caused her panic. A small, yellow-brown, round foveal lesion was identified in both fundi. Amsler grid testing revealed a bilateral central scotoma. Spectral-domain optical coherence tomography (SD-OCT) showed a bilateral foveolar cyst. Treatment was macular supplementation rich with beta carotenoids,

lutein, and zinc. At the three-month follow-up, the patient's VA was restored to 20/20; the retinal SD-OCT exam showed regular anatomy. **DISCUSSION:** SD-OCT exam macular cyst changes strictly followed the visual improvement of this patient. Restitutio ad integrum was the final SD-OCT finding. **CONCLUSION:** SD-OCT technique was shown as a great diagnostic tool in diagnosing, predicting and follow up for solar maculopathy damage and healing dynamics.

Keywords: optical coherence tomography, solar maculopathy, sunlight adverse effects

49. CANCER TREATMENT-INDUCED ARRHYTHMIA CASE REPORT

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INTRODUCTION: Atrial fibrillation (AF) is the most sustained supraventricular arrhythmia. Symptoms that can occur are palpitations, weakness, shortness of breath and pre-syncope. Cardiac conditions connected to the etiology of the AF are hypertension, congestive heart failure, rheumatic heart disease and ischemic heart disease. Non-cardiac conditions having a significant impact on the prevalence of the AF are hyperthyroidism, hypoxemia, alcohol intoxication and the use of some chemotherapeutics (anthracyclines, antimetabolites and antimicrotubule drugs). **CASE DESCRIPTION:** A 69-year old patient presented to the emergency room with tachycardia and high blood glucose levels (24.6 mmol/L). The patient was complaining on the pain in the right knee and oedema of both legs, without chest pain. Blood pressure was 130/70 mmHg, pulse 160bpm, SpO₂ 92%. From chronic treatment refers bisoprolol, pantoprazol, moxonidine. The data of history revealed adenocarcinoma (most likely originated from kidney), metastasis in bones, mediastinum, right hilar lymph nodes, arterial hypertension. Radiotherapy of the thoracic vertebrae (Th1-2), lumbar (L1) and left scapular area 40 days prior to admission was administered. Two weeks prior to admission patient underwent a first cycle of chemotherapy using vinblastine. The diagnosis of deep venous thrombosis was ruled out in hospital emergency ward. On admission to hospital, ECG analysis showed Atrial fibrillation of unknown time of origin (CV4). **DISCUSSION:** The patient was treated with radiotherapy and chemotherapy. Theoretically, both treatments can cause AF. In this case, the dose of radiation used for radiotherapy was too low to have an impact on AF. Considering that antimicrotubule drugs (in this case vinblastine) can affect heart conduction, cause T-wave changes, QTc interval prolongation. We conclude that vinblastine had an impact on newly diagnosed AF. **CONCLUSION:** To conclude, not enough studies have been made on this topic, therefore a connection between these entities is not defined. Hence, we are proposing a connection between treatment with vinblastine and AF.

Key words: arrhythmia, atrial fibrillation, oncology

50. COCHLEAR IMPLANTATION AFTER DEAFNESS CAUSED BY MENINGITIS

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INTRODUCTION: We are presenting a case of a 53-year-old female with deafness after Streptococcus pneumoniae meningitis. **CASE DESCRIPTION:** A 53-year-old female patient was admitted to our department for urgent cochlear implantation. 5 months ago, the patient had meningitis caused by S. pneumoniae. She was in a coma and was mechanically ventilated. After one month she became conscious but paraplegic and communication was very difficult. After three weeks of physical therapy, she could move but hemiplegia was still present. Pure tone audiometry showed sensorineural deafness. MRI of the head and temporal bone showed a high signal intensity in both cochleas but higher in the right cochlea, which is a sign of postinfectious fibrosis. Otoscopy was normal. We decided to perform an urgent cochlear implantation in the left ear, where were still signs of fluid inside the cochlea which indicated only partial fibrosis. Intraoperatively full insertion could not be performed due to fibrosis but partial insertion was performed. After activation of the cochlear implant, she showed significant improvement and after a month she could communicate. **DISCUSSION:** Meningitis, especially bacterial, can result in severe sensorineural hearing loss. Hearing loss can occur immediately or it can progress during the following weeks and months. After the acute stage, the inflammation may progress to fibrosis and ossification of the cochlea lumen. This can make

cochlear implant placement difficult or even impossible. **CONCLUSION:** Sensorineural deafness can occur after bacterial meningitis. It is important to perform an MRI scan of the temporal bone as soon as possible, before the complete fibrosis of the cochlea occurs. If the fibrosis is complete cochlear implantation is not possible.

Keywords: deafness, cochlear implant, meningitis

51. ENDOMETRIAL STROMAL SARCOMA MISTAKEN FOR TWIN PREGNANCY
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INTRODUCTION: Up to 10% of all uterine sarcomas are endometrial stromal sarcomas. Although it is mainly diagnosed in the age group of 40-50 years old, the number of cases reported in younger women seems to be increasing rapidly. ESSs classification is based on cell morphology and mitotic count into low-grade and high-grade tumors. **CASE DESCRIPTION:** A 27-year-old female presented to the Gynecology Outpatient Clinic due to massive uterine bleeding. Ultrasound examination showed extended endometrium with hypoechoic fluid. Abnormal twin pregnancy was diagnosed and patient was admitted to the hospital. β -hCG test was negative. During endometrial abrasion procedure suspicious mass of uterine was found. Assumed to be the stromal myoma. It was treated with GnRH agonist. Histopathological test was not clear due to scanty biopsy material. After three months of observation and hormonal therapy patient underwent a hysteroscopic removal of tumor. Histopathological examination revealed endometrial stromal sarcoma. Additional cytogenetic test was performed and YWHA-FAM22 gene fusion characteristic for high grade EES was found. After total abdominal hysterectomy with bilateral salpingo-oophorectomy patient underwent combined chemotherapy. **DISCUSSION:** It is challenge to diagnose ESS correctly. Clinical manifestation is nonspecific, with wide range of symptoms such as abnormal uterine bleeding, pelvic mass or abdominal pain. Well-prepared, representative biopsy material is necessary for correct diagnosis. Cytogenetic tests enable to distinguish low and high grade tumors. **CONCLUSION:** A prompt diagnosis and timely intervention are keys to success, especially in oncology cases. Hence, it is necessary to consider this diagnostic despite the nonspecific symptoms even in younger women.

Keywords: endometrial stromal sarcoma, myoma, pregnancy

52. WARTHIN LIKE VARIANT OF PAPILLARY THYROID CANCER. UNUSUAL FORM OF NEOPLASM: CASE REPORT

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INTRODUCTION: Papillary thyroid cancer (PTC) is a common form of thyroid cancer and accounts for 75-85% of all thyroid cancers. The Warthin-like variant of papillary carcinoma (WLPTC) is a rare and unusual form of thyroid cancer described in 1995 by Apel. This carcinoma resembles the Warthin tumor of the salivary glands. It has recognizable features of the papillary architecture with prominent lymphocytic stroma in fibro-vascular cores. WLPTC has similar or less aggressive clinical outcomes same as PTC. **CASE DESCRIPTION:** We present a case of WLPTC, located in the left thyroid lobe in a 57-year-old woman, with a history of diffuse multinodular goiter. Thyroid function test results showed marginal hypothyroidism. The patient was treated with 50 mg of levothyroxine-sodium. Thyroid ultrasound revealed roughly slurried echotexture. On both sides, multiple smaller hypoechoic nodules were detected. In the left lobe was present one large inhomogeneous hypoechoic nodule (28mm in diameter). Neck lymph nodes showed neither lymphadenopathy nor pathological changes. FNA cytopuncture results came back as "suspicious" for a diagnosis of papillary thyroid cancer. A total thyroidectomy was performed. The pathology report showed a circumscribed tumor with papillary architecture that looks like a Warthin-like variant of papillary carcinoma. **DISCUSSION:** Nine main histopathological variants of papillary thyroid cancer were described by WHO. The Warthin-like tumor was classified as the oncocytic variant. A distinct histological feature that differentiates WLPTC from other types or subtypes of thyroid cancer is lymphocytic stroma which may present as a hypoechoic part in the nodule on ultrasound. Some authors consider lymphocytic thyroiditis or Hashimoto thyroiditis as an indicator of a better prognosis. **CONCLUSION:** Age group, gender distribution, treatment

guidelines and good prognosis are the same for all variants of papillary thyroid carcinomas.

Keywords: thyroid carcinoma, papillary carcinoma, warthin-like

53. PAPILLOMATOUS NEVUS THAT MIMICS BASAL CELL CARCINOMA IN YOUNG LADY

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INTRODUCTION: Papilloma is caused by infection with the human papillomavirus (HPV). There is association of basal cell carcinoma(BCC) with HPV. Visual manifestations of BCC vary therefore early diagnosis is crucial for best disease-free outcomes. **CASE DESCRIPTION:** In December 2020 23-year-old woman presented with main complaint of shiny bump ~0,5 cm on the left cheek. Patient noted that first time she discovered nodule on her skin was in the summer 2020, but in October 2020 bump started to progress rapidly and appearance has changed (a crust appeared on the lesion, began to increase in size and irritated area appeared around the bump). Patient was referred to a surgeon, who made an excision of bump, due to it doubtful appearance- similar to basal cell carcinoma. Tissue was sent to patohistological examination. Patohistological conclusion: Lesion is made of squamous epithelial cells with focal papillomatous acanthosis, dyskeratosis, basal spongiosis and basal layer hyperchromatism. Morphological findings confirm solar type lentigo – benign keratinocyte proliferation with secondary chronic inflammation, that refutes basal cell carcinoma diagnosis. Post operative period was without complications, patient recovered well, wound healed with tiny scar. **DISCUSSION:** Diagnostics of basal cell carcinoma should be administered as soon as possible, if it allowed to grow, lesion can become dangerous and destroy surrounding structures. Due to basal cell carcinomas different visual manifestations it is very important to examine similar changes in the skin as in this case study. **CONCLUSION:** When evaluating bump-like lesions, patient's risk factors, history and progression rate must be taken into consideration. As BCC can mimic many of visual manifestations, early diagnosis and treatment is crucial.

Keywords: basal cell carcinoma, papilloma, skin cancer, BCC

54. METASTASIS OF RENAL CELL CARCINOMA 25 YEARS AFTER RADICAL NEPHRECTOMY

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INTRODUCTION: Metastatic pancreatic tumours are rare, accounting for 2-5% of all pancreatic malignancies. Renal cell carcinoma is the most common, even though only 1-2% of RCC metastasis occur there. Importantly, RCC metastasis can appear years after nephrectomy. Long term follow up is implemented in some centres, however according to ESMO guidelines there is still no evidence that this way of conduct is beneficial for patients. **CASE DESCRIPTION:** 81 years old male patient was admitted to the Gastroenterology Department for further diagnostics. Previously, he was hospitalized in a local hospital where a pancreatic tumour was found. Patient had a right nephrectomy done due to RCC in 1995. His medical history is complex, since he had as well thyroidectomy because of follicular adenoma and right-side hemicolectomy, again for the reason of neoplasia (adenocarcinoma). His main complaint was fatigue and he did not report any other symptoms. When it comes to laboratory results, GGT, creatinine and alkaline phosphatase were elevated. Abdominal ultrasound, MRI, CT and EUS were performed. Their consistent results show two lesions, one in the head of pancreas and another in its body. The rest of the body and the tail were atrophic. The common bile duct and the duct of Virsung were dilated. PET scan found neoplastic infiltrations in the pancreas and metastatic abdominal lymph nodes. Histopathology examination confirmed suspicion of late RCC metastasis to the pancreas. The patient was referred to the Oncology Department for further treatment. **DISCUSSION:** Metastasis is common in RCC, since 1/3 of patients have metastatic disease at the time of diagnosis and more develop them later, accounting for up to 50% cases. However, pancreas is a rare site. **CONCLUSION:** In our case, metastasis occurred 25 years after cancer treatment, which shows the importance of a patient's medical history in differential diagnosis.

Keywords: metastasis, RCC, tumor

55. TRANSVERSE COLON VOLVULUS IN A NEUROLOGICAL IMPAIRED GIRL

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INTRODUCTION: Transverse colon volvulus in children is a rare entity. It has been found 40 cases reported in the worldwide literature. It is presented with abdominal pain and vomiting, with a history of chronic constipation. Mental retardation can be predisposing factor for TCV. **CASE DESCRIPTION:** We present a case of transverse colon volvulus in a 14-year-old girl with mental retardation. On admission the patient presented with abdominal pain, vomiting and constipation that last 4-5 days. Vomiting was once a day. She was sub febrile up to 37.6 °C. Her abdominal examination revealed distended, tense, diffusely painful abdomen. Operative findings showed a 360-degree transverse colonic volvulus (TCV). After the reduction of volvulus, loop ileostomy was formed. The occlusion of the ileostomy and biopsy of the rectum were done on the 20th postoperative day. Biopsy showed the presence of ganglia cells. The patient was discharged 1 month after surgery. **DISCUSSION:** It is a great challenge to make an accurate diagnosis of transverse colon volvulus. Majority of cases are diagnosed intraoperatively. Transverse colon volvulus represents only 1.5% of LBV in children. Chronic constipation in neurologically impaired patients was a risk factor predisposing to volvulus. **CONCLUSION:** Pediatric patient with neurological conditions and mental retardation present an increased risk of colon transversum volvulus due to chronic obstruction.

Keywords: transverse colon, mental retardation, bowel obstruction, volvulus

56. CASE REPORT: ECTOPIC ACTH SECRETION IN A OLD FEMALE PATIENT WITH HIDDEN LUNG TUMOR

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INTRODUCTION: Ectopic adrenocorticotrophic hormone (ACTH) secretion was the first paraneoplastic endocrine syndrome described in the literature. The most common tumors associated with ectopic ACTH production are small cell lung cancer and atypical carcinoids. The localization of the source of ectopic ACTH can be problematic. **CASE DESCRIPTION:** A 76 years old woman who is a patient of Covid isolators of the Clinical Center of the University of Sarajevo at Podhrastovi, presented to the Endocrinology clinic because of uncontrolled hyperglycemia. A physical examination revealed mild hypertension, truncal obesity, hyperglycaemic and normokalaemic at the time of hospitalization. An endocrinological investigation, which was performed in the morning, showed that the patient's plasma cortisol was 325nmol/L and plasma ACTH 15.2pmol/L. CT scan of the lungs revealed a spot in the laterobasal segment of the right lung, with lymphadenopathy of the mediastinum. She was not deemed fit enough for nodule biopsy due to her breathing difficulties. Long active insulin has been very effective in controlling blood glucose. The clinical picture was so intense but with limited response to the conventional therapy. The patient was discharged to home treatment on hospital day 47 with the recommendation for biopsy. **DISCUSSION:** Localisation of the source of ectopic ACTH can be problematic. The lung is the most likely organ to harbor an ectopic source of ACTH, being the origin of over 45% of tumors followed by the thymus (11%) and pancreas (8%). As our case showed, it is necessary to suspect the disease at the initial view to improving the poor clinical outcome. The possibility of hypercortisolism caused by malignancy should be considered in a patient presenting with hypertension, diabetes, hypokalemia and metabolic alkalosis with a high cortisol level. **CONCLUSION:** Ectopic Cushing syndrome is a complicated medical problem especially when identifying the ectopic spot. The surgical treatment could be curative when the spot is determined.

Keywords: Cushing's syndrome, ectopic ACTH, case report

57. HIRSUTISM IN POSTMENOPAUSAL WOMEN - A DIAGNOSTIC CHALLENGE
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INTRODUCTION: Hirsutism in postmenopausal women, defined as an increase in the terminal hair growth, is a common medical presentation to physicians. Androgen excess is responsible for most cases. However, in clinical practice, we often observe a moderate relationship between the severity of hirsutism and androgen levels. Here we describe two patients from our Clinic with different underlying conditions and no correlation between serum androgen levels and the grade of hirsutism. **CASE DESCRIPTION:** Case 1: A 65-year-old woman was admitted to the Endocrinology Department with severe hirsutism (score 20 in The Ferriman-Gallwey scale) and adenoma of the left adrenal gland. The excessive hair growth and irregular menstrual cycles had begun in puberty. Case 2: A 62-year-old woman was referred because of a two-year history of the progressive development of mild hirsutism (score 8) and androgenetic alopecia. **DISCUSSION:** Case 1: The blood tests did not reveal elevated androgen levels. Ovarian tumour was ruled out and adenoma turned out to be non-functioning. Prediabetes was diagnosed based on OGTT results. Suspecting PCOS, spironolactone and metformin were administered. Case 2: The blood tests revealed severely increased testosterone levels (2,8 ng/ml; ref 0,1-0,7) as well as elevated urinary excretion of 17-ketosteroids (21,8 mg/24h; ref 2,2-7) which were not suppressed during dexamethasone suppression test. Prediabetes was diagnosed. Abdominal and pelvic CT was performed. In result, an adrenal tumour was excluded. Ultrasonography showed bilaterally enlarged ovaries with hyperchogenic stroma indicating hyperthecosis. **CONCLUSION:** Diagnosis of hirsutism in postmenopausal women may be challenging, especially when the laboratory findings do not correspond with clinical manifestations. Nevertheless, the development of hirsutism or alopecia should not be considered normal in postmenopausal women. It may be associated with androgen-secreting tumours or with benign conditions. To determine the actual diagnosis we should try to find the potential source of androgens - usually adrenals or ovaries and rule-out drug-related causes.

Keywords: endocrinology, hirsutism, gynaecology, alopecia, postmenopause

58. RITUXIMAB AS A TREATMENT OPTION FOR IMMUNE THROMBOCYTOPENIA

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INTRODUCTION: Immune thrombocytopenic purpura (ITP) is one of the most common hematological pediatric diseases. ITP is an autoimmune disease with detectable antibodies against several platelet surface structures leading to platelet destruction. Corticosteroids have been the starting therapy for the past 50 years. Other treatment options include intravenous immunoglobulin (IVIg), various immunosuppressants, thrombopoietin receptor agonists, splenectomy and biologic (rituximab). **CASE DESCRIPTION:** The patient whose case we present is a 16 year old girl. In June 2019 patient was admitted to Hematology department due to profuse vaginal bleeding and profound low platelet count ($6 \times 10^9 / L$). Tests confirmed antiplatelet antibodies and ITP was diagnosed. Treatment included blood derivatives, IVIg and corticosteroids. Since patient was resistant to given therapy, rituximab was successfully applied (standard regime weekly 375 mg/m² body weight). **DISCUSSION:** In typical cases of ITP in children treatment include corticosteroids or IVIg. In rare cases of ITP as in our patient biological therapy such as rituximab is a treatment option. It is a monoclonal antibody that interacts with CD20 receptor on the surface of B cell inducing B cell depletion. After four doses of rituximab, patient's platelet count reached a value of $259 \times 10^9 / L$. Patient completely responded to therapy. Monitored parameter was an increase in platelet count. Within the one-year-follow-up, no relapse was recorded. **CONCLUSION:** Rituximab is valuable treatment option for children with ITP refractory to steroids and IVIg. One year follow-up showed no bleeding, and the findings of a complete blood count have been in reference values.

Keywords: immune thrombocytopenic purpura, rituximab, children

59. A CASE OF PLEURAL EFFUSION DUE TO PNEUMONIA COMPLICATIONS DURING COVID-19 PANDEMIC IN A 23-YEAR-OLD PATIENT NEGATIVE FOR SARS-CoV-2 ANTIBODIES

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INTRODUCTION: Pleural effusions are a frequent finding in patients with bacterial pneumonia and this complication is called a parapneumonic pleural effusion. Pathogenetically, it can occur as a complication of bacterial pneumonia, chest injury or fluid accumulation, viral infections, systemic infections or pneumonia. Although a number of these patients can be treated with antibiotics alone, there is a part of these cases that can present with severe complications. The correct diagnosis can only be made with a detailed history, physical examination, chest radiography and diagnostic thoracentesis. **CASE DESCRIPTION:** In this case we will present a 23-year-old medical student S.F. The patient stated that he had felt dull pain in his right shoulder and neck, light sweating at night and a temperature up to 37.2°C for about ten days before the initial examination. After 6 days, the pain had spread into his right scapular and right pectoral region. The patient started to feel intense pain in the aforementioned regions, he started sweating more intensely and his temperature was 38.4°C. Three different COVID tests showed the patient was negative for SARS-CoV-2 antibodies. **DISCUSSION:** Pleural infections have a high mortality rate and knowing if a pleural effusion will progress into a complicated effusion or empyema is very difficult. An early diagnosis is important because an effective antibiotic regimen can be commenced as soon as possible. In this case, a thoracic surgeon was consulted and we were advised not to do a diagnostic thoracentesis due to the small amount of liquid. We proceeded with empirical antibiotics with regular ultrasound and X-ray monitoring. **CONCLUSION:** The differential diagnosis of a parapneumonic effusion is very diverse. The entire world is fighting the coronavirus pandemic, and thinking of this virus as the cause of this pathology is logical. However, a bacterial infection demands a prompt response and antibiotics should be given early.

Keywords: COVID19, pleural effusion, pneumonia, lung ultrasound

60. NONINSULINOMA PANCREATOGENOUS HYPOGLYCEMIA - A RARE CASE OF NESIDIOLASTOSIS IN AN ADULT WITH TYPE 2 DIABETES MELLITUS

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INTRODUCTION: Nesidioblastosis (NB) is a rare cause of hyperfunctioning pancreatic β cells, usually associated with excessive insulin secretion and hypoglycemia. This condition results in a disease called noninsulinoma pancreatogenous hypoglycemia (NIPH) which incidence in adults is estimated at 0.5–15% of organic hyperinsulinemias. **CASE DESCRIPTION:** 53-year-old patient was admitted to our Clinic to diagnose the cause of hypoglycemic episodes. According to the patient, in the previous 3–4 months he has experienced symptomatic events of hypoglycaemia, documented by glucometer measurements, which made it impossible to continue his professional career. He was previously diagnosed with type 2 diabetes mellitus and treated with metformin for approximately 2 years. Neither anamnesis nor physical examination were significant. Initially, the decision to discontinue the treatment was made. Unfortunately, the symptoms did not improve. Therefore, a supervised 72 hour fast was performed twice, which ended in symptomatic hypoglycaemia. Laboratory tests showed the following results - glucose level at 41 mg/dl, insulin at 12 mIU/L and C-peptide at 3 ng/ml. Additionally, imaging studies revealed no abnormalities. Eventually, pancreatic biopsy was performed, presenting spilled proliferation of abnormal β cells. Hence, NIPH in course of nesidioblastosis was diagnosed. After distal resection of the tail and part of the pancreatic shaft, a significant clinical improvement was noticed. The patient was discharged in general good condition with a satisfactory glycemic control. **DISCUSSION:** In this report we present rather unusual case of adult onset of NB resulted in NIPH. The golden diagnostic standard is histopathological examination and the treatment entails surgical intervention. An important diagnostic clue may be the fact that postbariatric surgery patients and families affected by this disease are more likely to develop nesidioblastosis. **CONCLUSION:** NIPH is a rare condition, which requires thorough diagnosis as

clinical manifestations vary widely. Thus, after excluding the most common causes of hypoglycemia, we should remember about nesidioblastosis.

Keywords: noninsulinoma pancreatogenous hypoglycemia, NIPH, nesidioblastosis

61. MANAGING TUBERCULOUS MENINGITIS IN CHILDREN: CASE REPORT

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INTRODUCTION: Tuberculous meningitis is a highly devastating central nervous system disease caused by *Mycobacterium tuberculosis*. Most children present with symptoms such as headache, fever, vomiting and irritability. Children with more advanced disease may have signs of meningeal irritation, raised ICP, cranial nerve palsies, neurological deficits, altered sensorium and movement disorders. Mortality rates of this condition in children vary between 5 and 23 per cent. **CASE DESCRIPTION:** We report a case of 2-year old toddler presenting with a convulsive seizure, foaming at the mouth and unresponsiveness at the time of admission. 2 weeks prior the patient had a thoraco-cervical rash and a 38 °C axillary temperature. MRI on admission showed arachnoidal infra and supratentorial changes typical for meningeal tuberculosis. The patient was successfully treated with Isoniazid, Rifampin, Ethambutol and Pyrazinamide for 2 weeks before being released with a dual antibiotic treatment. **DISCUSSION:** The peak incidence of Tuberculous meningitis occurs in younger children who are less than five years of age, and most children present with late-stage disease. Early diagnosis and treatment of Tuberculous meningitis plays a vital role in determining the disease outcome. This is challenging given that, early symptoms are often non-specific, so high degree of suspicion is required. The various methods used in the diagnosis of Tuberculous meningitis include cerebrospinal fluid cellular and biochemical analysis, microbiological confirmation and other testing such as neuroimaging. **CONCLUSION:** Managing tuberculous meningitis in children, especially in cases with other tuberculosis hotspots in the body is still a difficult task. This is proven by high mortality rates and complications of this disease. However, new diagnosis and treatment protocols with the collaborative knowledge of previous cases bring new hope for the future of these patients.

Keywords: child, tuberculous meningitis, central nervous system

62. TEMPOROMANDIBULAR JOINT DYSFUNCTION AS A RARE MANIFESTATION OF LYME DISEASE

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BACKGROUND: Lyme disease is a tick-borne disease caused by Gram-negative *Borrelia* spirochetes. The clinical manifestations of Lyme borreliosis are varied, they can affect many systems and organs. Clinical presentation of the first stage of the disease is erythema migrans, which often goes unrecognized. The joint manifestation primarily involves the knee joint, but all joints can be affected. The diagnosis is made on the basis of the clinical picture, serological tests are an auxiliary criterion and their negative result does not exclude infection. Temporomandibular joint disorders (TMD) occur in up to 15% of the general population, most often in people aged 20–40 and twice as often in women. They are characterized by disturbed joint function with limited range of motion or joint pain, pain in chewing muscles and nerve endings that innervate the muscles of the head and neck. In 40% they disappear spontaneously. **AIM:** The aim of the study is to draw attention to the rare manifestation of Lyme borreliosis in the form of TMD. **METHODS:** After an analysis of the PubMed database using the temporomandibular with borrelia or borreliosis or Lyme keywords assuming its presence in the titles or abstracts of the publications found thirty eight papers were obtained. After reviewing the literature, five publications relating to temporomandibular joint disorders caused by *B. burgdorferi* infection were qualified for the paper. **RESULTS:** TMD are a rare manifestation of Lyme disease as indicated by the low number of available literature on this issue. **CONCLUSIONS:** In the case of TMD, considering the ineffectiveness of the current treatment and the epidemiological situation at the patient's

place of residence, *B. burgdorferi* infection should be considered as an etiological factor. Only early diagnosis and thus the start of antibiotic therapy is effective and prevents the long-term consequences of Lyme disease.

Key words: temporomandibular, borrelia, borreliosis, Lyme

63. CLINICAL CHARACTERISTICS, DIAGNOSIS AND MANAGEMENT OF OCULAR SARCOIDOSIS

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BACKGROUND: Sarcoidosis is a multisystem autoimmune disease presenting with the formation of noncaseating granulomas in different tissues, including the eye. Any structure of the eye and its adnexal tissues can be affected. Ophthalmic manifestations can be isolated, or presenting simultaneously with other organ involvement. A wide range of treatment modalities is available for the management and long-term control of the inflammatory process in ocular sarcoidosis which is critical in order to prevent complications and visual impairment. **AIM:** To review the current knowledge on the diagnostic and therapeutic approach of ocular sarcoidosis, with emphasis on the importance of clinical examination, multidisciplinary approach and the role of new therapeutic modalities. **METHODS:** A thorough systematic literature search was performed in electronic databases using a combination of "ocular sarcoidosis", "sarcoid uveitis", "diagnosis of ocular sarcoidosis", "ocular sarcoidosis AND immunosuppression/biologic agents" search items. We reviewed multicentre studies, large retrospective cohorts and reviews published between 1990 and 2021. Only studies in English were included. **RESULTS:** Uveitis is the most common feature of ocular sarcoidosis, followed by conjunctival and lacrimal gland involvement. Complications, such as cataract and glaucoma, may be a result of the inflammatory process or adverse effects from therapy. Diagnosis is based on medical history, clinical, imaging and laboratory examinations, whereas histological confirmation from the affected tissue(s) remains the gold standard. Topical and systemic corticosteroids are used as the first-line therapy for sarcoid uveitis. Biological and immunosuppressive agents serve as an advanced solution in the management of chronic and persistent cases. **CONCLUSION:** The diagnostic and therapeutic modalities for ocular sarcoidosis have evolved over time, providing a more efficient approach. However, the management of disease still remains challenging in several cases. Setting an early diagnosis and starting appropriate therapy are crucial for preventing complications. Future studies should aim to develop more sensitive biomarkers and more effective and safe immunomodulatory agents.

Keywords: ocular sarcoidosis, granuloma, uveitis, biopsy, immunosuppression

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Basic Science

01. **THE GENDER'S GAP RUPTURE USING BIOCHEMICAL METABOLIC WAYS**
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INTRODUCTION: The Medicine, since the first woman's entry, has been breaking paradigms about feminine inferiority. This situation shows itself by the feminization of this career and also by significant achievements, which had female contribution to medical breakthrough. Although the numerical growth, it's worth mentioning that this trajectory is still surrounded by sexist thoughts. Therefore, the active methodology through discussions, when being focused to analysis, for example, biochemical metabolic pathways and healthy aspects, jointly with social context questions, allows the approach of women's society situation. **METHODS:** It's an exploratory research, analytical and descriptive, with quantitative and qualitative approaches. Since the application to the São Francisco University (USF), afterwards the approval by the Research Ethics Committee, CAAE 17683219.6.0000.5514, an analysis of USF's data has been made, as well as an interview with a doctor, after the signature of the Enlightened and Free Consent Term. Furthermore, the promotion of the discussion about gender equality on Medical School was made, on Biochemistry curriculum, from three Interdisciplinary Clinical Cases (Active Methodology) - which refers to important scientist's achievements and to the gender gap still existent - applied to USF students. **RESULTS:** Due to the obtained data, ensures a crescent and meaningful feminization of medicine at USF from 2003 to 2018 and the interview was able to illustrate that picture effectively, as well to show the barriers still faced. Verifies, likewise, the effectiveness of the clinical cases application, for evidentiate womanish discoveries and promote do biochemical learning. It's important to point that the students concluded, with 100% of affirmative answers, that the Active Learning Methodology favored their schooling. **CONCLUSION:** The growth of womanly participation in medical is evidenced with the evolution on female graduation number, however, this pathway still represents obstacles to enlarge their actuation and acceptance on medical environment. In this scenario, the active methodology is effective in talking about social context matters, which strengthen the ethical e morality , as well as the resolution of problemas, like the metabolic ways.

Keywords: Medicine, Feminization, Medical Education, Sexism, Women.

02. **EVALUATION OF CYTOKINES PRODUCTION BY PERIPHERAL BLOOD MONONUCLEAR CELLS FROM ASTHMA PATIENTS.**
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Asthma is a chronic inflammatory disease characterized by inflammation of the airways, leading to its obstruction. In general, this pathology can be classified into two main types, based on the immunopathological mechanisms that lead to its development: atopic asthma and non-atopic asthma. Atopic asthma is characterized by a type I hypersensitivity reaction initiated by exposure to allergens that induce the differentiation of Th2 and Th9 lymphocytes (producing IL-4, IL-5, IL-13, and IL-9), IgE production, sensitization and activation of mast cells and subsequent chemoattraction

and activation of eosinophils. Nonatopic asthma is usually associated with exposure to lung infections and pollutants that initiate a chronic inflammatory process with the active participation of Th17 and Th22 lymphocytes (IL-17 and IL-22 producers) and the activation and chemoattraction of neutrophils. Therefore, the different cytokines produced by T lymphocytes play a fundamental role in the development of asthma and, hence, a better understanding of their participation in the evolution of the disease can help in the therapy adopted. In this study, we aimed to evaluate the production of cytokines by peripheral blood mononuclear cells (PBMCs) present in the circulation of patients with asthma. PBMCs were isolated from the blood of patients with asthma or from healthy subjects by centrifugation in ficoll-hypaque gradient. PBMCs were maintained without stimulation or stimulated with LPS (lipopolysaccharide) or PHA (phytohemagglutinin), and the cytokines (IL-17, IL-22, IFN-gamma, IL-4 and IL-9) present in the culture supernatants were quantified by ELISA. Our results showed that PBMCs from patients with asthma produce higher amounts of IL-4, IL9, IL-22 and IL-17, and less IFN-gamma after stimulation when compared to control subjects' cells. In conclusion, our results corroborate previous data from the literature and indicate that these cytokines may play an important role in the development of asthma.

Keywords: asthma, peripheral blood mononuclear cells, cytokines.

03. **THE MASCULINIZATION OF MEDICAL RESEARCH AND ITS IMPACTS ON WOMEN'S HEALTH**
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INTRODUCTION: In the past century, biomedical researches were carried out only with male samples, under the justification that there was a necessity for a subject that would avoid costs with hormonal variations and possible pregnancies. In this logic, the obstinacy to reduce losses contributed to the consolidation of the unfortunate "bikini medicine", which limited women's health to reproductive issues. Nevertheless, this conceptualization has changed in the last decade, the latent masculinization of medical science still represents a serious impediment in a search of gender and sex equity at this context. **OBJECTIVES:** Conduct an integrative review on the masculinization of medical research and its impacts on women's health. **METHODS:** It is characterized as an integrative literature review. The research was carried out using the descriptors "biomedical research" and "sex specific" and "women's health", as well as "scientific research", "sex differences" and "women health", in the PubMed and Scientific Electronic Library Online databases (SciELO), in a twenty years' range (2000-2020), between 10th and 21st June, 2020. Fourteen studies were selected. **RESULTS:** Through content analysis, it is possible to evidence an increasing number of clinical and pre-clinical studies that demonstrate the genetic differences between men and women in addition to reproductive factors, covering physiological, metabolic and behavioral determinants. However, despite the evidence and the growing discussion on this topic, there is still a major omission of sex reports in medical research. It was still possible to delimit that this originates from the historical male domination in the scientific community, besides the search for a homogeneous study model. This reality perpetuates the latent predominance of the exclusive use of men as sample subjects, implying the underrepresentation of women in studies whose results are applied to both sexes. **CONCLUSION:** The masculinization of medical research has repercussions, therefore, in the production of limited

knowledge about the biological characteristics inherent to women, as well as in the risk of exposure of this group to therapies whose organic responses are unknown. Indeed, these circumstances reflect an irresponsible medical science and with conclusive answers impossible to generalize.

Keywords: sex and gender, medical research, medical science, women's health.

04. **PREVALENCE OF ANATOMICAL VARIATIONS IN THE ARTERIAL CIRCLE OF THE BRAIN (WILLIS POLYGON) AND POSSIBLE CLINICAL REPERCUSSIONS: INTEGRATIVE REVIEW**

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INTRODUCTION: The cerebral arterial circle, usually called "Circle of Willis", is an anastomotic arterial circulation located internally in the base of the skull and the encephalon which supplies the brain and adjacent structures. The normal Circle of Willis mitigates the process of ischemia through collateral circulation in cases of obstructions or stenosis. However its frequent anatomic variations can reflect clinically in those pathological cases. **OBJECTIVE:** Search the prevalence of the anatomic variations in the cerebral arterial circle and its possible clinical repercussions. **METHODS:** Integrative review of literature made in the data bases *PubMed*, *Scielo* and *Lilacs*. The vocabulary thesaurus used were "circle of willis" and "anatomic variation", indexed in the *Medical Subject Heading*, using the boolean operator "AND" to cross the terms with each other and its matching in portuguese and spanish. Were included only studies made between 2010 and 2020 and discarded case report or non-human studies. **RESULTS:** Twenty one articles were found, but only eleven were selected. The analysis of the studies allowed to agroup them regarding the prevalence of the location of the anatomic variations and the clinic repercussions associated to the variations. Were identified variations in both parts of the Circle of Willis, anterior and posterior, with predominance of the findings in the posterior portion. In this, hypoplastic and absence of the posterior communicating artery or posterior fetal-type artery were common findings. Some variations can interfere in circulation's symmetry, in diagnosis and in the treatment of strokes, besides potentially be a risk factor for aneurysm. **CONCLUSIONS:** Although they don't have obligatorily pathological character, the knowledge of the cerebral artery circle variations may help in the diagnosis and treatment of cerebrovascular's diseases.

Keywords: Willis polygon, Anatomical variation, Abnormalities

Gynecology and Obstetrics

05. **USE OF COMBINED HORMONAL CONTRACEPTIVES IN FEMALE UNIVERSITY STUDENTS WITH MIGRAINE WITH AURA: A NEGLECTED PROBLEM?**

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INTRODUCTION: The combined hormonal contraceptives are the most used contraceptive methods nowadays, however, even with low estrogenic dosage, they cause several effects in the body. One of the most prevalent is the risk of cardiovascular disease, an important cause of morbidity and mortality in the world. **OBJECTIVE:** The objective of this study was to evaluate the percentage of female university students that make use of oral combined contraceptives, with the presence of migraine with aura. **METHODS:** Descriptive study, cross-sectional and observational, in which the epidemiological profile and possible cardiovascular risk factors were assessed in a group of university students over 18 years old, through an online questionnaire. Age, year of graduation, ethnicity, habits (use of alcohol, smoking and illicit drugs) and the practice of physical activities, were asked. Besides that, the presence of comorbidities was analyzed and the use of contraceptive was questioned. The study was approved by the Ethics Committee in Santo André-São Paulo, Brazil. (CAAE: 26262619.8.0000.0082) **RESULTS:** 257 participants were included, with the average age of 20, 89,1% of participants are white, 73,5% ingest alcoholic drinks, 33,8% are smokers or former smokers, 15,5% use some type of illicit drug and 33,8% are sedentary. The majority (40%) is in the first year of graduation. The most used contraceptive method was the combined

hormonal contraceptive (69,6%). 56,64% used the morning-after pill, in the last year. 47 participants (18,28%) used contraceptives combined in the presence of migraine with aura, classified as level 4 of contraindication by World Health Organization (WHO) due to the risk of brain stroke. There was no statistical difference between the year of graduation, use of alcohol or drugs and the use of morning-after pill or hormonal contraceptives. **CONCLUSION:** In this study was identified a high percentage of female university students that use oral combined contraceptives, in the presence of migraine with aura, contraindication level 4 of WHO. It is important to advise people about the risks of this method at the presence of migraine and suggest alternative methods, in order to avoid cardiovascular disease like brain stroke.

Keywords: migraine with Aura, Hormonal Contraception, Headache.

06. **RED MEAT, DAIRY AND GLUTEN INTAKE AND ITS EFFECTS ON THE MANAGEMENT OF PELVIC PAIN FROM ENDOMETRIOSIS: A LITERATURE REVIEW**

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Endometriosis is a multifactorial, chronic, benign and estrogen-dependent pathology in which ectopic endometrial tissue is implanted outside the uterine cavity, being the most common sites the retrocervical region and the ovaries, leading to inflammation, pain and other consequences, such as conceiving issues and infertility. These lesions seem to be related to the menstrual cycle as the endometriotic tissue proliferation is triggered by estrogen levels response. Also, the endometriotic cells produce more estrogen, which enhances their own development. Typical symptoms of this pathology are dysmenorrhoea, dyspareunia and chronic pelvic pain. The leading diagnostic method is laparoscopic inspection with histological confirmation after biopsy concomitant with the clinical history. Such condition requires a multidisciplinary approach and the treatment is usually hormonal, aiming at suppressing and delaying its recurrence and progression. Given its still unclear physiopathology, an effective treatment is yet under study, and the ones currently available are mainly focused at mitigating the symptoms such as pelvic pain, rather than its prevention. Besides, current studies have tried to associate diet to endometriosis risk and pelvic pain relief. Therefore, this work is aimed at reviewing the literature related to diet and endometriosis symptoms, with emphasis on red meat, dairy products and gluten from the national and international bibliography, between 2010 and 2020, using online databases Scielo and Google Scholar and applying the keywords endometriosis, diet therapy, red meat, dairy products and gluten-free diet. The adoption of a diet therapy focused on monitoring the intake of those foods might be able to offer better results in symptoms related to endometriosis and even improving life quality in patients affected by this disease, working as an adjuvant treatment for this multifactorial pathology. Through a recent cohort study it was possible to infer the association between red meat intake and the risk of endometriosis in a dose-response way, in which it was concluded that a diet based on reducing red meat intake could improve symptoms such as pelvic pain. The red meat intake could be responsible for: oxidative stress and DNA damage; catalysis of endogenous formation of N-nitro carcinogenic compounds; metabolic dysfunctions and increased endogenous estrogen levels, although the true pathophysiology of red meat intake remains unclear. In addition, the intake of dairy products seems to contribute to the relief of symptoms, and may reduce levels of oxidative and inflammatory stress markers. Finally, a gluten-free diet may be linked to inhibition of immunomodulation and inflammatory response mediated by a cytokine network. Besides this inflammatory factor, recent research suggests that one of the manifestations of sensitivity to gluten is sensory ganglionopathy, evidencing the hypothesis that the mechanisms of nociceptive pain are involved with endometriosis related pelvic pain. In conclusion, diet therapy performs an important role in the management of painful symptoms of endometriosis, considering that the implementation of a diet focused on reducing the intake of red meat and gluten and increasing the consumption of dairy products may be linked to a decrease in observed levels of inflammatory response. However, further experimental studies are needed to fully understand its role.

Keywords: Endometriosis, diet therapy, red meat, dairy products, gluten-free diet.

07. **LATE CONCEPTION: SOCIAL ASPECTS AND FREQUENT COMPLICATIONS IN WOMEN'S HEALTH**

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Pregnancy in women over 34 years old is considered late and can be related to several causes, such as the women's desire to invest in their education and career; the postponement of marriage; the high divorce rates with subsequent new marriages and insecurities of the couple. In addition, another cause is the pro-women movements, which have been assisting women in achieving their rights and freedom since the mid-1970s. Furthermore, other reasons for this situation can also be related to the large and diverse availability of contraceptive methods, to the advances in assisted reproduction technology and to the increase in health concern. Such obstetric phenomenon may cause problems for the mother-fetus binomial. We selected the subject matter of this study in order to identify the current causes of late pregnancy - after 35 years old - and to relate them to complications due to physiological and organic changes in female body. Through the MedLine and Lilacs databases, we were able to make a bibliographic survey from 2015 to 2020 by using the keywords "female conception", "maternal age" and "pregnancy complications". Initially, six articles were selected, however, one of them was excluded after reading because it did not properly refer to the subject of late conception and its social aspects and complications. With regard to maternal complications, they are: spontaneous abortion in the first trimester, premature rupture of ovular membranes, hypertensive disorders of pregnancy and gestational diabetes. Hypertension is the most frequent complication in pregnancy, which occurs mainly in older women. These risks, such as changes in oocyte quality and structure, changes in ovulation frequency and efficiency; decrease in sexual function; higher chances of pre-existing chronic diseases and deterioration of the myometrial function, derive from the ovarian senility. Thus, the reproductive history may become progressively more complicated as pregnant woman age increases. In conclusion, these findings suggest that, since pregnancy in women over 35 years old is increasing in Brazil, its complications are equally increasing.

Keywords: late conception, pregnancy complications, maternal age.

08. **URINARY TRACT MORPHOFUNCTIONAL CHANGES IN PRUNE BELLY SYNDROME: THEORIES AND THE RELATION WITH FETAL PROGNOSIS**

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INTRODUCTION: *Prune Belly Syndrome (PBS)* is a congenital disorder of unknown etiology, characterized by a classic triad: urinary tract abnormalities, cryptorchidism and abdominal muscle deficiency. Due to varying degrees of impairment, treatment and prognosis are defined by the clinical individuality of each patient. **METHODS:** It was analyzed 18 articles available on different digital platforms, such as Pubmed, Medline, Scielo, Lilacs, Google Scholar, Capes and BIREME. The analyzed papers were dated from 2005 to 2019 and written in Portuguese, English or Spanish. The articles selection criteria were the following descriptors: Prune Belly Syndrome; Urinary Tract/abnormalities; Prognosis, in addition to the analysis of the references that are applicable. **RESULTS:** Urinary tract modifications resulting from PBS includes malformations of the kidneys, ureters, bladder and urethra. These alterations vary from microscopic changes, which concern the histological constitution, to macroscopic ones, such as bladder distention. Several theories have been proposed to clarify the etiopathogenesis of this syndrome. Among the most cited, it was highlighted: the obstructive theory that attributes the syndrome origin to a physical blockage of the urethra. This makes the bladder wall hypertrophied, since it requires a greater contraction force to overcome the obstacle, which causes high pressure inside the bladder, with vesico-ureteral reflux and consequent hydronephrosis. Each structural change is closely related to specific etiological theories and may be responsible for several other consequences. Such comorbidities associated with kidney problems do not only concern the fetus survival, but also the quality of life over time. **CONCLUSIONS:** The literature analysis showed that there are still many uncertainties involving the syndrome etiology, which is a major factor for the correct therapeutic approach and determination of fetal prognosis.

Therefore, greater academic effort is necessary to clarify the remaining uncertainties about the syndrome.

Keywords: Prune Belly Syndrome, Urinary Tract/abnormalities, Prognosis.

09. **POSTPARTUM DEPRESSION: IMPORTANCE OF EARLY DIAGNOSIS**

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OBJECTIVE: To identify the main risk and protective factors for postpartum depression, the importance of early diagnosis and the main consequences of this pathology for maternal and child health. **METHODS:** This is an integrative literature review carried out in the databases LILAS, SCIELO, PUBMED, Google Scholar and Acervo Mais, with a sample of 9 articles from the last 5 years being selected. **RESULTS:** It is known that the puerperium is a period of high susceptibility for the development of depressive symptoms, and there are also risk factors that can aggravate the appearance of the condition, as well as protective factors. It is essential to emphasize that the mother's emotional state directly affects the child's psychosocial development, so it is very important that the condition is elucidated correctly and that the diagnosis is made early through the identification of these factors. **CONCLUSION:** Due to the similarity between the symptoms and the condition that occurs outside the puerperal period, the diagnosis becomes a challenge. Given the severity and frequency of the problem, it is crucial that the screening of these symptoms is done by a trained multidisciplinary team and that it becomes part of the routine of obstetric care.

Keywords: Postpartum depression, Maternal and Child Health, Risk Factors, Early Detection.

10. **UTERINE FIBROIDS- A LITERATURE REVIEW**

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Uterine fibroids, also called leiomyomas, are benign smooth muscle tumors that may cause pelvic pain, abnormal uterine bleeding and reproductive dysfunctions. The objective of this work was to review the epidemiological profile, pathophysiology, risk factors, symptoms and treatments of uterine fibroids. To carry out this review, we searched the databases PubMed, Scielo and Europe PMC, selected relevant references and performed a narrative synthesis. We found that the development of uterine fibroids is conditioned by some risk factors such as ethnicity, body weight, red meat consumption and tobacco smoking. Despite little understanding of the pathophysiology of uterine fibroids, it is known that there is a genetic predisposition, along with a permissive effect of estrogen and progesterone for the proliferation of leiomyoma cells. In addition to the hormonal fact, cytokines such as interleukin (IL)-1, IL-6, IL-11, IL-13, IL-15, interferon-gamma (IFN- γ) and TNF act in the development of uterine leiomyoma. In vivo and in vitro experiments expose a relationship between the β -catenin gene and the growth factor TGF β 3. The treatment of uterine leiomyomas involves different methods, both surgical, such as hysterectomy and myomectomy, and hormonal such as administration of gonadotropin-releasing hormone (GnRH) agonists or antagonists. Hormonal contraceptives do not treat specifically the fibroids, but they can help control abnormal uterine bleeding from the disease. More research must be carried out in order to seek a more effective treatment of this pathology, which is the main cause of morbidity among women of reproductive age.

Keywords: "uterine fibroids", "leiomyoma", "progesteron", "estrogen".

11. **RELATIONSHIP OF GESTATIONAL ANXIETY AND DEPRESSION IN FETAL DEVELOPMENT**

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INTRODUCTION: Pregnancy is a period marked by changes in the environment psychosocial and physical-chemical behavior of women, causing them to

experience disorders such as anxiety and depression during this phase. Its incidence and consequence quality of life of 15% to 20% of globally affected women, a literature review analyze a relationship between these pathologies and their impacts on fetal development. **OBJECTIVE:** Check if anxiety and depression affect fetal development during pregnancy as well as analyze its pathophysiological mechanisms and effects on the fetus. **METHODS:** Searches were performed on the databases SCIELO, Google Scholar, PUBMED and 18 studies have been selected in the Portuguese and English languages, since 2001-2019. **RESULTS:** Relationship was found between anxiety and depression, fetal development. This occurs through transmission through the placenta, maternal hormonal changes to the effect. Illustrated by low birth weight, childbirth premature growth restriction and marked stress. These effects can be because they alleviate symptoms of anxiety and depression, as women have greater tendency to use licit and illicit drugs. **CONCLUSION:** The increase in levels of anxiety and depression beyond the risk limit have direct implications for maternal and fetal health. It is emphasized the need for further studies on the subject, since it is precarious and that, through the intervention of the health team, these conditions can be minimized. Thus, it is possible to improve the pregnant woman's quality of life and fulfill.

Keywords: Depression, Anxiety, Pregnancy, Fetal Development.

12. IS CONSERVATIVE MANAGEMENT IN YOUNG WOMEN WITH CIN 2 SAFE?

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INTRODUCTION: Cervical cancer is an important problem public health and can be prevented by screening. It is known that the treatment of precursor lesions is an important medical resource to prevent the progression to cervical cancer. In young women, there is not consensus on the management of precursor lesions, especially cervical intraepithelial neoplasia grade 2 (CIN 2), due to the high regression rates and rarity of invasive carcinomas in this group, in addition to the possibility of unfavorable obstetric outcomes, as a result of excisional treatment. The conservative management was recently recommended as a therapeutic approach in these cases. **METHODS:** Retrospective longitudinal observational study which analysis patients with CIN 2 up to 30 years old at "Woman's Hospital Prof. Dr. José Aristodemo Pinotti" in Campinas, São Paulo, submitted to conservative management, between 2012 and 2017. Data were obtained through the medical registry of selected patients. The regression, persistence and progression rates, besides the regression probability curve (RPC) were evaluated. For descriptive statistical analysis of numerical variables, mean values, standard deviation, proportions and Mann-Whitney test were used. In the comparison of categorical variables, the tests used were the Chi-square or Fischer's Exact tests. For the analysis of the regression curves and their comparisons, Kaplan-Meier and long-rank method were used. The study of factors associated with regression was performed using Cox regression analysis, simple and multiple. The level of significance used for the analyzes was 5%. **RESULTS:** 65 patients were in agreement with the inclusion criteria. As to numerical variables, the mean age at diagnosis was 22.38 (SD: 4.22), while the mean age of onset sexual activity was 15.7 years (SD: 1.97). The average follow-up time for these patients was 17.98 months (SD: 9.84). Concerning the categorical variables, 66.15% of women were nulliparous, the smoking rate found was 14.06% and the use of hormonal contraceptives 61.5%. Considering the first 12 months of the follow-up, we could observe that 37 patients (56.9%) had two consecutive exams to support the regression, 20 (30.7%) had persistent lesions and in 8 patients (12.3%) there was progression. The final outcome is regression in 73.3% in women <25 years, while in patients ≥ 25 years old, the regression rate found was 50.0%. In young women until 30 years, the probabilities of regression of CIN 2, according the RPC was: 42.0% at 6 months, 63.6%, at 12 months, 76.1% at 24 months and 84.1% at 36 months. No categorical variable was associated with RPC ($P > 0.05$). **CONCLUSION:** We conclude that young patients, especially under 25 years, have significant CIN 2 regression rates, supporting the effectiveness of conservative management for these group.

Keywords: Cervical Neoplasia, Cervical Intraepithelial Neoplasia, Human Papillomavirus.

13. HOME BIRTH PLANNED FROM THE PERSPECTIVE OF A GROUP OF PROFESSIONALS FROM A TEACHING HOSPITAL

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OBJECTIVE: Understand the opinion of health professionals about planned home birth. **METHODS:** exploratory and qualitative study, conducted with 15 health professionals, including nurses, obstetricians and neonatologists from a teaching hospital. Data were collected through semi-structured interviews, recorded and transcribed audio. The Bardin Analysis was used for data analysis. **RESULTS:** the reports gave rise to two thematic categories: a) Home birth: a possibility, with criteria and b) Home birth: a mix of concepts, opinions and interpretations. **CONCLUSION:** although health professionals recognize the main eligibility criteria for planned home birth, it is clear that there is no clarity about the work process in home birth assistance, which generates opinions and impressions without adequate scientific basis.

Keywords: Women's Health, Obstetrics, Home Childbirth, Health Personnel.

14. REASONS AND EXPECTATIONS FOR CHANGING FROM CONTRACEPTIVE METHOD TO LARC METHODS

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INTRODUCTION: Long-acting reversible contraceptive (LARC) methods, include intrauterine devices (IUD) and implants, are the best option to reduce unplanned pregnancies. Women who choose LARCs reported complaints concerning previous contraceptive and/or refer expectations related to the new method, which are not always feasible. The objectives of our study were to evaluate the reasons reported by women who opted for a LARC for the first time and the expected benefits in relation to the new method. **METHODS:** We performed a retrospective study at the University of Campinas using database from previous research. We included women aged 18 to 49 years who sought the service and chose LARC for the first time between 2011 and 2018, and we distributed them in three categories: short-acting contraceptive use (SARC) or 150 mg of depot medroxyprogesterone acetate-DMPA or non-hormonal methods/condom. Sociodemographic; length of time using (months) the non-LARC method; LARC chosen (cooper intrauterine dispositive-IUD, levonorgestrel intrauterine system-LNG-IUS or ENG implant); and reasons cited for change, and expectations with the new method were the variables analyzed. We used Chi-square test and Cramer coefficient to compare categorical variables. The level of significance adopted for this study was 5%. **RESULTS:** We evaluated 1509 women, 57.8% SARC users, 27.7% non-hormonal methods users and 14.4% DMPA users. The age of women was 33.1 years (\pm SD 7.9 years, 95% CI), 0.9 (\pm SD 1.0; 95% CI) of number of children and 48.8 (\pm SD 55.4; 95% CI) length of time of use months. Of total, 50% reported collateral effects, 31.7% reported forgetfulness and 20.8% reported fear of pregnancy as reasons for changing the method. More than half of them chose the IUD, 38% chose the LNG-IUS and 5% chose ETN-implant. **CONCLUSION:** It is necessary to know the reasons and expectations of women to adapt to the contraceptive method of choice.

Keywords: Contraception, long-acting reversible contraception, LARC methods, reasons for change.

15. DIAGNOSIS AND TREATMENT OF GESTACIONAL DIABETES: INTEGRATIVE REVIEW

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Diabetes Mellitus is a metabolic disease that can manifest itself by the lack or absence of insulin production. Bearing this in mind, due to the increase in obesity among pregnant women, calculated by BMI, there is a greater preponderance that they are affected by the disease, either by reducing glucose tolerance, a common cause during pregnancy, or by changes in habits. In addition, Diabetes Mellitus can be of origin prior to pregnancy or acquired during, however it can cease after delivery. The need to screen these pregnant women for a correct diagnosis and treatment is highlighted, mainly by the Family Health Strategy. When considering that Diabetes Mellitus is a public health problem and scientific knowledge on this topic is

mainly concentrated on methods of diagnosis and treatment of the disease, the importance of conducting an integrative literature review is justified, which aims to identify scientific production in publications in the health field, addresses interventions for diagnosis and treatment for pregnant women. The search for publications will be carried out from 2017 to 2019 by the Virtual Health Library (VHL), with the descriptors "Gestational Diabetes", "Treatment" and "Diagnosis", in order to answer the following question: "What is the production in health publications, does it cover the diagnosis and treatment of Gestational Diabetes Mellitus?". This study will provide sufficient subsidies to fill the vacancy in the diagnosis and treatment of the disease among pregnant women aiming to promote an early diagnosis and effective treatment in order to improve the health and quality of life of both the pregnant woman and the embryo and fetus.

Keywords: Gestational Diabetes, Treatment, Diagnosis.

16. **FEMALE URINARY INCONTINENCE: A DIAGNOSTIC AND THERAPEUTIC APPROACH**

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Urinary incontinence (UI) is defined as any loss of urine being more frequent in females. It is known that urinary incontinence can have extremely negative repercussions for the woman's quality of life. It is not a natural consequence of age, nor is it part of the normal aging process and this misconception prevents many women from carrying out the correct follow-up. Through this bibliographic review, carried out through a systematic search of articles on the Scielo, PubMed, Acervo Mais and LILACS portals, we aim to bring the main diagnostic and therapeutic methods of pathology to the discussion. It is crucial to assess the repercussions of the complaint on a daily basis, its limitations and restrictions. Such an assessment can be made by any qualified health professional, through the application of questionnaires, performing the screening and referring the patient to the correct treatment, which is multidisciplinary, involving the medical and physiotherapeutic approach. It is noteworthy that there are certain therapeutic procedures considered an advance in the resolution of the pathology and that cannot be readily performed in the Unified Health System (SUS) due to the cost, materials and availability. Thus, the question of inclusion and plurality in health is raised, mainly due to the importance of resolving the situation in the well-being of women.

Keywords: urinary incontinence, quality of life, pelvic physiotherapy.

17. **CYTOLYTIC VAGINOSIS - DIAGNOSTIC CHALLENGE**

Pietra Andrade de Osti¹, Beatriz Barros de Moura¹, Camila Bicudo Mendonça¹, Aline Tais Rothmund Topanotti¹, Annie Caroline Magalhães Santos¹.

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INTRODUCTION: Vaginal discharge is a common finding in medical practice as one in ten women will report the symptom over the period of twelve months. Candidiasis, trichomoniasis and bacterial vaginosis are the three pathologies most frequently found. Different entities may present the same symptoms, such as candidiasis and cytolytic vaginosis (CV): vaginal itching associated with a white discharge. Therefore attending physicians must face a challenge of correctly diagnosing in order to institute the most effective therapeutic approach. **METHODOLOGY:** As a literary review on the differential diagnosis between cytolytic vaginosis and candidiasis, considering the etiology, clinical presentation, laboratory and clinical diagnoses of cytolytic vaginosis. The descriptors "cytolytic vaginosis", "candidiasis" and "vulvovaginitis" were included in the Pubmed, Scielo, Lilacs and Google Scholar databases, delimiting the publication period between 2000 and 2020. 1.275 articles were found in Portuguese, Spanish and English. After excluding 36 duplicates, 777 articles were analyzed, 45 were chosen, and finally, 8 articles were selected to support this essay. **RESULTS:** Eighty species of *Lactobacillus* were found in normal vaginal flora. The most frequent in the Brazilian population are *Lactobacillus crispatus*, which coexists with other species of microorganisms such as *Gardnerella vaginalis*, *Trichomonas vaginalis* and *Candida albicans*. The balance between these agents is influenced by the hormonal status, as well as the individual's immune response, use of contraceptives, sexual activity and trauma. *Lactobacilli* are gram-positive bacteria responsible for maintaining vaginal

pH between 3.8- 4.5 through the transformation of glycogen into lactic acid. The acid environment prevents overgrowth of pathogens. An exaggerated increase in *Lactobacilli* can be found in an individual with VC. Theories indicate hormonal influence as responsible for this modification. Cytolysis occurs in the middle layer epithelium by increasing the production of lactic acid and consequently decreasing the pH. Patients will then present itching, dysuria and whitish, lumpy, odorless and "milky" discharge. Clinically similar to candidiasis, microscopic examination is necessary, which demonstrates: numerous pleomorphic *Lactobacilli*, few leukocytes and no bacteria. If colonization by candidiasis, there will be filamentary structures (hyphae and pseudo-hyphae) along with multiple microorganisms and normal *Lactobacilli*. **CONCLUSION:** Cytolytic vaginosis is an underdiagnosed pathology and often misdiagnosed with candidiasis in clinical practice, resulting in ineffective and prolonged treatment. Besides causing iatrogenesis, medical error lead to aggravating the patient's symptoms and cause unnecessary health system expenses. Considering the diagnostic challenge, it is necessary to educate physicians about the value of microscopic analysis and morphological differences between VC and candidiasis.

Keywords: cytolytic vaginosis, candidiasis, vulvovaginitis.

18. **LITERATURE REVIEW: FROM DEFINITION TO TREATMENT OF SHEEHAN'S SYNDROME**

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INTRODUCTION: Sheehan's Syndrome (SS) presents epidemiology, pathophysiology and uncertain and variable clinical manifestations. This makes diagnosis and preventive measures difficult, contributing to underdiagnosis. Therefore, this work proposes to evaluate the panorama of the current bibliography on this condition, in order to emphasize the importance of adequate management, aiming at reducing its morbidity and mortality. **METHODS:** from 2015 to 2020, the most pertinent articles contained in PubMed were selected for an integrative review. Keywords used were: "Sheehan's syndrome" OR "postpartum hypopituitarism" OR "postpartum pituitary necrosis". The publications underwent identification, screening, eligibility and inclusion. **RESULTS:** SS is an obstetric neuroendocrine complication resulting from ischemic pituitary necrosis, affecting mainly adenohypophysis, causing partial or total hypopituitarism and, therefore, impaired hormonal function. It is mostly caused after moderate to severe postpartum hemorrhage (PPH). Epidemiological data are uncertain due to the delay and failure of diagnosis, especially in underdeveloped countries. The pathological basis of SS is the interruption or restriction of pituitary blood flow, leading to varied necrosis and, consequently, hormonal hypofunction in the affected regions. It can occur by 1) hypotension and vasospasm in the pituitary arteries triggered by PPH; 2) physiological increase of the pituitary in pregnancy without corresponding elevation of the blood flow provided and/or small sella turcica, causing vascular compression; 3) thrombosis by hypercoagulation and/or 4) anti-hypophysis antibodies causing progression of hypopituitarism. There is a variation of clinical manifestations due to hormonal deficits. Hypofunction of the anterior region may occur with growth hormone deficiency, lactation insufficiency, hypogonadism, secondary hypothyroidism and adrenal insufficiency; from the posterior region it manifests with diabetes insipidus (DI). Acute presentation is rare and severe; it has findings such as unconsciousness, headache, adrenal crisis and DI. Chronic phenomena are common, progressive and nonspecific; they occur with sleepiness, anorexia, nausea, anemia, physical and mental fatigue, premature aging, hypopigmentation, dry, cold and thick skin, madarosis, scattered pubic and axillary hair, breast atrophy, amenorrhea, slow reflexes, increased sensitivity to cold, bradycardia and coma. It may be associated not only with decreased bone mineral density (BMD) and corneal central thickness and increased cardiovascular risk, but also with psychiatric conditions. The diagnosis seeks findings suggestive of pituitary hypofunction and obstetric past conditions through detailed clinical history, physical examination and complementary tests such as stimulation tests and analysis of hormone levels, in addition to the characteristics of the pituitary in the Magnetic Resonance Imaging, which may reveal partially or completely empty Sella turcica. Lymphocytic hypophysis is the main differential diagnosis, followed by pituitary tumors. Continuous hormone replacement therapy is currently the only alternative to repair the hypophysis, but it does not correct lost pituitary function or interfere with

the necrotic process. **CONCLUSION:** The SS is an entity with failure and delay in diagnosis due not only to the uncertain pathophysiology and non-specific manifestations, but also to medical unpreparedness and negligence with symptoms suggestive of the syndrome. Thus, treatment is postponed and morbidity and mortality increase, mainly due to the absence of follow-up of patients with PPH. Moreover, home births without professional assistance increase the risk of hemorrhage and make it difficult to accurately collect the obstetric history and, therefore, should be discouraged. Finally, the management of PPH should be early and effective, with sufficient blood transfusion and fluid replacement.

Keywords: Sheehan's syndrome, hypopituitarism, postpartum pituitary failure.

19. **DOMESTIC VIOLENCE AND COVID-19: WHAT DO STATISTICAL DATA REVEAL TO US?**

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INTRODUCTION: Domestic violence is considered one of the most serious forms of violation, as it is a crime that leaves much more than physical marks, damaging self-love, honor, dignity, self-esteem, and the fundamental rights to life for victims. The social isolation, is one of the deliberations imposed to contain the new Coronavirus (COVID-19), has a perverse side effect for thousands of Brazilian women who are increasingly sharing time and space with their aggressors during a quarantine. **METHODOLOGY:** There was an analysis of statistical data from the Brazilian Public Security Forum, about occurrence reports, protective emergency measures in the states of São Paulo and Rio de Janeiro and number of feminicides, during the months of March, April and May 2020, when compared to the same period of the previous year. Based on the above, 16 scientific articles were analyzed and reviewed, including publications in English and Portuguese, against the literature published in the period between 2019 and 2020. The research took place in MedLine (Pubmed), Scielo and Elsevier platforms. **RESULTS:** Social isolation allowed women who suffered from domestic violence to share more time and space with their aggressors, therefore, is indispensable to detach the decrease in complaints records, decline in emergency protection measures granted and the persistence of femicide. Thus, all data listed refer to the months of March to April 2020, when compared to the same period in the previous year. As exposed, the decrease in the number of complaints in March, April and May (-16.2%) is notable; (-35.4%); (-26.1%), showing the victim's impossibility to report the aggressor, due to the regime imposed by the quarantine. Likewise, there is a decline in emergency protective measures granted as women, mainly in the states of São Paulo and Rio de Janeiro: (-31% and -29.5%); (-31.8% and -27.8%); (-17.1% and -33.7%). The relapse of femicide in society, with an increase during the months of March and April (+ 38.9%; + 3.2%) and subsequently an indefinite decrease in the month of May (-27.9%), explains the perpetuation of the femicide as a reflection of a chauvinist, misogynist and patriarchal culture. **CONCLUSION:** Considering the invisibility of violence against women during social isolation, is indispensable condition, that greater access to the justice, shelter and protection system during quarantine is essential, with 24-hour assistance to those victims. As well, the denaturalization of violence is essential as something inherent in the relations between men and women, since violence is a serious problem that concerns all of society. Therefore, in view of the increase in domestic violence in the current pandemic scenario, it is unquestionable that, for many women, being in isolation with their aggressor is more dangerous than a Coronavirus infection, since the home is often a place of fear, insecurity and abuse.

Keywords: Social Isolation, Spouse-Abuse, Quarantine, Violence against Women, Domestic Violence.

20. **EFFECTS OF ACUPUNCTURE ON VASOMOTOR SYMPTOMS OF MENOPAUSE - LITERATURE REVIEW**

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Vasomotor symptoms (VMS) are often associated with menopause due to the hormonal variation that occurs during this period. Such symptoms may have consequences in daily activities and quality of life of women in

menopause transition. Hormone therapy is usually the most effective treatment for VMS, however many women look for alternative treatments, including acupuncture. The present study aimed to evaluate the use of acupuncture in clinical practice through research in databases (PubMed, Lilacs e Scielo). After 288 articles found in the databases with the descriptors "Climacteric and Acupuncture" and "Menopause and Acupuncture", 12 articles were selected for this research. It was observed that, with acupuncture, the physical, psychosocial, sexual aspects and vasomotor symptoms were attenuated. In addition, changes in LH and FSH levels were noted. When this intervention was accompanied by improved self-care, an improvement in quality of life was also reported. It is concluded that the results are favorable to the use of acupuncture as a possible alternative to hormone replacement therapy, in addition to the importance of future clinical tests.

Key Words: acupuncture, climacteric, menopause.

21. **THERAPEUTIC OPTIONS FOR INFERTILITY CAUSED BY ENDOMETRIOSIS: A LITERATURE REVIEW**

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Endometriosis is a multifactorial pathology, prevalent in women of reproductive age. Its main symptoms are pelvic pain, dysmenorrhea and infertility. This literature review used 88 articles from Medline, Pubmed, Scielo and Lilacs databases that provide us with scientific potentials to synthesize the main treatments with regard to endometriosis-related infertility. There is a preference for surgical treatment, with laparoscopy as the main representative, although combined approaches and individuals such as hormonal, integrative practices and assisted reproduction treatment have gained prominence due to the invasive nature of the surgical procedure. Despite the information present in the published articles, more studies are needed to define more efficient, viable and accessible treatments to women.

Keywords: Endometriosis, infertility, treatment.

22. **THERAPEUTIC MANAGEMENT OF POSTPARTUM HEMORRHAGE ASSOCIATED WITH PATIENTS WITH COAGULOPATHIES - A SYSTEMATIC LITERATURE REVIEW**

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Obstetric hemorrhage is the main direct cause of maternal morbidity and mortality, and it often happens during the puerperium. In this context, pregnancy complications or underlying disorders, when left untreated, can make the clinical picture worse. Following this line of reasoning, it has been noticed that patients with hemostatic deficiencies, such as lack of coagulation factors, as well as platelet and fibrinogen disorders, are more likely to be at risk, since they are among the causes of puerperal bleeding, due to the fact that the procoagulant substances level are not sufficient in this group of people, not being physiologically compatible as in a normal pregnancy. However, considering that Postpartum Hemorrhage, associated with coagulopathies, is potentially treatable, the clinical management contribution is essential to reduce such mortality rate. Thus, the present study aims to analyze the therapeutic approaches used in puerperal bleeding in patients with hemostatic disorders. For this purpose, a bibliographic and descriptive study was carried out, a systematic literature review type, in the MEDLINE, PUBMED and LILACS databases, based on articles published from 2015 to 2020, using health science descriptors (DeCS) to search: "postpartum hemorrhage, coagulopathies and treatment". The guiding question was defined as: "What treatments are used in puerperal bleeding in coagulopathies cases?" The search was conducted through July, 2020 and 9 articles were selected based on the inclusion criteria. As results, it has been found that specific treatments and managements are used in order to contain and / or prevent puerperal bleeding in different coagulopathies types. In general, perfusion and oxygenation are maintained based on blood volume and hemoglobin levels. Furthermore, therapy is performed with blood components and hemostatic agents, in ways that, for Von Willebrand Disease, the treatment can vary according to the disease

type, although, in general, it is based on factorial supplementation, using desmopressin and antifibrinolytics. For factors VIII and IX deficiency, the approach is similar, however, desmopressin use is only seen for FVIII deficiency. In case of FXI deficiency, factorial concentrates may or may not be associated with antifibrinolytics, also, fresh frozen plasma (FFP) has been reported to prevent bleeding. Regarding afibrinogenemia, dysfibrinogenemia and hypofibrinogenemia, the fibrinogen administration is effective, and, for the last one, cryoprecipitate and FFP. For platelet disorders, factor VIIIa, tranexamic acid, desmopressin and platelet concentrate (this one not being recommended to be used in case of Bernard-Soulier syndrome) are administered. In conclusion, therapies should be applied according to each coagulopathy specificity, in order to control postpartum hemorrhage, although there are procedures that may converge through the hemostatic disorders pathophysiology. Also, researches in this field are scarce, in this sense, this particular subject needs to be better exploited.

Keywords: Hemostatic disorders, Therapeutic Management, postpartum hemorrhage.

Head, Neck and Language

23. OPTHALMOLOGICAL MANIFESTATIONS IN COVID-19: ONE OF THE MULTIFACETS OF THE DISEASE.

Beatriz Mendes Oliveira¹, Thaís de Oliveira Hara¹, Marcelo Hara¹.

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Coronavirus are part of a family of viruses whose characteristics are to be enveloped, with single-stranded RNA and which are common causes of infection in wild animals, birds and mammals. The current pandemic is caused by a beta coronavirus that has come to be called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As it is a relatively new infection, with rapid spread throughout the world, much information has been discovered with the course of worldwide contamination. Thus, the objective of this study is to synthesize the information that already exists about the ocular transmission of the new SARS-CoV-2, ophthalmological disorders and strategies adopted for the protection of ophthalmologists. In order to carry out this review, the following health descriptors were used: Ophthalmology, Coronavirus Infections, Coronavirus and Conjunctivitis in a search in magazines, newspapers and Medical Literature Analysis and Retrieval System Online (MEDLINE). After reading the abstracts, full studies and applying the inclusion and exclusion criteria, 14 articles were selected for the preparation of this review. The results found were diverse. In relation to contamination and transmission by the conjunctiva, some theories explain the entrance of SARS-CoV-2 through the ocular surface through the angiotensin 2 receptor (ACE2), however the transmission by tears and conjunctival fluids has not yet been proven. Other studies show that patients who developed conjunctivitis had the virus in these fluids whereas in patients who did not develop conjunctivitis, the virus was not found in conjunctival secretions. The development of ocular signs and symptoms is inconclusive and several external factors must be taken into account. The main ocular manifestation reported was conjunctivitis but there are some biases such as the prevalence of dry eye in the population, notification of confirmed cases with coronavirus infection, among others. Another important point is the possibility of the occurrence of future chronic ophthalmic complications due to coronavirus infection such as vasculitis, optic neuritis and neuro-ophthalmological diseases due to the tropism of the virus by the nervous system. In relation to the new recommendations and safety measures for ophthalmologists, several approaches can be taken in an attempt to reduce transmission and avoid contamination. Mild involvement, without risk of complications, must be attended to via telemedicine and the need for presencial assistance assessed. In addition to screening for possible suspicions of patients infected with coronavirus, it is also recommended to decrease the number of people in the waiting room. In addition, personal protective equipment is essential. The use of masks, gloves, goggles and breath shield in the slit lamp are some of the recommendations to try to prevent SARS-CoV-2 infection. Thus, although many aspects are still not completely elucidated, studies show a higher prevalence of the virus in conjunctival secretions in patients with conjunctivitis. Transmission and contamination by the conjunctiva is still being studied. The ocular symptomatology caused by SARS-CoV-2 is also not defined due to several aspects that influence it. The use of personal protective equipment is necessary as in all spheres of society and many aspects of the infection are being studied concurrently with the pandemic.

Keywords: Ophthalmology, Coronavirus Infections, Coronavirus and Conjunctivitis.

24. EXTERNAL ACOUSTIC MEATUS CHOLESTEATOMA: A SYSTEMATIC LITERATURE REVIEW.

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External acoustic meatus cholesteatoma (EAMC) is the rarest form of cholesteatoma, therefore its characteristics are not still completely clarified. This paper develops a systematic review of EAMC in the last five years, with the purpose to identify the main clinical manifestations, symptoms and incidence in the general population, by a critical analysis of papers from the PubMed database, which meet the inclusion criteria established – english language papers, with full text available in MEDLINE, using the descriptors “cholesteatoma” and “external acoustic meatus” and the boolean operator “and”. The chosen publications reported that the most recurrent clinical manifestations of EAMC are otalgia and otorrhea, but many patients are asymptomatic. Furthermore, an equivalent incidence was observed in both genders, being itinerant in elderly people. The therapeutic choice varies according to stage of the injury.

Keywords: Cholesteatoma, External Acoustic Meatus, Symptomatology.

25. NEUROLOGICAL AND DENTAL CHANGES IN COVID-19: A LITERATURE REVIEW

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The Coronavirus pandemic has affected all layers of the population, but it is a disease that affects more the elderly population and people with pre-existing comorbidities, with variations in manifestations from person to person. The aim of this article was to discuss the main neurological and dental changes that can happen in patients with COVID-19. To carry out this research, a literature review was conducted in the following databases: Google Scholar, Scielo, Virtual Health Library and PubMed. Twelve articles were selected. The results found showed that patients with COVID-19 may present oral lesions, loss of taste and smell; in addition, they can also present neurological manifestations. The main neurological and dental manifestations found, respectively, were: dizziness, headache, muscle injury, altered state of consciousness, dysgeusia, hyposmia, cerebrovascular accident, ataxia and seizures and oral lesions, mainly enanthemas. It can be concluded that, COVID-19 requires greater clarification in understanding its mechanism of action through new scientific investigations, in order to understand the main neurological and dental manifestations that may occur. Therefore, doctors and dentists need to be attentive and, often, work together for the best resolution of these patients' clinical condition.

Keywords: COVID-19. Neurology. Dentistry.

26. DRY EYE PREVALENCE AND MAIN RISK FACTORS AMONG UNDERGRADUATE STUDENTS

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INTRODUCTION: Dry Eye is a common, complex and multifactorial disease of the ocular surface and tear film that results in discomfort and visual disturbance. Prevalence rates have broad variation and are mostly based on studies involving older populations. **OBJECTIVE:** This study aims to evaluate dry eye among a sample of undergraduate students from 2 major universities in Brazil, to understand symptoms, clinical signs presentation and most associated risk factors. **METHODS:** Cross-sectional survey that included 2,140 students (1,649 from UNICAMP and 491 from UNIFESP). Three fields of knowledge were included: 1,128 from biological; 699 from exact; and 313 from human area. All participants completed 2 self-applicable questionnaires about dry eye symptoms: Ocular Surface Disease Index

(OSDI) and short questionnaire used in the Women Health Study (WHS), both previously translated and validated to Portuguese. Dry eye symptoms were considered positive if OSDI score > 22 or reported severe symptoms and/or previous history of clinical diagnosis at WHS questionnaire. Indeed, a list of risk factors such as contact lens wear, medications, ocular surgery, and systemic disease associated to dry eye was presented. Participants who fulfilled criteria for dry eye symptoms underwent a complete clinical evaluation for signs of the disease evaporative and aqueous deficient dry eye. **RESULTS:** 2,140 participants aged 23.4 ± 5.2 years old, 56.1% female and 43.9% male were enrolled. OSDI score was 19.4 ± 16.2 ; 34.4% had OSDI > 22 and 23.5% according to WHS. Dry eye prevalence showed consistent sex differences, according OSDI scores 42.6% women and 24.0% men and with WHS 27.1% women and 18.5% men. Most common risk factors were visual display use (50.1%), less than 6 hours of sleep/day (37.0%), oral contraceptive use (21.9%), contact lens wear (16.3%) and antiallergic use (15.1%). Univariate and multivariate analysis demonstrated that female sex, contact lens wear, ocular surgery, use of electronic devices over 6 hours/day, oral contraceptive, anti-depressant, anti-allergic, sleep less than 6 hours/day as relevant related factors. Clinical evaluation demonstrated mild signs of ocular surface dysfunction, normal tear volume, tear film instability and evaporative dry eye. **CONCLUSION:** Dry eye a prevalent condition among undergraduate students. In this Brazilian youth sample, rates were higher than data recently published, that showed in the general Brazilian population over 40 years old, the overall rate was 12.8%. However, further investigation might be addressed to better understand related risk factors and clinical presentation.

Key words: Dry eye, risk factor, prevalence, young population, university, Brazil.

Internal Medicine

27. **BLOOD TRANSFUSION IN AN URGENCY AND EMERGENCY HOSPITAL** Martha Cavalcanti dos Santos¹, Bianca Cansian¹, Raul Garre Climent Rocha¹, João Carlos Pina Faria¹, Camila Augusta Victorino¹, Roseli Oselka Saccardo Sarni¹.

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OBJECTIVE: To evaluate the adequacy of the prescription of red blood cells concentrates by emergency physicians. **METHODS:** A Cross-sectional study by survey of transfusion requisition records completed by emergency physicians, from May/2018 to April/2019, in an emergency hospital. Adequacy in the indication, volume and subtype (filtered, irradiated and washed) of prescribed erythrocytes were evaluated. To compare the qualitative data, we used the χ^2 test. The significance level adopted was 5%. **RESULTS:** One thousand and twenty two transfusions were evaluated. The indication, volume and subtypes were correct in 72.7%, 45.9% and 81.6% respectively. Transfusion in symptomatic patients presented superior adequacy when compared to asymptomatic individuals with significant statistical difference (indication: 79.6% vs 67.2%, $p < 0.001$; Volume: 63.5% vs 31.7%, $p < 0.001$; subtype: 85.3% vs 78.7%, $p = 0.006$). Among clinical situations, there were more errors in sepsis (39.7%) and pneumonia (36.3%). More than half of the prescriptions presented excessive volume, raising the risk of circulatory overload, observing that the mean age was 60.6 years. The specific analysis of the prescribed subtypes showed adequacy of 17.9% in the filtrated, 1.7% in the irradiated and none of the washed. Thirty transfusions should have been filtered, but the prescriber did not request the subtype. **CONCLUSION:** One hypothesis for the observed inaccuracies is inadequate medical training on the subject, both in undergraduate and medical residency, associated with a lack of updating in transfusion protocols. The transfusion Committee received the results of this study with a proposal for continuing education measures on transfusion hemotherapy.

Keywords: Erythrocyte Transfusion, Emergency Treatment, Prescriptions, Transfusion Medicine.

28. **PREVALENCE AND SENSITIVITY PROFILE OF BACTERIA ISOLATED FROM URINE CULTURE OF PATIENTS FROM A PRIVATE CLINICAL ANALYSIS LABORATORY IN THE MUNICIPALITY OF CONSELHEIRO LAFAIETE-MG** Rubens Barbosa Rezende¹, Isadora Moreira Costa do Nascimento Nogueira¹.

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Urinary tract infection (UTI) is determined by the presence of pathogenic microorganisms that invade urinary tissues, and according to its location it is classified as low and high urinary tract infection. The objective of this study was to evaluate the prevalence and sensitivity profile to antimicrobials of bacteria isolated from women's urine samples from a private Clinical Analysis Laboratory in the municipality of Conselheiro Lafaiete-MG. A cross-sectional observatory study, of a quantitative type, aimed at collecting secondary data on the prevalence and sensitivity profile of bacteria isolated from positive urine cultures in female patients aged 18 to 60 years, in the period from January to December 2019. During the study period, 226 positive urine cultures from women within the stipulated age range were identified in this laboratory. Gram negative bacteria *Escherichia coli* were the most prevalent in the four seasons (66.37%). Gram positive *Enterococcus* sp. (3.54%) was more frequent in the fall. Amoxicillin/clavulanate, ceftriaxone and nitrofurantoin were the antimicrobials with the lowest rate of resistance on the part of *E. coli* (90%; 93.33% and 97.33% sensitivity, respectively). And in relation to the prevalent Gram positive bacteria, ampicillin showed the greatest sensitivity. It is essential to instruct patients about the dangers that UTI can cause and reinforce that the correct therapeutic recommendation is very important, as well as the dosage determined by the doctor, in order to make it more difficult for strains to appear due to inappropriate use of these antimicrobials.

Keywords: Bacteria, Bacterial infections, *Escherichia coli*, Infections, Urinary infections.

29. **INTRATUMORAL GENETIC HETEROGENEITY IN NON-SMALL CELL LUNG CANCER: DO SINGLE BIOPSIES REPRESENT THE COMPLETE TUMOR?** Felipe dos Santos Souza¹, Mariana Sandy Mada¹, Samuel dos Santos Bueno¹, Álvaro Moreira Rivelli¹.

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INTRODUCTION: Intratumoral genetic heterogeneity (ITH) describes a variable set of gene mutations within the same tumor. In this sense, it is known that tumors have different genetic patterns, but that they may even have differentiations within the same organism, causing cell subpopulations to perform different responses. Drug efficacy is variable and not yet conclusive, which increasingly leads to the need for further studies in the area. To this end, the following question about ITH stands out with regard to lung cancer, a neoplasm responsible for the highest number of deaths in male smokers: do the single biopsies represent the complete tumor? The objective, therefore, of the present study is to verify whether only a single biopsy is effective in the diagnosis and to analyze the interference of ITH in the treatment and prognosis of lung cancer. **METHODS:** descriptive studies on the use of biopsies were used to identify neoplasms from the following databases: European Journal of Cancer, The Lancet Oncology, Journal of Geriatric Oncology, PUBMED and SCIELO. The articles used were found from the following descriptors: Genetic heterogeneity. Lung neoplasms. Non-small cell lung cancer. Biopsy. Genetic markers. **RESULTS:** in nonsmall cell lung cancer (NSCLC), the presence of mutations promoting treatment resistance and a poor clinical prognosis were verified. Among them we can mention the expression, amplification and inversion / fusion of the EGFR, KRAS, BRAF, TP53, HER2, RH, MET and ALK genes. Biopsy is an investigative method of tissue collection with neoplastic suspicion for laboratory evaluation. However, it often does not analyze the ITH since one of the protocols most used today by oncologists has been to associate its use with the new generation genetic sequencing method, which broadens the view of the tumor's genetic variables. This fact confirms the limitations of the sampling of unique tumor regions and emphasizes the ability of multi-region sequencing to define the clonality of tumor events and to personalize therapeutic targets. **DISCUSSION:** The use of biopsy methods for investigative factors in neoplasms of laboratory evaluations is relevant to verify the CPNPC, in which mutations promoting resistance to treatment and poor clinical prognosis such as gene expression, amplification and inversion / fusion EGFR, KRAS, BRAF, TP53, HER2, RH, MET and ALK. However, laboratory biopsy methodology does not always analyze ITH. Thus, genetic sequencing proves to be the next generation procedure for analyzing tumor genetic variables; which demonstrates the lack of studies and mappings as authentic as possible in the specific clinical management for NSCLC. **CONCLUSION:** More studies are needed to deepen the mapping of tumor genetic variability in order to optimize and personalize the choice for the best treatment intrinsic to the identity of the tumor.

Keywords: Tumor genetic heterogeneity, Non-small cell lung cancer, Diverse mutations.

30. **EMERGENCY EPILEPSY**

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¹ UNIFAI.

This review article reports how epileptic seizures in the emergency are diagnosed and treated, as well as their probable etiologies. For this purpose, platforms such as Scielo, Pub Med, national and international student views, Portal Capes and the VHL Regional Portal (BIREME) were used for this search. Through these researches it was found that the crises, in the great majority, are detected through the investigation of the detailed clinical history of the patient, by the knowledge on the part of the medical team of triggering etiologies and the importance of the identification of a crisis in face of the possible differential diagnoses, as well as a well-performed physical exam, complemented by exams when necessary. In addition, the study reported the importance of stabilizing the patient in the face of epileptic seizures, paying attention to cardiorespiratory function, ensuring airway permeability, and first-line treatment with Benzodiazepines. It was found that the ideal treatment for epileptic seizures in the emergency room is considerable, as it influences the entire path of the patient. Better procedures in this phase can lead to a lower rate of admission to hospitals, providing favorable management, shorter hospital stays and savings in these patients' costs.

Keywords: "Emergency", "Epileptic Crisis", "Diagnosis", "Treatment".

31. **EVALI, AN EMERGING RISK FOR BRAZIL: A LITERATURE REVISION.**

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In 2019, the Centers for Disease Control exposed a rise in cases of acute pulmonary dysfunctions related to the use of electronic cigarettes. The nominated "Electronic Cigarette or Vaping-associated Lung Injury (EVALI)", once considered its novelty, lacked an effective knowledge about its identification and diagnosis. This scenario rebounded in the medical community as the beginning of new discussions related to the pathology. Once determined the significance of the context, this study aimed to evoke a debate that supported Brazil's involvement in the described circumstances, as it would promote the reflection about the Brazilian health situation to the management of a possible epidemic outbreak. Thus, it was promoted a search in the theme's current literature in Pubmed and Google Scholar. A screening for the keywords "EVALI", "lung injury" and "e-cigarette", written in Portuguese and English and published in the last decade took place. The critical analysis of titles and abstracts was done, excluding the publications which did not add to the discussion or the ones that were pointed in both research platforms. At last, the screened articles were read. From the initial 66 found papers, 21 were excluded for its non-addition to the discussion and 7 of them based on its duplicity. 38 publications composed the study's outcomes. The main findings in literature pointed towards an epidemiologic profile for EVALI of individuals aged between 18 and 24 years old, mainly males, of whom used e-cigarettes daily. Bibliography also highlighted a preference for inhalation of Tetracannabinol, followed by its association with nicotine and the isolated use of nicotine for smoking. EVALI's pathophysiology is still uncertain. However, the analysis of findings directs to the hypothesis of Vitamin-E Acetate's participation in EVALI's pathogenesis. Other theories point to the aerosolization of heavy metals, product of the thermal decomposition of the e-cigarettes material that become susceptible to inhalation. The analysis of the EVALI's manifestations revealed a predominance of respiratory (cough, dyspnea and thoracic oppression), gastrointestinal (abdominal pain, nausea, vomiting and diarrhea) and constitutional (fever, chills and weight-loss) symptoms, with an acute behavior, progressing to more dramatic stages in one to two weeks. Tachycardia and tachypnea associated with oximetry levels lower than 95% are frequent. Regarding the radiologic findings, irregular infiltrates in both lungs was more frequently found. Several patterns were observed in computed tomography, the most common being bilateral consolidation in the lung bases and ground-glass opacities. The diagnosis is based on the exclusion of other causes,

associated with suggestive radiologic findings and a e-cigarette use in the last trimester. Treating the illness is mainly based on corticotherapy and invasive and non-invasive ventilatory methods. At last, considering the study's main objective, the review could show the absence of Brazilian scientific productions that analysed EVALI or the national prevalence of electronic cigarette use. This lack of studies became an indicative of vulnerability of Brazilian medicine towards the growing usage of those devices worldwide and the possibility of an epidemic outbreak, similar to what was known in other countries, despite the fact that the marketing of e-cigarettes isn't legalized in Brazil and their impact on the development of other diseases is still unknown. These conclusions, therefore, only highlight the urgency of the debate in the country.

Keywords: "EVALI", "E-Cigarettes", "Lung Injury", "Electronic Cigarette or Vaping-associated Lung Injury".

32. **CASE PRESENTATION OF DILATED CARDIOMYOPATHY AFTER DENGUE INFECTION WITH FULL RECOVERED OF VENTRICULAR FUNCTION**

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Dengue is an arbovirus endemic in Brazil, with a wide clinical spectrum, from asymptomatic to death cases, because of dengue shock syndrome or hemorrhagic dengue. Atypical manifestations as myocardial involvement are usually more present in epidemic periods. This report presents the case of a patient who after a dengue episode evolved with dilated cardiomyopathy and reduction of the ejection fraction, with late resolution and complete recovery of ventricular function after the institution of treatment. Dengue, its clinical picture, diagnosis and complication are briefly discussed; with focus on the cardiac involvement, its pathophysiology and consequences. The exams that prove the previous ventricular functionality, its commitment with the disease and subsequent recuperation are presented. It concludes showing the relevance about the case presented, the importance of the medical suspicion and the challenge to conclude the diagnosis.

Keywords: Dilated cardiomyopathy, Dengue, Cardiac Insufficiency.

33. **OZONE THERAPY AS A PROMISING TREATMENT FOR FIBROMYALGIA: AN INTEGRATIVE LITERATURE REVIEW**

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The fibromyalgia is a rheumatic syndrome that affects approximately 2% of the Brazilian population. The referred one, is characterized, mainly, by generalized chronic pain and by specific painful areas called tender points. However, it may have other associated symptoms such as changes in sleep quality, debility, stiffness in the morning, changes in mood, memory and concentration, among others. Bearing in mind that oxidative stress is the most accepted etiology, ozone therapy is a possible effective treatment, which justifies its application and evaluation. Furthermore, the objective of this paper is to evaluate the use of ozone therapy in the treatment of fibromyalgia. As this is an integrative literature review, it was used as methodology the selection of articles on the BVS, PubMed and Google Scholar platforms with the keywords: fibromyalgia, ozone therapy and treatment. The selection criteria were published between 2010-2020 in Portuguese, English or Spanish and complete, preferably which resulted in the selection of 20 articles in total. Therefore, research shows that ozone promotes a mild, transient and regulated oxidative stress capable of inducing the activity of the antioxidant and immune systems. Clinical trials conducted between 2010 and 2019 using ozone therapy through the techniques of rectal insufflation, autohemotransfusion, subcutaneous injection and application of intravenous saline solution with a number of varied sessions indicate several benefits. Due to this therapy, there is a decrease in lipid peroxidation (LP), carbonyl protein content (PC) and generation of reactive oxygen species (ROS) indicating a general reduction in oxidative stress. Jointly, there was an improvement in the FIQ (Fibromyalgia Impact Questionnaire) and several complaints frequently presented as pain, depression, sleep disorders and anxiety. Hence, it is concluded that the use of ozone therapy to treat fibromyalgia is auspicious due to its several positive results and improvement in the patient's quality

of life. Therefore, it is of utmost importance to carry out further investigations, checking the possible limitations and long-term side effects.

Keywords: Fibromyalgia, Ozone therapy, Treatment.

34. CURRENT TROMBOPHILIA RESEARCH INDICATIONS

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¹ São Leopoldo Mandic.

INTRODUCTION: Thrombophilia is defined as the tendency to thrombosis due to inherited or acquired coagulation or fibrinolysis changes, which leads to a prothrombotic state. **RESULTS:** Through a systematic review analyze the current indications in thrombophilia research avoiding an excessive screening in non-indicated patients. **Development:** by reviewing the articles, is sought to complement current indications of thrombophilia research aiming at early diagnosis and aiding in the appropriate treatment for each mechanism of the disease. **Discussion:** compare the reviewed articles regarding the purpose of screening for thrombophilia, avoiding excessive or inappropriate screening as it may be more harmful than beneficial for the patient. **CONCLUSION:** to emphasize the relevance of screening for the acquisition and interaction between the various risk factors for thrombophilia, which is a field of great relevance. The detailed diagnostic approach of the cases is necessary to provide a definition of an individualized diagnostic criterion.

Keywords: pregnancy, heredity, hypercoagulability, thrombophilia, TVP.

35. COMPRESSIVE THERAPY: UNNA BOOT APPLIED TO VENOUS INJURY

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Venous ulcers in the lower limbs has become a theme quite discussed by health services in general, manifesting significant clinical and functional deficits that alter the hemodynamics of the venous and lymphatic system. The investigation on the best forms of treatment and their respective positive effects has stood out over the years where, inelastic compressive therapy through the Unna boot has obtained important evidence in the treatment of venous ulcers. The methodological procedures refer to an integrative review in the analyzed bases SciELO, PubMed and Virtual Health Libraries between the years 2010 to 2020 according to the inclusion and exclusion criteria being, researched studies in the languages Portuguese and English selecting the following health descriptors: "boot of Unna", "Venous Ulcer", "Physiotherapy" and "Quality of Life". The repercussions of the resource explain the reduction of edema, exudates frames and the progression in the wake of regeneration and walking stability. It becomes evident that the Unna boot is one of the main forms of treatment of venous ulcers in the lower limbs, reducing the extension of edema and stasis emphasizing the integration of multidisciplinary professionals, optimizing a better quality of life.

Keywords: Unna boot, venous ulcer, physiotherapy, quality of life.

36. TAKOTSUBO SYNDROME: A CASE REPORT

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INTRODUCTION: The Takotsubo Syndrome or Cardiomyopathy (CMT) is characterized by regional and transient left ventricular systolic dysfunction. It is an important etiology in the differential diagnosis of chest pain, since it is able to mimic the clinical presentation of acute coronary syndrome (ACS), in the absence of evidence of obstructive arterial disease (CAD) at angiographic examination. It affects women in 90% of the cases, especially those in post-menopause. This condition does not have a well-established etiopathogenesis. **METHODS:** This is a case report that aims to bring CMT as a differential diagnosis of ACS and discuss its particularities, in order to expand knowledge aimed at improving health conditions for the population. **CASE REPORT:** A.L.S., female, 55 years old, postmenopausal, with a history of hypertension and generalized anxiety disorder, admitted with typical

precordialgia triggered by emotional stress. The first hypothesis raised was of ACS, corroborated by the electrocardiographic findings and the enzymatic curve of myocardial necrosis markers (MNM). Cardiac catheterization (CATH) demonstrated that coronary arteries were free from obstructive atheromatosis, and left ventriculography, presence of anterior and apical hypokinesia, imaging findings that rule out the initial diagnosis and suggest CMT. Evolved on hospitalization with hemodynamic stability, full recovery of contractile myocardial function and improvement of chest pain. **Discussion:** The clinical presentation of the patient at admission raised the diagnostic assumption of an acute myocardial infarction without ST segment elevation (NSTEMI). The absence of obstructive atheromatosis at CATH, however, ruled out the possibility of NSTEMI and reinforced CMT as the most likely etiology of the condition, since it is capable of mimicking ACS, but without coronary atherothrombotic obstruction. The hypothesis of CMT should be considered as a differential diagnosis of ACS, especially in postmenopausal women. The patient presented typical imaging findings on ecodopplercardiography and ventriculography, such as the presence of hypokinesia in the apical and middle segment of the left ventricle (LV) and hyperkinesia in basal segments, giving the classic aspect of apical ballooning or "octopus trap" that gives the name to the disease - from Japanese Takotsubo. Through CATH obstructive coronary disease or acute rupture of atheromatous plaque were excluded. The therapeutic strategy was basically structured on hemodynamic support and control of possible complications. As stated, the reported case has characteristics compatible with CMT, from its clinical presentation at admission to the evidence of abnormalities of the LV wall in the study with ventriculography, and absence of signs of obstructive pathology to the study of coronary angiography, which corroborates with the pattern described by the literature of this pathology. **RESULTS:** This report made possible a theoretical deepening on the theme and the dissemination in the medical and academic community of the peculiarities of this syndrome. **CONCLUSION:** Based on the similarity between the clinical courses of Takotsubo Cardiomyopathy and Acute Myocardial Infarction, the relevance of CMT as a differential diagnosis of chest pain is highlighted. Therefore, it is necessary to know its epidemiological, clinical and radiological aspects.

Keywords: Takotsubo Cardiomyopathy, Ventricular Dysfunction, Left, Acute Coronary Syndrome, Chest pain; Psychological Stress.

37. ELECTRONIC NICOTINE DELIVERY SYSTEMS: CURRENT EVIDENCE OF RESPIRATORY AND CARDIOVASCULAR EFFECTS

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The use of electronic nicotine delivery systems (ENDS), also known as electronic cigarettes, became popular on the premise of being less harmful than traditional cigarettes, which was possible due to a positive image built by tobacco industry. Nevertheless, it is scientifically known that the use of e-cigarettes has carcinogenic and pro-inflammatory effects, affecting cognition, behavior, academic performance, along with alterations in the respiratory and cardiovascular systems. The aim of this study was to describe the impact of ENDS in respiratory and cardiovascular systems. In this review, 15 clinical trials, published between 2015 and 2020 in English, were retrieved. The data was accessed from National Library of Medicine and National Institutes of Health (PUBMED), Biblioteca Virtual em Saúde (BVS) and Scientific Electronic Library Online (SciELO), using the search terms "Electronic Nicotine Delivery Systems", "E-cigarette vapor", "cardiovascular" and "respiratory". The results revealed that e-cigarettes promote airway obstruction, airway injury, reduction of cough reflex sensitivity and of urge-to cough threshold. Moreover, ENDS' use leads to decrease of transcutaneous oxygen tension and disruption of lung homeostasis by changing the expression of small airways and alveolar macrophages genes, despite not altering lung function. In relation to cardiovascular alterations, these devices induce increases in heart rate, arterial stiffness, endothelial progenitor cells and endothelial microparticles, besides activating oxidative stress, hence elevating cardiovascular risk. All these modifications were acute, as a result of the methodological design of the studies, which had limitations referring to the short period of the trials, the various brands and composition of e-cigarettes, electronic liquids and flavorings, in addition to the lack of sample uniformization. In this regard, it is crucial that new studies are conducted to elucidate acute effects and further investigate chronic impacts of ENDS on respiratory and

cardiovascular systems, consequently providing trustworthy scientific evidence in this topic and deconstructing the positive image built by tobacco industry.

Keywords: Electronic Nicotine Delivery Systems, electronic cigarettes, respiratory system, cardiovascular system.

38. **LIFESTYLE CHANGES: A NON-PHARMACOLOGICAL TREATMENT FOR ANKYLOSING SPONDYLITIS**

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Ankylosing Spondylitis is a chronic, rheumatic, systemic, progressive and inflammatory disease, which mainly affects the joints of the axial skeleton, being characterized by pain and functional and structural joint impairment. This pathology primarily affects young and female individuals, around 26 years, in most cases the symptoms are identified before 30 years. Known as a disability, Ankylosing Spondylitis brings a negative impact on the patient's quality of life, affecting daily activities, working conditions and even personal relationships. Ankylosing Spondylitis's precise pathogenesis remains mostly unclear, even though spine inflammation and bone tissue proliferation are between the main etiological mechanisms. Genetic alterations have an important role in the development of the disease, especially those mutations involving MHC genes, as the presence of the genetic marker HLA B27 is associated with an increased risk of developing Ankylosing Spondylitis. Both innate immunity and adaptive immunity take part on the joint inflammation caused by the disease, with T CD4+ and T CD8+ lymphocyte, mononuclear cells and macrophage infiltration on sacroiliac joint's cartilage, intervertebral discs, peripheral blood and synovial fluid, causing destruction and ankylosis. Ankylosing spondylitis' treatment must be guided based on the pathological manifestations, severity of symptoms, desires and expectations from the patient, combining pharmacological and non-pharmacological measures. It aims to reduce the pain and joint stiffness, prevent deformities, improve quality of life and physical and psychosocial health of the patients. Lately, the non-pharmacological treatment is being pointed out as an alternative to improve the patient's quality of life through the change of lifestyle, which can improve breathing capacity, mobility and reduce stiffness of their joints. Since the practice of physical activity is correlated with the decrease of the concentration of the pro-inflammatory cytokine in the circulation, TNF-alpha, which is elevated in inflamed sites. The following work consist a review of literature about the benefits of healthy lifestyle as an treatment alternative for ankylosing spondylitis and a way to reduce the symptoms in a long term scenario. A research was made at Scielo, PubMed and LILACS platform with articles from 1990 until 2018.

Keywords: Ankylosing Spondylitis, treatment, exercises.

39. **ANALYSIS OF MICROGLIAL IMMUNOLOGICAL MECHANISMS DURING THE INFLAMMATORY RESPONSE TO INFECTIOUS EXPOSURE BY SARS-CoV-2**

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Faced with a pandemic scenario, neurological manifestations, although not frequent, have been observed in patients affected by COVID-19. An analysis was made about the immunological mechanisms used by microglia when central nervous system (CNS) suffers an infectious process caused by the SARS-CoV-2 virus, in order to find divergent and convergent points of this subject. It is an integrative review, data were collected from June 14th to August 1st, 2020 and, initially, a DecS server (Health Sciences Descriptors) search was performed and the following descriptors were selected: Microglia, Citocinas, Coronavirus, their combinations and variants in English; no descriptor was used alone. Subsequently, 6,725 studies were found by reading the title and abstract and it was possible to exclude 6,718 articles for being duplicated in the databases, published in Spanish and the ones that were a review article. Thus, only 7 articles met the inclusion (answer the guiding question of the research and to be published in 2020) and exclusion criteria mentioned above. After the last reading of the articles previously selected, a final sample of 6 articles published in English in four different countries was obtained and classified in three different study

types. The study showed a great participation of microglia as an intermediary of the inflammatory processes resulting from infectious processes by SARS-CoV-2 and other viruses that reflect its infectious mechanism in the CNS. The microglial activity present in patients with diseases that were worsened or triggered by SARS-CoV-2 was also found, demonstrating the role of this defense cell as a stimulator of the release of pro-inflammatory cytokines. It is hoped that this study can contribute to encourage research related to this topic, aiming to promote a cautious look at the CNS immunological reactions present in patients who manifest neurological symptoms resulting from COVID-19.

Keywords: COVID-19, SARS-CoV-2, Microglia, Neuroinflammation.

40. **ACROMEGALY: DIAGNOSIS FROM A TECHNICAL PERSPECTIVE**

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INTRODUCTION: Acromegaly is a rare disease resulting from overproduction of Growth Hormone (GH) and Growth Factor Similar to Insulin Type 1 (IGF-1). Clinically, it develops slowly and insidiously, which corroborates for a late diagnosis, when many characteristics of the disease have already become manifest and irreversible. Therefore, the time of diagnosis becomes an essential part in the management of the disease, which, at times, can be hindered by atypical or subtle presentations, especially for doctors or other health professionals with little experience in the case. **METHODS:** This is a descriptive observational study of the type "Case Report" whose information was obtained exclusively through the analysis of medical records. In addition, a bibliographic review on the topic (acromegaly) was carried out for greater theoretical support. **CASE REPORT:** Male patient, 57 years old, started follow-up with an Endocrinologist to follow a levothyroxine replacement that he had started 3 months before (after total thyroidectomy for large adenomatous goiter). In the anamnesis, the patient reported healthy lifestyle habits, with regular physical exercise practices and a stable weight. Of historical past, he referred only the use of CPAP (Continuous Positive Airway Pressure) for the treatment of Obstructive Sleep Apnea Syndrome (OSAS). During the physical examination, apparent mandibular prognathism, anterior incisor teeth slightly apart and macroglossia were identified. These clinical characteristics associated to the history of adenomatous thyroid disease (in the absence of autoimmune disease, family history or origin from an endemic region) raised the hypothesis of acromegaly. After investigation with laboratory and imaging exams, the diagnosis of acromegaly due to pituitary macroadenoma was confirmed and the therapeutic management was instituted. During the clinical follow-up, the patient showed a gradual and complete improvement of all symptoms related to the disease, greatly improving his quality of life. **Discussion:** The patient in the case had an atypical presentation of acromegaly, which hindered his early diagnosis. However, when analyzing the case retrospectively, there were many celebrations (well described in the literature) that could anticipate the diagnostic hypothesis, such as macroglossia, OSAS and adenomatous goiter. On physical examination, it is notable that a characteristic as classic as the acromegalic facies was not identified by the other specialists who followed the case. However, it was identified by the Endocrinologist at the first appointment and it was crucial for the appropriate follow-up of the diagnostic investigation. In contrast to the clinical presentation, the results of laboratory and imaging tests were quite typical of the disease. **CONCLUSION:** Although acromegaly is an easily understood disease in textbooks, atypical and subtle presentations can delay diagnosis in the absence of the Endocrinologist. Thus, it is extremely important to question the etiological diagnosis in cases of macroglossia, OSAS and adenomatous goiter - which can be performed by any doctor. With an early and timely diagnosis of the disease, the onset of cardiovascular and metabolic complications, associated with increased mortality, can and should be avoided.

Keywords: acromegaly, macroglossia, sleep apnea, nodular goiter, prostatic hyperplasia, research, adenoma.

41. **AMENORRHEA: RARE ETIOLOGIES AND ITS DIAGNOSTIC COMPLEXITY**

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INTRODUCTION: Amenorrhea can have several etiologies, which are often classified as either primary or secondary. The approach can be complex depending on the etiology, especially when not guided by the epidemiological prevalence. Therefore, it is necessary to establish an algorithm for diagnosis that leads to the main hypotheses, guided by a theoretical review that supports the main etiological suspicion. **METHODS:** This is a descriptive observational study of the type "Case Report" which information was obtained exclusively through analysis of the medical record, without direct involvement with the patient. In addition, a bibliographic review on the topic (amenorrhea) was carried out to greater theoretical support. **CASE REPORT:** Female patient, 21 years old, presented with complaint of primary amenorrhea and partial development of secondary sexual characters (M2-3 / P4). She has a family history of consanguinity and infertility. The laboratory exams presented elevated FSH and LH, reduced estradiol and normal karyotype (46, XX). Radiology identified atrophic ovaries and uterine underdevelopment. All other laboratory results were normal. **RESULTS:** In the presence of a primary amenorrhea, hypothalamic-pituitary, ovarian and uterovaginal causes should be investigated. However, in the present case, hypergonadotropic hypogonadism condition (reduced estradiol with increased LH and FSH) already directs the etiological evaluation to the ovarian compartment. Among the causes of primary amenorrhea that are associated with a serum increase in gonadotropins, diagnostic investigation has led to primary ovarian insufficiency (POI). With the evaluation of the POI, the etiological suspicion was reduced to autoimmune and genetic causes. Autoimmunity, although controversial in the literature, was taken into account due to some similarities and the impossibility of its exclusion. Regarding the genetic cause, syndromes such as Turner, Fragile X and Morris were excluded due to the clinical evaluation and the result of the (normal) karyotype. However, a rare etiology deserved particular attention: gonadal dysgenesis due to genetic mutations in patients 46, XX. Literature shows descriptions of genetic mutations in consanguineous families capable of explaining the patient's condition, with very similar clinical presentation. Mutation in some genes involved in meiosis (STAG3, SYCE1) would result in abnormal development of oocytes, while in others (MCM8 and MCM9) it would result in genomic instability associated with hypergonadotropic hypogonadism in its autosomal recessive forms. The patient's history of family consanguinity and infertility associated with the theoretical support analyzed strengthens the genetic hypothesis as the most probable etiology. **CONCLUSION:** In view of the probable etiological diagnosis, considered rare, and the lack of availability of tests to prove them, reviewing other reports of similar cases was an important tool for the diagnostic direction by establishing a parallel with the case reported in this study. Fortunately, even in the face of the impossibility of establishing a definitive diagnosis, the most appropriate therapeutic approach for the patient did not suffer interference, since the treatment of all POI cases is the same, regardless the etiology.

Keywords: amenorrhea, primary ovarian insufficiency, autoimmunity, oophoritis, gonadal dysgenesis; 46, XX; mutation, hypogonadism.

42. **CLINICAL EVALUATION AND PROGNOSIS OF RESPIRATORY VIRUSES IN ADULT PATIENTS ADMITTED TO A REFERENCE UNIVERSITY HOSPITAL BETWEEN 2013-2020.**

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Viral infections of the lower respiratory tract are an important cause of mortality worldwide and led to serious pandemic outbreaks seen centuries before the current COVID-19. Thus, the objectives of the current study were: to evaluate clinical and epidemiologically severe viral infections in the adult population from 2013 to 2020; assess risk factors associated with patients' prognosis; and measure the epidemiological impact of the COVID-19 pandemic in a reference hospital-university service in the region. Based on these purposes, an observational retrospective study, cohort type, was developed about the medical records of patients admitted to the Hospital Puc-Campinas between January 2013 and June 2020 with diagnostic criteria for Severe Acute Respiratory Syndrome (SARS). In this study, we observed the numerical impact and the severity of the COVID-19 pandemic compared to respiratory viruses in previous years, caused by other viral agents such as Influenza and Respiratory Syncytial Virus (RSV). It was also highlighted the expressiveness of the factors of risk/comorbidities in the face of the COVID-19 pandemic, which determined not only greater probability of

infection, as well as the patient's prognosis. In this way, the study of patients from a public referral hospital was able to show clinical features and prognosis associated with several acute viral respiratory infections.

Keywords: severe acute respiratory, COVID-19, SARS-CoV-2, influenza, syncytial respiratory virus.

43. **ANTICOAGULANT USE IN PATIENTS WITH SARS COV-2. WHEN TO PRESCRIBE?**

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INTRODUCTION: In December 2019, a series of pneumonia cases from unknown causes emerged in the city of Wuhan, China. The clinical presentations were similar to viral pneumonia and after sequencing analysis of samples from the patients' lower respiratory tract, a new coronavirus was identified, which was given the name 2019-nCoV (2019 novel coronavirus), a beta coronavirus belonging to the family coronaviridae. Its name was later changed to SARS-CoV-2 due to its genetic similarity to the previously known SARS-CoV, the virus that caused the 2002 pandemic in China. In the first months of the pandemic, it was observed that patients infected with SARS-CoV-2 that worsened rapidly, presented clinical and laboratory data compatible with Macrophage Activation Syndrome (MAS). This syndrome is the result of an exaggerated immune response, in which the proliferation of T cells and excessive activation of macrophages results in hypersecretion of pro inflammatory cytokines (IL 1 beta, IL 6, interferon and alpha TNF) and an increase in blood coagulability. The study aimed to review the pathogenesis domain, COVID-19 epidemiology, its relationship with the development of venous or arterial thrombosis and the need to use anticoagulants as prophylactic therapy. **METHODS:** A descriptive and exploratory study with a qualitative and documentary approach was carried out, using evidence published on platforms such as: PubMed, Scielo, ScienceDirect, ScienceMag in addition to academic books, emphasizing the most relevant and still under discussed points. The questions asked included considerations for prescribing anticoagulants such as prophylactic therapy in Sars-Cov-2 infected patients, using the words: COVID-19, thrombosis, anticoagulant as descriptors. **RESULTS:** A strong link between abnormal coagulation parameters and mortality has been proven. 71.4% of deaths and 0.6% of survivors presented evidence of disseminated intravascular coagulation. One of the studies followed 27 patients, it revealed that only 5 did not have D-dimer above 500 ng/mL. These took an average of 13 days until the start of anticoagulant therapy, where they received heparin in personalized doses, with better prognosis. Therefore, it is possible to justify the management of low molecular weight Heparin in a prophylactic dose (enlarged or not) in all patients tested positive, who do not present contraindications for its use. **CONCLUSION:** With the review we surmised that therapeutic strategies with the use of anticoagulants are essential to optimize the condition of infected patients. More prospective controlled studies addressing COVID-19 and increased blood coagulability are needed. In view of the international variability in preventive measures, diagnostic strategies and forms of treatment, the importance of the data obtained from the reviews carried out is perceived, as they help to clarify the presentation of the disease and its relationship with thromboembolism.

Keywords: Coronavirus Infections, 2019-nCoV, SARS-CoV-2, Thrombosis, Macrophage Activation Syndrome, Heparin Low-Molecular-Weight, Disseminated Intravascular Coagulation.

44. **NEUROLOGIC ALTERATIONS ASSOCIATED TO SARS-CoV-2: A LITERATURE REVIEW**

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The emergence of severe acute respiratory syndrome 2 (SARS-CoV-2) presented a challenge for the global medical community. It is an acute respiratory syndrome, caused by an enveloped virus that has an RNA genome. Although respiratory manifestations are the most common, SARS-CoV-2 can also affect several parts of the body, including the nervous system. Thus, this review aims to analyze the neurological manifestations caused by coronavirus disease (COVID-19). A literature review was carried

out, based upon articles that were published between 2019 and 2020 in journals indexed to the PubMed, MEDLINE, Scielo and Lilacs database platforms, using the descriptors "Neurologic Manifestations" AND "covid-19". Articles that directly addressed the theme, published between 2019 and 2020, which allowed free access to the full text were included. While the articles of systematic review, with an escape from the theme and with clarified methodology were excluded from the study. At the end, 33 articles were selected and engaged for the present study. The categories of neurological complications included encephalopathies, CNS inflammatory syndromes, ischemic stroke, peripheral neurological disorders and diverse central disorders. Neuroimaging techniques and EEG data revealed epileptogenicity and encephalomalacia in relation to SARS-CoV-2 infection. There is also an emphasis on the prevalence of neurological signs and symptoms in patients with severe COVID-19 infection. The angiotensin 2 receptor (ECA2) is the functional receptor for an invasion of SARS-CoV-2, as the virus binds to ECA2 in host cells and infects cells, then releasing the host's nucleic acid to spread. Currently, there is no proven drug treatment or vaccine. Therefore, it is necessary to intensify the monitoring of the virus and referral to specific health agencies to combat this infection.

Keywords: NEUROLOGY, COVID-19, SARS-CoV-2.

45. SOCIAL IMPACTS FACED BY PATIENTS WITH LEPROSY: AN INTEGRATIVE REVIEW

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INTRODUCTION: The aim of this study is to assess the most relevant aspects of the social impact of leprosy on the lives of patients and to point out measures to reduce this damage. **METHODS:** This is an integrative review. The bases used were: PubMed, Scielo and Lilacs. 24 articles were found and 9 were selected that met the initially proposed criteria. **RESULTS:** After an integrative review of the articles, a great stigma linked to leprosy was observed since antiquity. This stigma is due to the feelings that emerged with the infection, such as the distortion of the body and social prejudice, which has broad consequences for patients, especially when, for protection, there is the concealment of the disease and delay in diagnosis and treatment. **CONCLUSION:** It was identified that, in certain countries, there reduction of social stigma. However, at a global level, it is still a disease linked to the reduction of quality of life, and more effective measures to reduce such negative impacts are extremely important.

Keywords: Leprosy, Social impact.

Management, Quality and Health Care Technologies

46. APPLICABILITY OF BIOPRINTING AND PRINTING IN CONTEMPORARY MEDICINE.

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3D printing and bioprinting are technologies capable of supporting the continuous evolution of personalized digital medicine, through a process that involves medical image, treatment planning, implant design, digital fabrication of implants and personal instrumentation, along with patient acceptance. Despite the existing complexities, these technologies are responsible for enabling the elaboration of new therapeutic approaches, energizing surgical procedures, besides providing a better diagnostic to many patients. The aim of this study is to evaluate different areas that 3D and bioimpression are applied in. A literary search was made and 14 articles were retrieved, in which 13 were original and 1 was a review, published between 2016 and 2020, collected from PubMed Central, Scientific Electronic Library Online e LILACS using the search terms Bioprinting", "Printing", "Printing Three-Dimensional", "Bioprinting AND Medicine", "Printing AND Medicine". The studies revealed the importance of printing in medicine and its occupation areas. The results were categorized into the following groups: medical equipment construction in period of crisis, applicability in regenerative medicine, applicability in cardiology, applicability in fetal medicine and limitations. The studies revealed that 3D printing and bioprinting use is beneficial to patients, considering the

creation of implants or personalized organs that improve prognostic and different pathologies' treatment. Furthermore, the bioprinting technique allows the reproduction of tissues and organs, hence being a facilitator element in various medical specialties, such as reconstructive plastic surgery, maxillofacial surgery, spine surgery, arthroscopy and transplant surgery. Therefore, new studies are necessary to access new occupation areas, relevant information about costs and to certify bioprinting safety in clinical practice.

Keywords: 3d printing, 3d bioprinting, regenerative medicine.

47. USE OF THE DIAPHRAGMATIC PACEMAKER IN RESPIRATORY DISORDERS: A SYSTEMATIC REVIEW

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Considering the treatment need in pathologies that evolve to a respiratory failure, as in cervical spine traumas, Amyotrophic Lateral Sclerosis (ALS), and Central Congenital Hypoventilation Syndrome (CCHS), a variety of studies seek diaphragmatic pacemaker use evidences to replace mechanical ventilation, or even postpone the need for its use. The objective was to discuss possible benefits and harms of the equipment in relation to these diseases. This is a systematic review through electronic search in PubMed and Biblioteca Virtual de Saúde (BVS) database. The keywords "diaphragmatic pacemaker" or "diaphragmatic pacing" and "hypoventilation" or "quadriplegia" were used, according to Preferred Items for Systematic Review and Meta-Analyses methodology. In eight researched articles it was possible to identify data from 184 patients and the effects of diaphragmatic pacemaker were evaluated in pathologies that cause hypoventilation. In general, ALS patients (127) showed more mortality (76%), twice the number of adverse effects, and a shorter survival time (47.8%) in relation to patients who were submitted only to non-invasive ventilation. CCHS group (33) presented an average of 10h / day without mechanical ventilator, but cases of Obstructive Sleep Apnea were observed as a result of stimulation. In cases of cervical trauma (14), there was a decrease, in 57% of patients, of approximately 25% in dependence on the mechanical ventilator, and two patients recovered voluntary ventilation. Besides that, current respiratory volume levels in 12 patients undergoing implantation to study the feasibility of reducing mechanical ventilation increased by 37%, showing a reduction in diaphragmatic atrophy. It is concluded that the use of DP in patients with ALS has shown negative results in relation to mortality, expectation and quality of life. In cases of CCHS and cervical trauma, its use has been shown to be safe and effective, helping to improve respiratory capacity and quality of life of these patients.

Keywords: Diaphragmatic Pacemaker, Hypoventilation, Amyotrophic Lateral Sclerosis, Congenital Central Hypoventilation Syndrome and Tetraplegia.

Mental Health and Psychiatry

48. COLLEGE STUDENT'S HEALTH: A BIBLIOGRAPHIC REVIEW

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INTRODUCTION: The transition to adult life, often represented by college, is very significant for the student, and decisive in the development of future life patterns. Considering this, it is in the interest of public health to understand the picture of the college student's health. The context of health at university is influenced by several factors, that vary between the physical and psychological, the alarming and mild, and encompasses the most diverse risk groups. Thus, understanding this picture is fundamental to arranging public policies that positively affect the youth of today and the adulthood of tomorrow. **OBJECTIVE:** To analyze the college student's health, and, specifically, the students in the health sector. Furthermore, we sought out to verify the main factors that influence the picture and to understand the different extent to which they influence the students. **METHODS:** The search was conducted from 2012 to 2020 in the databases SciELO, CAPES and Medline. Were utilized the words "health", "student", "college student" and "factors". In the beginning, 202 articles were obtained, and, after the reading of the titles, were included only the ones concerning the factors associated with the variation of health in college students. After screening,

only 13 could be used in the making of the article. **RESULTS:** Students suffer from psychological disorders. The incidence of common mental disorder in university students is higher than in the general population. The same is true for anxiety and depression. Considering this, we searched for factors that cause these problems and found: sociodemographic factors, such as gender and income; relational, such as the existence of a support network; academics; psychological, such as coping strategies and health, like pre-existing conditions and change to the university lifestyle. As for the latter, poor nutrition, physical inactivity and lack of leisure and sleep were found harmful. In the students of health courses, these problems were intensified, with the addition of other factors specific to the area. **CONCLUSION:** the health of university students and student's in the health sector, in particular, is impaired and in worse condition when compared to the general population. This scenario must be faced in order to reduce complications resulting from the neglect of this age bracket's health. Thus, knowing the risk factors, it was possible to understand the healthy habits necessary for the well-being of students. With this knowledge, it is possible to outline policies aimed at improving the quality of life for university students.

Keywords: "Health", "College students", "Factors".

49. PERSONALITIES TRAITS AND CARDIOVASCULAR DISEASES: WHAT ARE THE RELATIONS?

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¹FAMERP.

INTRODUCTION: Cardiovascular diseases represent a major burden for public health, are the main cause of death in the world and have caused loss of quality of life, limitations in work and leisure activities, in addition to economic impacts on families and society in general. Studies have shown that psychological factors, such as personality traits, can be important factors to be taken into account in the diagnosis, management and prognosis of cardiovascular diseases. **OBJECTIVE:** The present study aimed to evaluate as negative influences of the types of personalities in the cardiovascular system and propose possible forms of prevention and treatment. **METHODS:** Conducted a systematic review of studies on personality types and cardiovascular events in the Lilacs, SciELO, PubMed and CAPES databases. There was no restriction on the language used in the publications. Used as a recommendation in the document Preferred report items for systematic analyses and meta-analyses (PRISMA), or aims to guide the dissemination of systematic analyses and meta-analyses in the health area. **Results:** Based on published studies, Personality type A and D can affect cardiovascular outcomes mainly by their attitudes to mental suffering. Authors point out that both are related to significant increases in the risk of cardiovascular disease; type A was associated with myocardial infarction, while type D is said to be a predictor of unfavorable outcomes in patients with coronary heart disease, myocardial infarction, peripheral arterial disease and in patients undergoing percutaneous coronary intervention and heart transplantation; these individuals are more exposed to stress, unhealthy lifestyles, not undergoing rehabilitation and low adherence to treatment. **CONCLUSION:** The studies highlight the importance of psychoeducational strategies in patient care, being, therefore, an early identification of suffering and psychosocial management the way of helping the patient to deal with the disease and improve their quality of life. Therefore, it is necessary to include items that evaluate the affective profile and personalities of patients in the cardiovascular assessment protocols, in order to identify possible factors that signal the worst disease or non-adherence to treatment.

Keywords: personalities, stress, cardiovascular risk, behavior.

50. POST TRAUMATIC STRESS DISORDER IN REFUGEES: UNDERSTANDING CHALLENGES IN THE DIAGNOSIS AND TREATMENT

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INTRODUCTION: The number of refugees in the world is growing with each passing day. Along with the many negative experiences they face before, during and after the migration process, attention must be paid to the emergence of mental illness, especially Post-traumatic Stress Disorder (PTSD). Additionally, upon arriving at the host country, this population faces

other problems such as prejudice, lack of information, language barriers and, mainly, lack of broad access to health. **OBJECTIVE:** To discuss the lack of professional health care to attend refugees related to Post-Traumatic Stress Disorder and analyse the challenges in its diagnosis and treatment. **METHODS:** A review of the literature was conducted using the Pubmed, Scielo and PSYCINFO databases in September 2019 to identify original research publications in Portuguese, English and Spanish from 2010 to present, as a major systematic review of PTSD in refugees. **RESULTS:** PTSD is an abnormal reaction to an internal adversity associated to a situation that involves death threat, actual death, serious injury or threat of physical integrity. It involves many neurological changes, which culminates in symptoms like recurring dreams, event memories, psychological suffering and empty future feeling, affecting patients' mental health, especially when added to a difficulty in diagnosis and treatment due to the barriers faced by refugees. The prevalence of specific types of mental health problems is influenced by the nature of the migration experience. Furthermore, the lack of health professional qualification and resources available in the public health contribute to the barriers that stand in the way of reaching the mental health of refugees, as there is a lack of preparation to receive this population. **CONCLUSION:** Therefore, all these challenges contribute to the difficulty in the diagnosis and treatment of PTSD in refugees, culminating in a worldwide problem affecting global health.

Keywords: Mental Health, Refugees/psychology, Stress Disorders, Post-Traumatic/diagnosis, Stress Disorders, Post-Traumatic/therapy.

51. RELATIONSHIP BETWEEN POSTPARTUM DEPRESSION AND BREASTFEEDING: SYSTEMATIC REVIEW

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INTRODUCTION: Postpartum depression (PPD) is defined as the appearance of symptoms of mood changes during pregnancy or between four and six weeks after delivery. Since mothers with PPD are less likely to breastfeed. **OBJECTIVE:** To analyze the relationship between PPD and breastfeeding, as well as elucidate the main factors related to PPD and lactation. **METHOD:** This is a systematic review in accordance with the PRISMA statement. The search was carried out in the MEDLINE, SciELO, SCOPUS and LILACS databases. The research was carried out independently by two researchers. Original articles were selected that addressed the object of study and published in Portuguese and English, with 23 articles selected for qualitative analysis. **RESULTS:** The factors found regarding the relationship between breastfeeding and PPD are: age, socioeconomic status, well-being of the mother and child, culture and mental health. In most studies, higher rates of abandonment of exclusive breastfeeding were observed in children with mothers with symptoms of PPD. Furthermore, a higher score on the Edinburgh scale also showed a strong association with early breastfeeding interruption (between 4 and 8 weeks postpartum) and, finally, PPD. Subsequently, it was seen that there is little relevance regarding the mothers' age, educational level, employment, number of children and relationship with the baby's sex. **CONCLUSION:** It was confirmed in most of the selected studies that breastfeeding has a bidirectional contribution for the mother and child, as well as postpartum depression seems to be associated with the interruption of breastfeeding. In order to clarify the possible influential causes in the cause-consequence relationship previously presented, it is necessary to carry out new studies with large populations to obtain a better statistical power.

Keywords: Postpartum depression, Breastfeeding, Interruption.

52. A REVIEW OF THE RECENT LITERATURE ON THE LIPID AND PROTEIN PROFILE IN SCHIZOPHRENIC INDIVIDUALS

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Schizophrenia (SCH) is one of the most common psychiatric disorders characterized by impaired motivation and cognition. It is a severe chronic

disease. The pathophysiological mechanisms of SCH are still being studied and no effective therapy can prevent or treat cognitive deficiencies and symptoms caused by the disease. Thus, the present study aims to find possible relationships between this pathology and some biomarkers, such as lipids, cytokines or proteins, that can assist in the early diagnosis, monitoring and treatment of SCH. A descriptive review of articles published in the indexed databases PubMed, MedLine, Lilacs and Scielo was carried out, with the descriptors: "serum profile" and "schizophrenia", using the Boolean operator AND and searching for articles in English and Portuguese, published in the last 5 years, that were related to the serum profile of lipids, cytokines or proteins in schizophrenic individuals. Twenty four articles met the inclusion criteria. Of these, 13 studies were associated with changes in lipid metabolites, 6 analyzed the cytokine profile and 5 articles studied serum protein levels in schizophrenic individuals. The results showed significant differences in schizophrenic individuals compared to control groups in: serum lipid levels, such as high density lipoproteins (HDL), low density lipoproteins (LDL), total cholesterol (CT), triglycerides (TGs) and several others; levels of cytokines, such as certain interleukins (IL) and interferons; and in protein levels, such as high sensitivity C-reactive protein (hs-CRP), heavy gamma immunoglobulin constant 1, H1L region of immunoglobulin V-III lambda chain, G72 protein and others. Also, changes in the levels of certain biomarkers were associated with the development of symptoms of SCH: (1) high concentrations of LDL and CT were related to the increase in impulsive actions and depressive, suicidal and self-aggressive behaviors; (2) disorders of TG levels favored severe symptoms, such as depression; (3) high content of free fatty acids (FFA) increases the oxidative stress in the central nervous system, stimulating the pathophysiology of the disease; (4) high levels of IL-3 were associated with worsening of symptoms in schizophrenics; (5) IL-17 levels were negatively correlated with alogia, formal thinking disorder and inattention; (6) levels of IL-6 and interleukin 2 receptor (IL-2R) had a positive correlation with the severity of symptoms, measured by the negative and positive syndromes scale (PANSS); (7) levels of IL-10 showed a negative correlation with negative symptoms of the disease and serum levels of IL-4 had a positive correlation with negative symptoms of the disease; and (8) elevated levels of cadherin 5 were present in schizophrenic individuals with a predominance of positive symptoms. These results provide extremely relevant information about potential biomarkers for early diagnosis and monitoring of the progression and severity of schizophrenia, in addition to being able to support future studies, which are even aimed at developing new therapies for the disease.

Keywords: Mental disorder, Serum biomarkers, Schizophrenia.

53. PSYCHOSOCIAL RISK FACTORS FOR POSTPARTUM DEPRESSION: AN INTEGRATIVE REVIEW

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INTRODUCTION: Postpartum depression (PPD) is one of the most recurrent non-obstetric complications associated with pregnancy, described by DSM-V as a specifier of major depressive disorder. Unlike maternity blue, which is a common, non-harmful and with spontaneous remission reaction, PPD is a more severe and persistent condition and, therefore, it has a negative impact on the maternal-infant relationship and increases the likelihood of self and heteroaggressions occurring. Although its etiopathology is not yet well defined, this condition is recognized as an important cause of maternal morbidity, which makes it a significant problem in the public health area. **Objective:** To identify, in the scientific literature, psychosocial risk factors for postpartum depression in women in this period. **METHODS:** This is an integrative review of the literature that collected data using the PubMed, Scielo and LILACS databases. The descriptors were correlated through the boolean operators AND and OR: "risk factors", "postpartum period", "postpartum" and "depressive disorder", according to the MeSH terms; "depression", "postpartum depression", "puerperal depression", "postnatal depression" and "risk factors", according to the DeCS; as well as the free term "postpartum". **RESULTS:** We selected 11 articles published between 2010 and 2019, which were analyzed according to their objectives and main results. Thus, the risk factors for the development of PPD were identified, which include, among others, the lower maternal age and the lower participation in decisions concerning the child, aspects that are often associated. Moreover, regarding interpersonal relationships, are considered

as predisposing factors: the frequent marital conflicts; the instability of consensual union; the lack of support offered by the partner and the other people with whom the parturient maintains a relationship; the presence of anguish and restlessness in the family; being a single mother; and the sexual problems in the postnatal period. Inadequate housing, financial difficulties, less than 12 weeks of maternity leave and lower schooling are social factors that increase the likelihood of developing this disturbance. Similarly, the late onset of breastfeeding; the use of infant formulae; transpelvic delivery and multiple pregnancies are also issues involved in this problem, as well as the medical complications linked to the mother and baby; the low weight of the baby at birth and at four weeks of life; hypertensive disorders in pregnancy; postpartum dysphoria; prematurity; and perinatal death. Furthermore, the history of adverse physical and/or sexual experiences in childhood; of spontaneous abortions; of depression; and of domestic violence have a negative impact on the lives of mothers, making them more susceptible to PPD. Finally, aspects associated with personality and behavioral patterns, consisting of somatic or psychic traumatic anxiety; distrust; neuroticism; mother's frequent exposure to the cell phone; and depressive or anxious manifestations in the premenstrual period or pregnancy are other psychosocial risk issues. **CONCLUSION:** The predisposing factors to postpartum depression should be considered so that health professionals can plan and carry out actions aimed at promoting mental well-being, as well as prevention and early diagnosis of this disorder. As a result, an appropriate environment would be built to combat PPD in order to avoid the harmful consequences of this pathology.

Keywords: Postpartum depression, postpartum period, risk factors.

54. THE RELATION OF DEPRESSION WITH CHRONIC NONCOMMUNICABLE DISEASES

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INTRODUCTION: Chronic Noncommunicable Diseases (CNCD) negatively affect people's quality of life, a fact that makes them more susceptible to the development of depression, a condition that further worsens the prognosis of these patients. Studies show a higher prevalence of depressive symptoms in patients with chronic diseases, which makes this target audience essential for monitoring mental health. **OBJECTIVE:** Correlate the higher incidence of depressive symptoms in patients with chronic diseases, in addition to assessing the sociodemographic risk factors that are associated with these adversities and their pathophysiological mechanisms. **METHODS:** In this study, an integrative review was adopted, using the Medical Literature Analysis and Retrieval System Online (Medline), Scientific Electronic Library Online (Scielo), Virtual Health Library (VHL) databases. **RESULTS:** It is known that intractable pain, low socioeconomic status, advanced age and female gender are risk factors for the development of depression associated with chronic diseases. The review showed that Chronic Kidney Disease and dialysis therapy are associated with depression and, according to Renz CP et al, about 60.3% of patients with this chronic comorbidity have some sign of depression. Regarding the cardiovascular system, it is known that previous acute myocardial infarction (31.1%), systemic arterial hypertension (40.1%) and diabetes (8.5-27.3%) are related to a higher prevalence of depression. In advanced cancer, the prevalence of depression was around 55%, with uncontrollable pain being the main factor, as it involves neurotransmitters and receptors that act in the genesis and maintenance of depression. Patients with respiratory problems such as COPD and Asthma, depression increased the mortality of the sick by 81%. Finally, Rheumatoid Arthritis is also closely related to anxiety and depression, since joint pain, deformities, sleep disorders, inability to work and, consequently, socioeconomic factors affect the daily lives of these individuals. **CONCLUSION:** It is evident the strong relationship between these diseases and depression and how this pathophysiological set is associated with the worse prognosis of physical and mental health of these patients. Thus, when identifying the sociodemographic risk profile for this association, it is possible to plan strategies to ensure the mental health of these patients and, thus, improve the quality of life.

Keywords: depression, chronic diseases, risk factors.

55. **FAMILY ACCEPTANCE IN THE PROCESS OF COPING WITH GENETIC DISEASE: REVIEW OF LITERATURE**

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The discovery of a genetic disease that raises intellectual deficits affects family stability through the breakdown of expectations, insecurity regarding the risks of lethality and the parents' guilt at the diagnosis. This article aims to assess family acceptance and coping strategies used in this process. For data collection, 24 articles from the "Google Scholar" and SciELO databases were used. From these, only five met the selection criteria for addressing the parental relationship with genetic diseases and family coping measures. The acceptance process is often hampered by misinformation about the disease, the lack of support from the support network and the way the news is communicated by health professionals. The parents, therefore, blame themselves for what happened, especially the mother. Coping strategies in this context are sought, such as: religious, family, friends and public support. Treating the family as the central character of the problem, and not the pathology, is a fundamental step towards starting to face this condition. The importance of this article is based on the ability to provide information to both families and health professionals, aiming at the best way to carry out the coping process.

Keywords: genetic syndrome, coping, face, family, acceptance.

56. **TRANSCRANIAL DIRECT CURRENT STIMULATION AS AN ADJUVANT THERAPY FOR DEPRESSION TREATMENT**

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INTRODUCTION: Considering the high prevalence of depressive disorders, as well as their psychological, social and biological consequences, transcranial direct current stimulation (TDCS) has been considered a potential strategy for managing this condition. This is a non-invasive neuromodulation technique based on the insertion of two flat electrodes, the anode (positive) and the cathode (negative), which are arranged in different skull regions for the application of low ampere direct current (between 0,15 - 2 mA) in sessions ranging from 10 to 20 minutes. Considering the evidence of TDCS effectiveness, the aim of the present study was to conduct a literature review on the use of this technique associated with pharmacotherapy or psychotherapies/cognitive therapies, in order to answer the following question: Is TDCS, combined with antidepressants, psychotherapy or cognitive therapies, more effective than the isolated treatment? **METHODS:** We performed a retrospective analysis (studies published between 2010 and 2020) using three different search strategies on the Ovid® platform. The studies were then selected according to established inclusion and exclusion criteria and comparatively analyzed. **RESULTS:** Nine scientific papers were selected, analyzed, discussed and theorized. We found that anodic TDCS in the prefrontal cortex (with greater evidence in the left dorsolateral subdivision) has significant antidepressant effects in the management of major depressive disorder, similar or less than sertraline and escitalopram, respectively, but superior to placebo or simulated stimulation. Furthermore, the studies indicate that the antidepressant effects of TDCS can be enhanced by the combination of treatments, mainly with sertraline. There is also evidence for a synergistic effect of TDCS and cognitive control training. **CONCLUSION:** Anodic TDCS in the left dorsolateral prefrontal cortex has significant antidepressant effects, similar to or less than antidepressant drugs commonly used in clinical practice, but superior to placebo or simulated stimulation. The studies analyzed indicate that the antidepressant effects of ETCC can be enhanced by the combination of treatments, mainly with sertraline. Cognitive stimulus activities can also improve antidepressant effects, although more studies, with a larger number of volunteers, can better support this conclusion. Furthermore, the increasing knowledge about ETCC, its application and effectiveness may allow in the near future a greater use of the technique as an alternative or complement to conventional treatment, considering that it is low-cost and of easy application.

Keywords: Transcranial direct current stimulation, Depressive disorder, Antidepressants, Neurostimulation, Cognitive therapy, Combined therapy.

57. **CONSTRUCTION OF HIGH FIDELITY SIMULATION SCENARIO FOR ASSISTANCE TO PERSONS WITH NONSUICIDAL SELF-INJURY**

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INTRODUCTION: Non-suicidal self-injury can be defined as the act of intentional damage to the body in order to obtain relief from a negative feeling state, resolution of interpersonal difficulties or induction of a positive feeling state, without suicidal intent. Aiming at the demand to improve the technical assistance of professionals and students regarding the theme, it was decided to use high fidelity simulation as an innovative teaching and learning method. This method focuses on learning the possibility of interacting in a simulated service in a protected environment. That way it collaborates in the learning process, helping to improve critical and practical thinking skills and reducing anxiety levels, preparing the participant for real care. **METHODS:** This is a descriptive study of the construction of a high-fidelity clinical simulation scenario to assist people with non-suicidal self-injury. The scenario construction process followed two stages: 1- construction of a high-fidelity simulation scenario template: bibliographical survey of the scenario and good practice of high-fidelity simulation, elaboration of the template; 2- elaboration of content related to non-suicidal self-harm: survey of scientific articles and guidelines on assistance to non-suicidal self-harm, consultation with researchers in the area of interest. Both stages underwent internal validation by a research group from a University in the interior of the state of São Paulo. The second stage also went through initial validation with specialist researchers using an instrument with a three-point Likert scale, being analyzed by the content validity index. **RESULTS:** Construction of a template to guide the creation of a high-fidelity simulation scenario, addressing clear objectives, approximation with reality and student support. Construction of a scenario for realistic learning of professional assistance to people with non-suicidal self-injury. The general validation of the template and scenario was accepted by 97% of the expert judges. **CONCLUSION:** The construction of the scenario on non-suicidal self-harm collaborates in the learning of health professionals and students. It contributes to a greater knowledge of the theme, theoretical, practical and emotional preparation for the reception of adolescents, strengthening actions of prevention, promotion and management of self-injurious behavior in society.

Keywords: Adolescents, High fidelity simulation, Non-suicidal self-injury, Simulation scenario.

58. **CHALLENGES FACED BY ASD PATIENTS AND THEIR FAMILIES FACING THE COVID-19 PANDEMIC: A NARRATIVE REVIEW**

Bianca Stephanie Lima Teixeira¹, Marcos Divino de Oliveira Júnior¹, Maria Eduarda Ferreira de Oliveira¹, Matheus Vieira Sampaio¹, Weberton Dorácio Sobrinho¹, Aécio Geovanne Cavalcanti Alves¹.

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INTRODUCTION: This article presents a narrative review of the literature regarding the challenges faced by individuals with Autistic Spectrum Disorder (ASD) whereas pandemic situation. **OBJECTIVE:** The review summarizes information that can be used by health professionals in general, educators and family members of autistic people and seeks to answer the following question: "For patients with ASD, what are the new challenges imposed by the pandemic of COVID-19 and their respective psychosocial stressors?" **METHODS:** The survey of the articles was carried out based on three data (SciELO, PubMed and LILACS), in addition to the Diagnostic and Statistical Manual of Mental Disorders DSM-5 and The Autisms. Studies included with a focus on autistic patients, especially children and adolescents. In total, 17 references formed the body of analysis of the review. **RESULTS:** Three dimensions are presented and discussed: 1) What are the obstacles in the life of the autistic person with the pandemic? 2) What do family members of autistic suffer with the arrival of the new coronavirus? 3) What are the impacts on the school life of children and adolescents with ASD during distance classes? **CONCLUSION:** The review allowed a better understanding of the physical, psychological and social situation of children and adolescents with ASD, in addition to the difficulties experienced by them and their families during the pandemic. In this bias, it is clear that family members, educators and health professionals must seek ways to reduce the impacts of the new coronavirus on the lives of autistic people.

Keywords: Adolescent, ASD, Autism, Autism Spectrum Disorder, Autistic, Child, Confinement, Coronavirus, Covid-19, Family, Isolation, Mental Health, Pandemic, Psychiatry, Sar-CoV-2.

59. **DEPRESSION IN ADULTS UNRESPONSIVE TO FIRST DRUG**
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INTRODUCTION: Patients who don't respond to the first proposal for antidepressant agents compose a separate group, and the clinical doctor must know their management, since remission rates to selective serotonin reuptake inhibitors are about 30% to 35%. In such cases treatment is a matter of discussion. Discussing and analyzing approaches and methods for improving recognition and management is useful in clinical practice, justifying the case report, which contribute to new studies. **Objective:** report a clinical case of depression in adult not responsive to the first drug approach. **CASE REPORT:** 25 years old woman, reported a year ago started with symptoms of anhedonia, unexplained sadness, frequent cries, headache, somnolence, inattention, irritability, memory loss and "empty head feeling". After 3 months, the patient evolved with anhedonia worsening associated with suicidal ideation. Pharmacological treatment started in basic attention with fluoxetine (20 mg in the beginning, following 40 mg daily after 1 month) and amitriptyline (already suspended). Referenced, the patient shows low antidepressant response after 1 month and 3 weeks of treatment. The patient refers hypercholesterolemia as previous pathological history and denies use of alcohol and illicit drugs and traumatic events during the life. In the mental exam the patient was oriented, with depressed mood and preserved insight. In view of the current condition, fluoxetine was discontinued, with venlafaxine replacement 75 mg in the morning during 10 days and 150 mg after this period. Psychoeducation and orientation against the abrupt discontinuation of the drug was made. **DISCUSSION:** Most patients with depression should be managed in the primary care service, and treatment should be diverted to secondary care only in the most serious and singular cases². The effectiveness of the treatment needs to be evaluated within 2 to 4 weeks after starting the medication. Although part of the literature uses monotherapy or small combinations of drugs, in clinical practice, several patients need two or more drug strategies to achieve remission of symptoms. There are evidences that after the first use of a Selective Serotonin Reuptake Inhibitor without success, switching to the same class or to a different class is plausible. **CONCLUSION:** Given the proportion of depressed patients who do not achieve the optimal outcome with the first selection of antidepressants and damage done, it is critical to know and track new tools to chance this inappropriate response.

Keywords: Depression, Adults, Antidepressants, Treatment Failure.

Pediatrics

60. **NEONATAL MORTALITY AND PERIVIALITY IN VERY LOW BIRTH WEIGHT PRETERM INFANTS**
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The preterm birth is currently one of the main public health issues. The frequency of this condition has grown worldwide, especially in the developing nations. This is the case of Brazil, which is among the ten countries with the highest numbers of premature births. Furthermore, the prematurity is the leading cause of mortality in infants under five years old and is responsible for the increase of short and long terms morbidities. Thereby, epidemiological studies are fundamental to understand this condition, its determinants and related risk factors. **Objective:** to assess the mortality and periviability of premature and very low birth weight newborns. **Methods:** analytical cross-section study with retrospective data collection from medical charts of 627 premature infants under 32 completed weeks of gestational age (GA) and birth weight (BW) under 1500 grams admitted to the neonatal intensive care unit (NICU) of a single Brazilian tertiary hospital between August 2008 and August 2018. For all statistical tests, we considered a 5% level of significance. **Results:** The average GA was 27.9 ± 2.5 weeks and the average BW was 964.8 ± 287 grams. The death rate was 26.6% and the periviability was 25 weeks. Most deaths (39.5%) occurred in the first week of life, 29.3% occurred in the first 24 hours and 86.8% in the neonatal period. The mortality rate was significantly higher in the following groups ($p < 0.05$): neonatal resuscitation in the delivery room (OR: 2.19), early neonatal sepsis (OR: 2.45), respiratory distress syndrome (RDS) (OR: 5.61) and peri-intraventricular haemorrhage (PIVH) (OR: 3.04). The median

BW among who died was 715g (567.5; 877.5) whereas it was 1035g (850; 1255) among who survived ($p < 0.001$). Furthermore, the reduction of BW significantly increased death rate, which was 88.5% with BW < 500g and 8.3% with BW ≥ 1250g ($p < 0.001$). The increase in GA also reduced mortality, which was 43.7% with GA < 28 weeks and 11.4% with GA ≥ 28 weeks ($p < 0.001$). Protective factors in this study were ($p < 0.05$): female gender (OR: 0.65), GA ≥ 28 weeks (OR: 0.16), continuous positive airway pressure (CPAP) in the delivery room (OR: 0.31) and use of inhaled O₂ during neonatal resuscitation (OR: 0.24). **Conclusion:** The preterm birth leads to a higher risk to neonatal death. The mortality among very and extremely low birth weight prematures is inversely proportional to GA and BW. This risk increases in the presence of worse birth conditions and conditions that require neonatal resuscitation. Besides, the presence of comorbidities increases mortality, with RDS, PIVH and neonatal sepsis being the main ones found in this study. Assessing this population characteristics is fundamental to uncover modifiable determinants that may be increasing mortality. Therefore, epidemiological studies are important to improve the preterm newborn medical care quality and establish knowledge to offer more ways to survive in better conditions.

Keywords: Premature infant, mortality, very low birth weight infant.

61. **THE IMPACT OF THERAPEUTIC HYPOTHERMIA ON NEWBORNS WITH HYPOXIC ISCHEMIC ENCEPHALOPATHY**
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OBJECTIVE: To express the physiological and biochemical effects of therapeutic hypothermia (TH) in the evolution of hypoxic-ischemic encephalopathy (HIE), to present the selection criteria for neonates that are candidates for therapy, to expose the standard clinical procedure of the technique and, lastly, to reveal the TH role in morbimortality rate, and in the cognitive and motor development of newborn with HIE, making evident the possible adverse effects of therapy. **METHODS:** A bibliographic survey was carried out in the LILACS, SciELO and PubMed databases, of renowned scientific articles with a publication interval between 1997-2020 on the theme of HT in newborns with EHI. After applying inclusion and exclusion criteria 25 articles were analyzed and divided into 11 bibliographic reviews, 10 experimental studies, 1 systematic review with meta-analysis and 3 case control studies, in order to understand the impact of HT and its neuroprotective hypothesis. **CONCLUSION:** As long as performed by a qualified professional team following precisely the application protocol, the TH acted in the reduction of damage due to HIE in newborn, especially in mild and moderate stages, softening brain lesion, favoring a good neurological outcome and great prognosis.

Keywords: Fetal Hypoxia, Hypoxia-Ischemia, Brain, Brain diseases, Hypoxia, Brain, Hypothermia, Induced.

62. **PSYCO-EMOTIONAL ASPECTS OF THE ROLE OF FAMILY IN THE CHILDREN'S ROTINE WITH CONGENIT CARDIOPATHY: FACILITATOR OR LIMITATOR ? INTEGRATIVE REVIEW**
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INTRODUCTION: Congenital heart diseases are changes in the base anatomical structure of the heart that might occur at the eighth week of pregnancy during its development and have an average incidence of one in one hundred live births. Nevertheless, its consequences go beyond the scope of physiological normality and affect other aspects of carrier child's life that imply severe changes in the family reality. **RESEARCH PROBLEM:** To highlight the impacts of the deficient psycho-emotional approach of the infants with congenital heart disease's support network by professionals of the multidisciplinary health team in its socio-cognitive development. **METHODS:** This is an integrative review of qualitative, observational and exhibition character. For its production, the search used the Pubmed, LILACS and Scielo databases, with the application of the descriptors: "nursing", "psychology", "family", "routine", "overprotection" and "congenital heart disease", associated or not, and by the use of synonymous terms, that is, the MESH at PubMed, in English and Portuguese; To outline the search,

filters was used, being them: ten-year interval (2010-2020) and full article available. As a result, the sample universe consisted of 625 pre-selected articles, subsequently reduced to 15 articles and 1 dissertation - without language limitation (Portuguese, English and Spanish) - being the final quantity composed of productions with affinity and relevance to the thematic approach. **RESULTS:** The critical evaluation of the articles allowed us to infer that there is great family pressure on children with congenital heart disease due to the characteristic risks of the pathology, capable of instituting an aura of caution in all the attitudes and wills demonstrated by the child, which are the target of "family overprotection", due to the deficiency of psychological assistance directed to the children's support network, since the diagnosis reception, as the process is potentially traumatic - according to the severity of the pathology, presented by each patient - to all involved in the equation, being them: family members, people that lives at home, health team and, in particular, the child. In this aspect, given the new reality, it is observed that many families are forced to adapt their routines in an integral way to the needs of the patient, even if parents or correlates are not prepared for the process of forced ambience, after the sudden break in expectations and the emergence of new physical, psychological and social demands, a fact aggravated by the scarce professional's psycho-emotional approach to guide all the ones involved in a healthy way, as the changes are needed in routine, in order to avoid overlapping fears above the experimentation of fundamental situations for the construction of the youth character. **CONCLUSION:** It is noted, therefore, that congenital heart diseases are not as rare as established in the social imaginary, given that their effects on the life and routine of parents are significant and capable of covering all social, psychological and emotional spheres, since they require the parental ability to define limits and possibilities, without overlapping the needs of the infant. Therefore, it is noted that the failure to address these needs is the causal factor for the perpetuation of the pattern and needs to be more emphasized for the materialization of humanized approach.

Keywords: nursing; psychology; family routine; overprotection; congenital heart disease.

63. **THERAPEUTIC APPROACHES TO MIGRAINE IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW**
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INTRODUCTION: Migraine is classified as a common primary headache disorder. It is important among children and adolescents due to its high prevalence in these populations, mainly during school age and adolescence. The treatment of migraine in these populations aims to ensure rapid relief of the headache and minimal side effects. **OBJECTIVE:** critical analysis of articles about pharmacological and non-pharmacological treatments of migraine in children and adolescents. **METHODS:** in this systematic review articles were researched in the Medline (PubMed) database. The inclusion criteria applied were: (1) Population of children and adolescents aged 0-18 years; (2) Articles in English and Portuguese; (3) Articles about treatment; (4) Clinical trials and Randomized Clinical Trials. The research was conducted in July 2019. **RESULTS:** a total of 634 articles were rescued. Of these, 265 were selected by title. After reading the abstracts, 33 articles were selected and 14 were included in the analysis of this systematic review. Among pharmacological options, several drugs were analyzed: Almotriptan showed significant improvement after 2 hours for 15-17 years, but didn't show significant improvement for 12-14 years. On the other hand, Rizatriptan was effective in doses of 5 and 10mg. The association of Sumatriptan with Naproxen sodium was satisfactory in 2 articles included in this review with three different doses: 10 / 60mg, 30 / 180mg, 85 / 500mg. Articles were also found reporting the use of Sumatriptan nasal spray (5mg and 10mg), with improvement in specific doses depending on age. The use of Sumatriptan tablets, Zolmitriptan nasal spray and Eletriptan proved to be insignificant. Among the non-pharmacological approaches, autogenic training with thermal feedback reported a significant decrease in the duration of migraine episodes at three different times: at the end of treatment, after 1 month and after 6 months. The technique of compression of superficial temporal arteries by a device was effective after 3 to 5 minutes. And falling asleep as a treatment for migraine also showed a significant improvement. **CONCLUSION:** among pharmacological treatments, the triptan class was the one addressed in all articles included. However, not all drugs were effective. Medicines such as Almotriptan, Rizatriptan,

Sumatriptan nasal spray and Sumatriptan associated with Naproxen sodium were effective. However, Sumatriptan administered orally, Eletriptan and Zolmitriptan nasal spray did not demonstrate therapeutic efficacy in the studied population. On the other hand, the three non-pharmacological approaches evaluated in this review (autogenic treatment with thermal feedback, compression of superficial temporal arteries by a device and falling asleep) proved to be effective.

Keywords: Migraine, Pediatric, Adolescents, Children, Headache.

64. **INFLUENCES OF POSTPARTUM DEPRESSION ON CHILD DEVELOPMENT**
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INTRODUCTION: Since Birth, the communication of the newborn with the world is aided by its mother. A progenitor's mental health can easily affect the quality of this first contact, however, mothers with postpartum depression tend to interact less with their babies. This condition is mostly observed through the lack of bonding with their babies in the first months of life, when small actions such as chattering and giving sympathetic looks are essential to develop the baby's neural connections. The main causes for postpartum depression are low self-esteem, problems in marriage, unplanned pregnancy and the socioeconomic question. **OBJECTIVE:** This review aims to establish the consequences of postpartum depression in the child development. **METHODS:** Scientific articles from the last 17 years were gathered through the databases PubMed, SciELO, BIREME and Medline in Portuguese and English. **RESULTS:** 56 articles were analyzed and they associated mothers with postpartum depression with children who showed difficulties in starting and maintaining social interactions, lack of their affectionate states displayed in their initial years, presenting a developmental delay. **Discussion:** Postpartum depression is characterized by persistent discouragement and guilt, while the puerperal period requires that the mother adapts to this new reality, resulting in a emotional instability that disarrange the mother-child bonding that should be being formed. Consequently, insufficient sensorial, affective and social stimulations result in a delay in child's development cognitive, affective and relational spheres. **CONCLUSION:** It is possible to associate the better development of the children with a proper mother-child interaction.

Keywords: Postpartum, Depression, Mother-Child Relations, Child Development.

65. **COST-BENEFIT ANALYSIS OF PROPHYLAXIS WITH PALIVIZUMAB IN PRETERM INFANTS ON THE PREVENTION OF RESPIRATORY SYNCYTIAL VIRUS INFECTIONS**
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INTRODUCTION: Syncytial respiratory virus (RSV) is the main cause of lower respiratory tract infections in babies and is responsible for infecting 68% of infants during the first year of life. The drug Palivizumab is a monoclonal antibody used as prophylactic against the RSV. To prevent infections by the virus and reduce its morbidity, approximately 50 countries have adopted protocols for the use of the drug, but there is no consensus on its effectiveness and the cost-benefit ratio, due to the high price of the drug. **Objective:** This article is an integrative review about the cost-benefit of prophylaxis, with the objective of comparing the data obtained from recent studies and reaching an objective and impartial conclusion. **METHODS:** The study was elaborated between July and August 2020. Articles in Portuguese and English were searched in the SCIELO, MEDLINE and PUBMED databases, published in the last 5 years, using the Boolean operators: "palivizumab" AND "randomized controlled trial"; "palivizumab" AND "cohort study"; "palivizumab" AND "observational study". The selected articles were submitted to a full analysis of their contents, and the results were cataloged in a Microsoft Excel® 2019 spreadsheet. All monetary values were converted into US dollars and adjusted for inflation to standardize the sample. **RESULTS:** Of the analyzed articles, 3 reached a negative cost-benefit conclusion and 2 reached a positive ratio. Using the ICER parameter to quantify cost-benefit, the data obtained ranged from \$ 24,439/QALY to \$

261,316/QALY in relation to conventional treatments and other protocols. Only one study concluded that prophylaxis results in cost savings, while another concluded with a favorable opinion as the ICER parameter remained within acceptable values. **CONCLUSION:** The wide variation in the data can be largely attributed to the different inclusion protocols adopted and the different methodologies used in the studies. The variety of conclusions reflects the lack of consensus on the topic in the scientific community, but the analysis of the results allows us to affirm that the cost-benefit of the treatment is a relative issue. Using ICER cost-benefit benchmarks published by sources linked to government agencies, the range found, \$ 24,439/QALY to \$ 261,316/QALY, establishes the use of prophylaxis as possibly acceptable in developed countries, but highly inefficient in middle-income countries like Brazil, even based on the most optimistic data.

Keywords: palivizumab, syncytial respiratory virus, preterm infants, cost-benefit.

66. **CLINICAL, LABORATORY AND OUTCOME ANALYSIS OF FOOD CHALLENGE WITH BAKED MILK, PERFORMED ON PEDIATRIC PATIENTS WITH MILK ALLERGY, HC UNICAMP (2016 TO 2018)**

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Milk Allergy (MA) is the most common form of childhood food allergy. The most reliable diagnostic tool for MA is the Food Challenge (FC), where the patient ingests, after an adequate period of exclusion diet, and, under medical supervision, the suspect food, in order to catch an allergic reaction. FC can be performed for both cow's milk containing intact protein and for cooked milk (Baked Milk). In about 70% of cases of MA, the patient becomes tolerant to Baked milk before becoming tolerant to the intact protein. The daily use of Baked Milk products makes it possible to increase the food repertoire, with a positive impact on patients' nutrition and quality of life. There is also evidence that the daily intake of Baked Milk foods makes it possible to acquire a faster tolerance for milk with intact protein. The present study allowed us to consistently assess the epidemiological and clinical characteristics of the 22 patients who underwent FC for Baked Milk at a university service. However, there was an impossibility of a correct evaluation between previous levels of IgE specific for cow's milk in the studied group, given the low percentage of tests performed. Since there was an expressive amount of negative FC for Baked Milk, allowing the expansion of the diet for many patients, strategies that allow the accomplishment of a greater quantity of FC for Baked Milk and also FC for intact protein are desirable from the point of view of the quality of life of the patients and also of the patients' health services.

Keywords: Cow's milk protein allergy, Oral Provocation Test, Baked milk.

67. **MONTELUKAST IN PEDIATRIC ASTHMA: A REVIEW**

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Asthma is a highly prevalent disease that can negatively impact the well-being of children and adolescents, and correct pharmacotherapy is essential in the management of symptoms and the prevention of exacerbations. Montelukast is a leukotriene receptor antagonist widely used in asthma and allergic rhinitis. Here, we discuss the pharmacological aspects of montelukast, highlighting its role in the treatment of pediatric asthma. We searched papers and guidelines on PubMed, MedLine or Scielo, as well as websites of regulatory agencies. According to national and international guidelines, montelukast is an alternative to inhaled corticosteroids in the treatment of asthma in children and adolescents, being able to reduce airway inflammation and prevent bronchoconstriction. Although montelukast has a satisfactory efficacy and safety profile, pharmacovigilance studies have shown the occurrence of serious neuropsychiatric adverse reactions in pediatric patients, which contributes to the warnings issued by regulatory agencies. Future randomized clinical trials or observational studies on the safety of montelukast, in addition to mechanistic assays, are necessary and will contribute to support clinical decisions about the maintenance of the drug in pediatric asthma pharmacotherapy.

Keywords: Asthma, Pediatrics, Montelukast.

68. **ANALYSIS OF THE RELEVANCE OF BEHAVIORAL, ECONOMIC AND SOCIAL ASPECTS FOR THE MEDICAL TEAM THAT ATTENDS PEDIATRIC PATIENTS WITH ATOPIC DERMATITIS.**

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Atopic dermatitis (AD) is defined as a recurrent chronic skin inflammatory disease, which affects around 20% of children and 10% of adults in developed countries. Intense skin pruritus and eczematous lesions are the most frequent signs and symptoms; it is a disease that significantly compromises the patient's behavior and social interactions. School performance, sleep quality, embarrassment due to the appearance of the skin and the difficulty in performing tasks or participating in sports or leisure activities evolve, in many cases, to great emotional lability. However, the medical team that attends the patient is not always attentive, trained or has enough time in the medical consultation to address the behavioral, economic and social aspects related to these patients. In the present study, medical records of 65 patients with AD were evaluated. Very few descriptions were found regarding the patient with AD in its multiple aspects, physical, social and psychological. However, it was possible to observe the presence of the impact of AD on patients' quality of life, such as sleep impaired by itching, financial expenses and the need to refer to multidisciplinary teams. It was also possible to observe the difficulty of understanding and adherence to simple measures such as environmental prophylaxis and dietary guidance. The findings of the present study show how complex the patient with AD is and how important it is to establish a medical consultation and special follow-up, with time and strategies specific to the multiple needs of these patients.

Keywords: Atopic Dermatitis, Medical evaluation, Quality of life.

69. **APPROACH TO SEXUAL ABUSE IN MALE CHILDREN: A CASE REPORT**

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The sexual abuse suffered by male children is a theme which has a great clinical relevance, although it is neglected by the society and also, by the healthcare professionals. Therefore, the violence against boys turns into a public health issue. This study aims to report the case of a male, 12 years and 6 months old, patient, victim of sexual harassment. In order to realize the research, it was used data from the patient's medical records, which describes his whole clinical history since his first contact with the institution. Furthermore, the subject-matter was contextualized with a literature review based on current data. The referred patient was admitted at the Unidade Básica de Saúde - UBS (Essential Healthcare Unity), in Betim city (MG) accompanied by his grandmother, having, as a complaint, encopresis and enuresis, due to this, he was forwarded to a pediatrics examination. During anamnesis, his grandmother reported that the child suffered sexual harassment throughout his early childhood, on his father's behalf, what had already been reported on the patient records, although it was never notified by the healthcare team. Lastly, it is extremely valuable the approach of neglect sexual abuse against male children.

Keywords: Child Abuse, Primary health Care, Pediatrics, Sex Offenses.

70. **THE FIRST THOUSAND DAYS OF LIFE: LITERATURE REVIEW ON STRATEGY AND PUBLIC POLICIES IN BRAZIL**

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In 2008, the series of The Lancet magazine introduced the concept of the first thousand days of life and identified the need to invest in the period from conception to the end of the second year of life of the child through a good nutrition and growth. Through this, the importance of encouraging vitamin A, zinc, iron and iodine supplementation programs was highlighted, as these factors may prevent these children from reaching their growth and development potentials. This work is a review of non-systematic literature with the objective of searching and analyzing articles in the scientific literature that corroborate its importance and identify the national public policy actions of the Ministry of Health that should be implemented by pediatricians and other health professionals in search of healthy nutrition

and development. A literary search about the subject and key words in scientific journals in the electronic databases, Medline and Lilacs, with articles published between 2008 and 2017 was carried out. It was observed that the first thousand days of the child represent an important period for implementation actions and interventions that ensure adequate nutrition and development. Among these interventions, the programs of the Ministry of Health stand out. However, other non-nutritional measures, such as public health programs, improvements in basic sanitation, and the provision of medical and hospital services in disease prevention, are needed.

Keywords: "Infant nutrition", "Public health", "Child development", "Brazil".

Social Sciences

71. FETAL AND INFANT DEATH'S PROFILE DUE TO CONGENITAL MALFORMATIONS IN THE COUNTY OF ARARAQUARA-SP

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INTRODUCTION: Birth anomalies are considered congenital malformations such as a consequence of failure of body constituents during the embryonic period. It is remarkable the presence of congenital malformations among the main causes of fetal and infant mortality. **OBJECTIVE:** To quantify the fetal and infant deaths resulting from these diseases in the city of Araraquara-SP according to the International Statistical Classification of Diseases and Related Health Problems (ICD-10); to compare the data obtained with those from the state of São Paulo and from Brazil and relate it to maternal and infant variables. **METHODS:** This is a cross-sectional study with data referring to congenital malformations in the municipality of Araraquara-SP, from 1996 to 2017. The research was conducted using DATASUS databases. **RESULTS:** Araraquara's fetal and child mortality rates have varied both above and below state and national rates. The main causes of fetal death in the county were those coded as other congenital malformations (Q80-Q89) and congenital malformations of the nervous system (Q00-Q07); the main causes of infant death were congenital malformations of the circulatory system (Q20-Q28) and congenital malformations of the nervous system (Q00-Q07). **Conclusion:** There is a need to provide greater attention to mothers with lower education and at-risk age, as well as greater completeness in vital statistics records.

Keywords: Congenital malformations, Fetal mortality, Infant mortality.

72. SOCIODEMOGRAPHIC AND HEALTH PROFILE OF SEX PROFESSIONALS

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OBJECTIVE: To analyze the sociodemographic and health aspects of sex workers in the city of Guanambi-BA. **METHODS:** this is a descriptive, census-based, cross-sectional study with a quantitative approach, carried out between July and August 2017, with 50 female professionals. **RESULTS:** most of them are aged between 18 and 21 years old, non-black ethnicity, with single marital status, with complete or incomplete elementary education (schooling between three and eight years old) and Catholic religion. Lack of employment is the main reason for joining the profession and most want to change their profession. Most have already had some type of sexually transmitted infection and sought treatment in primary care. **CONCLUSION:** sex workers are vulnerable and stereotyped professionals regarding professional practice as well as the reasons that led to professional practice. In this sense, it is necessary to expand the discussions in order to foster public health strategies and policies aimed at protecting health and ensuring the maintenance of social rights and duties.

Keywords: Sex Professionals, Labor vulnerability, Sex Work, Health Vulnerability.

73. EVALUATION OF THE ADHERENCE TO THE 2019 MEASLES VACCINATION CAMPAIGN AND ITS IMPLICATIONS

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INTRODUCTION: According to the Epidemiological Report from December 2019, 57.619 suspected cases of measles were notified. The National Campaign for Measles Vaccination started on October 7, with the D-Day being October 19, when the Healthcare Units performed the immunization. At the campaign's starting point, 18 states of Brazil had registered the virus presence; at the end of 2019, all states already had confirmed cases. The concern with adults was due to the high transmissibility, especially with the lack of triple viral's second dose. **Objective:** To evaluate the target group accession to 2019 Measles Vaccination Campaign and understand their reasons for choosing not to vaccinate, in addition to investigating the knowledge and sociocultural established with the vaccination process. **METHODS:** It is a transversal study accomplished through a questionnaire application, approved by an ethics committee in 2019. 150 residentes from São Paulo's extreme southside participated in the study. The selection criteria were: to reside in the area and be at least 18 years old. Samples were 82% feminine, age varied from 18 to 72 years old (40.7 years average), with 45% being white and 73% having at least a high school degree. Data was computed on Microsoft Excel, described on relative frequency and statistically analysed with Cochran's G test. **RESULTS:** Most participants knew about measles vaccine compared to other vaccines ($p=0,0000$), however, 48% were not vaccinated during the 2019 campaign. According to DATASUS data, vaccination coverage for the state of São Paulo was 93,9%. Both rates are below the 95% goal established by the Ministry of Health. 35% of participants stated that there was no active search in the area where they reside, being that 58% of them did not participate in the campaign. 15,5% don't consider vaccines safe, which can justify the fact that 52% of this group have not been vaccinated against measles. However, 97,5% believe on the effects promoted by vaccination. 16% are afraid to be vaccinated, and 50% of those had not been vaccinated against measles. When asked why, 29% affirmed to have fear of needles, 25% feared collateral effects and 4% believe that is not necessary. These data are consistent with current literature. Yet, adverse events are infrequent and non-serious, so that the benefits outweigh the risks, highlighting the importance of good communication between professional and patient. The main source of information about vaccination was TV/radio, with 43% ($p=0,0000$). 43,5% of the participants who do not agree with mandatory vaccination, did not get vaccinated in the campaign. However, since the National Immunization Plan creation (1970), vaccination is mandatory and its promotion among minors is citizen's duty. **CONCLUSION:** Therefore, it is concluded that, although not considered safe by a significant part of the population, Brazilians still give vaccination credibility. Besides that, the dissemination of false informations about side effects contributes to the lack of reliability in vaccines. The importance of expanding health communication and the good relationship between user and SUS professionals was present in all problems mentioned, from ineffective conduct of active searches to the ignorance about the importance of the National Immunization Plan and its benefits to the population.

Keywords: Measles, Vaccination, Immunization Programs, Health Communication.

74. SITUATION OF THE BRAZILIAN JAILED POPULATION DURING THE COVID-19 PANDEMIC.

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With the world's third largest prison population, the Brazilian prison system represents an imminent threat to public health. The perennial condition of vulnerability to which the population deprived of liberty was worsened during the Covid-19 pandemic - overcrowding, poorly ventilated environments and scarcity of water and hygiene supplies are characteristics of prisons, which, in turn, they promote the proliferation of infectious diseases, such as the Coronavirus, in addition to aggravating pre-existing diseases. Thus, it is urgent to establish effective measures to combat this problem in prisons, in order to preserve the health and rights of inmates. It is a narrative review of literature carried out through a bibliographic research of articles published between 2015 and 2020, through a systematic search covering journals from the databases: MEDLINE via PubMed and SCIELO. For the complementary research, the following were consulted: National Survey of Penitentiary Information (INFOPEN), Department of Penitentiary Administration and resolutions published by the National Council for Criminal and Penitentiary Policy. Seven articles published in periodical journals were selected for full reading, in addition to the

complementary material. In order to control the intramural viral spread, the Justice Ministry suspended visits and other socio-educational activities in prisons. However, this isolated measure does not prevent the spread of the virus, as there is a high turnover in penal establishments, in addition to subjecting the inmates to a condition of "double isolation", which can aggravate psychological problems. So, following the example of several countries, rational extrication was recommended. 30.43% of the prison population is in provisional detention, and, finally, a significant part of these individuals is not sentenced to deprivation of liberty. Therefore, there is an unnecessary overload of the system, which, in the current scenario, is fatal. The recommendation has not been effectively implemented, and as long as there is no adequate isolation space, no other control action will be effective. Meanwhile, the spread of coronavirus in prisons remains on the rise, and despite underreporting and insufficient testing, it has increased by 800% in the past two months. In conclusion, the health crisis in the prison system is not a recent situation, due to the pandemic, but a structural problem, characterized by a series of unconstitutionality that has been perpetuating for decades. This scenario makes it even more difficult to contain the coronavirus in prisons. Thus, it is urgent that the contingency plan be put into practice, especially the rational extrication, so that, thus, the other measures take effect. The intervention of health professionals through the dissemination of information on the lethality of the disease and the importance of preventive measures, in addition to the online training of public servants on appropriate prophylactic conduct could assist in viral containment. The lethality of Covid-19 in prisons is at least five times higher than for the general population, and, if not contained quickly, can result in a real massacre.

Keywords: prisons, public health, coronavirus, COVID-19, isolation.

75. **ANALYSIS OF ACCESS TO HEALTH SERVICES BY SEX WORKERS.**

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OBJECTIVE: Based on the data collected and the theoretical frame of reference used, it is noticed that several factors interfere in the access of sex professionals to Primary Health Care (PHC). These factors range from social members to the attendance of health unit professionals, which is strongly influenced by social culture. Furthermore, the structure and organization of the environment also influence the access, not only for professionals, but for all patients who use the health system. **Considerations:** 50 sex workers were interviewed, among them 13 (26%) are between the age group of 18 to 21 years old. Regarding ethnicity, 39 (78%) participants were characterized as non-black. Regarding the level of education, 30 (60%) had not elementary school completed, which they attended just between 3 to 8 years. Regarding the time profession, about 18 (36%) women work for 1 to 3 years. **Results:** It is a descriptive, census-based, cross-sectional study with a quantitative approach, carried out between July and August 2017, with 50 female professionals. **METHODS:** To analyze the factors associated with the access of sex workers to PHC.

Keywords: Sex workers, Access to health services, Primary attention.

76. **YELLOW FEVER: A SCENARIO FOR THE 21st CENTURY; THE RISK OF REURBANIZATION**

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INTRODUCTION: Yellow fever is an infectious disease, not contagious, caused by a flavivirus and transmitted by a mosquito, being a disease of high lethality. This disease is characterized by two cycles of transmission, which are the urban cycle and the sylvatic cycle. The urban cycle no longer exists in Brazil, only manifesting itself through the sylvatic cycle in this country. There are other types of cycles, however they occur only on the African continent. Yellow fever has made many victims throughout history, including in the Araraquara city, having an important epidemic during the late++ XIX century. The vaccine was discovered during the XX century, what have changed the epidemiological dynamics of the disease over the population. **OBJECTIVE:** To elucidate the central characteristics of yellow fever, making a brief history and showing the dangers of the disease, as a possible epidemic or even a palpable future of reurbanization, then

prophylactic measures may be taken. **METHODS:** SciELO and PubMed were used as database, using the key-words "yellow fever", "arboviruses", "Aedes" e "flaviviruses", consulted in the Health Science Descriptors database. **Revision:** The antecedents of yellow fever, as well as the etiology of disease, epidemiology, pathogenesis, clinical case, diagnosis, forms of treatment and prevention, as well as a reurbanization of the disease. **CONCLUSION:** Yellow fever has a high lethality, and for the prevention of new cases a previous diagnostic evaluation is necessary. Currently we have a resurgence of *Aedes* sp. promoting a conducive environment for redevelopment of the disease.

Keywords: Yellow Fever, Arboviruses, *Aedes*, Flavivirus.

77. **NON-PSYCHOTIC DISORDERS IN WOMEN WHO SUFFER VIOLENT ABUSE FROM THEIR INTIMATE PARTNER AND ITS CONSEQUENCES TO THE PUBLIC HEALTH SYSTEM**

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The violence against women is a fact that is undeniably present in today's society and in previous ones, each with its most striking characteristics. In many cases of this type of violence, it is common to note that women who are raped by their intimate partners may develop some non-psychotic disorders. The article brings the importance of addressing this issue as a public mental health issue for them, in order to identify and highlight the impacts of inadequate treatment of women who developed such disorders. As a methodology, a bibliographic review was used, from 1994 to 2020, through the Scielo, Pubmed and Google Scholar database platforms, using keywords: Battered women; Health Services Misuse; Health Expenditures; Intimate Partner Violence and Stress Disorders, Post-Traumatic. With the analysis it was possible to notice that the health system is not prepared to assist the victims, which implies an incorrect reception, followed by an inadequate treatment and that does not lead to an improvement of the condition. Thus, it perpetuates unnecessary spending on medicines and determines the recurrence of these people in the health system, since their demand is not met. In conclusion, inadequate treatment guided by unprepared health professionals to victims of intimate partner violence is a major determinant of unnecessary public health spending, and therefore it is necessary to quantify this impact to optimize treatment, bringing benefits to patients and investments in health that already suffer from precariousness.

Keywords: Battered women, Health Services Misuse, Health Expenditures, Intimate Partner Violence and Stress Disorders, Post-Traumatic.

78. **RESULTS PROFILE OF CYTOPATHOLOGICAL EXAMS CARRIED OUT IN A BASIC FAMILY HEALTH UNIT IN THE MUNICIPALITY OF SÃO JOSÉ DOS CAMPOS - SÃO PAULO**

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The cervical cancer is a progressive condition and can develop, over a period of two decades, to an invasive stage. Due to its slow evolution, if a cervical cancer has an early diagnosis, it presents a possibility of cure. The objective of the study was to identify the profile of the results of cervical cytological exams in a Basic Family Health Unit. This is a cross-sectional, analytical and retrospective study based on the results of cytopathological exams performed during the first semester of 2019, on women accompanied by the health team allocated to a Family Health Unit, located in the eastern region of the municipality of São José dos Campos. 800 results of cytopathological exams were collected and organized, being consolidated in Excel 2010 spreadsheets and expressed in graph. The results obtained from the relative percentage, differentiates a prevalence (98.62%) of results without changes or benign changes, in addition to being within the normal limits of cytological smears. 0.5% of low-grade squamous intraepithelial lesion (LSIL) and 0.12% high-grade squamous intraepithelial lesion (HSIL) were identified; presence of infection by *Candida* sp. (2.87%) and bacterial infection by *Gardnerella vaginalis* (13.12%), in addition to the result of cytopathological examination with the presence of the protozoan

Trichomonas vaginalis (0.62%). It is concluded that the prevalence of the alterations is within the expected in the cervical cancer actions carried out by the Unit's team and updated by the professionals responsible for collection in the Unit. However, even if the numbers of infections are within the expected, the attention to actions to promote and prevent sexually transmitted infections stands out.

Keywords: Women's health, cytopathological examination, cervical cancer.

79. PREVALENCE AND FACTORS ASSOCIATED WITH ARTERIAL HYPERTENSION IN PUBLIC SECTOR WORKERS

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INTRODUCTION: Systemic arterial hypertension (SAH) is one of the most frequent conditions in the population and a bigger risk factor for cardiovascular diseases. In workers it can cause early retirements, job turnover and reduced participation of the workforce. **OBJECTIVE:** to assess the prevalence and factors associated with SAH in public sector workers. **METHODOLOGY:** cross-sectional study, carried out with workers from a public Brazilian higher education institution (n = 629). The self-reported diagnosis of systemic arterial hypertension was used as the dependent variable, and sociodemographic and labor characteristics, lifestyle, referred symptoms and objective health indicators were independent. The data were analyzed using absolute and relative frequency using the chi-square test, with a significance level of 95%. **RESULTS:** the majority of the sample consisted of females, aged over 40 years, married or in a stable relationship and white. As for the prevalence of SAH found, it was possible to observe that 26% had it, being related to age, with workers aged 40 years or more being the most affected (p < 0.01). Still, it was shown to be associated with marital status, employment relationship, chest discomfort when climbing a slope and body mass index (p < 0.01). **CONCLUSION:** it was found that the prevalence of workers with systemic arterial hypertension was similar to the national population, being associated with sociodemographic and work characteristics, referred symptoms and objective health indicators. Thus, actions aimed at preventing injuries and improving the quality of work of university agents are necessary.

Keywords: Hypertension, Chronic Disease, Occupational Health Nursing, Occupational Health, Risk Factors.

80. ASSESSMENT OF ASSISTANCE TO INDIVIDUALS IN HEMODIALYSIS AND ITS INFLUENCE ON QUALITY OF LIFE

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OBJECTIVE: to verify the care given to individuals affected by chronic renal failure in a hemodialysis center and to identify associated factors. **METHODS:** This is a cross-sectional descriptive epidemiological study conducted in a satellite clinic of hemodialysis in the municipality of Guanambi-BA. For that, KDOQOL SF 1.3 and a socio-demographic form were used as data collection instrument. **RESULTS:** Regarding the assessment of the quality of service assistance, 77.5% of the patients were not instructed about other dialysis modalities, 96.7% made direct payments to undergo hemodialysis, 100% were monitored by the multidisciplinary team, 87.4% presented nutritional contribution, 19.2% bring BPC and 75.5% have their financial outflow through the Treatment Outside the Home. The quality of life of domains admitted on an emergency basis was reduced in all domains. **Conclusion:** The present study showed the lack of information regarding the choice of the dialysis modality by the client, which was performed by the nephrologist, restricting the client's right. And, although the clients are accompanied by the multidisciplinary team, which contains the social worker, most of the clients had an indication, however, they did not receive the Continuous Benefit.

Keywords: Chronic Renal Disease, Hemodialysis, Evaluation.

81. HEPATITES C IN PRISONERS AND DRUG USERS

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INTRODUCTION: Hepatitis C is a hepatic disease commonly caused by the Hepatitis C Virus and can result in a severe liver cell injury. **METHODS:** This study is based on bibliographic revision on data bases such as Bireme, Medline and Scielo. **RESULTS:** We aimed to discuss the epidemiology of HCV among jail and drug addict population through a literature review, which showed that the incidence and prevalence of this disease can be higher than ten times when compared to general population (0.7% for general population, 1.4% for drug addicts and 16.2% for Brazilian inmates). **DISCUSSION:** Transmission, prevention and treatment were also analyzed and demonstrated difficulties related to prophylaxis adhesion and adverse reactions by pharmacological treatments. **CONCLUSION:** Overall, particular and urgent attention to this population are crucial to implement effective prophylactic actions, trying to avoid the need of pharmacological treatment which commonly present severe adverse effects.

Keywords: Hepatitis C, HCV, epidemiology, jail and illicit drugs users.

82. PRIMARY PREVENTION OF COVID-19 IN DOWN SYNDROME POPULATION

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The present study describes the elaboration of guidance materials on COVID-19 for individuals with Down syndrome and their parents and caregivers. Once this population is considered as a risk group and neglected by the media, the concern arose of guiding them about the essential information around the disease and its forms of prevention. For this, an animation and videos developed by people with Down syndrome were produced, in addition to a booklet and a video directed to their parents. The project was developed by the extension group from Pró-Reitoria de Extensão e Assuntos Comunitários of Pontifícia Universidade Católica de Campinas, composed by students majoring in pharmacy, journalism, medicine, nutrition, psychology and occupational therapy. In partnership with Fundação Síndrome de Down and Brazilian Society of Cardiology. The campaign was widely publicized by social media and by written, television and radio media, totaling more than 30 different exhibitions. It is estimated that more than 600 thousand people were affected by the campaign. In addition, the exchange of knowledge with professionals from different areas and with the target audience was a rich experience for the students, allowing the understanding of the importance of the dissemination of scientific knowledge to the community. Finally, the ability of individuals with Down syndrome to hold knowledge and promote health was valued, breaking the social barrier of exclusion and disability.

Keywords: Down syndrome, COVID-19, Prevention.

83. STUDY OF THE EPIDEMIOLOGICAL PROFILE OF YOUNG ADULTS WITH COLORECTAL CANCER IN A CITY IN THE NORTH OF MATO GROSSO STATE: 2012 TO 2013

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Colorectal cancer (CCR) appears among the most frequent neoplasms in the world and has screening as a recommendation. The development time of this neoplasm is a long period, being the result of the interaction between genetic predisposition and environmental factors, such as: advanced age, family history, genetic syndromes, obesity and intestinal inflammatory diseases. The purpose of this study was to analyze the profile of patients with colorectal cancer between 15 and 44-years-old treated in a city located in the north of the Mato Grosso State due to the worldwide increased number of cases below the average age tracking line. It is a longitudinal descriptive study with data collected from the medical charts of patients diagnosed with colorectal cancer from 2012 to 2018. The variables collected were: gender, age, weight, height, tumor histological, staging, forms of

treatment, prognosis, presence of comorbidities diabetes and cardiovascular disease. The results were expressed in absolute and relative frequencies using Excel® (Office 365). We analyzed 124 medical records, 21 (16.93%) of them were referent of patients aged between 15 and 44-years-old. Analysis of the 21 medical records revealed that 66.66% of them were male; 42.86% had the BMI above adequate ($18.5 < 25 \text{ kg/m}^2$); 61.90% were aged between 15 and 39-years-old and 52.38% were residents of the studied municipality. Regarding comorbidities, none of the patients were diabetic and 9.52% had cardiovascular disease. The predominance of CCR was adenocarcinoma (100%), being the T3NoMo stage found in 33.33% of the cases; 71.43% of them had as therapy the association between surgery and chemotherapy; 9.52% of them died, being that they were above the adequate BMI. Thus, it was concluded that from the medical records evaluated between 15 and 44-years-old, 61.90% were between 15 and 39-years-old, showing the involvement of a younger group when compared to the literature data. Most of them had the BMI higher than the adequate and this fact is associated in the literature as an independent risk factor. These data reveal the need to verify if there are other factors associated with CCR in the studied city in order to perform a review and the possibility of a readjustment of the screening program for this disease, which can have a great importance in early diagnosis and consequently better prognosis.

Keywords: colorectal cancer, obesity, screening.

84. **GEOGRAPHICAL INFORMATION SYSTEM ON HOMICIDE IN CAMPINAS**
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From 1979 to 2016, more than four million Brazilians died due to external causes. Among these deaths, two million occurred in the State of São Paulo. Of this total, more than 45% resulted from homicides. Among the countless difficulties in containing homicides in Brazil, one can also mention the low knowledge about the spatial distribution of this problem at the intra-municipal level. This project aims to overcome this limitation by developing, testing and making available, to any interested parties, a geographic information system that locates the occurrence of homicides in a large city in the State of São Paulo, visually identifying the characteristics of these deaths and the areas of greatest incidence. It is intended that such a system contributes not only to local prevention, but also to the development of similar systems in other locations.

Keywords: homicide, spatial distribution, geographic information system, external cause.

85. **CONGENITAL TOXOPLASMOSIS AND ITS RELEVANCE IN THE NATIONAL CONTEXT: A BIBLIOGRAPHIC REVIEW**
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¹UFJ.

Toxoplasmosis is infection caused by the *Toxoplasma gondii* protozoan, which is acquired by fecal-oral transmission, badly cooked meat consumption of intermediate or vertical hosts. It is one of the most frequent zoonosis, with wide distribution and high prevalence in Brazil, being relevant for the worldwide public health. In immunocompetent individuals, the infection uses to be asymptomatic. The transplacental transmission comes from the first infection of the pregnant, and in face of the variable seriousness of the congenital disease, the pre-natal selection to avoid or reduce manifestations and sequels becomes fundamental for the newborn to his or her birth and future life. This review aimed to join and to present updates about congenital toxoplasmosis (TC), its selection tests/available diagnosis, and its importance for the prenatal and neonatal diagnosis, besides to evidence the effectivity cost of the sorting programs verified in European countries. A bibliographic search based on the data from August July 2020 was realized, by using the following descriptors: toxoplasmosis, congenital, neonatal, prenatal, diagnosis and their respective English translation. Articles in English and Portuguese, published between 2016 and 2020 were selected, and the ones that didn't frame into the study theme were excluded. Materials from the Health Ministry and the Brazilian Pediatric Society were also consulted. Among all the works found, nine were selected for a discussion. As in other countries around the world, Brazil has a prenatal tracking program based on a serologic test (IgM and IgG anti toxoplasma). The serial ultrasound exams during the pregnancy

period can evidence changings and malformations suggestive of the infection, but they don't confirm the diagnosis. Among the methods used for the TC, the method of PCR, by using samples of amniotic liquid (LA), blood and or fetal tissues, is the most employed one. The LA collection by the amniocentesis demonstrated safety when it was realized in a pregnancy age over 15 weeks. Other technics employed are the genotyping, microscopy, dye test and tests by using species of mice. For the postnatal diagnosis, the combination of several serologic tests aggregates a larger sensibility, and the ELISA e ISAGA technics can be used. During the last years, the developing countries have presented stability or rising of their seroprevalence. In this context Brazil occupies an important position, due to factors like lack of infrastructure and the late beginning of the prenatal sorting. The dosage of IgA demonstrated to be useful for the inconclusive serology confirmation and acute infection, yet is little available. European studies verified that the prenatal sorting of pregnant people saved costs in regions with high prevalence of the disease, and this one demonstrated to be more effective than the neonatal. Most of the studies proved that the diagnosis and previous treatment of the maternal infection reduce the vertical transmission significantly and improve the TC prognosis. The reality found in Brazil impeaches the nullification of the prenatal sorting program. So, the need of financing which enlarge the availability and the agility of tests of the tests to permit the previous diagnosis of the infection and health of the newborn are necessary. With the insertion of the neonatal tracking through the Newborn Screening Program, the expectancy is that this become more effective.

Keywords: zoonosis, vertical transmission, prenatal, diagnosis, neonatology.

86. **ANALYSIS OF THE INFANT MORTALITY COEFFICIENT ATTRIBUTED TO SEPTICEMIA IN BRAZILIAN MACROREGIONS**
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INTRODUCTION: Sepsis is a main cause of infant mortality in Brazil, as an organic dysfunction caused by one's inadequate systemic response to infection. So far, clinical manifestations and diagnostic exams remain unspecific, resulting in delayed diagnostic and raising mortality. Considering this context, this study aims to identify the number of deaths due to sepsis in children under one year old in the five Brazilian macroregions, to calculate mortality coefficients attributed to this cause in each Region and to compare their significances to the Municipal Human Development Index (MHDI) from each Region. **METHODS:** a quantitative comparative epidemiological study was carried out, with a population-based cross-sectional delimitation, based on data collected from the Informatics Department of the Unified Health System (DATASUS). To analyze information obtained in DATASUS, the GraphPad Prism® software 5.0 version (USA) was applied, in which Shapiro-Wilk, one-way ANOVA and Bonferroni tests were performed, in which $p < 0.05$ was considered significant, and results were expressed as 95% confidence interval (95CI%) and prevalence ratio. **RESULTS:** from 2010 to 2018, 28994 infants under one year old died due to sepsis in Brazil. The average number of deaths per year was 3223, with a peak of 3353 deaths in 2010 and a minimum of 2816 deaths in 2018. Southeast Region had the most elevated number of deaths attributed to sepsis (11.145), in sequence were North (9.572), Northeast (3.917), South (2.378) and Center-West Region (1.982). Regarding the sepsis mortality coefficient, North Region presented the highest average between the eight years, exhibiting 1.39 deaths per thousand born, in a decreasing sequence came Northeast (1.28), Southeast (1.07), Center-West (0.93) and South Region (0.93). **Discussion:** Southeast Region presented the highest total number, among all Regions, of deaths attributed to sepsis in children younger than one year old, even though this Region obtained an intermediate mortality coefficient comparing to the other Regions, which is a marker more precise to evaluate on which panorama this pathology is. Analyzing the average number of deaths attributed to sepsis in children under one year old, North Region has approximately 435 deaths, ranking as the third Region, in decreasing order, regarding this parameter; however, North leads the list in which Regions are listed decreasingly according to their mortality rates by sepsis in infants with less than one year old. Moreover, this elevated marker found in North Region did not have significant difference when compared to the one found in Northeast Region, thereby rendering them both areas where infants are at most risk of dying due to sepsis until they reach their first year of life. Therefore, when comparing the MHDIs of the Regions defined by the Brazilian Institute of Geography and Statistics (IBGE) with

their respective mortality coefficients by sepsis in this group age, it is affirmable that Regions with the highest mortalities (North and Northeast) are equally the ones with worst MHDIs. **CONCLUSION:** a relevant epidemiological panorama of the number of deaths and of the infant mortality rate due to sepsis in Brazil was obtained, reinforcing the known connection between socioeconomic development indexes and infant mortality. Therefore, there is urgency to meet the exuberating demand for improved medical assistance conditions and for investments from the Public Authorities, especially in Regions presenting worst infant mortality rates and worst human development indexes.

Keywords: Sepsis, Coefficient, Infant Mortality, Deaths, Regions.

87. **CONDITIONS FOR PREGNANCY AND DELIVERY IN THE CITY OF BELO HORIZONTE - MG.**

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INTRODUCTION: The National Policy for Integral Child Health Care (PNAISC) aims to promote and protect the health of children from pregnancy to nine years. The city of Belo Horizonte/MG uses this Policy to develop guidelines and standards for the implementation of full care for children. As a result, this work aims to analyze the changes of pregnancy conditions and birth in the city of Belo Horizonte/MG before and after the application of The National Policy for Integral Child Health Care, among 2011 to 2018. **METHODS:** This is a descriptive study of pregnancy conditions and birth in Belo Horizonte/MG, from 2011 to 2018. The study population refers to births that occurred in that period and filled in the Live Birth Information System (SINASC), available by the Informatics Department of Informatics of the Unified Health System (DATASUS). The chosen data were: duration of pregnancy, birth weight, type of delivery, number of consultations performed in the prenatal period, Apgar score in the 1st minute and 5th minute, education, and age of the mothers. **RESULTS:** There was a significant increase in the prevalence of vaginal delivery and a decrease in cesarean delivery. Vaginal delivery was frequent in mothers with schooling up to 11 years old and under 29 years old. Concerning the pregnancy period, there was a low increase in births up to 36 weeks, and there was also an increase in prenatal consultations numbers, in the category of seven or more consult appointment. About the 5th minute Apgar there was a progressive increase over the years, while the 1st minute Apgar showed few variations. **CONCLUSION:** The city of Belo Horizonte features positive results on the rise of vaginal delivery. However, other conditions of pregnancy and delivery do not seem to forth this improvement. Therefore there is a need for investments in public policies to increase the number of prenatal consults and to reduce the births of preterm and low birth weight infants - thus promoting better care for the maternal and child health of this population.

Keywords: Health policy, maternal-child health, vaginal delivery, Belo Horizonte/MG.

88. **EPIDEMIOLOGICAL PROFILE OF CASES OF VIOLENCE AGAINST CHILDREN AND ADOLESCENTS IN BRAZIL BETWEEN THE YEARS 2015 TO 2018.**

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¹Unifacisa.

INTRODUCTION: Childhood and adolescence are unique phases, which, when their rights are inflicted, can bring physical, emotional and psychological consequences to deaths. Aggressions can be physical, sexual, psychological, emotional and negligent, and these attitudes are punishable by law according to the Child and Adolescent Statute. **METHODS:** Retrospective epidemiological study, based on documents, on cases of violence against children and adolescents in Brazilian territory. Data collection occurred in the month of August and September 2020, and data from the Notifiable Diseases Information System (SINAN) was used, from 2015 to 2018, regarding aspects of the victim and the aggressor. As these are public domain data, it was not necessary to submit this study to the Research Ethics Committee. **RESULTS:** In both sexes the number of cases increases with advancing age, with no female being prevalent in relation to the male, increasing the difference in the age group between 10 and 14 years. The main aggressor

with 30.56% of notifications is a mother, in addition, the most frequent type of aggression practiced by offenders is physical violence with 36.16% of notifications. **CONCLUSION:** It is concluded that the main victim among children and adolescents in Brazil are girls aged 10 to 14 years old, being induced by radiation, sexual violence and rape.

Keywords: child abuse, violence, child, teenager.

Surgery

89. **PERINEAL FISTULAS' DIFFERENTIAL DIAGNOSIS. HIDRADENITIS SUPPURATIVA OR CHRON'S DISEASE?**

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Hidradenitis Suppurativa (HS) is a chronic dermatologic condition in the apocrine gland-bearing skin, leading to deep, painful inflammatory lesions. The pathophysiology of this disease is not yet well understood; the most accepted hypothesis is that it has a multifactorial origin related to the patient's immune and genetic systems and microbiota; in addition, it accompanies a systemic inflammatory disorder. It affects the patient under the biological e psychic prisms, making this pathology very excruciating for both patient's body and mind. Treatment is based on the stage of the disease that occurs according to Hurley's criteria and therapy covers exclusive clinical care or combined with surgical intervention. Objectives: to report the case of a patient who has a late diagnosis of Suppurative Hidradenitis justified by the delay in seeking medical care and the mistake in considering the clinical presentation suggestive of Chron's Disease. Point out how differential diagnosis between these pathologies should be carried out ad perform a narrative literature review. Methods: the information described in this study was based on medical record review (CAAE: 96710818.3.0000.5496), literature review with data collection on the following platforms: Pubmed, PMC, Medline, Lilacs and Scielo. The selected articles were the ones published in the last four years, written in English, Portuguese, Spanish or French. The retrospective search was restricted to indexed scientific articles describing research involving humans. Case Report: J.C.S.L, 36 years old, male, resident of upstate Mato Grosso, attended at a tertiary health unit located in the same state. He complained of perianal nodulation eleven years ago, located on the right buttock, associated with high-intensity pain and purulent-looking secretions. Disease worsened six years ago with an increase in the number of nodulations that have not shown improvement or worsening factors. According to the patient, these lesions went into spontaneous remission, however showed frequent recurrence in the same body region. After performing a local biopsy with anatomopathological analysis, patient was diagnosed with Chron's Disease and remained for two years under a mistaken diagnosis. After undergoing colonoscopy, he was diagnosed with HS, receiving treatment with extensive local fasciocutaneous resection followed by healing by second intention, improvement in quality of life and remission of lesions so far. Conclusions: HS is an inflammatory, chronic and recurrent disease that must be early diagnosed in order not to worsen both the condition and it's prognosis. In cases of perineal HS with differential diagnosis for CD with anorectal fistulas, biopsy does not have a significant value to distinguish these pathologies. For the investigation we suggest anamnesis focusing on the evolution of lesions, family history, eating habits, associated comorbidities and colonoscopy. We also recommend monitoring patients by a psychiatrist and/or psychologist due to stress, social isolation, depression and stigmatization that occurs due to HS.

Keywords: Hidradenitis Suppurativa, Chron's disease, differential diagnose.

90. **GLYCEMIC AND HEMATIMETRIC CHANGES IN PATIENTS SUBMITTED TO BARIATRIC SURGERY: A COMPARATIVE BETWEEN BYPASS AND SLEEVE GASTRECTOMY METHODS**

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INTRODUCTION: With the alarming world levels of obesity, the surgical treatment alternatives of weight reduction gained the highlights, among them the Roux-en Y gastric bypass and the sleeve gastrectomy, which result in benefits to the health of the affected; however, these methods also create

anemia and many other complications that deserve attention. Therefore, the goal of this review was to comprehend the glycemic and hematimetric changes in patients submitted to these methods. **METHODS:** To the realization of this literature review, articles had been used, which were obtained from research platforms as Scielo, PubMed, LILACS and Google Scholar. **Review:** Throughout this review were studied the changes resulting from these procedures, like the glycemic changes, anemia, dumping syndrome, and others; beside this, were approached the benefits and ravages created by these surgeries, and which should be the postoperative recommendations to these patients. **CONCLUSION:** Was possible to chart a comparative between the two methods, concluding that even being different, they have similar results and postoperative recommendations.

Keywords: Glycemic changes, Anemia, Gastric Bypass, Bariatric Surgery, Gastrectomy.

91. **RECURRING AFFECTIONS IN KIDNEY'S POST-SURGICAL TRANSPLANTATION AND ITS IMPACTS: AN INTEGRATIVE REVIEW**

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Chronic kidney disease affects approximately 12% of individuals worldwide, being recognized as a disorder in which the progressive loss of kidney functions occurs and, therefore, demands a replacement therapy for these activities. Moreover, kidney transplantation in most cases presents itself as the best treatment, as it guarantees an improvement in the patient's quality of life and in the survival rate. However, the effectiveness of this propaedeutic depends on the acceptance of the recipient to the transplanted organ, thus, the administration of immunosuppressants in continuous use is applied in order to control the immune response, avoiding rejection and the appearance of inflammatory diseases. However, this pharmacological class triggers changes that culminate in unwanted effects. Thus, the objective is to elucidate the main complications after renal replacement surgery and its impacts on patients' experiences. As this is an integrative literature review, the selection of articles on the VHL, PubMed and Google Scholar platforms was used as methodology with the keywords: Complications; Side effects; Immunosuppressants; Infections and Kidney Transplantation. The selection criteria were articles published between 2010-2020 in Portuguese, English or Spanish and complete, resulting in the selection of 20 articles in total. That said, the literature reports that, although essential for post-surgical success, immunosuppressive therapy has several negative repercussions in the short and long term. In the initial

six months, it was found that over 50% of the operated patients had bacterial infections, caused by Cytomegalovirus and multidrug-resistant microorganisms. In the following period, the tendency was the appearance of opportunistic, viral and fungal infections, with candidiasis and mucormycosis prevailing in the latter, with an evolution to death in 68.2% and 54.4%, respectively. In addition, it was found that over 60% of individuals became hypertensive, and consequently, more susceptible to diabetes. Furthermore, the mortality rate due to cardiovascular diseases was 50% higher when compared to the general population. At the same time, other comorbidities such as obesity, dyslipidemia, anemia, neoplasms, as well as skin changes such as acne, warts, hyperplasia of sebaceous glands can affect the transplanted individual. Therefore, it is concluded that kidney transplantation fulfills the role of supplying the lack of renal functions in patients with terminal illness. However, the immunosuppressants used in the post-surgical period to prevent rejection of the new organ, unfortunately, weaken the transplant recipients' immune system and make them susceptible to various opportunistic infections. Thus, it is necessary to carry out more scientific studies in the area in order to provide an improvement in the quality of life of transplanted individuals, in addition to providing greater clarification to health professionals on the proper management of these patients.

Keywords: Complications, Immunosuppressants, Infections, Kidney transplantation, Side effects.

92. **RARE CASE REPORT OF CONGENITAL NEOPLASIA: CONJUNCTIVAL DERMOLIPOMA**

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OBJECTIVE: Report a case of a patient reporting bulbar conjunctiva injury on the left eye since birth with recent growth. **METHODS:** the information was obtained by interviewing the patient and a literature review. **Final considerations:** Dermolipoma is a rare and benign conjunctival neoplasm. It causes aesthetic discomfort and sometimes clinical symptoms such as itching, dry eye, eye movement pain. The resolutive treatment is the excision of the lesion, performed with caution in order to avoid complications due to trauma to the adjacent structures.

Keywords: Neoplasms conjunctiva, ophthalmology, dermolipoma, choristoma, surgery treatment.

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01. COVID-19 DIAGNOSIS AND ITS IMPACT ON THROMBOTIC RISK IN A COHORT OF CONSECUTIVE PATIENTS HOSPITALIZED DUE TO ACUTE RESPIRATORY DISTRESS SYNDROME

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INTRODUCTION: Previous evidence suggest that the thromboembolic risk is greater in COVID-19 than in other types of acute respiratory distress syndrome (ARDS). However, such comparison has been mainly evaluated in historical cohorts. **METHODS:** We have selected consecutive patients admitted from March to June 2020 at the UNICAMP Clinical Hospital who met the ARDS clinical criteria established by the Brazilian Ministry of Health and the Berlin Definition. COVID-19 diagnosis was confirmed by reverse transcription polymerase chain reaction or enzyme-linked immunosorbent assay. Descriptive analysis, chi-square and t-tests were used to compare COVID-19 and non-COVID-19 patients. **RESULTS:** Of the 377 patients admitted during this period, 100 COVID-19 patients and 100 non-COVID-19 patients were included in this study. 67% and 55% were men ($P=0.08$), respectively. The median age was 57.36 years (interquartile range [IQR] 45.84 to 65.83) in the COVID-19 group and 53.87 years (IQR 43.94 to 68.91, $P=0.3$) in the non-COVID-19 group. Both groups had a similar baseline risk of thrombosis, assessed by: previous thromboembolic events; recognized "thrombophilia"; infarction, stroke, trauma and/or surgery within the past 4 weeks. Oxygen saturation at admission was lower in COVID-19 patients (92% IQR 90% to 97%) than in non-COVID-19 patients (95% IQR 89% to 96%, $P=0.03$); accordingly, the need for invasive oxygen support was greater and more lasting (44%; 16.00 days IQR 8.50 to 22.50) in the COVID-19 group than in the non-COVID-19 group (33%, $P=0.05$; 12.50 days IQR 4.75 to 21.25, $P=0.002$). Coagulation markers such as activated thromboplastin time, prothrombin time, platelet count and D-dimer levels (1,700.00ng/mL IQR 752.00 to 3,417.00 non-COVID-19; 1,426.50ng/mL IQR 744.25 to 3,461.00 COVID-19, $P=0.17$) were similar between groups. Although thromboprophylaxis was more frequently administered to COVID-19 (76%) than non-COVID-19 patients (42%, $P<0.0001$), thrombotic events were more recurrent in the former group: 28 events were reported in 22 COVID-19 patients while 14 events were reported in 12 non-COVID-19 patients ($P=0.06$). The most common events in the COVID-19 group were pulmonary embolism (46.43%) and thrombosis in unusual sites (25%), which represented 50% ($P=0.07$) and 7.14% ($P=0.03$) of non-COVID-19 thrombotic events, respectively. **DISCUSSION:** The obtained results suggest that the frequency of thromboembolic events is greater among COVID-19 patients than among those with other ARDS, even though both groups showed similar thrombotic risk at baseline and COVID-19 patients received anticoagulants more frequently. Classic coagulation markers were not able to differentiate the thromboembolic risk between the two study populations. This indicates the need to improve clinical screening and treatment for thrombosis in COVID-19 in order to prevent its occurrence and reduce disease mortality. **CONCLUSION:** In this study, we provide clinical evidence that the thromboembolic risk is greater in COVID-19 than in other ARDS. D-dimer level analysis was not able to differentiate such risk between the study groups.

Key words: COVID-19, Thrombosis, Infection, Blood Coagulation, Acute Respiratory Distress Syndrome.

02. HEALTH PROFILE OF GESTATIONAL AND CONGENITAL SYPHILIS IN BRAZIL BETWEEN THE YEARS 2015 TO 2019

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INTRODUCTION: When the diagnosis of syphilis is made during pregnancy, prenatal care is extremely important in order to prevent the congenital form of the disease from occurring in the child, since the agent can infect the fetus through the placenta. **OBJECTIVE:** To show the number of cases of gestational and congenital syphilis in Brazil between the years 2015 to 2019. **METHOD:** It is a retrospective and cross-sectional study. The population referring to the research is composed of 313,043 people, all of whom were notified either by syphilis during pregnancy or by congenital syphilis up to 1 year of age. The data obtained were collected through the DATASUS website, stored and analyzed by Excel tools. An epidemiological profile was outlined evaluating the age range of pregnant women and children affected, and a comparative analysis was carried out between the number of cases and the year of diagnosis. **RESULTS:** According to the analyzed data, notifications of syphilis in pregnant women totaled 209,147 in the period from 2015 to 2019. The year 2018 was the one with the most cases in all trimesters of pregnancy, when compared to the other years, totaling 62,583 notifications. While in 2017 and 2019 there were 25,009 and 11,824 cases, respectively. Regarding the age group, the most affected patients are between 20 and 29 years old, with 53.08% of cases, followed by the age group between 15 and 19 years old, 13.27%. Regarding congenital syphilis, about 104,190 cases were analyzed between the years 2015 to 2019. The year 2018 was the year with the highest involvement of this disease, totaling 26,307 cases. When the affected age groups are analyzed, it is observed that children under 7 days have a higher incidence of the disease, totaling 100,573 cases, that is, 96.5%. As for the classification of congenital syphilis, among the analyzed period, the recent one has a total of 97,214; while the late one has only 191. There is a considerable amount of abortion and stillbirth due to syphilis, with the values of 3,600 and 3,187 being found, respectively. **DISCUSSION:** Although the treatment of syphilis is easy to manage, a significant increase in its incidence has been demonstrated. The result found in relation to the age group affected in pregnant women is endorsed by Cardoso et al. (2018), in which he found in his research carried out in Ceará that the age group most affected is 20 to 29 years old because it is the peak of reproductive life, followed by the age group 15-19 years old, due to the fact that adolescents start your sexual activity early. Therefore, adequate prenatal care is a tool for reducing cases. **CONCLUSION:** Thus, it can be concluded that prenatal care is the main form of assistance for syphilis in pregnant women. It is necessary to carry out new strategies for the effectiveness of the prenatal care provided and the consequent reduction in the incidence of congenital syphilis.

Key words: Syphilis, Health Profile, Prenatal Care, Primary Health Care, Disease Prevention

03. ANALYSIS OF THE INCIDENCE OF LEPTOSPIROSIS CASES AND THE MADEIRA RIVER FLOOD

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INTRODUCTION: The historical flooding of the Madeira River in 2014 showed problems involving social determinants of health, due to the incidence of illnesses spread by contact with wetlands, especially peri-urban areas. As an example, there is Leptospirosis, an acute febrile bacterial disease, with a means of infection from contact with reservoir animals' urine, which has a benign course or progresses to severe forms. May be due to the unregulated urbanization and incipient basic sanitation of the State added to a high rainfall index. **METHODOLOGY:** Quantitative study of notification of Leptospirosis cases in the state of Rondônia, using secondary data from DATASUS, from the years 2012 to 2016. The variables studied were: age range, sex, color / race, education, analysis of the means of infection: character of the infection site related to the area and to the environment, cases per year. **RESULTS:** In the period from 2012 to 2016, 471 cases of leptospirosis were reported in Rondônia, of which the largest number of cases was registered in 2014 (39.70%). The months of March, April and May from 2014 had the highest records of that year (50.80% of the cases), with a percentage increase of 280% compared to the same period in 2013. As for the infection site, 47.34% of the cases occurred in the urban area and 50.95% in the home environment. Leptospirosis cases were more prevalent in men (64.97%), young adults, aged 20 to 39 years (46.71%), brown (55.41%), with low education (41.82% were illiterate or with incomplete elementary education). **DISCUSSION:** Leptospirosis is contracted through contact with the urine of infected animals, mainly synanthropic rodents, when the microorganism penetrates through mucous membranes, injured skin or intact skin immersed in contaminated water for long periods. Thus, more infections consequently occur in rainy periods, in urban environments with poor garbage collection and basic sanitation. Such situations were observed in the present study, highlighting the year 2014 when the flood of the Madeira River occurred, reaching its highest level in the month of March, the month of May was the second rainiest of the year, and in that time span the highest number of cases was recorded. According to data from the 2008 IBGE, only 5 of the 52 municipalities in the state had a sewage network, in 2017 there were 10 municipalities, 4 which justifies the high rates found. Furthermore, the profile of those infected coincides with the group of greatest social vulnerability, who are unaware of the disease means of contamination, live in unhealthy places and have low access to health services. **FINAL CONSIDERATIONS:** In view of this situation, it is important the execution, in fact, of basic sanitation and health education measures for the community, since the responsibility for raising cases of Leptospirosis in 2014 was not only due to the influence of climate factors, but by the historical neglect of the population's basic rights.

Key words: Leptospirosis; Weil disease; Epidemiology; Floods, Basic Sanitation

04. THE COEXISTENCE OF TWO MAJOR GLOBAL DISASTERS: THE RELATIONSHIP BETWEEN COVID-19 AND THE INCREASE IN DOMESTIC VIOLENCE

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INTRODUCTION: Considered a global phenomenon - and a disaster -, violence against women has deep roots in the social inequality existent. The Brazilian popular maxim "em briga de marido e mulher, não se mete a colher" is an example of how we naturalize such violence, in which the victim goes through a process of dehumanization and is now seen as a possession of men in the eyes of society. The result of such a patriarchal line of thinking can be seen in the statistics: one out of three women of reproductive age was once physically or sexually violated by their partner. With the COVID-19 pandemic, an already worrisome reality became worse: with the obligatory social distancing, various countries have registered an increase in the number of occurrences of domestic violence - such as China, Italy, and France. In Brazil, there has been an increase in denunciations, estimated at

50%, when compared to the numbers registered before social isolation. Such facts defy the idea that home is a safe ambience for everyone, because, for numerous women, a home is a place of fear and abuse - which allows the domestic violence scenario to perpetuate through the centuries. In the present days, women have now to face two great challenges: survive the COVID-19 pandemic and the daily conviviality with their partner. **OBJECTIVE:** Expose and discuss the aggravation of domestic violence suffered by women in the context of the coronavirus pandemic. **REVIEW:** As advocated by the World Health Organization (WHO), isolation and social detachment are fundamental in combating the pandemic, to contain the rising rates of contagion as well as not to overload the health system. However, organizations that protect women and fight domestic violence are seeing increasing numbers of aggression, due to the forced cohabitation. It is known that some social indicators, such as poverty, unemployment and decreasing prospect of improving the financial situation are aspects aggravated and strengthened throughout the pandemic. These factors interfere with relationships within members of the same family and may become a starting point for situations of domestic violence. Furthermore, the rise in the aggressor's stress levels, which may be triggered by the fear of getting infected with the virus and the reduction of social conviviality, is considered as an aggravating factor for domestic violence. In addition, since the victim's social contact with other family members and friends is also reduced, their chances of developing or strengthening a support network and seeking help out of the situation are diminished. In other words, the COVID-19 pandemic can be considered an obstacle as to the protection of the victim's rights, as well a factor which increases its vulnerability. **CONCLUSION:** Concomitantly to the aggravation of violence, the victim's access to supportive services is reducing. Therefore, we conclude that the current context of social distancing imposed by the coronavirus pandemic and, consequently, the seclusion of vulnerable groups in their home ambience is propitious to the increasing cases of domestic violence.

Key words: Violence; Domestic violence; Pandemics; Coronavirus; COVID-19.

05. NUCLEAR ACCIDENTS: ANALYSIS OF THE MAIN STOCHASTIC EFFECTS

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INTRODUCTION: Throughout history, several nuclear accidents have occurred, resulting in several deaths and sequelae among the world population. Among the main ones, it is worth mentioning the episode that occurred in Goiânia, Brazil, in 1987, resulting from the improper disposal of a radiotherapy device. This resulted in the handling of Cesium-137, a radioactive isotope, by the lay population. This episode resulted in 4 short term deaths and more than 151 direct contaminations. Other major disasters were the explosion of a nuclear reactor in the city of Chernobyl in 1986 and the leak of radioactive material in the city of Fukushima in 2011. Exposure to ionizing radiation (x-rays and gamma rays) can generate deterministic effects, that is, acute manifestations after the application of a dose above a threshold, generating predetermined repercussions, or stochastic effects, that is, random late repercussions, which do not depend on the radiation dose, but are proportional to it, notably cancer and mutations. **OBJECTIVE:** To review the stochastic effects caused by human exposure to ionizing radiation, highlighting the long-term physiological consequences. **METHOD:** Systematic review based on articles from Scielo and PubMed databases (titles until 2019) in English and Portuguese, using the descriptors: stochastic effects, non-stochastic effects, ionizing radiation, radiation protection, cesium-137, Fukushima, Chernobyl. **REVIEW:** It is characteristic of nuclear accidents that individuals are exposed to high doses of radiation in a short period of time, which can trigger the Acute Radiation Syndrome. The damage of this syndrome is related to deterministic effects, that is, the radiation dose reaches thresholds beyond which lesions occur in certain organs and systems, the gastrointestinal, hematopoietic, cutaneous and neurovascular being the most affected. However, those individuals who survive are affected for life, due to the stochastic effects of ionizing radiation. The large increase in the incidence of papillary thyroid carcinoma in people affected in the Chernobyl and Fukushima accidents has been evidenced, reflecting the possibility of radiation-induced carcinogenic mutations in DNA. The main oncogenes altered in the individuals affected by this pathology were RET, BRAF, and RAS. Furthermore, the incidence of childhood leukemia increased in the cities affected by Chernobyl radiation, as did the rates of breast cancer, which started to appear earlier than in

the years before the accident. As far as the accident in Goiânia is concerned, there are no relevant studies proving the increase in the incidence of diseases in the affected people. Conclusion: Lifelong medical follow-up is recommended for victims of nuclear accidents, since stochastic radiation effects may appear years after exposure, and are common in such accidents. Finally, further studies should be carried out in the population affected by Cesium-137, in order to verify the incidence of diseases in victims in relation to the non-exposed population.

Key words: ionizing radiation; stochastic effects; nuclear accident; carcinoma; deterministic effects.

06. **COVID-19 AND NEUROLOGICAL COMPLICATIONS: A REVIEW OF THE PREVALENCE OF THE MAIN SYMPTOMS AND THE PERSPECTIVE OF PATIENTS' PROGNOSIS**

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INTRODUCTION: The Covid-19 pandemic has been reported since late 2019. In March 2020, the World Health Organization declared a public health emergency of international concern due to Sars-Cov2 aggressiveness and rapid spread. Several studies have been published on the disease. Despite all the information revealed, there are significant knowledge gaps in the pathogenesis of COVID-19. Neurological complications were well explored after a few months of the virus worldwide spread and the research data indicate that headache, dizziness, myalgia, smell and taste disorders, and stroke are common clinical manifestations in Sars-Cov-2 infections. **OBJECTIVE:** Analyze the prevalence of neurological complications in patients with COVID-19 and the possible association between these manifestations and a poor prognosis. **METHOD:** The Pubmed database was consulted, filtering searches from January 2020 to April 2021 for randomized and non-randomized clinical trials, cohort studies, cross-sectional studies, and case-control studies carried out in humans and published in English. The search was directed by consulting the MeSH, using the descriptors: "COVID-19" and "Anosmia" or "Ageusia" or "Headache" or "Dizziness" or "Myalgia" or "Stroke". 228 articles were considered relevant to the context, of which 52 were selected for analysis considering the inclusion criteria: (1) correlation between Covid-19 and disorders of smell, taste, headache, dizziness, myalgia, and stroke (2) neurological manifestations and Covid-19; and exclusion: (1) Covid-19 and vaccine; (2) sample with patients who exhibited only a specific symptom or specific condition. **REVIEW:** The most common symptom, headache, had an average prevalence of 32,67%, with a standard deviation (SD) of 23,34%, and values in the range of 4,69% and 78,8%. Regarding olfactory disorders, it was found an average prevalence of 27,33% (SD = 18,04%), with maximum and minimum values of 59,26% and 0,5%, respectively. As for taste, the average prevalence was 28,03% (SD = 20,28%), with maximum and minimum values of 60,99% and 2,82%, respectively. Myalgia showed the average prevalence of 19,12% (SD = 20,32%), with maximum and minimum values of 70,27% and 2,80%, respectively. Dizziness presented the average prevalence of 8,39% (SD = 10,47%), with maximum and minimum values of 26,21% and 1,41%, respectively. Finally, relating to strokes, it was found an average prevalence of 2,2% (SD = 76,58%), with maximum and minimum values of 27% and 0,1%. The heterogeneity of the results can be explained by the peculiarities of the methodology of each study and the differences in the profile of the studied groups. Considering the analyzed studies, 14 connected the presence of specific neurological symptoms to the worsen prognosis in COVID-19, especially in cases of stroke. **CONCLUSION:** Neurologic manifestations are frequent in COVID-19 patients. Identifying these manifestations, especially the most prevalent ones, can assist in early diagnosis and patient isolation. In addition, in some cases, they seem to be associated with a worse prognosis, but further research is needed to certify this association.

Key words: COVID-19; Neurologic Manifestations; Headache; Anosmia; Ageusia.

07. **VITAMIN D DEFICIENCY AS A RISK FACTOR FOR SEVERE CASES OF COVID-19: A NARRATIVE REVIEW**

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INTRODUCTION: The COVID-19 pandemic is a global public health threat caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). SARS-CoV-2 can infiltrate the respiratory tract, triggering immune responses and leading to tissue destruction. A dysregulated response, such as a cytokine storm, may increase the severity as well as the extension of lung inflammation and multisystemic effects. Since vitamin D modulates both innate and adaptive immunity, much research has been developed on its use for COVID-19 treatment and prophylaxis. Furthermore, due to the social isolation context imposed by the pandemic, people have been less exposed to sunlight, and thus more prone to have lower vitamin D levels. **OBJECTIVE:** To investigate the relation between vitamin D deficiency and severe cases of COVID-19 in a global pandemic and social isolation setting. **METHOD:** This review was conducted using the search terms "coronavirus", "vitamin D deficiency", "prophylaxis" and "treatment" in the PubMed database. The search was done in April of 2021, including articles that appeared in 2020 and 2021 in the English language. **REVIEW:** This search yielded 44 results, but only 37 were contemplated. Lower vitamin D levels have been associated with a higher Case Fatality Rate (CFR) from COVID-19 and an increase in Acute Respiratory Distress Syndrome (ARDS). This correlation is probably due to the biological effects of vitamin D and the pathophysiology of the SARS-CoV-2 infection. The virus uses the angiotensin-converting enzyme 2 (ACE2) receptors to invade host cells, thus reducing the expression of this enzyme. This downregulation disrupts the ACE/ACE2 balance leading to a state of heightened angiotensin II activity. The exacerbated production of angiotensin II stimulates the cytokine storm and compromises the host's immune system, facilitating virus propagation and increasing the likelihood of acute lung injury. As shown in some pre-clinical studies, calcitriol (the active form of vitamin D) has a pronounced endocrine impact intensifying the expression of ACE2. Besides this role, calcitriol also has direct effects on the immune system, due to a broad expression of vitamin D receptor (VDR) on most immune cells, such as macrophages, dendritic cells, and lymphocytes. For this reason, vitamin D can regulate the innate and adaptive immune responses by suppressing the release of inflammatory cytokines and chemokines, which may help reduce the cytokine storm present in some COVID-19 patients. **CONCLUSION:** In a social isolation setting, obtaining vitamin D through endogenous synthesis may be more difficult due to lack of ultraviolet B (UVB)-radiation exposure. Therefore, exogenous sources, such as supplementation, may be an alternative to resolve potential vitamin D deficiencies. Even though there is strong evidence linking vitamin D to COVID-19, no consensus has been reached regarding the potential of vitamin D as prophylaxis or treatment of the SARS-CoV-2 infection. Most of the studies depicted here were observational and retrospective; none of them were randomized controlled trials. Thereby, further studies on the role of vitamin D in the development of COVID-19 represent opportunities to discover a new form of treatment for the SARS-CoV-2 infection.

Key words: COVID-19, vitamin D, immune system, cytokine storm, ACE2 enzyme.

08. **THE IMPORTANCE OF AN EFFICIENT PRE-HOSPITAL CARE NETWORK FOR MAJOR BURNS**

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INTRODUCTION: In December 1961, one of the former workers of the Gran Circo Norte Americano, installed in Niterói, Rio de Janeiro, used gasoline to set fire to the circus canvas made of Nylon and coated with paraffin, starting one of the biggest fires in history of Brazil, totaling 503 fatalities and more than a thousand injured, more than double of the 189 victims of the great fire at the Joelma Building in 1974 in São Paulo, and the 242 victims of the Boate Kiss in 2013 in Rio Grande do Sul. The screening carried out by the

doctor Ivo Pitanguy in the fire of the Gran Circo Norte Americano can be considered a milestone in the history of the management of multiple burn victims, standing out for the speed of clinical reasoning and evaluation of the victims during on-site care, despite the inexistence of a formal response plan by the government agencies of the time. After the occurrence of these great fires in Brazil, greater attention was paid to this danger. Burns are one of the most frequent health problems in urgent and emergency services, and the correct initial care is decisive in reducing the morbidity and mortality of these patients, as well as possible late complications. Therefore, an efficient pre-hospital care network (PHCN) for major burns is extremely important. **OBJECTIVE:** Understand the dynamics of PHCN in burn victims, in order to expedite the emergency care of victims of major disasters such as that of Gran Circo Norte Americano and Boate Kiss. **METHOD:** Integrative literature review of complete articles, with descriptive and qualitative analysis, available in SciELO databases, using the keywords "burns", "pre-hospital care", "first aid", in addition to Google Scholar data sources, considering articles published in the period from 2017 to 2021. **DISCUSSION:** The PHCN approach consists of first removing the victim from the flames and, then, proceeding to the primary assessment of the airways, with endotracheal intubation in patients with decreased level of consciousness or signs of smoke inhalation, guaranteeing a good ventilatory parameter; Calculate the burned body surface (BBS) and hydration, using the Rule of Nine or the Lund-Browder Diagram by removing all the patient's clothes and irrigating the burned area with physiological solution at room temperature, the ice being discouraged; After wrapping the patient in clean, dry sheets to avoid hypothermia, therapeutic planning and wound care are carried out, in addition to neurological assessment. The primary assessment aims to analyze the injuries suffered and treat them according to the order of priority, obeying the ABCDE of the trauma and the priorities with the care of possible complications in each item. **CONCLUSION:** It is evident, through the results of the studies analyzed, that the PHCN is essential for a good prognosis of burn victim patients, requiring a good clinical assessment, skills and specific knowledge about first aid for a good prognosis, being of great national interest. the creation of local response plans, which aim to standardize and optimize the response to civil disasters.

Key words: Burns; Fires; Injuries; Emergencies; First aid.

09. NATURAL DISASTERS AND EPIDEMIOLOGICAL OUTBREAKS: UNDERSTANDING THE CHOLERA EPIDEMIC IN POST-EARTHQUAKE HAITI

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INTRODUCTION: In 2010, a high magnitude earthquake struck Haiti, causing over 250,000 deaths, 300,000 injuries and leaving more than 1.3 million people without shelter and, the country more fragile than ever. After nine months, numerous cases of acute watery diarrhea had been reported and, in October of the same year, the Ministry of Public Health and Population (MSP) declared a cholera epidemic in the region. In this sense, it is important to evaluate how a given natural catastrophe, that destroyed a national infrastructure that was previously vulnerable, created a scenario ripe for the disease's proliferation. It is, therefore, urgent to find ways to prevent future cholera epidemics in disaster areas. **OBJECTIVES:** To understand the correlation between the earthquake that struck Haiti in 2010 and the consequent cholera epidemic that spread throughout the country in the same year. **METHODS:** This is a qualitative literature review with a descriptive feature, which seeks to explore the theme. In this paper, we highlighted some major findings from articles indexed in the databases: Pubmed and Scielo, by applying the descriptors: "Haiti", "earthquake", "cholera" and "epidemic". **REVIEW:** Cholera is a serious intestinal infection caused by *Vibrio* bacteria strains, which is transmitted via oral-fecal dissemination, through contaminated water and food. The symptoms can include intense diarrhea, vomiting and deep shock and, when not treated, is deadly in 25% of the cases. This disease has been frequently associated with outbreaks after natural disasters. The 2010 Haitian earthquake is a prime example. Approximately 9 months after the earthquake, Haiti acknowledged a cholera epidemic in the country. Epidemiologists came up with numerous hypotheses to explain the emergence of the pathogen and its severity, in a territory where no serious cases of this infection had been registered in over a century. Genetic sequencing of the bacteria revealed the *Vibrio cholerae* O1 strain of exogenous origin. As a result, studies

showed that the microorganism had been imported to the country by the Nepalese army that came to the region to provide aid to the victims of the earthquake. The initial dissemination of this strain was caused, above all, due to sharing of non-treated water between the military camps and the natives, besides the mass displacement from the capital to the rural areas due to the earthquake. The overcrowded accommodations, built to receive unsheltered Haitians, was also an aggravating factor. These factors, combined with the devastation of a previously precarious national infrastructure, including problems with basic sanitation and poor drinking water supply further intensified the unfavorable conditions leading to a serious cholera epidemic, which, in turn further contributed to an already critical situation in post-earthquake Haiti. **FINAL CONSIDERATIONS:** In conclusion, there is a consensus, from the literature studied, about the importance of water and sewage management to prevent the proliferation of cholera in natural disasters. Furthermore, to avoid new contaminations or the potential for contamination, it is important to control against the importation of possible strains.

Key words: epidemic, cholera, Haiti, earthquake, natural disaster

10. OUTBREAK OF DIETHYLENE GLYCOL POISONING IN BELO HORIZONTE, MINAS GERAIS

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INTRODUCTION: Diethylene glycol (DEG) is a chemical compound used in several processes, such as automotive antifreeze, in paint formulations and in the food refrigeration process. In 2019, in the city of Belo Horizonte - MG, due to an error in the brewing process, this compound was added to the composition of the drink, causing serious complications in those who consumed the contaminated batch. After ingestion, gastrointestinal, neurological and renal manifestations were observed, and many evolved with severity and death, mainly due to low diagnostic suspicion leading to late treatment. **OBJECTIVES:** To identify the consequences of ingesting diethylene glycol and the need for a quick diagnosis in order to reduce the damage caused to the body. **Methods:** The literature review was performed by an electronic search in the Pubmed and Scielo database. The terms used were ethylene glycol, diethylene glycol, intoxication, neurotoxicity, nephrotoxicity and gastrotoxicity. Initially, 28 articles were selected, of which only 4 were used, which included criteria of intoxication in humans and the toxicokinetics of the substance. **REVIEW:** DEG intoxication leads to specific clinical syndromes, the severity of which depends on the amount ingested and the time of exposure to the compound. After ingested, the compound is widely distributed, reaching the kidneys, brain, spleen, liver, muscles and fat quickly. Metabolism occurs mainly via the liver, by oxidative method, and the main route of excretion are the kidneys. Thus, clinical manifestations can be observed, divided into well-established phases: (1) gastrointestinal symptoms, (2) acute kidney and liver damage, (3) neurological symptoms. The first phase manifests within the first 48 hours and consists of gastrointestinal symptoms, an altered mental state and the development of metabolic acidosis. In the second phase, liver and kidney lesions appear, which, if not reversed, can lead to death. Individuals who survive the initial stages may progress to the third stage, which consists of neurological damage, mainly to the peripheral nervous system, which can lead the patient to show areflexia, motor deficit, loss of visual and auditory functions. The treatment of DEG intoxication consists of the use of ethanol, which is inexpensive and is more available in clinical centers and can be administered intravenously or orally. In addition to this, fomepizol can be administered, however, it has a high cost and is not easily found in our country. In some cases hemodialysis therapy is performed, but its benefit is still controversial. **CONCLUSION:** Poisoning by diethylene glycol was responsible for outbreaks of poisoning associated with beer consumption. This led to serious consequences, including death and disabling conditions. Knowledge of the intoxication syndrome and its suspicion in emergency care are key factors for an adequate early therapy and a better clinical outcome for the victims.

Key words: diethylene glycol, intoxication, fomepizole, neurotoxicity, poisoning

11. THE SKIN AFTER THE RADIOLOGICAL ACCIDENT: A REVIEW OF THE CHARACTERISTICS AND TREATMENT

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INTRODUCTION: Ionizing radiation was a topic that gained prominence during the last century, for being a great technological advance, but also for its high destructive power, with known accidents occurring in Goiânia, Chernobyl and the cases of Japan. The study evaluated the current evidence of local dermatological consequences of such accidents. **OBJECTIVE:** To analyze the clinical characteristics, propaedeutics, diagnosis and therapy adopted on the skin of patients who suffered major radiological accidents. **METHODS:** A search was conducted in electronic databases, such as LILACS, PubMed, SciELO and MEDLINE. The eligible studies were from 1994 to 2019, in English, Spanish or Portuguese. Among them were case reports and quantitative studies, discovered by the terms "radioactive", "accidents" and "skin injury", with a Boolean operator "AND". We used the standard method of systematic review for study selection, data abstraction and risk of bias. **BIBLIOGRAPHIC REVIEW:** Studies found demonstrated the phases of a dermatological radioactive lesion, its clinical presentations and characteristics, such as slow evolution, different resistance of the distinct layers of the skin, atrophy of vessels and tendency to necrosis and ulceration. Certain studies have shown how these behave in the long term and other damaging effects, cancerous or not, that radiation could cause to the skin. We also found different types of treatment, some less conservative, such as total excision of the lesion, others more like palliative care, and some biotechnological innovations, such as the use of mesenchymal stem cells to help in the healing of the injury. **FINAL CONSIDERATIONS:** We conclude that the diagnostic and therapeutic approach with which are treated the victims of radioactive accidents with focal lesions on the skin, has undergone an evolution and improvement process over the years, but still requires more controlled studies to determine the most appropriate techniques. In case a new major radiological disaster were to happen again.

Key words: skin injury, radioactive, accident, skin assessment, therapeutics

12. MENTAL HEALTH IN MAJOR DISASTERS: IS IT POSSIBLE TO PREDICT OUTCOMES?

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INTRODUCTION: Traumatic event associated with their psychological repercussions present themselves as a feeling of extreme helplessness, as well as a rupture of expectations and beliefs. In this sense, the images created of oneself and the environment do not adjust adequately to this new reality. Therefore, the relationship between mental health disorders and the exposure to disasters is mediated by emotions such as anger, associated to the main life stressors capable of reducing quality of life in post-trauma, which justifies the higher incidence of post-traumatic stress disorder (PTSD) in survivors of major disasters. **OBJECTIVE:** This review aims to analyze how social, individual, and environmental factors impact in the outcome of massive disasters. **BIBLIOGRAPHIC REVIEW:** One's social environment is a decisive factor in the development and the protection from psychiatric disorders. Disasters impact on the social environment, which leads to increasing levels of suffering and physical and emotional wear and tear on individuals. On the other hand, societies with stronger peer links and greater engagement in social activities create more stable support networks. Results include an inversely proportional relationship between these factors and the development of psychological disorders. Resilience appears as an individual protective factor as analyzed in a study conducted with Hurricane Katrina survivors, individuals with lower scores on questionnaires that assessed this parameter showed higher rates of post-traumatic stress disorder and suicidal ideation after the event, in addition

to presenting faster psychic deterioration. Low income is a prominent risk factor: a study on the UK winter floods found that victims without home insurance at the time of the event were more inclined to experience depression, anxiety, and PTSD two years after the original flood than those who had insurance or financial conditions to outcome the material damages. Another risk factor is conditioned by the environment, as disasters are inevitable stressors, but the eventual locations of these events inevitably deal with the simultaneous exposure of the entire population that lives there, taking the oil spill in the Gulf in 2010 in the USA as an example. In this perspective, studies carried out with the affected population showed that these individuals had at least one physical symptom after direct contact with oil, such as respiratory problems, muscle pain, nausea, and vomiting. In concern to mental health, there was a considerable increase in rates of anxiety, depression, and PTSD as well as high numbers of domestic violence, abuse of alcohol and other substances, chronic stress, and a significant decline in social relationships. **FINAL CONSIDERATIONS:** Major disasters can destabilize the mental health of the victims by means of changes in individual, social and environmental circumstances involved. Therefore, it is possible to establish risk and protective factors for mental health damage following great disasters. However, it is needed to point out the importance of more research regarding this subject in order to establish proper public policies for the contexts in question.

Key words: mental health; risk factors; natural disasters; outcomes; review

13. POSTTRAUMATIC STRESS DISORDER IN NATURAL DISASTER SURVIVORS: REVIEW

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INTRODUCTION: Climatic instabilities have generated an increase in the incidence and severity of natural disasters. Health problems caused by these scenarios can lead to residential vulnerability, which adversely affects mental health and well-being, leading to numerous mental illnesses. In the face of a considerable incidence of post-traumatic stress disorder (PTSD) in survivors of natural disasters, it is important to systematically highlight its preponderance among the various groups in society, in order to enable more assertive interventions to support victims. **OBJECTIVE:** To compile the available knowledge about the occurrence of post-traumatic stress disorder (PTSD), in order to understand the risk factors and assist assertive interventions and improve the prognosis. **METHOD:** The database of the BVS portal was used to perform a literature review, with a search conducted with the following keywords: "natural disasters", "psychosocial", with the publication interval in the last five years (2017 to 2021), applying the filters: disasters, post-traumatic stress disorders, survivors, earthquakes, psychological stress, natural disasters, depression, mental health, floods, tsunamis, anxiety, mental disorders, anxiety disorders, disaster planning. 177 articles were excluded by title, 91 by abstract and, finally, 29 selected articles. **BIBLIOGRAPHIC REVIEW:** PTSD can occur at any age from the first year of life, and symptoms usually manifest in the first 3 months after the traumatic event, being characterized by involuntarily reviving spontaneous and distressing memories, as well as negative cognitions and mood, as guilt, isolation and mistrust, or hypervigilating, aggressive and self-destructive behavior, accompanied by sleep disorders, anxiety and depression. More than a third of natural disaster survivors are susceptible to the development of PTSD, and this disorder is a predictor of the increased incidence of suicidal ideation. On the other hand, it was seen that greater social support and resilience act as protective factors for their development, as they preserve the individual's well-being during stressful conditions. In addition, there are risk factors for PTSD: female gender, extremes of age, low family income, low education, poor health perception, traumatic experiences, clear trauma memory and previous mental health disorders, among them depression can increase the risk by 3.5x. **FINAL CONSIDERATIONS:** It was found that factors related to the individual are more useful in diagnostic screening than the impact of the disaster itself. It is important to emphasize that immediate interventions in people with high levels of peri-traumatic suffering can be effective for the reduction and better treatment of mental disorders. On the other hand, when not attended to, these people may miss a critical opportunity, resulting in years of suffering and a possible suicidal ideation. Future psychosocial support plans for disaster survivors may include physical and mental care in the transition from the acute to the recovery phase, facilitating supportive interpersonal relationships for survivors during the medium-term recovery phase, and

providing long-term psychological support for the most traumatized survivors, even if they appear to be functioning normally.

Key words: Stress Disorders, Post-Traumatic; Mental Health; Protective Factors; Psychosocial Support Systems; Disasters

14. THE CORRELATION BETWEEN TYPE 2 DIABETES MELLITUS AND WORSENING COVID-19

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INTRODUCTION: It is known that patients with type 2 diabetes mellitus (DM2) have important systemic repercussions. Clarifying that, we resorted to the pathophysiology of DM2. This is associated with some factors: a general activation of the innate immune system, which has a chronic state of inflammation mediated by cytokines, hyperglycemia and chronic hyperinsulinism, being the source of abnormalities in all stages of coagulation. In the current pandemic scenario, we often see worse prognosis in diabetic patients infected with the SARS-CoV-2. Therefore, it is necessary to clarify the relationship between the two diseases in order to understand the reason for the increasing number of complications. **OBJECTIVE:** This review aims to determine the correlation of DM2 with increasing complications in patients with COVID-19 with a focus on the pathophysiology of diabetes and the increasing mortality due to the consequences generated by this disease together with COVID-19. **METHOD:** This article is an integrative bibliographic review, which the search for studies was carried out following the inclusion criteria: articles written in English and Portuguese, published in the years 2020 and 2021, indexed on the LILACS and PUBMED platforms. To perform the search, combinations between the following DeCs (Health Sciences Descriptors) and MeSH (Medical Subject Heading) descriptors were used: Covid-19 (Covid-19); Type 2 Diabetes Mellitus (Type 2 Diabetes Mellitus), and the qualifiers: Mortality and Complications. Such terms were crossed as descriptors and, in addition, in the LILACS database, the descriptor Diabetes Mellitus type 2 was also crossed as a title, to obtain more articles. 21 scientific articles were obtained from the PUBMED database and 4 from LILACS, which were read in full, 14 of which were selected for answering the guiding question of this study and 4 used on that review. **RESULTS AND DISCUSSION:** It is already determined that diabetic patients are more susceptible to infections in general and, when infected, have a worse prognosis compared to non-diabetics. This combination is a result of the damage that hyperglycemia brings to the control of viremia and inflammation. Patients with DM2 have impaired polymorphonuclear function, T lymphocyte function and dysregulation of nitric oxide production. They also have a reduced antiviral response, evidenced by decreased production of IFN-alpha, suppression of IFN-1 and other pro-inflammatory cytokines. SARS-CoV-2 uses the angiotensin-converting enzyme (ACE) receptor to penetrate cells. As hyperglycemia can increase the expression and enzyme activity of this receptor, a greater amount of virus can enter cells and, consequently, determine the severity of the infection. In type 2 diabetes, there is a prothrombotic state, since chronic hyperglycemia and hyperinsulinism lead to abnormalities in the coagulation phases. Therefore, coagulopathy was seen as a key risk factor in the worsening of diabetics infected with SARS-CoV-2. **FINAL CONSIDERATIONS:** In this study, the correlation between the pathophysiology of DM2 and the worst prognosis of COVID-19 was clear. In addition to the innate immunological changes present in these patients, important glycemic fluctuations also increase morbidity and mortality, requiring constant glycemic control in order to minimize the impact of this infection on these chronic patients.

Key words: Diabetes Mellitus type 2; COVID-19; Physiopathology; Mortality; Complications.

15. COVID-19 AND CARDIOVASCULAR EFFECTS

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INTRODUCTION: COVID-19 consists of an infection of the upper airways, caused by the SARS-CoV-2 virus, popularly known as the new coronavirus. The transmissibility of this pathology is extremely high and can cause everything from mild to severe symptoms, causing an excessive demand for intensive care and millions of deaths. Since March 2020, this stir has added up to more than 155 million cases and 3.2 million deaths worldwide. Several individuals are asymptomatic, while others, especially senile and with previous illnesses, manifest critical conditions. In this context, although the disease predominantly affects the pulmonary system, it can manifest itself with varied cardiac complications, corresponding to a systemic approach disease. **OBJECTIVE:** To understand the main cardiovascular complications of COVID-19. **METHOD:** This is a literary review, with an exploratory character and a qualitative approach. Studies on COVID-19 and its cardiac complications were selected and analyzed, using the databases of the United States National Library of Medicine (PubMed), and the Scientific Electronic Library Online (SciELO). **BIBLIOGRAPHIC REVIEW:** The clinical repercussions of COVID-19 are very similar to those of other respiratory viruses, being characteristic, in most cases, mild symptoms such as fatigue, fever, dry cough, and in more severe cases, dyspnea, pulmonary bleeding, lymphopenia severe and severe acute respiratory syndrome. On the other hand, damage to the cardiovascular system started to draw attention, differentiating SARS-CoV-2 infection from the others. These cardiac disorders are probably of multifactorial origin since they can result both from an imbalance between high metabolic demand and low cardiac reserve, as well as by the virus itself, which leads to systemic inflammation and thrombogenesis, with elevated inflammatory markers (CRP, procalcitonin, d-dimer, IL-6, ferritin, DHL), and direct myocardial injury due to myocyte invasion may also occur, predisposing to varied disorders such as acute heart failure, myocarditis, Takotsubo syndrome (ST), thrombosis, arrhythmias and cardiogenic shock. These disorders occur mainly in patients with cardiovascular risk factors such as: obesity, systemic arterial hypertension, diabetes mellitus, advanced age or with any previous cardiovascular disease. In this sense, COVID-19 can cause new cardiac injuries and act to precipitate the worsening of underlying cardiovascular pathologies. It can be seen, then, that cardiovascular comorbidities associated with increased biomarkers of myocardial injury and cardiac decompensation during this condition are significant predictors of morbidity and mortality, being associated with a higher rate of hospitalizations in intensive care units and high percentages of death, being necessary special attention to these at-risk patients, in addition to proper management of their complications, with rapid identification and implementation of appropriate treatment. **CONCLUSION:** Thus, the symptoms of COVID-19 have a wide spectrum, which can cause cardiovascular complications. Knowledge about such cardiac disorders is crucial, since it can assist the profiling of interventions and guide health professionals more effectively, in order to recognize and intervene in advance in these disorders that aggravate and hinder the resolution of the infectious condition.

Key words: COVID-19; Coronavirus Infections; SARS-CoV-2; Cardiovascular Diseases; Cardiology.

16. SUSCEPTIBILITY AND SEVERITY OF COVID-19 IN PEOPLE LIVING WITH HIV: A NARRATIVE REVIEW

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INTRODUCTION: In face of the COVID-19 pandemic, the follow-up of several comorbidities was impaired, such as the infection by the human immunodeficiency virus (HIV). Furthermore, questioning arises about potential worse outcomes in people co-infected with HIV and SARS-CoV-2, considering the immunological and clinical specificities of people living with HIV (PLHIV). **OBJECTIVE:** To analyze, based on the literature, the association between HIV infection, susceptibility and severity of COVID-19. **LITERATURE REVIEW:** Ssentongo et al., in a systematic review and meta-analysis, showed that HIV infection is a risk factor for the development of COVID-19, besides higher mortality rates related to coinfection. Other studies also found worse outcomes of COVID-19 in PLHIV, such as increased mortality and disease severity. It is noteworthy that PLHIV may present risk factors that alone influence the prognosis of COVID-19, such as advanced age, hypertension and diabetes. In a review involving nearly seven thousand patients, Johnson et al. showed that HIV infection is associated with more diagnoses of COVID-

19, however, in terms of severity, comorbidities present in these cases may be more relevant than characteristics intrinsic to the HIV. Lee et al. and Sarkar et al., also in systematic reviews and meta-analyses, did not find worse clinical outcomes in the HIV and SARS-CoV-2 co-infection, although they included studies from a shorter period of time and fewer patients compared to the meta-analysis of Ssentongo et al. Contradictory results have also been found in other studies, in relation, for example, to susceptibility, mortality and risk of intubation. It is noteworthy that some of these had a reduced number of patients and included only hospitalized individuals, with a potential influence on the results. Thus, there are controversies, but it is possible that in fact there is a greater susceptibility and severity of COVID-19 in PLHIV. In addition, a cohort study by Tesoriero et al found greater hospitalization for COVID-19 in those patients diagnosed with HIV without suppression of viral load and in those with reduced TCD4+ lymphocyte count, although certain studies have not confirmed an association of the disease stage with higher mortality and/or severity. Regarding the use of antiretroviral therapy (ART), the findings are inconclusive and do not allow a confirmation of a direct influence on the prognosis of COVID-19 yet. However, the benefit of ART and the control of the HIV infection is undoubted, despite having repercussions on the prognosis of COVID-19 or not. **FINAL CONSIDERATIONS:** The literature is controversial and further studies on the topic are required. Thus, it is not possible to rule out an increase in the susceptibility and severity of COVID-19 in PLHIV, either due to the direct influence of HIV infection or due to the comorbidities present. Therefore, it is important to maintain longitudinal monitoring of these patients, ART and the management of other comorbidities, in addition to these individuals being evaluated as possible priority groups in the vaccination against COVID-19. Finally, it is essential to maintain screening for HIV infection during the pandemic.

Key words: HIV, HIV infections, Betacoronavirus, Coronavirus infections, Pandemics

17. **TOXIC GASES INHALATION IN THE KISS NIGHTCLUB DISASTER: CONSEQUENCES OF FIRES IN CLOSED ENVIRONMENTS**

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INTRODUCTION: Disasters, whether natural or man-made, result in major economic and / or social losses. Among the major disasters, we can mention the Kiss nightclub fire that occurred in January 2013, in Santa Maria (RS), in which there were 236 deaths and 169 hospitalizations, with the majority of the victims died from smoke inhalation and not due to burns, as in most fires. In the accident that occurred, the injuries from smoke were numerous, however, it is important to highlight the high toxicity of the gases carbon monoxide (CO) and hydrogen cyanide (HCN) that have compromised many victims. Both CO and HCN are formed by incomplete combustion and are classified as asphyxiating gases, and CO, due to its high affinity with hemoglobin, reduces the release of oxygen to the tissues, leading to hypoxia. HCN, on the other hand, blocks the respiratory cycle from its connection with the enzyme cytochrome C oxidase, which leads to the excessive production of lactic acid, which might lead to death by anoxia. **OBJECTIVE:** To identify the consequences of inhaling toxic gases CO and HCN in fires in closed spaces, with reference to what happened at the Kiss nightclub. **METHOD:** The integrative review was carried out through research in the Scientific Electronic Library Online database (SciELO). The following descriptors and Boolean operators were used: intoxication AND carbon monoxide and Kiss nightclub. Eight and six results were found respectively. No filters were used since all the results obtained from the descriptors were reviewed. Among the previous studies, six of them were used to prepare the review. **BIBLIOGRAPHIC REVIEW:** The main consequences provoked by the intoxication of CO and HCN gases are due to hypoxia, which leads to a systemic condition, whose clinical symptoms are usually nonspecific. Among the signs and symptoms, the following stand out: tachypnea and tachycardia - as compensatory mechanisms -, dizziness, headache, lowering of sensory, generalized inflammatory processes, and pathological breathing sounds. In addition, the high concentrations of lactic acid resulting from severe HCN poisoning lead to a clinical picture of metabolic acidosis, which might cause renal overload, protein denaturation, and impaired metabolic pathways, which can quickly lead to death. Thus, it is important to identify the signs and symptoms as early as possible in order to start treatment based on oxygen therapy, antidote administration, and the use of protective mechanical ventilation, in addition to observe the neurological and pulmonary functions. **FINAL CONSIDERATIONS:** The Kiss nightclub accident

demonstrates how disastrous fires can be indoors and exemplify the consequences of exposure to toxic gases. Therefore, the integrative review of the previous studies shows that an immediate and systematic management is essential, both in the ABCDE of trauma for the reception of victims, and in hospital treatment, in order to reduce the consequences provoked by the inhalation of toxic gases, as well as the rates of mortality. Finally, it is worth mentioning that the individuals who survived the gas poisoning in question have higher mortality rates compared to the population.

Key words: toxic gases, intoxication, Kiss nightclub, fire and disaster.

18. **ANALYSIS OF THE EFFECTS OF TRANSCRANIAL DIRECT CURRENT STIMULATION ON COVID-19 PATIENTS**

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INTRODUCTION: COVID-19 is a disease caused by SARS-CoV-2 virus, of *Coronaviridae* family, and has become a serious global health problem. Different forms of treatments have been used to treat specific symptoms, among them non-invasive neuromodulation, especially the Transcranial Direct Current Stimulation (tDCS). tDCS induces changes in neural excitability through a current flow from an anode electrode to a cathode electrode, both placed on the scalp. **OBJECTIVES:** This study aims to analyse the effects of tDCS when used on COVID-19 patients. **METHODS:** Integrative review obtained through PUBMED, Web of Science and BVS databases using the following keywords combined: "transcranial direct current stimulation" AND "COVID-19" and "tDCS" AND "COVID-19". The inclusion criteria were studies published in english and clinical studies published in peer-reviewed journals. The exclusion criteria were articles published in languages other than English, duplicates and articles that didn't answer the guiding question (*what are the effects of tDCS on COVID-19 patients?*). Initially, 43 articles were found and after the reading of the title and the abstract the new sample included 3 articles. Among the 40 articles that were excluded, 3 were duplicated and 37 didn't answer the guiding question. **BIBLIOGRAPHIC REVIEW:** Non-invasive neuromodulation is an alternative to pharmacological approaches, which can assist in four main ways. The first one would be improving musculoskeletal pain; the second one, in prevention of neuroinflammation by stimulating the regulatory regions of the systemic anti-inflammatory process; third one, in therapy for psychological disorders generated by pandemic stress; the fourth one, assisting in the process of physical and cognitive rehabilitation after COVID-19. Studies suggest that COVID-19 causes an autonomic imbalance, producing important alterations on vagus nerve activities, which is responsible for inflammation control. It may have its activity increased due to influence of the left dorsolateral prefrontal cortex (DLPFC) or temporal cortex. By stimulating, with tDCS, the left DLPFC, it was found an increase of the vagal activity and a reduction of the systemic inflammation, as well as helping with neuropsychiatric problems related to infection. Furthermore, the application of tDCS in the temporal cortex, in patients undergoing respiratory physiotherapy, can be used to increase the efficacy in pulmonary rehabilitation. tDCS, in both anodal and cathodal modalities, reduces the excitability of the diaphragmatic corticospinal pathways in healthy individuals. Based on this information, it was verified the hypothesis that it could also be used on the relief of dyspnea in COVID-19 patients that requires mechanical ventilation in the Intensive Care Unit (ICU). However, there isn't enough evidence about it to prove this hypothesis. Regarding the improvement of anxiety and stress, there have been no major conclusions in studies applying tDCS, however, randomized clinical trials have shown a significant improvement in physical stress. **CONCLUSION:** tDCS is a promising treatment that can auxiliate in many ways in the symptomatic treatment of COVID-19, although more studies are needed to clarify its effectiveness and evaluate its other uses.

Key words: COVID-19, Neuroinflammation, Neuromodulation, SARS-CoV-2, Transcranial direct current stimulation.

19. **THE GREAT DISASTER OF THE COVID-19 PANDEMIC AND ITS ASSOCIATION WITH DEPRESSION AND ANXIETY AMONG THE ELDERLY: AN INTEGRATIVE REVIEW**

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INTRODUCTION: The COVID-19 pandemic became one of the greatest unprecedented disasters of recent times. Social isolation, resulting from protective measures against the virus, have been investigated by researchers in its connection with the population's mental health, especially the elderly, once they are a major risk group for severe forms of the disease. Studies concerning the consequences of the SARS outbreak in 2003 showed an increase of psychiatric conditions and suicide rates among the geriatric population, elucidating the importance of studying the mental impact caused by the ongoing pandemic aiming to anticipate and minimize adverse evolutions on the geriatric population. **OBJECTIVE:** Identify, according to recent literature, the impact of the COVID-19 pandemic and the consequent social isolation in depression and anxiety rates within the elderly population. **METHODS:** This is an integrative review. The research was done in the Virtual Health Library (VHL) with the following descriptors: COVID-19, Mental Health and Elderly. Subsequently, the following filters were applied: full text, MEDLINE, Lilacs, SciELO, anxiety, depression, risk factors, observational study, incidence study, english and portuguese. Following the selection of the articles by its titles, the abstract from the studies as well as the full text were analyzed. Included articles were those that studied individuals over 60 years old and that investigated the pandemic and social isolation's effects on depression and anxiety. The articles were excluded if the study population was selected exclusively from specific groups or individuals with underlying chronic diseases. **REVIEW:** The search resulted in 79 articles: 28 were excluded according to the title, 44 by the abstract and two by the full text. Therefore, 5 articles were included in our review. It has been stated that one's subjective feeling of loneliness would have more impact on depression and anxiety rates than social isolation itself. Liang et al. (2021) reported that 30.8% of the study population had compatible findings for depressive symptoms during the COVID-19 pandemic; however, this was less evident among the elderly that had adopted preventive measures against the virus continuously. The uncertainty of the pandemic's progression increases the elderly concerns of being infected and corroborates the fear of the uncontrollable consequences, possibly influencing their mental health. Having symptoms of COVID-19 for over 14 days or having an infected family member proved to be associated to both anxiety and depression. One of the studies concluded that the elderly are less vulnerable than the youth in suffering from depression and acute stress, probably due to their greater resilience in addition to greater experience with adverse life events. Nevertheless, socioeconomic challenges and the rise in anxiolytic use appeared to be correlated to higher levels of anxiety and depression within the geriatric population. **CONCLUSION:** Social isolation and the pandemic's uncertainty possibly impact in depression and anxiety rates among the elderly. Thus, more studies and the elaboration of preventive measures towards these psychiatric conditions are expected in order to mitigate the hazards to the older one's mental health.

Key words: Aged, Anxiety, COVID-19, Depression, Mental Health.

20. **ACUTE RADIATION SYNDROME IN MAJOR RADIOLOGICAL DISASTERS**
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INTRODUCTION: Acute radiation syndrome (ARS) is characterized by a variety of symptoms that indicate damage to an organ or its system when the body is exposed to a radiation rate greater than 1 gray (Gy) in a period of time that varies from minutes to months. The study of this disease is of great relevance, given the various events of radioactive exposure that have already occurred in the world, such as the bombings of Hiroshima and Nagasaki and the disasters of Chernobyl and cesium-137 in Goiânia, and their management is little known by most health professionals. **OBJECTIVE:** To analyze and discuss a compilation of scientific studies on acute radiation syndrome in major radioactive disasters. **METHOD:** It consists of a bibliographic review of scientific articles in Portuguese and English indexed

in the Scielo, PubMed and Cochrane databases between the years 2007 and 2020. **BIBLIOGRAPHIC REVIEW:** ARS has three chronological phases after acute radiation exposure: prodromal phase, which occurs in minutes - when the individual absorbs doses of 10 Gy or more than 20 Gy - or up to 2 days after exposure, has nonspecific initial symptoms, such as fever, anorexia, nausea, vomiting, diarrhea, fever and headache; latent phase, which consists in the improvement of the patient's condition, for a few hours, after 2 to 20 days of exposure, the decrease in symptoms is related to a greater degradation of pluripotent stem cells compared to more differentiated cells; and the manifest illness, which occurs after 21 to 60 days of exposure to radiation, and may last for days or months. In addition, the severity of ARS varies according to the radiation dose absorbed, influenced by the distance from the radioactive source and the exposure rate, that determines sub-syndromes of this disease. Cutaneous syndrome occurs between the first 2 days of exposure, with lesions ranging from erythema to blisters. The hematopoietic syndrome occurs after exposure above 2 Gy and can generate pancytopenia, leading to possible spinal aplasia. The gastrointestinal syndrome leads to the destruction of intestinal crypts, which can occur in organ failure, occurring at exposures greater than 5 Gy. Neurovascular syndrome, on the other hand, results from an exposure greater than 10 Gy, resulting, in its majority, in death. Treatment is based on the patient's clinical condition and gives him a longer survival. In cases of non-treatment, the lethal dose in 60 days is 4 Gy, however with the provision of intensive care units, antibiotics, reverse isolation and bone marrow transplantation, this exposure can rise to up to 9 Gy. **CONCLUSION:** ARS is little known by the majority of health professionals and even fewer of these professionals have experience with its management. Assertive medical treatment after acute exposure to large doses of radiation is essential to reduce mortality and morbidity in exposed patients and, therefore, your knowledge of ARS is essential.

Key words: Acute Radiation Syndrome; Absorption, Radiation; Chernobyl Nuclear Accident; Atomic Bomb Survivors; Man-Made Disasters

21. **POST COVID-19 PARKINSONISM: A BIG CHALLENGE FOR THE FUTURE?**

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INTRODUCTION: In the 20th century, after the occurrence of an outbreak of influenza, several cases of post-encephalitis parkinsonism were observed. Although the studies weren't clear about this relation, it was possible to realize that viral infections can be a risk factor for the development of Parkinson's disease (PD). With the pandemic of COVID-19, declared by the WHO in 2020, it has returned to thinking about the relationship between a serious viral infection, currently, by SARS-Cov-2 and the development of neuropathologies such as PD. **OBJECTIVES:** The study aims to analyze whether there is a possible relationship between Sars-Cov-2 infection and the development of PD due to the inflammatory responses caused by the infection in the Central Nervous System (CNS). **BIBLIOGRAPHIC REVIEW:** One third of patients hospitalized due to COVID-19 have neurological symptoms. SARS-CoV-2 uses the angiotensin-converting enzyme 2 (ACE2) to enter cells and perpetuate the infection. It is known that ACE2 is present, at significant levels, in various tissues such as the respiratory tract, kidney, myocardium and neuronal. In addition, the presence of anosmia or hyposmia can be considered common pre-motor changes at the beginning of PD. It is supposed that the affection of the CNS occurs in two ways: by the direct action of the virus or in an indirect way, resulting from the immunological and inflammatory activity of the infection. The direct form would be related to the entrance of SARS-Cov-2 through the olfactory bulb and the rupture of the blood-brain barrier (BBB) through the hematological route. The indirect would be caused by the induction of a systemic inflammatory state, as an attempt by the body to fight infection. It is known that the production of cytokines is essential in combating the virus, but an exacerbated release of interferons (IFNs), interleukins (IL), tumor necrosis factor (TNF) and chemokines may occur, which can cause a deleterious effect to the SNC. Some symptoms can occur years after infection. The virus is believed to cause changes in the production of energy and in the folding of neuron proteins. A delayed neurodegeneration would arise due to incorrect unfolding and the aggregation of proteins such as α -synuclein in these patients. It is estimated that, among the neuronal population, dopaminergic neurons are more susceptible to degeneration, since they have high energy rates and proteostasis. Thus, the accumulation of α -synuclein could be

facilitated in these cells. It is known that the pathophysiology of PD is related to progressive motor and non-motor disorders, due to the loss of dopaminergic cells in the substantia nigra pars (SNpc) and to the accumulation of Lewy bodies positive for α -synuclein (α -syn). **FINAL CONSIDERATIONS:** It appears that there is a probable relationship between the infection by COVID-19 and the development of PD, however, there was no clarity about the mechanisms through which this occurs due to the lack of data and to the fact that these consequences will come in the long run. However, the possibility of an increase in cases of PD in the future cannot be ruled out, as was the case with influenza previously.

Key words: COVID-19; Parkinson's disease; Viral infection; Neuropathies; Central Nervous System.

22. IMPACT OF THE FUKUSHIMA NUCLEAR ACCIDENT ON THE THYROID CANCER OUTBREAK

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INTRODUCTION: An earthquake, in 2011, caused an accident in usinuclear at the Fukushima Daiich whose dispersion materials radioactive concerned by its possible effects on the health of the local population. Although considered low, the level of radioactive exposure in Fukushima was considered a risk factor for thyroid cancer, especially in younger individuals. **OBJECTIVE:** To analyse epidemiological and clinical- pathological aspects of thyroid cancer related to the Fukushima nuclear accident. **METHOD:** An integrative literature review was carried out, whose database for the search for articles was PubMed, based on the descriptors "Fukushima Nuclear Accident", "Public Health", "Accidents", "Radioactive Hazard Release" and "Thyroid Cancer", according to the Medical Subject Headings (MeSH). In order to verify the relationship between the studies, the Boolean AND operators were used. By the inclusion criteria, the articles from the last five years were selected, which related ac indenting nuclear Fukushima and. manifestation of thyroid cancer have been eliminated, the exclusion criteria, by reading titles and abstracts, articles related to other problems of the thyroid and did not meet the objectives of this work. So found - if 34 articles and selected - is 15. **LITERATURE REVIEW:** the correspondence between radiation exposure and thyroid cancer has been suggested from studies that linked this ne malignant aplasia to radiotherapy used to treat some childhood diseases, such as enlarged thymus, in the twenties and sixties. Regarding the minimum latency period of thyroid cancer, the variation is from 5 to 10 years. In studies focusing on the Fukushima accident, this pattern was noticed, however, are as with iodine deficiency tend to present a higher frequency early. In addition, it was noticed, when evaluating inhaled and ingested radiation, that the impact of external radiation was more significant, despite the fact that local evacuation occurred. From this, it is suggested that the stress caused by the change works with the risk factor for thyroid cancer. With regard to pathological aspects are the most histological type. Identified is the carcinoma to papillary thyroid and mutation most prevalent is in the BRAF gene closely related to cervical lymph node metastasis. However, there are precopation the overdiagnosis, since the prognosis of papillary cancers of the thyroid does not necessarily improve with early diagnosis. In this sense, higher screening criteria and reduced sensitivity were established for asymptomatic individuals. In this context, it is indicated, first, to palpate the thyroid and, in case of suspicion, refer to the ultrasound. As for the screening ultrassonogrã they are, should be included tumors between 10 and 15 mm. **FINAL CONSIDERATIONS:** In the Fukushima nuclear accident, although the level of exposure was low, cases of malignant thyroid cancer were identified, in which papillary carcinoma was the most frequent and the most prevalent mutation in the BRAF gene. Despite these discovery tas, it is critical to prevent the overdiagnosis, which requires diferente criterion for screening, depending on the symptoms. In this context, long-term studies are necessary, since current knowledge is more focused on acute exposure.

Key words: Public Health; Accidents; Radioactive Hazard Release; Fukushima Nuclear Accident thyroid cancer

23. EBOLA VIRUS: A NEGLECTED AND UNDERREPORTED DISEASE

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INTRODUCTION: Ebola virus disease (EVD), first identified in 1976 (Zaire) and responsible for an outbreak in West Africa in 2014, was declared by WHO as a global public health emergency. EVD is a neglected and underreported tropical disease that was responsible for the death of 11,310 people between the years 2013 to 2016. In addition, this in association with the poverty and malnutrition that affect the African region caused secondary comorbidities such as HIV, measles, malaria, tuberculosis, pneumonia, cancer and cardiovascular diseases, with consequent deaths. **OBJECTIVE:** To analyze the impacts of Ebola virus disease on the health of the affected populations and the consequences of neglect in the face of this disaster. **METHOD:** Bibliographic review in the Scielo and PubMed databases with articles from 2014 to 2020, in Portuguese, English and Spanish, in addition to recent news from 2020 and 2021, in Portuguese and English. **BIBLIOGRAPHIC REVIEW:** Ebola is an RNA virus, with high virulence, a member of the Filoviridae family and which has five isolated species, with a mortality rate of approximately 65%, depending on the species: Zaire ebolavirus (ZEBV), Sudan ebolavirus (SUDV), Bundibugyo ebolavirus (BDBV) Tai Forest ebolavirus (TAFV) and Reston ebolavirus (RESTV). The number of fatal EVD cases reported across countries varies widely and this is due to differences in health systems, outbreak response mechanisms and the severity of the Ebola virus species involved - ZEBV considered the most serious, followed by SUDV and the BDBV, the least serious. The Ebola virus has an incubation period ranging from 2 to 21 days. Its transmission between humans occurs through direct contact with blood, organs and body fluids of people or contaminated surfaces. The first clinical manifestations are non-specific of the flu and progress quickly to bleeding, shock and multiple organ dysfunction, due to the intense inflammatory response, immune system failure and vascular coagulation changes. In addition to the consequences for public health, the virus had economic implications in view of the strong impact generated by fear, the paralysis of trade and the death of workers. Data estimated by the World Bank estimated the loss of GDP in Guinea, Liberia and Sierra Leone at US \$ 2.8 billion by 2015. **FINAL CONSIDERATIONS:** Given the above, it is possible to conclude that the reality of the viral outbreak overloads the health system and culminates in a lack of assistance to those affected by the disease, as well as to those with other comorbidities. Forty-three years after the virus was discovered, it was possible to develop a vaccine only for the ZEBV species, the most serious. Meanwhile, local African populations have been poorly vaccinated, which implies the need for investment in amplified vaccination aiming to circumvent the severity of the disease and local impacts, minimizing damage to countries that are already suffering from external strangulation by countries hegemonic.

Key words: Ebola virus; hemorrhagic fever; ebola virus disease; ebola infection; neglected disease.

24. A FORENSIC VIEW ON THE KISS NIGHTCLUB FIRE

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INTRODUCTION: The Kiss Nightclub fire occurred in the city of Santa Maria in Rio Grande do Sul in 2013, leaving 680 injured and 242 dead, caused by sparks from a flare used as an attraction in the presentation of a band in the nightclub. There was an investigation by the regional Civil Police, which found irregularities at the venue. **OBJECTIVE:** This paper aims to analyze, from the forensic point of view, the findings found in the autopsy of the bodies in the fire, through a literature review. **METHOD:** To address the issue a literature review was conducted, using the electronic databases Pubmed and Scielo, with the descriptors in English and Portuguese - alone and in combination - "Asphyxia", "Forensic Toxicology", "Intoxication by carbon monoxide", "Obstruction of the airways", "Hydrogen Cyanide" with search in

the last eight years covering a current literature on the object of research.

LITERATURE REVIEW: In the fire that occurred in Kiss Nightclub, the causes that led to the death of 242 people are trampling, burns, respiratory tract injuries and asphyxiation by toxic smoke. According to the bulletin of the Legal Medical Institute (IML), about 90% of the deaths in the fire were due to asphyxiation caused by cyanide and carbon monoxide inhalation (CO). Asphyxia is defined as disturbance resulting from oxygen deprivation, and can be classified as complete or incomplete (depending on the severity of the situation), fast or slow (according to the speed of onset), and internal or external (depending on the cause). Asphyxiation by CO occurs due to its high affinity for hemoglobin. This substance binds to hemoglobin preventing hematosi, thus characterizing asphyxia at the tissue level. Hydrocyanic acid, on the other hand, is a water-miscible gas that diffuses rapidly to the tissues, making it a powerful asphyxiant, resulting in severe hypoxia due to inhibition of cytochrome oxidase, preventing the use of oxygen by the tissues. In the case of trampling, there is mechanical asphyxiation produced by impeding the passage of breathable air by direct or indirect means of obstruction. **FINAL CONSIDERATIONS:** On the forensic aspect in a necropsy, the expected anatomopathological findings resulting from asphyxia by inhalation of toxic gases, such as cyanide and carbon monoxide, are: dilated pupils, pallor, pinkish tint of the face, early rigidity, cyanosis in the extremities, clear hypostatic stains (livor mortis) and late putrefaction. Some bodies may have facial burns from the fire. The internal signs of the victim would be pinkish flowing blood, polyvisceral congestion due to heart failure, and tardive or echymosis visceral spots located mainly in the subconjunctival, subpleural, and subepicardial regions. In asphyxia caused by trampling one expects to find lesions in the thoracic skeleton and viscera, the echymotic face mask (Morestin's echymotic mask), distended lungs (Valentin's sign), congested liver, and a heart with dark and fluid blood. Finally, it is important to emphasize that there are no pathognomonic signs of asphyxia, but rather recurrent findings, according to those mentioned above.

Key words: Asphyxia, Forensic Toxicology, Carbon monoxide intoxication, Obstruction of the airways, Hydrogen Cyanide

25. THE IMPACT OF THE SAMARCO TAILINGS DAM RUPTURE IN MARIANA-MG ON THE MENTAL HEALTH OF THOSE AFFECTED

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INTRODUCTION: On the afternoon of November 5, 2015, the tailings dam at Fundão broke in the city of Mariana, causing the biggest environmental disaster in Brazil of mining origin. As a result, 40 cities were affected, 663 km of rivers directly impacted, 19 fatalities and markers of displaced families. Faced with a context of loss of social and symbolic ties, the mental health condition of the affected population is a cause of concern, due to their greater vulnerability. **OBJECTIVE:** To investigate the impact of Mariana's disaster on residents' mental health. **METHODS:** During the month of April 2021, a descriptive study was carried out, utilizing the MedLine and SciELO database, using the descriptors: "Disaster"; "Man-made Disaster"; "Health condition"; "Environmental Health"; "Mental Health"; and its variations, obtained through MeSH. Studies published in the last five years and in the English language were included. **RESULTS:** Six articles were selected to be part of the scope of this review. The loss of routine, mourning, a little feeling of belonging, as well as the fear of not being able to rebuild life projects and not being in contact with their community, provoke signs and symptoms in the residents, such as isolation, depressed mood, anguish and anxiety, which are accentuated mainly in the elderly. An exploratory, cross-sectional and descriptive study conducted self-assessment interviews after Mariana's disaster in 507 participants and concluded that 35% of them consider their health worse after the dam burst. Regarding emotional or behavioral symptoms, 83.4% of the interviewed population reported having them, with insomnia being the most frequent (36.9%), followed by worry or tension (21.7%), feeling sad (18.1%), being easily scared (17.8%); altered mood, irritability or aggression (15.6%); more frequent crying (12.6%); difficulty making decisions (10.5%), apathy (10.1%) or drowsiness (9.5%). Alignment, the Survey on the Reality of Mental Health in Mariana, through the application of questionnaires, observed that the quality of sleep in 52% of the interviewees was impaired. In addition, 28.9% of the assessed population was diagnosed with depression; 32% with anxiety disorder, 12% with post-traumatic stress disorder, and 16.4% were identified with risk of suicide. It is noteworthy that the use of benzodiazepine anxiolytic drugs to

sleep was found in 18.2% of the population and the use of antidepressants in 16.9%. **CONCLUSION:** Faced with a scenario of so many losses and impacts not only environmental, but also economic, social and patrimonial, there is a deterritorialized and mentally vulnerable population, which reports signs and symptoms of fragile mental health and that needs treatment and attention in the public sector.

Key words: Disaster; Man-made Disaster; Health condition; Environmental Health; Mental Health

26. THE RELATIONSHIP BETWEEN COVID-19 AND AUTOIMMUNE DISEASES: NARRATIVE LITERATURE REVIEW

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INTRODUCTION: The disease caused by the SARS-CoV-2 virus, named COVID-19, was reported in December 2019 in Wuhan, China, as a new infection causing Severe Acute Respiratory Syndrome (SARS) that quickly spread across the globe and was declared as a pandemic by the World Health Organization (WHO) in March 2020. An asymptomatic evolution or presentation of severe forms of the disease is possible, with an exacerbated participation of the innate and adaptive immune response, contributing to the formation of the "cytokine storm" observed in these patients. Several studies indicate that COVID-19 and autoimmune diseases have numerous clinical and immunological similarities. The damage to the different organs that occur in both diseases is caused by an uncontrolled immune response with activation of leukocytes and formation of neutrophil extracellular traps (NET), thrombus propagation and breaking of immune tolerance with the production of autoantibodies. **OBJECTIVE:** The objective of this narrative review was to assess whether SARS-CoV-2 infection could act as a trigger for the development of autoimmune diseases and to assess the role of COVID-19 in the course of pre-existing rheumatological diseases. **BIBLIOGRAPHIC REVIEW:** Several studies have shown an association between infection by the SARS-CoV-2 virus and the development of clinical manifestations of autoimmune diseases, such as Cold Agglutinin Disease, Guillain-Barré Syndrome, Antiphospholipid Antibody Syndrome, Arthritis, Vasculitis, Lupus Systemic Erythematosus and Macrophage Activation Syndrome. It is important to note that the likelihood of developing autoimmunity phenomena is also based on genetic predisposition, gender effect, age, family and individual history of autoimmune diseases. On the other hand, patients who already have rheumatological diseases and the use of immunosuppressants, especially cyclophosphamide, are more susceptible to infections. In relation to COVID-19, studies show an infection rate similar to the general population, but this may be related to the preventive measures adopted. However, studies have shown that the use of high doses of glucocorticoid may be associated with greater severity of the infection, resulting in greater hospitalization. In addition, the evidence points to the possibility of infection by SARS-CoV-2 triggering new manifestations, such as joint pain, skin lesions and hemolytic anemia, in patients whose rheumatic disease was previously controlled. Thus, the recommendations involve keeping track of the activity of rheumatological diseases to prevent worse outcomes. **FINAL CONSIDERATIONS:** SARS-CoV-2 infection is associated with endothelial damage, exacerbated production of inflammatory cytokines, thrombotic events, changes in immune tolerance and production of autoantibodies, similarly to what occurs in immune-mediated diseases. In addition, the treatment of patients who already have rheumatological diseases can make individuals more susceptible to infection, mainly due to the use of immunosuppressants. Evidence also points out that SARS-CoV-2 infection may trigger new manifestations in these patients. Nevertheless, it is worth mentioning that many of the studies were based on case reports and observational studies. Therefore, given the complexity and relevance of the topic, further studies are needed to better elucidate the mechanisms in which COVID-19 interacts with autoimmunity.

Key words: COVID-19; autoimmune diseases; rheumatic diseases, SARS-CoV-2; immunosuppression

27. **ASSOCIATION OF COVID-19 WITH ANDROGENETIC ALOPECIA**
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INTRODUCTION: On December 2019 there were described the first cases of infection from SARS-CoV-2, which had a possible origin in the market in the city of Wuhan-China. Since then, it has been observed a fast dissemination, with more than 141 million cases in the worldwide and approximately 3 millions deaths, what made it being declared a pandemic by the World Health Organization (WHO). Epidemiological studies has shown cases are less frequents in children also there are higher numbers of mortality rates in men, who tend to be more related to the androgenic sensibility of the virus. It has also been observed that patients who had shown androgenetic alopecia (AGA) had aggravations from COVID-19. **OBJECTIVES:** The aim of the study is to produce a literature review about the correlation between the presence of AGA in the carriers infected from Sars-Cov-2 virus. **METHOD:** Integrative review of literature based on article from the PubMed, Mendeley, BVS and Scielo, using the descriptors in Portuguese and English: "alopecia"; "androgen receptors"; "COVID-19"; "Sars-Cov-2" and "dermatology". As the inclusion criterium, there were selected articles published between 2020-2021 in English. **BIBLIOGRAPHY REVIEW:** Although it may exist a relation between a AGA and the gravity of the cases COVID-19, this hasn't been totally clarified. The greater prevalence and gravity in men from the infection by COVID-19 are related to behavior factors, due to the fact that most male are more likely to the risk factors, exemplified by the group of smokers or those who carry hearth diseases. Furthermore, the molecular mechanism of viral infectivity helps the affection of men, as the entrance of in cell depends on transmembrane protease serine 2 (TMPRSS2), a protein transmembrane which is regulated by androgens. The androgenetic alopecia, also known as baldness, is a demonstration of genetics heritage dermatology, unchained by hyperactivity from androgen receptors. So it is possible that it can be used to identify patients a high risk to a worse prognosis. **FINAL CONSIDERATIONS:** Epidemiological studies has shown that some patients are more likely to evolve worse symptoms from COVID-19, some of them are: pregnant, over 60 years old and people with comorbidities, like immunosuppression and obesity. The susceptibility to androgens also seems to be an indicative of gravity from the infection by COVID-19, since then it was described others pathologies related, which can aggravate the case, as the benign prostatic hyperplasia, the polycystic ovary syndrome and the use of anabolic steroids. Moreover, the worst prognosis in male are relevant, once that men have more reluctance in selfcare and greater predisposition to AGA. The pathophysiology of COVID-19 has not described in its totality yet, thus, more studies are necessary to confirm the association between COVID-19 and AGA in attempt to identify the possible risk factors to a worse prognosis of the illness.

Key words: alopecia; androgen receptors; COVID-19; Sars-Cov-2; dermatology.

28. **MULTISYSTEMIC INFLAMMATORY SYNDROME IN CHILDREN (MIS-C) TEMPORALLY ASSOCIATED WITH COVID-19: A LITERATURE REVIEW**
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INTRODUCTION: The COVID-19 pandemic, decreed by the World Health Organization in March 2020, represents one of the biggest health crises of all time, being responsible for more than 3 million deaths worldwide. Initially, children were considered to be a lower risk group, since most of them had mild conditions. Serious complications began to be reported in April 2020, when healthy children were hospitalized with cardiogenic shock or presentations similar to Kawasaki's disease with temporal association with COVID-19. In May 2020, the CDC published a definition for Multisystemic Inflammatory Syndrome in Children (MIS-C). MIS-C was hypothesized as being mainly post-infectious and distinct from COVID-19. In Brazil, according to the Epidemiological Bulletin No. 45 of the Ministry of Health, by October

2020, 511 cases of the disease had already been confirmed in the country. **OBJECTIVES:** Gather updated data on clinical presentation, diagnostic criteria and treatment of MIS-C. **Methodology:** Research was carried out in the Pubmed database using the descriptor "pediatric multisystem inflammatory disease, COVID-19 related" taken from the Medical Subject Headings (MeSH) platform and a filter for systematic reviews. **LITERATURE REVIEW:** The literature search identified 9 articles. After methodological screening, 5 studies were considered eligible for this review. 2410 patients aged 0 to 20 years were evaluated in these studies, with an average age of 8.68 years, predominance of healthy patients and association of severity with ethnicity, especially blacks and asians. The pathophysiology of MIS-C related to COVID-19 is still unknown. Possible mechanisms involved include direct systemic action of the SARS-CoV-2 virus and the post-infection hyperinflammatory state, with increased cytokines. Common clinical presentations are fever, gastrointestinal symptoms, skin rashes, conjunctivitis, shock, ventricular dysfunction, cheilitis, edema and erythema of extremities. The condition also meets clinical criteria for the diagnosis of Kawasaki Disease. Among the most frequent complications are myocardial dysfunction and dyspnea, requiring ventilatory support, and acute kidney injury. Thromboembolic events are uncommon, probably due to the use of anticoagulant therapy. The treatment for MIS-C involves the use of intravenous immunoglobulin, associated with inotropic support and anticoagulant therapy. Other medications used are corticosteroids, immunomodulators and antibiotic therapy. Despite the low mortality observed in cases of MIS-C, the need for hospitalization in intensive care units is high, leading to an increase in the occupancy rate of pediatric ICU beds. In addition, treatments, although efficient, still have little scientific evidence and high cost. **CONCLUSIONS:** With the aim of bigger understanding of this correlation with SARS-CoV-2 and better planning of prophylactic strategies, the importance of long term studies is highlighted. The deepening of research is essential to reduce the impacts of MIS-C in the public health system, both in ICU uses and in hospitalization time. Another relevant point is the fact that MIS-C can lead to chronic conditions, especially cardiac ones, showing other tangency point with the urgency of a long term and multidisciplinary treatment.

Key words: pediatrics; COVID-19; pediatric multisystem inflammatory disease, COVID-19 related.

29. **LITTLE MAJOR DISASTERS: THE IMPACT OF THE LOCKDOWN DURING THE COVID-19 PANDEMIC ON DOMESTIC ACCIDENTS IN THE PEDIATRIC AGE GROUP.**
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INTRODUCTION: The COVID-19 pandemic resulted in the implementation of the lockdown strategy in several countries around the world, which implies that children and adolescents remain at home more prolonged than usual. In this context, domestic accidents in the pediatric age group emerge as a public health problem with a major impact on children's morbidity and mortality, and it is necessary to establish efficient prevention practices to ensure the proper development of these individuals. **OBJECTIVE:** To discuss the impact of lockdown during the COVID-19 pandemic on home security in the pediatric age group and its disastrous consequences on family life. **METHOD:** This is an integrative review, made through a meticulous evaluation of articles that portray the topic at hand. We opted to search the Scientific Electronic Library Online, PubMed and Virtual Health Library databases and select the journals using the descriptors "domestic accidents" and "children" in English and Portuguese, using the Boolean operator "AND". The articles used were published in the period 2020-2021. **RESULTS:** The scientific literature shows an increase in the number of cases of domestic accidents in the pediatric age group during the lockdown period. Among the accidents observed, the most prevalent were trauma (7.4%), poisoning (28%), burns (16.6%) and ingestion of foreign bodies (12.5%), with a large part of these injuries in the environment domestic or in the immediate vicinity (garden, yard, garage). Domestic accidents occur in about 84% of children up to 1 year of age, 75% of children between one and two years of age, and more than 50% up to 5 years of age. This phenomenon results in a 20% increase in the rate of admissions for domestic accidents in the period March-April 2020, when compared to the same period in 2019, in addition to the rate of hospitalization due to accidents there being the growth of 400% in the same period. **BIBLIOGRAPHIC REVIEW:** As previously presented, it is appropriate to point out the vulnerability that children in lockdown have to suffer domestic accidents,

something that requires its due importance, since it has seen higher rates of home injuries when compared to the number of confirmed cases of pediatric patients with COVID-19 and an exponential increase after the beginning of the SARS-CoV-2 pandemic, resulting in a 400% increase in the level of hospitalizations. However, this scenario can be avoided when environmental risk factors are identified and eradicated. Unfortunately, there was a scarcity of literary productions and epidemiological data on the subject in the scientific community, being imperative the need to pay attention to this problem, to reduce the disastrous endings that domestic accidents can lead to. **FINAL CONSIDERATIONS:** Finally, it is notorious to conclude the negative impact of the lockdown on home security in the pediatric age group. The increased incidence of domestic accidents should be seen as yet another side effect of the SARS-CoV-2 pandemic, and a closer look is warranted.

Key Words: home accidents, pediatrics, pandemics, households, COVID-19.

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