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December 6 - 10

George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures University Days

BOOK of ABSTRACTS

4/2021

Scientific Session of University Academic Staff
International Conference of PhD Students and Young Doctors

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Table of contents

Scientific Session of University Academic Staff Medicine and Pharmacy

Scientific Session of University Academic Staff

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MEDICINE AND PHARMACY

ANESTHESIOLOGY AND INTENSIVE CARE MEDICINE

UPPER LIMB HYPERPERFUSION IN A PATIENT WITH VA-ECMO

Judit Kovacs[1], Mihaly Veres[1], Gabriela Botianu[1], Svetlana Solomon[1], Attila Szabo[1], Virgil Marginean[1], Daniela Mihut[1], Tudor Capilna[2], Horatiu Suciu[3], Cosmin Banceu[3]

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Background: ECMO is a temporary support for cardiac and/ or respiratory function, and it ensures the appropriate perfusion and oxygenation of organs and tissues in severe heart and/or respiratory failure unresponsive to maximal therapy. Although it is a lifesaving method, it can induce a number of complications that can increase morbidity and even mortality in critically ill patients. A rare, unpleasant but not life-threatening complication is limb hyperperfusion, which occurs more frequently in the lower limbs, but can also develop in the upper limbs. We would like to present this complication through the prism of a case presentation. **Material and methods:** A 67-year-old patient, at a short time after myocardial revascularization, presented interscapular pain, dyspnea, hypotension progressing rapidly to cardiogenic shock, acute pulmonary edema, which were caused by a severe coronary spasm. For hemodynamic and respiratory stabilization, femuro-axillary VA-ECMO was initiated. **Results:** After starting VA-ECMO, the patient became hemodynamically and respiratory stable, but after four hours she presented progressive edema of the right upper limb, with rapid progression to compartment syndrome, and in 6 hours epidermolysis occurred. Because she had severe arteriopathy, the cannula could not be moved to the femoral artery, so the pump flow was reduced. In 3 hours after the reduction of the VA-ECMO flow, the edema of the upper limb was remitted, after 5 days the upper limb regained its functionality. The patient was weaned from VA-ECMO in hemodynamic stability, adequate oxygenation on the 6th day. Unfortunately, due to a severe lung infection, her condition worsened after the 9th postoperative day, PaO2/FiO2 decreases again, the patient showed signs of sepsis, then septic shock, and died on the 15th postoperative day. **Conclusions:** VA-ECMO is a method that can save critically ill patients through cardiac and/or respiratory support but it can often challenge us unexpectedly.

Keywords: cardiac surgery, coronary spasm, VA-ECMO, limb hyperperfusion, epidermiolysis

THE EVALUATION OF THE SERUM LACTATE LEVELS IN SARS-COV-2 INFECTED CRITICAL PATIENTS

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Background: Serum lactate level can increase when lactic acid production exceeds clearance. Most causes of lactic acidosis are due to hypoxic conditions. The prognosis for these patients is reserved unless their tissue perfusion and oxygenation are restored. Serum lactate levels and the rate of lactate clearance are strong predictors of survival in critical patients. In our study we present a correlation between serum lactate and different paraclinical and clinical values: temperature, pH, pCO2, pO2, daily urine andblood glucose in patents diagnosed with SARS-COV-2 with a severe form that required management in the ICU. **Material and methods:** In this retrospective study were included a total of 208 patients diagnosed with SARS COV2 infection and admittedbetween 1 August 2020 and 31 December 2020 to the modular unit for Covid 19 infected critical patients. Spearman's rankcorrelation coefficient with Confidence Interval of 95% and for statistical significance a p value of <0.05 was used. For thestatistical analysis Graph Pad Prism 9.0 was used. **Results:** We have found significant negative correlation between serum lactatelevels and pO2 levels ($p < 0.0001$; $r = -0.15$), serum lactate and daily urine output ($p = 0.001$; $r = -0.1$), serum lactate and pH ($p < 0.0001$; $r = -0.16$) and serum lactate and pCO2 ($p = 0.007$, $r= -0.07$). Between serum lactate and blood glucose level we havefound significant positive correlation ($p < 0.0001$; $r = +0.18$). **Conclusions:** In critical Covid infected patients severe hypoxemiaand hypoperfusion is very common as increased serum lactate levels reveals. A state of hyperglicemia could be associated withincreased pyruvate levels, which in turn is associated with increased lactate levels. Our results are similar to the predictive power oflactate, and related to the pathophysiologic processes regarding lactic acidosis described through medical literature.

Keywords: lactate, acidosis, Sars Cov 2, intensive care, critical

STUDY OF PCO2 LEVELS IN SARS-COV-2 INFECTED CRITICAL PATIENTS

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Background: Carbon dioxide is formed intracellulary as a byproduct of metabolism. It is transported to the lungs where it is ultimately removed from the body. It plays role in the regulation of blood pH, respiratory drive, affinity of hemoglobin for oxygen, regulating cerebral blood flow. Fluctuations of the carbon dioxide levels may be harmful for various organs, thus they are highly regulated. In our study we present a correlation between blood partial pressure of carbon dioxide and age, temperature, pH, pO2, daily urine in critically ill patients diagnosed with SARS-COV-2. **Material and methods:** In this retrospective study were included a total of 208 patients diagnosed with SARS COV2 infection, who were admitted between 1 August 2020 and 31 December 2020 to the modular unit for Covid 19 infected critical patients. Spearman's rank correlation coefficient with Confidence Interval of 95% was used for the corellation and two tailed p value of <0.05 was used for statistical significance. The statistical analysis was made using Graph Pad Prism 9.0. **Results:** We have found significant negative correlation between pCO2 and pH levels ($p < 0.0001$; $r = -0.11$), pCO2 and pO2 ($p < 0.001$; $r = -0.12$). There was no significant correlation between pCO2 and age, ($p = 0.24$), pCO2 and temperature ($p = 0.37$), pCO2 and daily urine ($p = 0.39$). **Conclusions:** Cellular respiration converts ingested nutrients, like glucose and oxygen to energy. CO2 is a byroduct of the reaction. The oxygen needed for this process is obtained via inhalation and the CO2 is removed via exhalation. Covid infected patients are hyperventilating and thus the level of pCO2 decreases. This hyperventilation is due to hypoxaemia and fever, so we would anticipate a correlation in pCO2 and pO2, pCO2 and body temperature, the last one was not confirmed in our study.

Keywords: carbon dioxide, critically ill, Sars Cov 2

COVID 19 ANXIETY FOR MEDICAL AND NON-MEDICAL PERSONNEL

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Background: Nowadays pandemics have caused life losses and also managed to put a heavy burden upon medical and non-medical personnel. The psychological impact which imprinted doctors, nurses and auxiliary personnel might not be visible at once, but it exists and its side effects could later be the background of serious illnesses. This prospective study aims to evaluate the anxiety and the stress produced or related to COVID 19 pandemics upon ICU personnel. **Material and methods:** This is a prospective, non-randomized study carried out in the Intensive Care Clinic of the Emergency Clinical County Hospital of Targu Mures, Romania.

The responders were enrolled on a voluntary basis and filled anonymous questionnaires -State-Trait Anxiety Inventory (S.T.A.I. 1 and 2), Post-traumatic stress questionnaires (PTSD). **Results:** The study enrolled 87 responders: 49 doctors, 27 nurses, and 11 non-medical personnel. Most of the responders presented with scores of moderate and high post-traumatic stress disorder. The main differences were observed in the correlation between the tests results and the time spent in COVID 19 units: for doctors and nurses, we obtained positive correlations, although not statistically significant, for non-medical personnel the correlations were significant and negative. Within each group, no significant results were observed. Another interesting correlation was observed when test results were associated with the years of experience was significant only in the doctors' group. **Conclusions:** The majority of ICU personnel present post-traumatic stress disorder and anxiety, signs of burnout. The time spent in COVID units decreases the anxiety in doctors but it has a different effect on nurses and auxiliary personnel.

Keywords: Burnout, Anxiety, Medical personnel, COVID-19

ACUTE PULMONARY HYPERTENSION FOLLOWING SEVERE CHEST TRAUMA

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Background: Background: Acute pulmonary hypertension (APH), defined as a mean pulmonary arterial pressure greater than 25 mmHg, is a common complication found in critical patients who developed Acute lung injury (ALI) or Acute respiratory distress syndrome (ARDS). Right ventricular (RV) dysfunction occurred secondary to acute myocardial dysfunction related to sepsis or a systemic inflammatory response. In the setting of ALI/ARDS, a progressive increase in pulmonary pressures has been associated with decreased survival rates. Protective lung ventilation strategies lower its incidence. **Material and methods:** Case report: We present the case of a Caucasian male, 58 years old, admitted to intensive care unit (ICU) secondary to a polytraumatic crush syndrome. Computed Tomography (CT) exam reveals pulmonary lacerations of right lower lobe, costal flap on both sides, pulmonary contusions at the level of the bilateral lower lobe and bilateral upper lobe with 40% damage to the lung surface. The medical evolution was complicated by the appearance of ARDS with mixed, traumatic, and post-transfusion etiologies, followed by the development of APH, aggravating hypoxia and ventilation parameters. After establishing protective mechanical ventilation and initiating vasodilator and diuretic therapy, and maintaining a negative water balance, the mean pulmonary arterial pressure (MPAP) values decreased gradually; the patient was weaned from the ventilator after approximately 4 weeks. **Results:** Conclusions: The occurrence of APH in a patient with moderate/severe ARDS severely affect pulmonary gas exchange. Aggressive and concomitant treatment of both conditions is essential for improving respiratory function. **Conclusions:** Conclusions: The occurrence of APH in a patient with moderate/severe ARDS severely affect pulmonary gas exchange. Aggressive and concomitant treatment of both conditions is essential for improving respiratory function.

Keywords: ARDS, APH, Chest trauma, protective lung ventilation

COVID-19: CASE BY CASE

COVID-19 IN HIV POSITIVE PATIENTS ADMITTED TO THE 1ST INFECTIOUS DISEASES CLINIC OF TG. MURES

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Background: People living with HIV (PLWH) with high T CD4 lymphocyte count and undetectable viral load do not have any increased risk to develop severe COVID-19. However, PLWH with severe immunodepression are at risk of severe evolution of COVID-19. The classical risk factors for severe evolution of SARS-CoV2 infection, such as diabetes, hypertension, cardiovascular disease, advanced age can worsen the prognosis of PLWH. The suspected beneficial role of the antiretroviral therapy in COVID-19 was not confirmed. **Material and methods:** A retrospective chart review was performed using the data of PLWH who were admitted to the 1st Infectious Diseases Clinic of Tg. Mures with confirmed SARS-CoV2 infection during March 2020 - November 2021. 18 patients were found, 10 were admitted for a period longer than 48 hours, 8 were examined during a daily visit and treated at home. **Results:** 50% of the PLWH were males, the mean age was 33 years, The mean TCD4+ lymphocyte count was 676 cells⁄mm3. 55.55% of the patients had undetectable HIV viral load. 94.44% of the patients were under antiretroviral therapy. 38.88% were in the C3 stage of HIV infection. The most frequent comorbidities were chronic hepatitis and HIV encephalopathy. The mean hospital stay was 5 days. 16.66% of PLWH had moderate COVID-19, the rest of the patients had mild forms. 16.66% of the patients developed pneumonia, the radiological changes were mild. None of the patients developed respiratory failure. The inflammation markers were mildly increased, only one patient developed a d-dimer value above normal. 22.22% of the patients received Favipiravir, 16.66% low molecular weight heparin. Only one patient was vaccinated previously with Pfizer vaccine. All of the patients evolved favourably. **Conclusions:** Despite the small cohort of PLWH with COVID-19 it can be concluded that HIV infection itself does not worsen the outcome of SARS-CoV2 infection in the absence of other risk factors.

Keywords: PLWH (people living with HIV), prognosis, SARS-CoV2 infection

ABDOMINAL WALL HEMATOMA IN COVID-19 PATIENT

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Background: Coagulopathy is a well-known recognized complication in SARS-CoV-2 infection. For this reason, anticoagulant therapy with low molecular weight heparin (LMWH) has been included in medical guidelines for hospitalized patients. Hemorrhagic issues in COVID-19 patients are poorly understood, but can cause serious complications. One of them is abdominal wall hematoma/rectus sheath hematoma, usually diagnosed in elderly patients with more than one comorbidity. **Material and methods:** Case report: A 83-year-old man chronic tobacco user, with a history of hypertension, ischemic heart disease, atrial fibrillation, COPD, presented to the emergency department with a 3-day history of feeling unwell, low-grade fever, chills, non-productive cough, nausea, fatigue and progressive dyspnea. He was tested positive for COVID-19, CT scan showed ground-glass opacities with pulmonary condensation predominant in LSS associated with fibrosis and minimal bilateral pleural effusion. Antibiotic, anti-inflammatory and therapeutic anticoagulant therapy with LMWH was initiated. On the 16th day of hospital admission, he complained of acute abdominal pain, examination showed tender and distended abdomen with palpable mass 2x3cm in epigastric region, accompanied by local inflammatory signs. CT revealed well defined oval-shaped thoraco-abdominal collection, in musculoaponeurotic layer, 77x34mm, with hematic density. **Results:** Based on clinical findings and other investigations we established the final diagnosis for acute illness: severe COVID-19, pneumonia, bilateral pleural effusion, complicated with abdominal wall hematoma. By surgical intervention a voluminous blood-clot was removed. Intraoperative cultures were negative. The patient recovered and was discharged after 35 days of hospitalization. **Conclusions:** This presented case highlights the need of active monitoring of this kind of patients, for possible hemorrhagic complications on anticoagulant therapy. The multidisciplinary

approach is the key of successful management.

Keywords: coagulopathy, abdominal hematoma, SARS-CoV-2

COVID INFECTION IN KIDNEY TRANSPLANT PATIENTS: FROM MILD TO LIFE THREATENING

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Background: Although a lot of emphasis has been put on the way Covid-19 infection impacts different cathegories of patients, quite few studies have focused on kidney transplant recipients. The aim of this paper is to analyze the outcome of Covid-19 infection in kidney transplant patients. **Material and methods:** 10 kidney transplant recipients have been included in a retrospective observational study in the Nephrology Department of The Mures Clinical County Hospital. Inclusion criteria were: existence of a kidney graft, one positive PCR result for Covid-19, immunosuppressive treatment. Age, gender, renal function, time between the symptoms onset and hospital admission, severity of the infection - classified as asymptomatic, mild, moderate or severe , need for intensive care, need for home oxygen therapy after discharge, impact of antiviral, anti-inflammatory and anticoagulant medication on the outcome were analyzed. **Results:** Only one loss of graft function directly related to Covid-19, needing hemofiltration, in case of a patient with severe form was recorded. In the other cases, Covid-19 infection did not have a direct negative impact on kidney function. Remdesivir significantly improved the outcome, only two deaths being recorded out of six patients with moderate and severe forms. Advanced age (above sixty) did not prove to be a high risk factor. The mortality rate was 30% and strongly associated with the development of pneumonia with acute respiratory failure, SpO2 <60% and need for orotracheal intubation with mechanical ventilation. **Conclusions:** Remdesivir is life-saving in moderate and severe forms when administred early! Advanced age is not a predictor of mortality. Mortality correlates with severe pneumonia, need for oxigen therapy and prolonged time until admission. Loss of kidney graft function, if present, significantly increases the mortality risk in Covid patients. However, the infection does not carry a significant risk of kidney graft function and does not worsen the graft dysfunction if present before the infection.

Keywords: kidney transplant, COVID 19 infection, Remdesivir, pneumonia, viral infection

ARE CKD PATIENTS MORE SUSCEPTIBLE TO COVID INFECTION? THE EXPERIENCE OF THE NEPHROLOGY DEPARTMENT, MURES COUNTY HOSPITAL

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Background: Patients with chronic kidney disease and especially those on hemodialysis are at an increased risk of contamination and unfavourable outcome in case of SARS-CoV-2 infection. Therefore they were constantly screened for COVID in order to limit the risk of contamination during the 4 hour dialysis session. We analyzed the clinical and therapeutical characteristics in our patients. **Material and methods:** The retrospective study included 42 patients with COVID-19 who were admitted to the Nephrology Department in a period of 8 months, from March 2020 to April 2021. We analyzed the severity, the presence of upper or low respiratory symptoms, inflammatory markers (ferritine, CPR, D Dimer), treatment and outcome. **Results:** The percentage of patients with COVID-19 who developed acute kidney injury during infection was 38% and those who had CKD stage 5D with the need for renal replacement therapy was 50%. On admission, 48% of them had mild symptoms, 40% moderate disease, 12% had severe pneumonia and 17% were transferred to intensive care and 24% died. The treatment regimen used by our clinic (adjusted for eGFR) was: anticoagulant treatment-all cases, antibiotic treatment in 39 cases, corticotherapy in 37 cases, oxygen therapy in 33 cases, antiviral treatment in 24 cases and IL-6 inhibitors in 4 cases. In 5 cases CVVHDF was performed and in 2 cases hemodialysis was initiated. Dialyzed patients continued their chronic therapy in dialysis centers or in hospital in supplementary shift. **Conclusions:** Coronavirus infection in patients with renal impairment is more frequent and has a worse

outcome, especially in patients with eGFR below 30 ml/min/1.73m2 and in those receiving hemodialysis. Treatment is difficult due to dose reduction/accumulation and multiple comorbidities. Initiated immediately, the antiviral and IL-6 treatment were life-saving.

Keywords: chronic kidney disease, eGFR, COVID 19 infection, dialysis

THE IMPACT OF SARS-COV-2 INFECTION ON PATIENT WITH CHRONIC NEUROLOGICAL DISEASE

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Background: Hydrocephalus is an abnormal buildup of fluid in the brain ventricles. Hydrocephalus can appear at any age, but it occurs more frequently among infants and adults 60 and over. The management of acute SARS-CoV-2 infection in patients with secondary hydrocephalus can be challenging. **Material and methods:** Case report: A 53-year-old man, with a history of clipped middle carotid artery (MCA) aneurysm, ventriculo-peritoneal shunt, secondary hydrocephalus, epilepsy, hypertension, ischemic heart disease, was admitted for acute episode of SARS-CoV-2 infection. Neurological examination revealed: disoriented, but cooperative patient, with left upper and lower extremity weakness, central facial palsy, left palpebral ptosis, Glasgow Coma Score (GCS): 13 points. Initial head CT described sequelae lesions at the right MCA, aneurysmal metal clips, cortical atrophy, periventricular leukoaraiosis, ventriculoperitoneal shunt, no signs of active hydrocephalus. Minimal lung affection described on chest CT. Laboratory findings on admission with minimal inflammatory syndrome. Antibiotic, anti-inflammatory and anticoagulant therapy was initiated. On the 14th day of admission, he complained of drowsiness, presented one epileptic seizure with GCS: 7 points. At reevaluation routine laboratory tests showed increased inflammatory markers: fibrinogen (900 mg/dl), erythrocyte sedimentation rate (95 mm/h), C-reactive protein (42.92 mg/L), broader spectrum antibiotic therapy was initiated, with only a transient favorable outcome. Second head CT (after 4 weeks) showed active hydrocephalus, associated with rapid progressive neuro-cognitive decline. After neurosurgical evaluation the patient was transferred to the Neurosurgery Department, after 40 days of hospitalization. **Results:** Our patient underwent neurosurgical intervention. Acute hydrocephalus was resolved by the successful replacement of ventriculo-peritoneal shunt. At discharge GCS:15 points, afebrile, cooperative, left-sided hemiparesis (neurological sequel). **Conclusions:** The active monitoring of patients with chronic neurological disease is essential. This patient with chronic hydrocephalus developed a mild form of COVID-19, complicated with shunt malfunction. The multidisciplinary approach was the key to successful management.

Keywords: hydrocephalus, ventriculoperitoneal shunt, SARS-CoV-2

COVID-19 IN A YOUNG UNVACCINATED SUPER OBESE PATIENT

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Background: The number of persons infected with SARS CoV-2 is still growing, we need to prevent or treat the infection as early as possible for a better outcome. Commonly reported risk factors for severe COVID-19 are: age >65 years, gender, cardiovascular disease, pulmonary disease, diabetes, obesity, etc. **Material and methods:** Case report: We are presenting the case of a 47-year-old unvaccinated man, with a history of metabolic syndrome, associated to super obesity (BMI: 47kg/m2), hypertension, diabetes, on chronic treatment. He was admitted in the Infectious Diseases Department for: fever, inappetence, cough, progressive dyspnoea, modified general condition. The first symptom appeared approximately 7 days before admission. On the 4th day of illness, he tested positive for COVID-19 (at home rapid Ag test). After a week of minimal symptomatic treatment at home, without any medical advice, presents at the emergency department with acute respiratory failure. RT-PCR was positive, chest CT unable to perform related to technical issues (super obesity). For treatment he received antiviral, antibiotic, corticosteroid, immunomodulator, anticoagulant and symptomatic medication. The outcome was unfavourable. He was transferred to Intensive Care Unit after 4 days. Non-invasive ventilation C-PAP (Continuous Positive Airway Pressure) was started. On the 7th day he developed massive pneumothorax, with need of surgical treatment (pleurectomy), 250ml serous pleural fluid was evacuated. The patient was mechanically ventilated. **Results:** Despite of multidisciplinary team efforts the patient`s status became critical, he

needed positive inotrope support. 12 days after treatment initiation he developed pulseless electrical activity, was unresponsive to cardiopulmonary resuscitation. **Conclusions:** The unfavourable outcome of this young patient with multiple comorbidities, super obesity, unvaccinated and late presenter, underline the necessity of immunization in risk population regardless of age.

Keywords: COVID-19, young, obesity, unvaccinated, outcome

SEVERE SARS-COV-2 INFECTION IN A PATIENT WITH MULTIPLE COMORBIDITIES WHO REFUSED ICU TREATMENT

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Background: During the COVID-19 pandemic, we report the number of new cases, the number of patients in the ICU, the number of deaths per day , the number of patient who recoverd , but we don't report the number of patients who need ICU treatment but refuse the transfer. **Material and methods:** We present the case of an 81 year old male, with multiple comorbidities (diabetes, arterial hypertension, ischemic cardiomiopathy, stent implanted on CXA) who was admitted in the Infectious Diseases Hospital in Ludus, Mures County, in September 2021. **Results:** The patient was diagnosed with severe SARS CoV2 infection, severe respiratory insufficiency, bilateral pneumonia and developed acute pulmonary edema the second day after admission, with an oxigen saturation below 60% without oxygen therapy but refused the transfer to the ICU. The patient had severe inflammatory syndrome (IL-6: 230pg/ml, LDH:504 U/L, CRP:169mg/l, fibrinogen:785 mg/dl) and received a single dose of 400 mg of Tocilizumab iv. During hospitalization he developed a secondary bacterial pneumonia probably after administration of Tocilizumab , but with prompt treatment of the infection and the underlying diseases, the outcome was favorable and the patient recoverd after 21 days. **Conclusions:** There is an increased tendency for patients with severe SARS CoV-2 infection to refuse the ICU treatment , making the approach of the case difficult for the medical staff, whom are forced to treat critical patients in medical wards without the appropiate infrastructure, relying on the hope of good outcome.

Keywords: comorbidities, severe respiratory insufficiency, Tocilizumab, refused ICU treatment

ADULT PRESENTATION OF CITOKINE STORME ASSOCIATED WITH RECENT COVID-19 VACCINATION DURING THE INCUBATION PERIOD

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Background: COVID-19 is a potentially critical infectious disease. Inflammatory response and disease severity may vary according to immune system status. In Romania 8,58% of people tested between 27th of December 2020 and 30th of September 2021 were immunised and had a positive test for SARS-CoV-2, 13.47% were vaccinated with Johnson & Johnson and 21.82% were confirmed in the first 7 days postvaccination. **Material and methods:** We present the case of a 34-year-old patient, without known comorbidities, immunized with Johnson & Johnson vaccine who presented three days later fever, chills, dry cough, myalgias, arthralgias, headache, diffuse abdominal pain. Four days later test for SARS-CoV-2 infection had positive result and was hospitalized with SO 96% in ambiental air . The patient develops signs and symptoms for severe acute respiratory syndrome, increased lung affection, IL6 values five times higher, SO 74%, therefore the pacient was transfered to ICU where non-invasive ventilation and respiratory physiotherapy was performed alongside with antiviral and immunomodulatory treatment **Results:** After 15 days of hospitalization the patient is discharged with partial resolution of lung lesions, reversal of respiratory distress, SO 94% in ambiental air and remission of inflammatory syndrome **Conclusions:** Vaccination during the incubation period can generate citokine storme, severe manifestations requiring sometimes admission in ICU. Vaccination against COVID-19 reduces the risk of infection and helps protect from severe manifestations even if the virus is acquired

Keywords: citokine storm, COVID-19, vaccination

COVID-19 ASSOCIATED ABDOMINAL PAIN - A CASE REPORT

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[1]Department of Infectious Diseases, UMFST Tîrgu Mureş

Background: SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) infection has been associated with various systemic manifestations and complications. Different pathophysiological mechanisms, such as inflammation, vasculopathy, immobilization, hyperglycemia, endothelial dysfunction, and hypercoagulable state have been considered to explain gastro-intestinal (GI) manifestations/complications in COVID-19 patients. The present report describes a case of COVID-19 complicated with prolonged abdominal pain. **Material and methods:** Case report: A 65-years-old male patient with hypertension, coronary heart disease, type 2 diabetes mellitus, obesity, unvaccinated against COVID-19, presents to emergency department for respiratory and GI symptoms. COVID-19 was confirmed by reverse transcriptase polymerase chain reaction, pulmonary CT scan showed the typical viral pneumonia. On the 7th day of admission, the patient complained about sudden onset abdominal pain and nausea. Laboratory findings showed increased blood glucose levels and metabolic acidosis. This abdominal pain persists despite of symptomatic treatment and became so severe, we needed further investigations. **Results:** Abdominal CT angiography described chronic ischemia of superior and inferior mesenteric artery, with no acute ischemia. Our patient was transferred to Department of Diabetology treated with antibiotics, anticoagulants, with the correction of hyperglycemia and acidosis leading to a favourable outcome. **Conclusions:** GI symptoms are often associated with COVID-19. The clinical presentation of this viral infection can be associated with abdominal pain which can be observed at the beginning, during the illness and/or indicating a complication, especially in patients with cardiovascular comorbidities.

Keywords: COVID19, gastrointestinal manifestations, abdominal pain, hyperglycemia, comorbidities

COVID 19: A NEUROINFECTION OR A TRIGGER FOR AUTOIMMUNITY?

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Background: COVID-19 is a highly infectious pandemic caused by SARS-CoV-2 which frequently presents with respiratory failure, fever, thrombotic events, systemic complications and neurological involvement. **Material and methods:** A significant number of cases of encephalitis or other autoimmune pathologies have been reported in association with COVID-19 infection. The inability in the majority of cases to detect the coronavirus in the corticospinal fluid samples associated with the presence of autoantibodies raises the question if the neurological involvement is the result of direct neuro invasion or it is the effect of autoimmunity triggered by the infection. The systemic hyperinflammation in the context of "cytokine storm" may impair neurovascular endothelial function and disrupt the brain-blood barrier with the activation of immune cells in the brain that can induce para-infectious autoimmunity. **Results:** We present two cases from our clinical experience. The first is a 34 years-old male with acute disseminated encephalomyelitis with anti-MOG antibodies occurring 28 days following the diagnosis of COVID-19 and the second case is a 67 years-old female with an autoimmune encephalitis with VGKC antibodies that was diagnosed 5 months after the infection. Both cases had a good evolution with immunotherapy. It is not possible to rule out that SARS-CoV-2 infection played a role in the genesis of autoimmune diseases in our patients. **Conclusions:** Given the extent of the COVID-19, this presentation highlights the importance that the physicians take into account the possibility of neurologic autoimmune disorders when the clinical picture suggests it, thus leading to a faster diagnosis and proper treatment.

Keywords: COVID 19, AUTOIMMUNITY, MYELITIS, ACUTE DISSEMINATED ENCEPHALOMYELITIS, AUTOIMMUNE ENCEPHALITIS

IMMUNOLOGY OF SARS-COV2 INFECTION AND THE MECHANISMS OF DMTS IN MS PATIENTS

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Background: Multiple sclerosis (MS) is a chronic autoimmune and neurodegenerative disease of the central nervous system that affects mainly young adults. During this unfortunate COVID-19 pandemic era, the complex medical implications, including vaccination rose serious concerns of immune response in patients that already have a pathologic autoimmune condition. A growing experience appeared in the last months regarding MS treated patients with disease-modifying therapy (DMT) and COVID-19 infection and vaccination. **Material and methods:** Three categories of COVID-19 vaccines have been manufactured: live/attenuated, non-live/attenuated and gene-based, mRNA. The approved agents are safe and the majority of adverse reactions are limited to local and mild systemic events. No data regarding the risk of developing MS after vaccination have been reported. **Results:** No absolute contraindication has been reported for the live vaccine in MS patients treated with interferons, glatiramer acetate and dimethyl fumarate but the risk-benefit assessment is essential; no specific risk has been reported concerning non-replicating viral vector and mRNA administration. **Conclusions:** We will present the most important aspects of the immune interactions seen in MS patients between the pathophysiological mechanisms of the disease and COVID-19 infection, including vaccination.

Keywords: Multiple Sclerosis, COVID-19, Vaccination, Disease Modifing therapies

THE IMPLICATIONS OF SARS – COV – 2 INFECTION IN THE CASE OF PREGNANCY ASSOCIATED WITH DIABETES AND OBESITITY – CASE PRESENTATION

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Background: Diabetes mellitus and obesity represent major risk factors for a severe evolution of Covid 19, a higher risk of developing acute respiratory distress syndrome (ARDS) induced by viral pneumonia, which lead to high mortality rates. **Material and methods:** We present the case of a 37 years old patient, IIIGIIP, 32 week pregnancy, type 2 obesity, gestational insulin - requiring diabetes, committed to hospital on the 6th day of infection with SARS - CoV - 2, with severe clinical manifestation. Lab data revealed leukocytosis, neutrophilia, hyperglycemia, dyselectrolytemia. We initiated treatment with Remdesivir, antiviral steroids, anticoagulants, anti-diabetes. Taking into the consideration the worsening of the general state, of the neurological function with confusion, the intensification of acute respiratory failure (Spo2=88% with oxygen therapy), the patient was rushed to the ICU ward of Gynecology Clinic 1 Tg - Mures, where an emergency cesarean section was performed resulting in an alive female premature newborn (W=1900g). **Results:** Toracic CT -severe interstitial infiltrations diffusely and randomly localized, including subpleural at the level of the two pulmonary parenchyma. No bilateral alveolar infiltrations. No pleurisy. Multiple aortic pulmonary mediastinal adenopathy images with inflammatory aspect. Minimum pneumomediastinum. Head CT with contrast agent. The Willis polygon arteries show opacity evidence, with no aneurism dilatations, without filling defects of venous dural sinuses. Evolution under complex treatment, antiviral, antibacterial, anti-inflammatory, anticoagulant, anti - diabetes, the probiotic was favorable, the patient being discharged on the 29th day after admission. **Conclusions:** A pregnant patient with SARS - CoV -2 needs a rigorous observation due to the associated risk factors, gestational diabetes and obesity.

Keywords: SARS-CoV-2, pregnancy, diabetus mellitus

ANXIETY ASPECTS IN COVID 19. CASE PRESENTATION

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Background: Numerous studies have demonstrated that the coronavirus pandemia has increased incidence of anxiety related disorders. **Material and methods:** This paper is based on a case illustration: is about a 35 years old male, employed, with an otherwise perfect health status, no significant history of illnesses, only mood disorder controlate by treatment, unvaccinated. **Results:** He presents to the Infectious Disease Clinic with:fever 39°C, anosmia, ageosia, dyspnea, dry cough, lasting more then five days before admission. **Conclusions:** COVID 19 was found to fully mediate the anxious symptomatology that include an assessment of COVID 19 related adverse mental consequence that including psychiatric evaluation to offer the efficient therapy.

Keywords: anxiety disorders, COVID 19, reccurent fears, anxiety reactions, efficient therapy

COVID OR POST COVID SYNDROME. WHICH IS WORSE?

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Background: After severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2) infection, a growing population may experience respiratory symptoms and abnormalities which may persist for more than several months. These patients are treated with invasive mechanical ventilation (IMV) and are prone to develop barotrauma, pulmonary bacterial infection, a difficult weaning, and a prolonged hospital stay. **Material and methods:** We presented the clinical case of a man, 40 years old, admitted in hospital with a severe acute respiratory distress syndrome (ARDS) secondary to SARS-CoV-2 infection, with prolonged mechanical ventilation. His clinical course was complicated by the occurrence of right pneumothorax and pneumomediastinum. The serial CT scans revealed bronchopneumonic foci, the lung in frosted glass, and later with bands of predominantly apical and bilateral postero-basal fibrosis that imposed prolonged invasive mechanical ventilation. The weaning from ventilator was difficult, the patient was discharged after 3 months from ICU. **Results:** Patients with COVID 19 are prone to a risk of difficult weaning from ventilator, related to the severity of the disease, P/F ratio, the onset of barotrauma or late pulmonary infection and pulmonary fibrosis that impaired oxygenation. **Conclusions:** Patients with COVID 19 are prone to a risk of difficult weaning from ventilator, related to the severity of the disease, P/F ratio, the onset of barotrauma or late pulmonary infection and pulmonary fibrosis that impaired oxygenation.

Keywords: COVID-19, ARDS, barotrauma, pulmonary fibrosis

COVID-19 AND CHRONIC KIDNEY DISEASE

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Background: During the course of severe acute respiratory coronavirus 2 (SARS-CoV-2) pandemic, it has become evident that infection is not limited only to the respiratory tract. The kidney represents an important target of SARS-CoV-2, with significant consequence in the evolution of coronavirus disease (COVID-19). **Material and methods:** 71-year-old patient from rural environment, with multiple comorbidities: previous myocardial infarction, stent implantation on the circumflex coronary artery, cardiac failure NYHA II, paroxysmal atrial fibrillation, secondary arterial hypertension, chronic kidney disease stage V. For the past 7 years the patient has undergone 3 weekly sessions of dialysis. He received two doses of anti-SARS-CoV-2 Comirnaty vaccine, over 6 months before. During one dialysis session, the patient complains of tiresome dry cough, chest pain and subfebrility, started 3-4 days before. Positive SARS-CoV-2 antigen test is confirmed by RT-PCR. **Results:** Paraclinical investigations emphasize

moderately increased inflammatory markers, CO-RADS score 1, negative blood cultures, procalcitonin < 0.2 ng/ml. SaO2 97-94% in atmospheric air, BP 160/77 mmHg, HR 76 b/min. The patient is isolated in the Clinic of Infectious Diseases I Tîrgu Mureş, where he receives antiviral treatment with remdesivir, immunomodulatory therapy with interleukin-1 (IL-1) receptor antagonist, antibiotic treatment with meropenem, all medication doses adjusted according to the glomerular filtration rate, after hemodialysis sessions. Chronic medication of comorbidities was associated. Evolution was favorable, without complications. The patient was discharged after 14 days, afebrile, with relatively good general status, remission of symptoms, improved inflammatory markers and RT-PCR SARS-CoV-2 test positive. **Conclusions:** Despite the severe chronic kidney disease and multiple comorbidities, the patient developed an average form of disease. Vaccination is likely to have provided protection against severe COVID-19.

Keywords: COVID-19, Chronic kidney disease, comorbidities

ALTERNATIVES FOR SEPSIS IN A PATIENTS WITH SARS-COV2 INFECTION – CASE REPORT

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Background: The SARS-COV2 infection is causing multiple organ damage but due to fear of not to infect medical staff, comprehensive assessment of the patient is often missing. Therefore, we present a case of a patients with a hidden cause of sepsis caused not exclusively by COVID-19 infection. **Material and methods:** A 67-year-old male patient was admitted to the medical ward of County Clinical Hospital of Tirgu Mures for SARS-COV2 infection, associated pneumonia on the left side and bilateral pleural effusion. Antiviral treatment was started with Lopinavir/Ritonavir but due to gastrointestinal side effects and jaundice was withdrawn. Laboratory data revealed slightly elevated total bilirubin (5.91 mg/dL), direct bilirubin of 3.14 mg/dL, gamma glutamil transpeptidase (GGT) of 505 U/L. On abdominal ultrasound cholecystectomy and a dilated common bile duct were described. Given the increased inflammatory markers and a slight pain in the right subcostal region, abdominal computed tomography was necessary which described a stone in the dilated bile duct consolidating the diagnosis of angiocolitis with associated pancreatic reaction. Endoscopic Retrograde Cholangiopancreatography (ERCP) was performed completed by a stent implantation with regression of clinical and biological parameters. Due to associated acute kidney failure hemofiltration was started with amelioration of the glomerular filtration rate. Ten days after procedure the patient presented fever of 39C, blood cultures positive for Acinetobacter baumannii infection which was treated with antibiotics. Seven days after initiating antimicrobial therapy patient develops an episode of diarrhea with laboratory data showing infection with Clostridium difficile. **Results:** Finally, after specific treatment of the mentioned infections, patients' clinical evolution was favorable, and was discharged with a negative SARS-COV2 test after 35 days. **Conclusions:** Sepsis in SARS-COV2 infection could have several hidden causes. Therefore, patients should benefit from a comprehensive, careful clinical assessment and there is need of a multidisciplinary team in order to offer best medical treatment also in SARS-COV2 patients.

Keywords: sepsis, angiocolitis, SARS-COV2, Acinetobacter baumannii, Clostridium difficile

SARS-COV-2 INFECTION TRIGEER FOR HERPETIC MENINGOENCEPHALITIS? CASE REPORT.

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Background: COVID-19 has been assosciated with a marked inflammatory response, followed by immunosuppression after the initial proinflammatory phase. Herpes encephalitis is classically observed in immunocompromised patients, the elderly, or those with disseminated infection. **Material and methods:** A 73-year-old man, obese, hypertensive presented to the Emergency Unit for fever, confusion, altered general status, symptoms suddenly installed a day before presentation. Heteroanamnestic data indicates recent history of severe COVID-19. The objective exam detects the patient uncooperatively, febrile (axillary temperature 38,2°C), hemodyamically stable, without signs on meningeal irritation. The evolution was unfavorable with the progressive alteration of state

of consciousness, with the installation of aphasia, Glasgow Coma Scale - 11 pct, blood pressure: 200/100 mmHg, heart rate 96 bpm. **Results:** Cranial computed tomography (CT) reveals a spontaneous hyperdens area of 6 mm and peripheral millimeter calcification, located supratentorial area. Lumbar puncture revealed changes in cerebrospinal fluid (CSF) consistent of viral meningitis. CSF was clear appearance, Pandy reaction +/-, 28/3µl cellular elements, of wich most than 70% was lymphocytes, with a slightly incresead glucose concentration 112 mg/dl (the synchronous serum value was 131 mg/dl), a protein level whitin normal levels. HSV 1 / 2 DNA was increased in CSF (> 460 copies/ml), in relation to increased titer of Ac anti HSV 1 Ig G - 80,14 VU in the blood. A viral culture was not performed and the bacterial culture of CSF was sterile. The SARS-CoV-2 rT-PCR test was positive. Under ethiological treatment with Virolex, antibiotics, pathogenic and symptomatic evolution was unfavorable. The deteroriation of the general condition was progressive, declaring death 18 days after hospitalization. **Conclusions:** Reactivation of herpes simplex infection in this case may be caused by impaired immunity mediated by T lymphocytes. Inflammation due to COVID-19 and secondary imunosuppresion may lead to reactivation of latent infections.

Keywords: viral meningoencephalitis, herpes simplex virus, COVID-19

CARDIOVASCULAR SURGERY

SURGICAL TREATMENT OF THE POPLITEAL ARTERY ANEURYSM

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Background: In this paper we want to present the types of surgical treatment of popliteal artery aneurysms (PAA) depending on their location and size, respectively the age and biological status of the patients. **Material and methods:** This is a retrospective study developed at the Vascular Surgery Department, Emergency Mures County Hospital, during 01.01. 2014 – 01.09.2021 being included in the study 11 patients who had intact, broken or thrombosed PAA and who received surgical treatment. **Results:** Analyzing the data obtained from the medical observation papers and the medical information system of the hospital we noticed that the age of the patients ranged from 60 to 72 years, had multiple comorbidities and all were male. The location of the aneurysms was in the upper or middle part of the popliteal artery and their size over 1.5 cm. The surgical procedures performed were popliteo-popliteal and femuro-popliteal by-pass with Dacron graft, reinforced Goretex graft or autologous inverted saphenous vein. Patients had a good postoperative evolution with only one case presenting a hematoma at the level of the popliteal fossa and which had a favorable evolution under conservative treatment. **Conclusions:** Surgical treatment of popliteal artery aneurysms represents an optimal therapeutic solution that saves the lower limb and improves the quality of life for the patients.

Keywords: surgical tratament, popliteal artery aneurysm, by-pass

DENTAL MEDICINE

LARGE PLEOMORPHIC ADENOMA OF THE PAROTID GLAND – CASE REPORT

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Background: Tumors of the parotid gland are benign in most cases, and 80% of them are pleomorphic adenoma. These tumors are characterized by slow, progressive, painless growth, usually reaching 2 to 5 cm in diameter. However, there are some cases of larger tumors, about 8-10 cm in diameter (or more), but also there are tumors that can exhibit malignant transformation during their evolution. **Material and methods:** Case Report A 37-year-old fit and well man was referred by his general medical practitioner with a 7 years history of swelling of the left parotid region. Clinical examination revealed a large multinodular, irregular mass of approximately 10 cm in diameter attached by the left parotid region, with no signs of facial nerve palsy. CT scan was performed to evaluate the extent of the mass. The tumour was excised under general anaesthesia. **Results:** Prolonged, neglected development (for many years) of benign parotid tumors may determine the outbreaks of intratumoral malignancy that change the prognosis and treatment of each case. Development of malignancy can only be detected histopathologically after removal of the primary tumor or its biopsy. Tumor size can rase surgical issues for protection / preservation of the facial nerve, which demonstrate frequently dislocation / tumor invasion. **Conclusions:** Large parotid tumors (with long evolution) raise the suspicion of intratumoral malignancy development and have many difficulties in surgical approach.

Keywords: parotid tumors, salivary gland, pleomorphic adenoma

IMAGE ENHANCEMENT AND REGISTRATION OF SEM MICROGRAPHS SHOWING TITANIUM OXIDE NANOTUBES DEVELOPED ON MEDICAL IMPLANTS

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Background: TiO2 self-organized nano structures formed on medical implants surfaces by electrochemical anodization have been shown to increase biocompatibility and enhance their osseointegration. The quality assesment of these structures is traditionally done by visually inspecting their structure, size and uniformity. **Material and methods:** This research proposes methods for enhancing images depicting TiO2 nano structures as an essential preliminary step in their automatic characterization. The images are obtained by scanning electron microscopy and are affected by noise and distortion. In order to improve image quality, multiple takes of the same area were stacked. Because of the vibrations experienced by the specimen holder and a slow loss of power, the succesive takes are incresingly diplaced and dimmed. This was mitigated by employing an original genetic algorithm for image registration and a number of image enhancing techniques such as cropping, Gaussian kernel bilateral filtering and hystogram mathcing. **Results:** The genetic algorithm (GA) employed for image registering reduces the processing time 5 times compared to a brute-force algorithm. Its chromosome consists of 2 genes - the displacements between the images on the 2 axes - and its fitness function was calculated as the sum of intensity differences between all pixels of the images. The optimum GA settings for fast and reliable results: 51 generations, 8 individuals, 1 elite individual, roulette selection, 1-point crossover and uniform evolutive mutation with 10% probability. The best results were obtained by stacking 3 succesive images. Applying the Gaussian bilateral filtering, the best compromise between noise reduction and preserving the details and sharp edges was achieved when using a range filter variance parameter of 0.015*256^2 (for 8-bit images) and a size of 11 pixels for the spatial kernel. **Conclusions:**
Acknowledgement: This research was supported by the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" of Târgu Mureş, Research Grant number 292/2/14.01.2020.

Keywords: Image processing, Image registration, Medical implants, Titanium nanotubes, SEM micrographs

PICA SYNDROME IN PREGNANCY: EFFECTS ON ORAL HEALTH

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Background: Pica syndrome is a disorder in wich pregnant womendevelop a tendancy to ingest certain non-nutritive substances.Harmful effects on oral health,especially in pregnancy ,can have a maternal and fetal impact. **Material and methods:** Based on data from literature and two concrete cases,we present the ethiology of Pica syndrome,health effects in general, maternal and fetal effects in particular in pregnancy,regression and even disappearance in postpartum ,augmentation in the first trimester of pregnancy,as well as the principles of dental,psychiatric,prophylactic and curative treatment.Two concrete cases of Pica syndrome in pregnancy with harmful effects on maternal oral health are presented. **Results:** Pica syndrome started during pregnancy,disappeared after the first trimester or after the birth and the effect on oral health is requiring a multidisciplinary treatment:dental,psychiatric,psychological and obstetric -gynecological.Vitamin therapy,psychological counseling,treatment of dental disease and very carefully pregnancy monitoring were the mail therapeutical principles. **Conclusions:** Pica syndrome can be a pathology associated with pregnancy,the pregnant women being in the category with "increased obstetrical risk".The hormonal factor,local oral conditions specific to pregnancy and the psychiatric field are the main predisposing and triggering factors .The non recognition and camouflage of them by the pregnant women is already a complication,being the driving force in the appearance of subsequent ones.

Keywords: Pica-syndrome, dental conditions, multidisciplinary treatment

LIP SPLIT WITH MANDIBULOTOMY APPROACH FOR ORAL ACCESS IN CASE OF MALIGNANCY EXCISIONS OF THE ORAL CAVITY.

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Background: Lip split and mandibulotomy procedures are used for improvement of the access for excision of posteriorly situated cancer of the oral cavity. It can be combined with segmental mandibular resection and assures great access for further use of flap reconstruction of postoperative defects. **Material and methods:** We present eight cases of posteriorly situated oral cancers, where lip split with mandibulotomy approach was used for the excision. Intra/ preoperative tracheostomy, oral sanation and tooth extractions were cariied out. Preoperative evaluation of the mandible was made on OPG radiographs. Head and neck Ct scan assured propper clinical stadialization of TNM. Supraomohyoid selective neck dissection was preformed in each case. In 2 cases myocutaneous SternoCleideoMastoid flap was adopted for oral defect closure, in 1 case segmental mandibulotomy was preformed and axial supraclavicular flap was used for postoperative defect closure. Histopatological examinations were used for evaluation of the surgical margins of the resected specimen, and post radiotherapy status was examined. **Results:** There were clear surgical margins achieved in each case, no postradiotherapy osteonecrosis, osteomyelitis/ other mandibular failure was reported. **Conclusions:** The tehnique offers great access for the excision of oral cancers, with clear surgical margins, and offers sufficient space for clear visibility when suturing the flap.

Keywords: Lip split, mandibulotomy, cancer of the oral cavity, osteosynthesis, radiotherapy

SURGICAL CHALLENGES IN CASE OF COMPLEX MAXILLO-FACIAL TRAUMA- CASE PRESENTATION

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Background: The head and neck region is complex given the implication of the airways, the proximity to the brain and cervical spine. In case of maxillofacial trauma, because of the great vascularity of this area, surgeons have to diagnose and intervene efficiently and rapidly in order to stabilize the patient **Material and methods:** We present the case of a 42-year-old patient admitted to the emergency room with extensive maxillo-facial trauma caused by a car accident on the 31st of May 2021. The patient intubated with GCS 3, presents facial edema, bilateral periorbital hematoma, and massive head and neck emphysema. CT scan shows multiple severely displaced fractures of the midface, respectively LeFort III fracture associated with bilateral zygomaticomaxillary complex fracture, bilateral comminuted sinus wall fractures, comminuted nasal and ethmoidal fractures with anterior and posterior hemorrhage, comminuted hard palate fractures, sphenoidal bone fracture, frontal sinus fracture, thoracic contusion, mild brain swelling, and minimal subdural hematoma. Lab work shows minimal modifications, due to trauma-related stress. Emergency surgical treatment implied hemostasis, identification, repositioning, and fixation of as many bone fragments as possible by osteosynthesis, anterior nasal tamponade, application of arch bars in order to assure post-extubation maxillo-mandibular immobilization. No eyeball herniations are seen intraoperative. After extubation, because of the tridimensional displacement of the maxilla, an occlusion border is applied on the left lateral arch in order to restore habitual occlusion. **Results:** Local and general evolution is favorable, with remission of the head and neck swelling, no signs of infection, and, according to the patient, a comfortable occlusion, but with a possible right abducens paralysis that will require neurological investigation. **Conclusions:** Surgical management in severe cases of maxillofacial trauma requires advanced anatomical notions, as well as having a three-dimensional vision so that an aesthetic reconstruction of the cervicofacial area can be obtained.

Keywords: maxillofacial, surgical, trauma, fracture, management

ENT (OTORHINOLARYNGOLOGY)

HEARING REHABILITATION BY COCHLEAR IMPLANT IN THE ADULT POPULATION - MODERN METHOD OF TREATMENT

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Background: Hearing loss affects about a third of adults between the ages of 61 and 70 and more than 80% of those over the age of 85.The cochlear implant is a biomedical device frequently used in adults affected by deep neurosensorial hearing loss. This type of hearing loss is usually permanent, occurs gradually and worsens with age. **Material and methods:** The Nijmegen questionnaire was used to evaluate these patients, in order to assess the quality of life of adult users of hearing rehabilitation systems, namely the impact of the use of these electronic devices, on the perception of speech sounds and on the cost-benefit ratio **Results:** The distribution of patients by gender reveals a female proportion of 58% and 42% for males. The average age of the studied group is 32.53 years with a value of 50% in patients aged between 30 and 40 years, respectively 8.33% in patients aged 40-50 years. Regarding the results of the Nijmegen tests, we considered the values of the score> 80 as having an excellent grade of quality of life, values between 60 and 79 a good grade, values between 40 and 59 a modest grade and values below 40 as having a poor grade. The biggest differences between the two groups of patients evaluated were for basic sound perception and speech production.The social domain benefits from a score of 80.96 for cochlear implant wearers, compared to hearing aids which, although they have the highest score in the social domain (47.74), it is included in the group with modest values. **Conclusions:** This study demonstrates that surgically implantable prostheses have benefits in hearing rehabilitation in the adult population superior to traditional hearing aids. The Nijmegen questionnaire provides a rich source of qualitative patient information, superior to the speech perception test result.

Keywords: cochlear implant, hearing aids, questionnaire, quality of life, hearing rehabilitation

FORENSIC MEDICINE

THE CORELATION BETWEEN EPICARDIAL ADIPOSE TISSUE AND LEFT VENTRICULAR MASS IN SUDDEN CARDIAC DEATHS

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Background: In sudden cardiac deaths (SCD) cases visceral adipose tissue (VAT) begins to manifest interest as a cardiovascular risk factor. Studies have shown that epicardial adipose tissue (EAT) represents a true visceral fat with characteristics of high insulin-resistant tissue and source of inflammatory mediators. The aim of the study was to evaluate the posible correlation between EAT and left ventricular morphology of persons with a wide range of adiposity who died from SCD. **Material and methods:** We studied 20 deaths that where autopsied at IML Tg. Mures, 10 who died from SCD and 10 with unknown pathologies who hanged themselves. On all autopsies performed we measured the thickness of EAT (apex of the left ventricle), left ventricular morphology (hypertrophy, dilatation), macro/microscopicaly cuantified coronary atherosclerosis and weighted the heart. **Results:** Sudden cardiac death was the first and only symptom in 7/10 cases, 3 cases had a history of angina pectoris or dyspnea. The study revealed that an increased thickness of EAT is significantly related to an increase in left ventricular mass. At autopsy, the measured heart weight of the SCD cases was increased, 70% of them had undiagnosed cardiomiopaties, with higher degrees of coronary atherosclerosis than the cases who died from hanging. **Conclusions:** An increased thickness of EAT could signal a cardiovascular and metabolic risk factor of SCD. Our study shows that the amount of EAT could indicate the presence of cardiomiopaties that are known to trigger SCD. Targeted screening with an assessment of EAT/left ventricular morphology alongside coronary atherosclerosis evaluation could lower the incidence of SCD if proper measures are taken in active population with no medical history or clinical symptoms. We could not establish a cause and effect between EAT and left ventricular thickness.

Keywords: sudden cardiac death, epicardial adipose tissue, autopsy

AIR GUNS: AN UNDERESTIMATED DANGER - CASE PRESENTATION

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Background: The compressed air weapon is a type of firearm to which the projectile is expelled due to the compression of air under pressure. According to the Romanian legislation on weapons and ammunition, the pneumatic weapon is a weapon that, for throwing the projectile, uses the expansion force of compressed air or pressurized gases in a container cylinder. These types of weapons belong to the category of non-lethal weapons and ammunition subject to authorization (category C). However, accidental fatal cases, suicides or even criminal deaths attributed to these types of weapons are described in the literature. **Material and methods:** We are discussing the case of a 5-year-old boy who, at a picnic with several families, is shot by his 8 years old brother with a compressed air sniper rifle, left unattended. The medical crew arrived at the scene could not save the boy's life. **Results:** Necroptic examination revealed a left anterolateral thoracic wound with a diagonal transfixing pathway through the lower left pulmonary lobe, pericardium, left ventricle, with the projectile found in the lateral-internal wall of the right atrium. The projectile identified was a metal type projectile (lead), with a length of 8.5 mm and a diameter of 4.5 mm. **Conclusions:** Compressed air weapons, although considered non-lethal, have proven over time their extremely dangerous potential through the fatal injuries produced. Raising public awareness, limiting use and enforcing strict legislation could prevent tragic events. Non-lethal weapons are not "toys".

Keywords: Air guns, Lethal, Forensic medicine

MEDICO-LEGAL ASPECTS OF POST-RESUSCITATION AGONAL TRAUMAS

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Background: Cardiopulmonary resuscitation is one of the most important interventions from a socio-medical point of view. During the autopsy, the forensic pathologists frequently reveal traumas caused due to CPR; The forensic pathologists must be capable of making the distinction between the postresuscitation compression injuries and the traumas that appear due to other factors. The medico-juridical importance of these traumas resides in the differential diagnosis of CPR lesions and non-iatrogenic traumas (violent deaths) or non-violent pathologies. **Material and methods:** The morphology of postresuscitation traumas, together with the generating mechanisms, as well as the differential diagnosis of postresuscitation and violent traumatic injuries will be assessed by reviewing the current literature and by evaluating over 50 autopsies, performed in IML Târgu Mures over the last year, out of which 38 presented various post-resuscitation traumas. Rare, fatal postresuscitation injuries and the underlying mechanism will be highlighted in a following case in order to get a thorough understanding of the subject. **Results:** The 38 cases that present postresuscitation injuries reveal that frequent traumas met due to CPR are rib and sternal fractures produced by chest compression maneuvers, and tracheal injuries due to the oro-tracheal intubation.Rarely, severe traumatic injuries such as parenchymal ruptures can appear due to medical care(CPR or handling of the patient) and be an adjuvant factor to the patient's death. **Conclusions:** Cardiopulmonary resuscitation can lead to mild or severe traumatic injuries even if performed adequately. Mostly these injuries aren't precipitating the patient's death. In other cases, such as the one presented, in which a liver rupture appears either due to chest compressions during CPR, leading to costal fractures in the lower part of the thorax with protrusion of rib fragments in the liver parenchyma either due to a possible mishandle of the patient, both situations can be categorized as resuscitation trauma and shall be deemed accordingly, as iatrogenic injuries.

Keywords: Cardiopulmonary resuscitation, Trauma, Forensic pathology

HEMATOLOGY

IMATINIB, STILL A VIABLE THERAPEUTIC APPROACH IN CHRONIC MYELOID LEUKEMIA?- SINGLE INSTITUTION EXPERIENCE

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Background: Tyrosine kinase inhibitors (TKI) have been the primary treatment for chronic myeloid leukemia(CML) for more than a decade. Imatinib (IMA) was the first TKI to show promise, but second-generation TKIs are increasingly taking their position as the "prima donna" of CML treatment. The "old" IMA is still a possibility for some patients who are still receiving first-line TKI-IMA therapy and are in good molecular remission. **Material and methods:** Type of study: qualitative, cohort, and retrospective. We reviewed data from 33 CML patients who were treated with IMA in the Ist Medical Clinic-Hematology, Clinical Emergency County Hospital Targu Mures, from January 2009. A subset of 17 patients in this cohort is currently on IMA therapy (November 2021) with good molecular remission and no notable side effects. We focused on the following parameters in this subgroup in particular: age at diagnosis, gender, months of IMA therapy, prognostic indices, and relevant clinical and laboratory findings. For the total set of 33 patients, EFS was estimated using the Kaplan-Meyer method, where event = IMA treatment failure, IMA intolerance, or death. **Results:** In the study group, there are 17 patients (8 males and 9 females) still on first-line TKI-IMA, with a median age of 58 years at diagnosis (minim 38-maxim 78). Sokal=29,41%/47,06%/23,53%, Hasford=47,06%/41,18%/11,76%, EUTOS=94,12%/5,88%. Total months on IMA therapy: 106 on average, 67 on the low-end, and 152 on the high-end, with 7 patients (41.18%) having spent more than 120 months on the medication (>10 years). The three-year EFS for the overall IMA group (33 patients) was 72.73%, the five-year EFS 66.67%, and the ten-year EFS 48%. **Conclusions:** Despite the increasing use of second-generation TKI for first-line therapy in CML, IMA is still an option, some patients with very good responses for many years. According to current protocols, IMA treatment interruption is not recommended; proper molecular monitoring is mandatory.

Keywords: Chronic Myeloid Leukemia, first-line Imatinib, long term very good response

HODGKIN LYMPHOMA-EVOLUTION AND PROGNOSTIC

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Background: Hodgkin Lymphoma (HL) is a malignant neoplasm of the lymphoid system which affects, especially, the young patients but with an increasing rate of curability. The survival rate reaches 90% in the early stages and 65-70% to 10 years in the advanced stages. The objective was to determine the clinical behavior and prognostic factors of the patients with HL. **Material and methods:** We analyzed a group of 21 patients diagnosed and treated in the Medical I Clinic/Hematology Department between the years 2012-2018. We followed the demographic data of our patients, the comorbidities, the prognostic factors and the treatment outcome. **Results:** Our group was composed of 8 male and 13 females. The average age was 44 years old, twelve patients were under 35 years and 9 above 35 years. The majority of patients had sclerosis nodular subtype (45%), especially female (77%). The predominant patients from our group were in the early stage, 58% versus 42% in the advanced stage. The patients were treated with chemotherapy and 6 patients also needed radiotherapy. We achieved complete remission at 71,40% patients and the survival rate was 86% in our lot. The patients who did not achieve complete remission had more than 2 risk factors which affected their response to the treatment. **Conclusions:** Hodgkin lymphoma has become an increasingly curable disease with a cure rate of more than 85%. The young age, the few number of risk factors and the early stages, has a significant influence in achieving a positive outcome.

Keywords: lymphoma, stage, treatment

HYGIENE

HEALTH IMPACTS OF CLIMATE CHANGE

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Background: Over the past century human activities, particularly the burning of fossil fuels, have released enough carbon dioxide and other greenhouse gases to dissipate additional heat into the lower atmosphere and to affect the global climate. As a result, humanity has changed the surface of its planet and the composition of its atmosphere. Climate change is already impacting health in many ways, leading to death and illness. Our aim is to draw attention to the effects of climate change on health and health care system. **Material and methods:** We had searched various surveys, domestic and international studies about the effects of climate change and statistical estimation of the possible consequences. In our presentation we confine ourselves to the results of these surveys. **Results:** The health effects of climate change can be measured only approximately by considering only a fraction of the potential health effects, and assuming continued economic growth and health progress. We can estimate that climate change is expected to cause about 250,000 more deaths per year between 2030 and 2050. There are 38,000 deaths due to extreme heat, 48,000 deaths due to diarrhea, 60,000 deaths due to malaria and 95,000 deaths due to childhood malnutrition. **Conclusions:** We conclude that climate change is one of the most serious problems of the 21st century, affecting all population. In short- to medium-term, the health effects of climate change will be determined mainly by the human vulnerability, in longer-term the effects depend increasingly on the extent to which transformational action is taken now to reduce emissions. We can contribute to reduce environmental pollution by raising awareness and by educating the population.

Keywords: climate change, global warming, greenhouse gases, health effects

VITAMIN D DEFICIENCY IMPACT ON HEALTH, ON SOCIAL AND ECONOMICAL FACTORS

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Background: Background: The level of vitamin D presents interindividual differences, it is influenced by many factors, for ex. genetic predisposition, lifestyle and dietary factors, exposure to sunshine, geographic features, illnesses, supplementation. The best method for it's measurement is the level of 25-hydroxyvitamin D. Vitamin D plays a major role in musculoskeletal system, cardiovascular system, immune system, as well as in other important processes. Vitamin D deficiency can be observed not only among the elderly, but also in the young population as well on account of modern lifestyle. Regarding these factors, vitamin D deficiency represents an important health, social and economical problem. **Material and methods:** Material and methods: We launch a prospective study among the population aged between 18 and 45 years who is hospitalized and need surgery due to a fracture. There were determined the levels of vitamin D among this population. With the help of a survey we map out those individuals who belong to risk groups. **Results:** Results: We present the case of a 37 year aged male patient who suffered a fracture because of a minor trauma and was out of work due to a long recovery. **Conclusions:** Conclusions: Based on our study, we draw attention on how dangerous vitamin D deficiency can be, and as a preventive method it would be important the supplementation of vitamin D even at younger people, especially at those individuals who belong to risk groups.

Keywords: vitamin D, deficiency, fracture

COVID-19 PANDEMIC FROM THE POINT OF VIEW OF CHILDREN

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Background: The aim of our work is to present children's perception about the special situation created by COVID-19 pandemic, because they were deeply affected by the limitations. Our object is to examine how children reacted to these unexpected changes and how they are adapted to the new situations. We also examine the sources of information, from where children were informed about the pandemic. **Material and methods:** In the survey it was used a quantitative, non-representative, randomized, anonymous questionnaire; we asked single-choice closed questions. Our intention was to assess respondents knowledge and to form opinions about the pandemic and his evolution. **Results:** Based on our studies, we can see that most of children indicated television (42.6%) and Internet (36.1%) as sources of information. The pandemic period meant for them more internet use (67%), more rest (46.6%), more free activities (39.5%), more frequent discussions with the family (30%). Most of children (76.9%) said that they missed to see their friends, and related the uncertainty as the biggest concern (51.2%). About one third (31.1%) are concerned about family health. For distance learning there were used Google Classrooms platforms (64.4%), Zoom (62.2%) and WhatsApp (41.7%) as teaching methods. **Conclusions:** In conclusion, we can conclude that television and internet are the primary sources used by children. The frequency of internet use has increased among them in direct relation that they should miss the opportunity to meet their friends. The pandemic caused uncertainty which affect children. Almost a third of the respondents has teachers who are receptive to their opinions about the teaching methods.

Keywords: COVID-19 pandemic, children, teaching methods

INFECTIOUS DISEASES

CEREBRAL TOXOPLASMOSIS AS PARADOXICAL IRIS IN AN HIV INFECTED PATIENT – CASE REVIEW

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Background: Immune reconstitution inflammatory syndrome (IRIS) is defined as a clinical worsening of the severely immunocompromised HIV positive patients, which appear following the introduction of antiretroviral therapy. IRIS can be attributed to an infection, or malignancy, or autoimmune disease, it can be unmasking (the disease was not diagnosed at baseline), or paradoxical (the disease was known and treated at baseline, but shows a paradoxical worsening). IRIS affecting the CNS can evolve favorably with complete recovery, or recovery with neurological sequelae, or can be rarely fatal. **Material and methods:** We present the case of a 34-years-old male patient, known HIV positive for 19 years, nonadherent to the antiretroviral therapy, with the last T CD4+ lymphocyte count of 118 cells⁄mm3, HIV viral load of 2577802 copies⁄ml. Personal history reveals immune thrombocytopenic purpura, epilepsy, HIV encephalopathy, and pulmonary and genitourinary tuberculosis (currently under therapy). The patient is admitted in August 2021 presenting seizures and 3 contrast enhancing right temporo-parietal and occipital lesions on the brain CT scan. Empirical therapy with high dose TMP-SMX (trimethoprim-sulfamethoxazole) and Clindamycin was introduced. Antiretroviral therapy was initiated. Levetiracetam was administered to control the seizures. Clinical and radiological improvement was obtained, the contrast enhanced brain CT scan did not show any lesions after 3 weeks of therapy. **Results:** At 6 weeks of anti-toxoplasma therapy the patient developed again seizures, contrast enhancing lesions were described again in the right parietal, temporal and occipital area. The seizures were controlled only with levetiracetam associated with lamotrigine and valproic acid. The patient underwent another course of 6 weeks of anti-toxoplasma therapy, depletion therapy, tapered corticosteroid therapy, and continued antiretroviral therapy, with favourable outcome. **Conclusions:** Brain toxoplasmosis in HIV positive patients responds usually well to the etiological therapy. Rarely can manifest a paradoxical worsening in the context of IRIS, requiring prolonged therapy, associated corticosteroids, and the continuation of antiretroviral therapy.

Keywords: Immune reconstitution inflammatory syndrome, antiretroviral, contrast enhanced brain CT scan

HIV LATE PRESENTER IN COVID ERA

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Background: In spite of global efforts, the number of persons infected with HIV is still growing, we need to detect HIV infection as early as possible. **Material and methods:** Case report: We are presenting the case of a 55-year-old heterosexual man, married, vaccinated against COVID-19, with a history of herpes zoster, atopic dermatitis (2015), chronic diarrhoea and fatigue syndrome. Admitted in Infectious Diseases Department for: altered general condition, Clostridioides difficile colitis, nausea, vomiting, weight loss 15 kg in the last 3 months without improvement on treatment prescribed by gastroenterologist. On admission at physical examination patient with slim disease, pale, dehydrated skin, whitish deposits on tongue, productive cough, abdomen tender on palpation, without signs of neurologic affection. During the hospitalization he underwent a complex laboratory, imagistic, invasive, histopathologic investigations. He tested positive for HIV (LTCD4:57/microL), IgG antibody for Toxoplasma gondii and CMV, from sputum Candida albicans and non-albicans, Escherichia coli, Elisabethkingia meningoseptica, from bronchial aspirate Candida krusei, from urine Enterococcus spp., Mycobacterium tuberculosis, from stool Cryptosporidium parvum. The treatment was combined, he needed primary prophylaxis for opportunistic infections, antiretrovirals, antibiotics, antifungals, antituberculous agents, supportive care, interaction checking and management of side effects. Chest CT on admission demonstrated ground glass and reticular opacities, after 8 weeks ground glass opacities, cavitary lung lesion, pleural effusion, mediastinal lymphadenopathy, pericardial fluid. Bronchoscopic examination revealed two necrotic formations in the posterior trachea. On lung biopsy aspergillosis was revealed. Immune reconstitution, LTCD4: 155/mm3, confirmed the IRIS (immune reconstitution inflammatory syndrome).
Results:

After long admission time (3 month) with undulant evolution, the patient was discharged, stable, in better general condition. **Conclusions:** Screening methods remains essential for early HIV diagnosis even in pandemic time. The management in this late presenter patient with multiple comorbidities, opportunistic infections, IRIS, was difficult, but with a huge human and material effort successful.

Keywords: HIV, late presenter, IRIS

INTERNAL MEDICINE

SARS – COV – 2 INFECTION, AS A RISK FACTOR FOR DEEP VEIN THROMBOSIS

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Background: COVID-19 is an acute respiratory infectious disease caused by the highly pathogenic human coronavirus SARS-COV-2. The direct or indirect effect of the infection, through the presence of a severe condition and hypoxia may predispose patients susceptible to thrombotic events. **Material and methods:** This is an observational study which included 237 patients (87 patients with DVT, 35 patients with DVT and COVID-19 disease and 115 patients with COVID-19 disease) hospitalized in the Internal Medicine Clinic no. 1 of SCJU Târgu Mureş, between January 1, 2020 - June 30, 2021. Before the hospitalization for every patients were observed and analyzed the demographic and paraclinical characteristics, the location of DVT, cardiovascular risk factors and the onset of signs and symptoms before hospitalization. **Results:** Lot 1 - statistically significant differences were identified in terms of the number of days of hospitalization, death, cardiovascular risk factors (hypertension), CKD and PAD. Statistically significant differences were obtained between the subgroups in terms of the following paraclinical characteristics: D-dimer, GFR, prothrombin time, lymphocyte count, ferritin, LDH. Lot 2 - we found statistically significant differences in the following cases: CHD, CKD, D-dimer, fibrinogen, creatinine, alkaline phosphatase, PCR, prothrombin time, hemoglobin, serum iron. **Conclusions:** COVID-19 coagulopathy is an acquired syndrome that occurs frequently during this viral disease, is multifactorial and, unlike other viral diseases, affects the arterial, venous and the microcirculation system. Thromboprophylaxis and curative anticoagulation have broad indications in patients with COVID-19, but are not sufficient to prevent and limit the effects of thrombo-inflammation. It is essential that health professionals adopt an interdisciplinary approach to the systematic evaluation of the individual in order to accurately establish the diagnosis, determine the pathogenesis for each case and consecutively the optimal treatment required. The weight of risk factors can be used to identify risks at the individual level and to adopt early prophylaxis and control.

Keywords: SARS – COV – 2 , COVID-19, infection, risk factor, deep vein thrombosis, coronavirus

POLYMYALGIA RHEUMATICA, THE GREAT IMITATOR

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Background: We present a case of fever of unknown origin (FUO), considered bacterial infection, treated with antibiotics, until the correct diagnosis of polymyalgia rheumatica (PMR) was revealed. **Material and methods:** The 63 year old male patient presented with weight loss, low- grade fever, general and muscle weakness, arthralgia. Symptoms started 10 weeks before with lumbal pain and fever. Laboratory results were tipical for acute inflammation, with leukocytosis, thrombocytosis, extremely elevated ESR and CRP. Before presentation, the patient was treated with Cotrimoxazol for two weeks, but his condition didn't turn better. Urinary tract infection and pneumonia were ruled out. The diagnosis of FUO was established. Next investigations ruled out endocarditis, discitis and hematological disorders. Computed tomography ruled out lymphoma and other neoplasms, pathological findings were slight enlargment of the right psoas muscle and periarticular edema of the right coxofemural joint. Treatment with Cefuroxim and Ciprofloxacin was initiated for soft tissue infection. After one week of treatment the general condition of the patient got worse, fever persisted. Laboratory results didn't show any improvement either. Soft tissue ultrasound was performed, it revealed tendinitis with multiple localizations. The patient finally was diagnosed with PMR. Antibiotic treatment was stopped, oral cortisone was initiated, with rapid clinical response, followed by ESR and CRP value normalization. **Results:** Differential diagnosis between bacterial infection and noninfectious febrile condition was a challenge in this patient. Laboratory findings were suggestive of bacterial infection, but the lack of clinical response to empirical antibiotic therapy required further investigations. The situation was complicated by the presence of psoas fluid collection, suggestive of soft tissue infection. Prompt response to corticotherapy confirmed the diagnosis of PMR. **Conclusions:** In FUO with laboratory analysis suggestive for bacterial infection, it is important

to identify infection site and etiology. If these aspects are unclear, we must think of an alternative diagnosis, to avoid unnecessary antibiotic treatment.

Keywords: fever of unknown origin, polymyalgia rheumatica, bacterial infection

MICROBIOLOGY

ANTIFUNGAL ACTIVITY OF ESSENTIAL OILS ON CLINICALLY IMPORTANT CANDIDA SPECIES

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Background: Fungal infections, mostly with *Candida* species, represent nowadays an important part of the infectious pathology. Considering the emerging antifungal resistance, therapeutic and prophylactic alternatives are needed. Objective: to assess the antifungal effects of aqueous extracts (AqEO) of commonly used essential oils (basil, cinnamon, clove, melaleuca, oregano and thyme) against *C. albicans*, *C. auris*, *C. krusei*, *C. guilliermondii* and *C. parapsilosis*. **Material and methods:** The minimum inhibitory concentration (MIC) of AqEOs was assessed by microdilution method in 96-well plates, by incubating the yeast cells in RPMI medium in presence of different concentrations of each AqEO. The MIC was assessed in the last well that showed at least 50% inhibition of fungal growth. A significant antifungal effect was considered for concentrations ≤ 3% v/v. This work was supported by George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș Research Grant number 294/5/14.1.2020 **Results:** All AqEO, except melaleuca, presented good antifungal effect on *C. albicans*. The highest antifungal activity was observed for cinnamon, closely followed by thyme and basil, with MICs ranging between 0.1% v/v and 3.13% v/v. On the opposite side, melaleuca showed the weakest effect, with MICs ranging between 3.13% and 25% v/v. Overall, the most responsive yeast species to AqEOs were *C. auris* and *C. parapsilosis*, while the most resistant were *C. albicans* and *C. krusei*, with average MICs of approximatively 6% v/v. **Conclusions:** Cinnamon, clove, but also thyme AqEOs showed the most significant biological activity in terms of antifungal effect. The antifungal effects are also species-dependent, *C. albicans* and *C. krusei* being the most resistant.

Keywords: Candida, antifungal, essential oils

THE ANTIMICROBIAL POTENTIAL OF "GREEN" SYNTHETIZED SILVER NANOPARTICLES USING BEECH BARK AND SPRUCE BARK EXTRACTS

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Background: The "green" synthesis of silver nanoparticles, especially using different plants extracts, provide solutions with good antimicrobial activity, summing the well-known antimicrobial activity of silver and phytochemicals, in a delivery system with small size and controlled form. **Material and methods:** Four silver nanoparticles (AgNPs) suspensions were synthetized using either beech bark (BBE) or spruce bark (SBE), and two silver salts, acetate (Ac) or nitrate (Nit). The obtained solutions were: AgNP BBE Ac, AgNP BBE Nit, AgNP SBE Ac, AgNP SBE Nit. Five different Candida species (C. albicans, C. parapsilosis, C. krusei, C. auris, C. guilliermondii) and two bacterial strains (S. aureus, E. coli) were used to assess if these suspensions present synergistic activity with fluconazole or gentamicin (checkerboard method) and if they interfere with the microbial growth rate. **Results:** All the tested solutions presented synergistic activity with fluconazole for C. parapsilosis and C. guilliermondii. AgNP BBE Nit and AgNP SBE Ac presented synergistic effects with gentamicin for E. coli, while for S. aureus no synergistic effects were observed. AgNP BBEs inhibited the growth rate for all the fungal species, except for C. auris, while the AgNP SBEs inhibited the growth rate for C. parapsilosis, C. krusei and C. guilliermondii. Also, AgNP BBEs inhibited the growth rate for both tested bacterial strains, while only the AgNP SBE Ac was able to inhibit the growth rate for E. coli. **Conclusions:** The biosynthesis of silver nanoparticles with

beech/spruce bark is a versatile method for obtaining solutions with antimicrobial activity, which might be used as alternative/adjuvants for the antimicrobial treatment. This work was supported by the University of Medicine, Pharmacy, Sciences and Technology "George Emil Palade" of Târgu Mureş Research Grant number 293/1/14.01.2020.

Keywords: silver nanoparticles, antimicrobial, beech bark extract, spruce bark extract

MODULATION OF CANDIDA ALBICANS VIRULENCE FACTORS BY VARIOUS ESSENTIAL OILS

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Background: Virulence in *Candida albicans* is multifactorial, consisting in capacity to adhere and invade the substrates, to adapt and survive in different conditions, or to change the growth behavior. Objective: To assess the biological activity of aqueous extracts (AqEO) of basil, cinnamon, clove, melaleuca, oregano and thyme essential oils on *C. albicans* virulence factors. **Material and methods:** The biological activities of essential oils on *C. albicans* were assessed in presence of 3% of each AqEO and compared with control (without added substance). The growth rate was evaluated by spectrophotometry, measuring the optical density of *C. albicans* culture in Sabouraud broth at different time points. The biofilm production was assessed by crystal-violet assay. The gene expression was assessed by ΔΔCt-RT-PCR (RNA extraction, reverse-transcription, real-time-PCR) for genes encoding various *C. albicans* virulence factors: *ALS3* adhesin, *SAP2* proteinase and *HSP70* chaperone. The effect on filamentation rate was assessed by incubating *C. albicans* in human serum for 2h, followed by quantification of germinated cells. This work was supported by G.E.Palade UMFST Târgu Mureş Research Grant 294/5/14.1.2020. **Results:** AqEOs inhibited *C. albicans* growth starting the 9th hour of incubation; significant inhibition was found for cinnamon and clove, where total inhibition was observed even after 48h of incubation. All AqEOs significantly inhibited the capacity of *C. albicans* to produce biofilm (OD_{620} ranging from 0.049 for cinnamon, or 0.07 for thyme and oregano, to 0.11 for melaleuca), compared with control (OD_{620} of 0.123). All AqEOs generally downregulated *HSP70* and *SAP2*, but upregulated *ALS3* gene expression. The formation of germ tubes was significantly inhibited by all AqEOs, down to 0% filamentation rate for cinnamon and clove. **Conclusions:** Essential oils are able to modulate the virulence of *C. albicans* in a way that may be favorable for the clinical management of fungal infections. Cinnamon, clove, but also thyme AqEOs showed the most significant biological activities.

Keywords: Candida, essential oils, virulence, biofilm, gene expression

NEUROLOGY

DIRECT ORAL ANTICOAGULANTS IN THE TREATMENT OF CEREBRAL VENOUS THROMBOSIS

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Background: Cerebral venous thrombosis is a rare form of stroke, being responsible for 0.5% of cases. Basic treatment according to current guidelines consists of parenteral anticoagulation with unfractionated heparin (UFH) or low molecular-weight heparin (LMWH), followed by oral anticoagulation with vitamin K antagonist (VKA). **Material and methods:** The purpose of our paper is the presentation of current data in the specialized literature and the experience of our clinic in this area over the last 10 years. **Results:** In recent years the therapeutic indications of new oral non anti-vitamine K anticoagulants (NOACs) have expanded in multiple clinical territories. There are numerous ongoing randomized clinical trials that investigate these substances in cerebral venous thrombosis and numerous published studies based on clinical experience with off-label use of these substances, with favorable results. The first randomized clinical study, finalized and published in 2019, with positive results was with dabigatran. The results of rivaroxaban studies are expected in 2022. **Conclusions:** Hopefully, the updated clinical guidelines based on the ongoing randomized clinical trials will better clarify the role of NOACs in the management of this rare cerebrovascular disease.

Keywords: cerebral venous thrombosis, DOAC, Rivaroxaban, Apixaban, Dabigatran

NEUROPATIA AUTONOMĂ CARDIOVASCULARĂ DIABETICĂ-PERSPECTIVĂ CLINICĂ

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Background: Sistemul nervos autonom prin calea simpatică si parasimpatică integrează strâns procese vitale, cum ar fi controlul variabilității ritmului cardiac, a tensiunii arteriale, a contractilității miocardice, deci în consecință joacă un rol pivotal in reglarea sistemului cardiovascular. Neuropatia autonomă diabetică cardiovasculară (NDAC), ca o componentă a neuropatie diabetice autonome are o importanță clinică și prognostică deosebită pentru acești pacienți. **Material and methods:** Semnele clinice de NDAC sunt tahicardia de repaus, intoleranța la efort fizic prin reducerea variabilității ritmului cardiac, disfuncția cardio-respiratorie intra- și perioperatorie, hipotensiunea arterială ortostatică, ischemia miocardică silențioasă, aritmiile cardiace și hipertensiunea arterială cauzată de neuropatia autonomă. Implicații clinice și prognostice ale NDAC sunt legate de riscul crescut de mortalitate cardiovasculară prin riscul crescut de aritmii cardiace, de moarte subită și creșterea mortalității postinfarct miocardic la acești pacienți. De asemenea s-a constat creșterea mortalității la pacienții cu NDAC și episoade de hipoglicemie prin atenuarea răspunsului autonom cardiovascular la anumiți factori de stress cardiovasculari. Episoadele repetate de hipoglicemie reduc răspunsul sistemului nervos autonom la hipoglicemie. **Results:** Factorii de risc cardiovasculari tradiționali (obezitatea, fumatul, dislipidemia, hipertensiunea arterială) reprezintă factori de risc importanți în apariția NDAC în DZ tip 2, ceea ce oferă o oportunitate pentru prevenirea apariției sau încetinirea progresiei acestei complicații. Eforturile trebuie îndreptate spre optimizarea controlului glicemic, menținerea TA și a profilului lipidic în limite normale, evitarea fumatului, promovarea exercițiilor fizice și a unei diete sănătoase încă din primii ani de ev oluție a DZ. **Conclusions:** Experiența acumulată în urma studiilor clinice de anvergură efectuate deja ne-a ajutat să înțelegem că ținta nu este reprezentată doar de un control optim al glicemiilor, ci de o intervenție timpurie, amplă, " holistică" și globală asupra tuturor factorilor de risc demonstrați a fi implicați. Prevenția complicațiilor trebuie să înceapă cât mai precoce în momentul diagnosticării diabetului zaharat.

Keywords: Diabet zaharat, Neuropatie diabetica autonoma, Neuropatie autonomă cardiovasculară, Factori de risc cardiovasculari

RARE OLIGODENDROPATHY CAUSED BY JOHN CUNNINGHAM VIRUS IN MULTIPLE SCLEROSIS PATIENTS TREATED WITH NATALIZUMAB: THE EXPERIENCE OF TÂRGU-MURES REGIONAL CENTER

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Background: The main limitation of natalizumab treatment in patients with multiple sclerosis (MS) is the risk of developing progressive multifocal leukoencephalopathy (PML), a rare opportunistic, life-threatening brain infection, caused by John Cunningham virus (JCV), a widespread polyomavirus present at latent stage in healthy individuals. **Material and methods:** In some patients treated with natalizumab, a monoclonal antibody that binds to ⍺4 integrin and blocks the migration of activated lymphocytes along the blood-brain barrier, due to the interaction between viral and host factors, a pathogenic form of the JCV develops, that infects and destroys oligodendrocytes in the central nervous system. The risk of developing PML is quantified according to the presence or absence of 3 risk factors: anti-JCV antibodies status, prior immunosuppressive therapy and increasing duration of natalizumab treatment. **Results:** To date, 85 patients with MS have been treated with natalizumab in our center, of which 72 for a period of at least 2 years and 9 have been treated with natalizumab for more than 10 years. We will present the 3 cases of PML reported by our center, extremely varied in terms of treatment duration (21months-7 years), anti-JCV antibody titer (0.76-2.44), clinical manifestations and brain imaging. **Conclusions:** We will also report our experience regarding the therapeutic approach and management of these cases.

Keywords: progressive multifocal leucoencephalopathy, multiple sclerosis, oligodendropathy

GUT-BRAIN AXIS DYSREGULATION IMPLICATIONS IN MULTIPLE SCLEROSIS

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Background: Multiple Sclerosis (MS), the most frequent cause of neurological disability in young adults is a chronic, immune-mediated disorder of the central nervous system with clear involvement of genetic and environmental factors. Alteration of gut microbiota was proposed as an environmental risk factor in MS. **Material and methods:** The gut-brain axis is bidirectional and the homeostasis is maintained by the integrity and auto-regulation of the two biological barriers, the blood-brain barrier (BBB) and the intestinal barrier, dependent on the sympathetic and parasympathetic pathways of the autonomic nervous system and vagus nerve signalling. The healthy, eubiotic state acts as an anti-inflammatory environment, capable of inhibiting the growth of pathogenic microorganisms by inducing the activation of the innate immune system. **Results:** Dysbiosis can induce the development of Th1 and Th17 pro-inflammatory mechanisms instead of favouring the regulatory Th2 responses. The main products are short-chain fatty acids (SCFA), such as butyric acid (BA), caproic acid (CA). BA carries immunomodulatory properties and can stimulate the Treg differentiation and induce secretion of the anti-inflammatory Th2 cytokine, IL-10. CA promotes pro-inflammatory lymphocytic differentiations from Th1/Th17 lineages and plasmatic levels are increased in the MS population. **Conclusions:** The gut-brain axis dysfunction leads to CNS inflammation by a dysregulation in the cholinergic afferent fibres and the central neuroinflammation impacts the efferent cholinergic pathways that subsequently maintains the gut pro-inflammatory state, favouring immune dysregulation. We present some of the most important aspects regarding the pathophysiology of gut-brain connection, microbiota disturbances and vagus nerve signnaling.

Keywords: Multiple Sclerosis, Gut-brain axis, Microbiota, Short Chain Fatty Acids, Vagus nerve

OBSTETRICS AND GYNECOLOGY

HEREDITARY OVARIAN AND BREAST CANCER. GENES INVOLVED. PROPHYLACTIC MANAGEMENT

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Background: Breast and ovarian cancers are the most common tumors in women and their genetic predisposition is about 5-10%.WHO statistic found in 2021 that in 2020 there were 684,996 deaths from breast cancer globally.In 2018, Serbia had the highest rate of ovarian cancer: 16.6 per 100,000 women and in Romania the rate was of 10.4 per 100,000 women. **Material and methods:** The best-known genes associated with familial breast and ovarian cancer are BRCA1 and BRCA2.Other genes involved in hereditary breast and ovarian cancer have been identified due to new NGS(Next Generation Sequencing):PTEN, TP53, STK11, CDH1.The genes PALB2, BRIP1, ATM, CHEK2, BARD1, NBN, NF1, RAD51C, RAD51D could be included in diagnostic lists for assessing the risk of ovarian and breast cancer **Results:** Prophylactic surgery consists of bilateral mastectomy in breast cancer and bilateral salpingo-oophorectomy in hereditary ovarian cancer after completion of family planning in accordance with family history and onset of tumors in families. **Conclusions:** Identification of new genes involved in hereditary ovarian and breast cancer by new molecular techniques offers the chance of prophylactic surgery and personalized medicine based on the genetic characteristics of the patient.

Keywords: hereditary ovarian cancer, hereditary breast cancer, gene involved

OCCUPATIONAL HEALTH

CIRCADIAN RHYTHM DISTURBANCES IN ALTERNATING SHIFT WORK

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Background: Alternating shift work produces changes in circadian rhythm, creating various metabolic disorders, such as diabetes, cardiovascular disorders, sleep disorders, obesity. Timing of eating could be an important factor for modulating body weight and metabolic state. Chrononutrition recommends a period of 10-12 h in which not to consume food during the night, time-restricted eating. Most people who work in shifts consume food during the night. This can be a trigger that disturbs the circadian clock of the person.In this study, I follow the weight and abdominal obesity in a group who eat during the night compared to those who do not eat during the night. **Material and methods:** for tracking the effect of eating habits on health during the night shift, I studied a batch of 32 people, women, a group of hospital staff working in alternating shift work, mean age 45.71 years,(32,64)st. dev 7.22 who completed a questionnaire on the health impact of shift work, clinical examination, BP, height, weight, abdominal circumferences measurement. **Results:** In this batch were 25 people who ate during the night,78,2 % group A, and 7 people who did not eat during the night, 21.8%. group B In group A the mean BMI was 27.28, compared to group B, the mean BMI was 23, p = 0.0415, statistically significant, and the abdominal circumferences on group A were mean 86.84 cm versus 78.85 cm in group B, p = 0.159. **Conclusions:** both abdominal circumference and BMI was lower in group B who does not eat during the night, but because I worked with a small sample of people, it is necessary to increase the number of cases and to follow on other factors that influence abdominal obesity, such is physical activity, and sleep changes.

Keywords: circadian rhythm, , chrononutrition, , time restricted eating, BMI

DIFFICULTIES AND STRATEGIES OF BIOMONITORING OCCUPATIONAL EXPOSURE TO GLYPHOSATE

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Background: Glyphosate is an effective and widely used pesticide decomposing into its inactive main metabolite aminomethylphosphonic acid (AMPA). Glyphosate is a small, polar, readily water soluble compound, highly chemically stable and not photosensitive. Due to widespread use, concerns have grown regarding health risks involved with occupational and populational exposure to glyphosate. Therefore, accurate and sensitive methods in order to correctly assess the exposure for humans are necessary. **Material and methods:** A LC/MS system consisting of an UPLC coupled with a QTOF mass spectrometer was used. For analytical separation a wide array of chromatographic columns were tested (C18, HILIC, amino), in combination with different types of aqueous and organic mobile phases. Detection was optimized and carried out in MS/MS mode with ESI(-). **Results:** Under optimal mass spectrometric conditions glyphosate could be determined by monitoring the transitions m/z 167.9 -> 150.0, 124.0, while AMPA for m/z 109.9 -> 63.0, 79.0. Poor retention on tested columns was obtained due to the high hydrophilic chemical profile of the analytes. The best chromatographic separation and ionisation was obtained with HILIC column and ammonium formate and acetonitrile as eluents. However, selectivity and efficiency had to be further improved in order to be confidently used in biomonitoring and other studies involving glyphosate exposure. **Conclusions:** The biomonitoring of glyphosate presents a series of challenges due to the physical-chemical properties of the analytes, although many approaches can be used. Even when using LC-MS, a technique with high sensitivity and selectivity, the separation of the compounds from environmental and biological samples, and assuring accurate and reproducible measurements is difficult and needs further research. Aknowledgement: The study was supported by grant no. 10127/17.12.2020, "Dezvoltarea unor metodologii LC-MS sensibile și selective pentru determinarea unor substanțe controversate din apă și alimente", George Emil Palade University of Medicine, Pharmacy, Science,

and Technology Târgu Mureş, Romania.

Keywords: biomonitoring, LC-MS, pesticide, glyphosate, AMPA

ORTHOPEDICS

TOTAL HIP ARTRHOPLASTY IN DISPLACED FEMORAL NECK FRACTURES

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Background: The femoral neck fractures is one of the most freqvent patholofy in our unit.We present our experience in the surgical treatment of the displaced femoral neck fracture made in our Department. **Material and methods:** We presnt 375 patients treated with THA in the period 2017-2020.This fracture is present in old peoples and have a high rate of complications like pseudarthrosis,non-union,femoral head avascular necrosis.The patients are from the County Mures and Surroundings Counties-Harghita,Covasna,Sbiu,Alba,etc-and some have been treated with hemiartrhoplasty or osthesynthesys and the fracture site is not heal and displaced. Indication for THA was:-age above 65 years-daily activity possible-failure of the hemoarthroplasty or ostheosinthesis-nonunion-AVN We use uncemented and cemented hip prosthesis according to the bone stock and the same postoperative care and rehabilitation programme. **Results:** To evaluate the outcomes we consider few aspects :-Comorbidities of the patients-The mortality rate which was lower after THR-4 % compare to ostheosynthesis 14 %-In 45 % we should change the ostheosynthesis material with THA because of the displacement of the hardware and complications in patients mobility The results according the Hrris Hip Score was excellent in 65 % of cases,very ggod in 25 %,satisfactory in 6 & and poor in 4 %.The last 2 results were obtaine in patients with age more than 80 years who suffer from previous morbidities and cannot complete the rehabilitation programme. **Conclusions:** Our conclusion in this study is that the THA is a best surgical indication for patients with Garden III and IV fractures,compare to the other surgical proceudre-ostheosynthesis,hemiartroplasty- in the population older than 65 years.The type of prosthesis cemented or uncemented is indicated by the patients bone stock, his health status and social activities.

Keywords: Femoral neck, Fracture, Total Hip Arthroplasty

REVISION ARTHROPLASTY: CHALLENGES AND OUTCOMES IN FEMORAL STEM REPLACEMENT

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Background: Revision total hip replacement (RTHR) has gained tremendous advancements in terms of usage in the previous three decades. Numbers of RTHR are expected to dramatically increase in the following years. Causes for these high revision rates are instability, aseptic loosening, osteolysis, infection, periprosthetic fracture, component malposition, and implant failure. Our objective was to clinically assess short-term outcomes after RTHR with replacement of only femoral component. **Material and methods:** This is a prospective study (2008-2019) that screened 122 patients out of which 88 did not met inclusion criteria. Therefore we included 34 patients out of which 14 were females with a mean age of 72.2 ± 12.4 and 20 males with a mean age of 70.3 ± 11.2. All patients underwent femoral stem replacement and were operated by the same senior surgeon. Revision causes included: aseptic loosening, femoral osteolysis and stress shielding. Harris Hip Score (HHS) was used to evaluate clinical outcomes and radiological assessment was done by plain radiographs - preoperatively and at postoperative 3, 6 and 12 months visits. Visual Analogue Pain (VAS) scale was used to analyze data regarding pain status at different visits. **Results:** Preoperative HHS was 53.2 (SD ± 21.4). Significant improvement of HHS was observed at the first 3 month follow-up visit (76.3, SD ± 11.9, p= .004). At 6 (79.4, SD ± 9.6) and 12 months (81.4, SD ± 7.4) visits the HHS score did not differ significantly (p=.091). VAS improved from 4.7 ± 2.2 preoperatively to 8.4 ± 1.1 at one year follow up. There were no radiographic signs of femoral stem loosening. Complications included one subcutaneous granuloma. **Conclusions:** Evidence based outcomes prove that femoral component revision surgery restores motor function and alleviates pain in patients scheduled for THR stem revision surgery. Improper patient selection, bone loss, poor planning and septic environment might compromise final outcomes.

Keywords: femoral component, hip revision arthroplasty, uncemented, stem replacement

THE MANAGEMENT OF THE PERIPROSTHETIC INFECTIONS AFTER TOTAL KNEE AND HIP ARTHTROPLASTY

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Background: Total knee (TKA) and hip (THA) arthroplasty are common and highly successful procedures for the treatment of the hip and knee osteoarthritis. Periprosthetic joint infection (PJI) is a potentially destructive and a rare complication of TKA and THA. This study aims to manage in the most effective ways the periprosthetic infections after total hip and knee arthroplasty. **Material and methods:** We analyzed 20 retrospective studies taken from the "Pubmed" database. They were searched using the words: "periprosthetic infections", "management of periprosthetic infections", "treatment of periprosthetic infections" and" the diagnostic criteria of periprosthetic infections". The criteria for inclusion in this meta-analysis were the following: 1. the year of publication from 2017 to 2021 2. clinical and paraclinical methods for diagnosing periprosthetic infections included 3. to provide information on the various treatment regimens. **Results:** The diagnosis is multifactorial and is based on the clinical findings, serological tests, radiographies, examination of synovial fluid, intraoperative culture collection and histology. Currently, the diagnostic criteria suggested by the Musculoskeletal Infections Society (MSIS) are used in the diagnosis of periprosthetic infections. Since 2018, the scientists suggested a new definition of periprosthetic infections by creating a scoring classification that implicated preoperative serological markers, intraoperative variables, and synovial markers. The scientists evaluated the new definition in a total of about 400 patients and showed that the new classification offered a similar specificity and a better sensitivity compared to the MSIS criteria. Many studies have noted that two-stage revision surgery and joint spacers can lead to an infection control rate of up to 95%. **Conclusions:** Infection after total knee and hip arthroplasty can be difficult to diagnose and treat. The diagnosis is based on serological tests, clinical findings, laboratory and imaging results. Two-stage revision surgery using the antibiotic spacer is more successful in eradicating the infection than one-stage revision surgery.

Keywords: periprosthetic infections, knee arthtroplasty, hip arthtroplasty, diagnose

PROGRESSIVE OVERLOAD RECOVERY IN PATIENTS WITH TOTAL HIP ARTHROPLASTY

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Background: The number of total hip arthroplasties (THA) has increased significantly in the last decade, partially due to the fact, that younger patients are in need of THA. The materials used for implants have improved over the years, but the techniques used

in post-surgery recovery did not. **Material and methods:** The goal of this study was to evaluate the possibility and effectiveness of utilizing progressive overload and functional re-training of patients after THA. 40 patients took part in the study, 20 in the control group, and 20 in the study group. The study had sessions that were loosely observed in the beginning of the recovery after THA (weeks 0-10), these were followed up with a series of closely monitored sessions, that were focused on the recovery of activities that required more intense effort (weeks 10-16). The exercises that the study group used to recover had an array of vocational and recreational activities. The control group followed a standard recovery plan, prescribed by their surgeon. The patients were tested by evaluating their walking capacity, observing the objective examination pre-procedure and 16 weeks after the procedure. The scores used to determine the changes were pain, the 6 minute walk test (6MWT), the timed up and go test (TUG), climbing stairs, getting up from sitting position and physical strength. Patient satisfaction was also taken into account. **Results:** The study group had better results on functional inquiries, at the 6MWT, strength in the operated hip and overall satisfaction. The study groups showed better symmetry in getting up from a sitting position, than the control one. No other significant differences were observed. **Conclusions:** Recovery that focused on less monitored sessions in the first weeks after THA, and emphasized recovering activities that require more physical strength later, had positive effects on the biomechanics and functionality of the joint without compromising its safety.

Keywords: total hip arthroplasty, recovery, functionality, biomechanics

CEMENTLESS CERAMIC-ON-CERAMIC TOTAL HIP REPLACAMENT WITH UNUSUAL LATE RESULT, CASE REPORT

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Background: Because of expectation of good results (low risk of loosening, long term clinical and radiological survivorship) some surgeons prefer cementless ceramic-on-ceramic total hip arthroplasty. Complications include wear of the ceramic component, squeaking noises with hip movement, black wear debris (metallosis) and bone loss. Wear of ceramic components is associated with trauma, high activity level, obesity or impingement of acetabular cup(imperfections in placement of ceramic liner). **Material and methods:** 54-year-old woman with a history of avascular necrosis of femoral head had with cementless ceramic-on-ceramic right total hip arthroplasty. Eight years after the surgery patient developed hip pain, limited range of motion (flexion 800, extension 50, abduction 200) and audible loud noises, without any history of trauma. X ray exam showed damage of ceramic liner with protrusion of prosthetic head into acetabular component. **Results:** Replacement surgery was performed and we noticed important black wear debris (metallosis) within all prosthetic joint tissues, massive bone loss in acetabulum and femur; we performed acetabulum cavity and proximal femur reconstruction with porous tantalum block (ZimmerTM, Trabecular Metal®) a cemented polyethylene cup and revision femoral component (Revitan Straight ®) with stainless steel prosthetic head. **Conclusions:** this case report shows a rare complication of cementless ceramic-on-ceramic total hip replacement: with no trauma history, no high activity level or unusual hip movements. Metallosis (associated with high cobalt-chrome serum levels). is a significant major complication of this type arthroplasty, with difficult revision, expensive reconstruction implants and long term recovery.

Keywords: metallosis, ceramic arthroplasty, revision surgery

SPONTANEOUS OSTEONECROSIS OF THE KNEE (SONK) -NARRATIVE LITERATURE REVIEW

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Background: Spontaneous osteonecrosis of the knee (SONK), recently renamed as subchondral insufficiency fracture of the knee is now considered as a distinct clinical condition that is a common cause of acute, unilateral knee pain and swelling. SONK is considered the most common form of osteonecrosis of the knee with an higher prevalence in patients over 50 years old. The aim of this study was to provide a concise review of the literature and report state of the art diagnosis and treatment guidelines of SONK. **Material and methods:** The reasearch was conducted using PubMed and Cochrane databases filtering articles until September

2021. The key words used were: spontaneous osteonecrosis of the knee, subchondral insufficiency fracture, knee osteonecrosis. **Results:** Female gender is most commonly affected with the medial femoral condyle (94%) reported as most commonly affected. A common history of osteoporosis or osteopenia has been observed with frequent symptoms such as focal tenderness of the medical femoral condyle. The gold standard for the diagnosis of SONK was MRI which reported bone marrow edema (%), subchondral crescent linear focus on T1 (%). Bone scintigraphy may also be used but it has a lower sensitivity (%) compared to MRI. Conservative treatments are reserved for small lesions (size<3.5 cm squared). They imply protected weight bearing, lateral widge insoles, NSAIDs, bisphosphonates and prostaglandins I2. Surgical treatment is used for larger lesions. They include diagnostic and therapeutic arthroscopy, core decompression, bone grafting and osteochondral autologous transplant. In case of advanced stages of the disease, high tibial osteotomy (HTO), used in younger and active patients, unicompartimental knee arthroplasty (UKA) or total knee arthroplasty (TKA) can be considered. **Conclusions:** Gender plays a role in the incidence of medial femoral condyle SONK. Small-sized lesions are considered reponsive to conservative treatment. Metaanalyses on the topic could further detail treatment protocols and guidelines.

Keywords: spontaneous osteonecrosis of the knee, subchondral insufficiency fracture, knee osteonecrosis, knee joint

MULTI-LIGAMENT KNEE INJURY: CASE REPORT

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Background: Knee dislocations (KD) have been reported more often in literature, being hard to diagnose and treat. We conducted a retrospective, short-term clinical assessment of a 38-year-old male firefighter, with a high-velocity knee trauma, from clinical assessment, through diagnosis, surgery and full recovery, of a posterolateral corner reconstruction done simultaneously with anterior and posterior cruciate ligament reconstruction, using an Achilles tendon allograft. **Material and methods:** Clinical evaluation was performed using Tegner-Lysholm Knee Scoring Scale at different follow-up visits. After initial visit, this patient presented with an increased varus, recurvatum laxity (varus thrust gait, positive dial test) and mild external rotation. Magnetic resonance imaging was performed to determine the damaged structures and eventual other simultaneous injuries; after X-ray evaluation, diagnosis was KD (type III Schenk) with anterior, posterior cruciate (ACL, PCL) and posterolateral corner (PLC) ruptures. Intraarticular part was performed arthroscopically (tourniquet), PLC being performed after tourniquet release. Four tunnels (2 femoral, 2 tibial) were drilled for ACL and PCL reconstruction, grafts were passed, and fixed, after proper tensioning, with interference screws; PLC reconstruction being performed (without tourniquet), with intraoperative X-ray control to avoid tunnels interference, with graft passage, proper sequential tensioning and interference screws fixation. Postoperative rehabilitation was split in 6 weeks with knee immobilizer and up to 6 months with hinged knee brace. Lysholm score was 52 pre-operatively and 81 at 6 months post-operatively. Tegner activity scale was 6 before surgery and 5 after six months. **Results:** After skin healing, knee's stability was regained and proper ROM was achieved after a long immobilization and difficult rehabilitation regimen. One year later, clinical examination showed proper ROM, good knee stability and good activity level. **Conclusions:** Multiple ligament knee (MLK) reconstruction in a KD is feasible, with good results after proper knee immobilization and rehabilitation. Allografts are safe and effective, with no graft rejection.

Keywords: knee trauma, multiple ligaments, allograft

PRIMARY AND REVISION HIP REPLACEMENT: MID-TERM RESULTS USING BONE GRAFTS AND REINFORCEMENT DEVICES FOR ACETABULAR RECONSTRUCTION

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Background: Our aim was to retrospectively analyze mid-term subjective and objective results of acetabular reconstruction in primary and revision hip arthroplasty comparing impacted bone grafts with reinforcement devices. **Material and methods:** Out of 68 patients screened for inclusion, only 35 met the inclusion criteria. Patients were split into two groups: group I - patients with primary total hip arthroplasty (n=20) and group II - patients with revision hip arthroplasty (n=15). Group I had the acetabular cavity reconstructed by morselized bone impacted grafts and cementless acetabular cups. In group II acetabular cavity was

reconstructed with morselized grafts and in cases of a superior bone defect with structural bone grafts. Hip centre of rotation was restored close to the optimal position for group I and lowered in all cases for group II. Subjective results were analyzed using WOMAC score and Visual Analogue Pain (VAS) scale. Objective results were assessed using Harris Hip Score (HHS) correlated with radiological findings. Primary endpoints were analyzed at 6 and 12 months follow-up visits. **Results:** Group I WOMAC score improved at 12 months compared to six months follow-ups. Group II had a WOMAC score of 20.5, at 6 months follow up with an improvement of 34.5% at 12 months visit (31.3, SD ± 16.4). There were no significant difference in VAS at different follow-up visits and between groups. Group I HHS increased significantly at 12 months (87.8, SD ± 11.1) compared to six months visit (77.2 ± 18.2). Group II had similar results at one year (88.7, SD ± 9.2) and at 6 months (75.5 ± 15.4). **Conclusions:** Mid-term results at one year follow up proved that both methods are viable options in primary or revision hip replacement. Both subjective and objective assessments prove once again that outcomes are similar with both techniques and results are correlated with the degree of bone loss.

Keywords: Acetabular reconstruction, Revision hip arthroplasty, Bone grafting, Reinforcement device, Acetabuloplasty

THE ANTIBIOTIC EFFECT ON THE MECHANICAL PROPERTIES OF BONE CEMENT

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Background: The efficacy of an antibiotic mixed with bone cement against various infections was first reported in the 1970s. Nowadays, due to the growing number of antibiotic-resistant bacterial infections, orthopedic surgeons sometimes need to prepare bone cement mixed with different antibiotics. Less is known about the effect of different bone cement and combinations of antibiotic, the elution profile and its mechanical strength. Our goal is to compare the mechanical strength of a commercially available bone cement with antibiotic and a hand-mixed bone cement with antibiotic and a bone cement without antibiotic. **Material and methods:** In the present study we used our own model to measure the mechanical resistance of a conventional bone cement with and without antibiotic and home-mixed bone cement with antibiotic. Different mixing methods were compared using Gentamicin, in one case the cement and the antibiotic powder were mixed first and only then the liquid was added, and in the other case the liquid was added to the antibiotic and then the whole mix to the cement. **Results:** Our results allow us to conclude that the addition of the antibiotic to the cement is affecting negatively the strength and the load-bearing capacity of the cement. The antibiotic-free cement in terms of the mechanical strength was much stronger than the prefabricated bone cement with antibiotic and decreasing in the other two cases. **Conclusions:** The results of the current study show that although antibiotics significantly reduce periprosthetic joint infections, they significantly weaken the load-bearing capacity of cement.

Keywords: bone cement, load-bearing capacity, antibiotic

3D RECONSTRUCTION MODELS IN ORTHOPAEDICS

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Background: Nowadays the development of computer science has made computer-assisted modeling (CAD) widely available. Layer imaging obtained during some diagnostic procedures (CT, MRI) allows the establishment of a 3D geometric model. The model thus obtained must match the modeled organ in shape and size.Our aim was to investigate the accuracy of the computer based procedure used in the modeling process. **Material and methods:** Our examination was based on a knee joints CT and MR images. The segmentation was made plane by plane, separating femur and tibia using both CT and MRI and cartilaginous surface using the MRI images. The contour curves were placed on top of each other to find the plane covering them with an accuracy of 0.1 mm. We compared the obtained MRI and CT bone models sizes to the real bone sizes, the shape of the virtual MRI and CT bone models, and the fit of the cartilage cap obtained with the MRI to the CT and MRI bone surfaces. **Results:** Cartilage and bone, based on MRI images fit perfectly, within the set tolerance of 0.1 mm. Among the bone models, the CT reconstruction was the closest to reality, the largest deviation was 2.5 mm, and 5 mm for the MRI model. The MRI cartilage can be fitted to the CT model, however, the model made from combining them differs significantly (12 mm) from reality. **Conclusions:** Our models based on the same image series are the same, so the method is accurate. Inaccuracies are caused by different resolutions and segmentation.

The bone CT model can be used for larger components (femur, tibia). The model obtained by placing the cartilage cap on the bone surface is the most inaccurate, but it is geometrically closer to reality than the cartilaginous-bone model obtained by other methods (e.g., by thickening the bone surface).

Keywords: 3D reconstruction, 3D modeling, CAD modeling

FUNCTIONAL AND CLINICAL RESULTS AFTER TOTAL KNEE ARTHROPLASTY AND REHABILITATION

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Background: One of the most frequent intervention in our clinic is the total knee artroplasty. We use the KSS knee score questionnaire to evaluate the improvement of mobility after Total Knee Arthroplasty (TKA). **Material and methods:** The objective of this study was to assess the quality of life after TKA, using the KSS knee score questionnaire. We realized a study involving 85 patients, 37 males and 48 females, aged between 56 and 72 (mean age 67,4) with knee arthrosis treated between 2019-2020, at the Orthopedic and Traumatology Clinic in Târgu Mureş. All the patients were assessed using KSS Knee Scoring Scale that includes symptoms, functional limitations in daily activities and intense activities, but also the patients perception of the knee condition and function. **Results:** The KSS Knee Scoring Scale was determined before surgery, in 16 cases (18,8%) we obtained values between 55-65 (which means a fair outcome) and in 69 cases (81,2%) we obtained a score <50 (which means a poor outcome); in the age group <60 years we observed a fair outcome in 10 cases, between 60-65 years mostly were cases with a poor outcome (12 cases). After total knee arthroplasty we obtained in 12 cases (13,7%) values between 65-85 (a fair outcome), in 48 cases (56,8%) a score between 84-94 (good outcome) and in 36 cases (29,5%) values between 94-100 (excellent outcome). In the age group >65 years, 7 cases were with a fair outcome, another 11 cases between 60-65 years were a good outcome and <60 years we had mostly cases with an excellent outcome - 5 cases. **Conclusions:** Using the KSS knee scoring scale we demonstrated a improvement in patients quality of life after TKA and rehabilitation.KSS Knee Scoring Scale.

Keywords: KSS Knee Scoring Scale, Total Knee Arthroplasty, rehabilitation

LIFE AFTER TOTAL HIP ARTHROPLASTY – ASPECTS OF ACTIVITY LEVELS AND LIFE QUALITY

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Background: Osteoarthritis of the hip is one of the most disabling conditions in the world, as it significantly affects the quality of life of patients. It is a chronic condition that causes severe pain, determines the impossibility of motion, thus limiting the patient's activity. The most effective treatment for this disease is total hip arthroplasty. The objective of this study is to determinate the activity level and life quality after total hip arthroplasty. **Material and methods:** We realized a study involving 97 patients who had undergone unilateral uncemented total hip arthroplasty at the Orthopedic and Traumatology Clinic in Târgu Mureş. For patient's satisfaction quantification we used Harris Hip Score that includes symptoms, functional limitations in daily activities and intense activities, but also the patient's perception of the hip condition, and occupational activity levels. **Results:** The Harris Hip Scoring Scale was determined before surgery, revealed significant deficiency of flexion, abduction, external rotation and adduction between the healthy and affected hip. Before total hip arthroplasty in 18 cases (19,5%) we obtained a score 70 years we observed a suitable outcome of 4 cases, but the mostly cases was with a poor outcome (9 cases). After uncemented total hip arthroplasty we obtained in 23 cases (22,3%) values between 70-79 (fair outcome), in 41 cases (39,7%) a score between 80-89 (good outcome) and in 33 cases (38%) values between 90-100 (excellent outcome). **Conclusions:** Using the Harris Hip Score we demonstrated an improving patients life quality after total hip arthroplasty. After total hip arthroplasty, it is necessary to perform a physiotherapy program.

Keywords: Harris Hip Score, Total hip arthroplasty, Quality of life

A RESEARCH STUDY REGARDING OSTEOSYNTHESIS VERSUS TOTAL HIP ARTHROPLASTY OR HEMIARTHROPLASTY IN HIP FRACTURES IN THE ELDERLY

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Background: One of the most expanding existential problem for the orthopedic society and the patient is the osteoporotic fractures of the femoral neck and the trochanteric region. Despite the wide range of implant designs and the advances and innovations, the mechanical and systemic complication and mortality rates remain high. The purpose of our study is to decide which treatment option improves the outcome in femoral neck and trochanteric femur fractures in elderly comparing osteosynthesis and total joint replacement. **Material and methods:** A research following hip fracture treatment was studied from our clinical detabase of Spitalul Clinic Judetean. All the randomized control trials, reviews and meta-analyses comparing fixation implants or total joint replacement in the elderly were included. **Results:** Trochaneric fractures advocates for internal fixation whereas fractures of the femoral neck with a grade of displacement often require total hip arthroplasty. For a good functional results in active patients and the elderly cemented total hip replacement is recommended in the detriment of cementless techniques.Hemiarthroplasty is the first choice in treating infirm patients with cognitive impairment and multiple comorbidities. Trochanteric fractures (types A1 and A2 AO/OTA) are successfully treated with extramedullary or intramedullary fixation. For an uneventful healing ,stable fixation and adequate reduction are prerequisites. In order to prevent iatrogenic complications , the operative technique must be highly meticulous. **Conclusions:** Overall, many parameters cand affect the outcome in the treatment of hip fractures and fragility. An important role is played by the technical features and surgeon characteristics and the ultimate solution is to be developed. However, patient characteristics are very important in decision-making, even though fracture morphology advocates for a specific treatment option.

Keywords: Joint replacement, Hip, Ostheosyntesis, Fractures, Elderly

ASSESSMENT OF POSTOPERATIVE SATISFACTION AFTER TOTAL KNEE ARTHROPLASTY

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Background: The main goals of total knee arthroplasty (TKA) performed on patients with severe osteoarthritis are restoring knee biomechanics and relieving pain. Although surgical techniques and postoperative care are improving, there is still a variable number o patients with a low level of satisfaction after TKA. **Material and methods:** The objective of this study is to evaluate the satisfaction level of patients who underwent total knee arthroplasty. We selected 98 patients who underwent 108 TKA's between November 2019 and November 2020 from the Orthopedic and Traumatology Clinic in Târgu Mureş. The follow-up period was one year. For patients satisfaction quantification we used Likert Scale. Pre- and postoperative symptoms and functional status were assessed using Knee Society Score (KSS) and Western Ontario and McMaster Universities Ostearthritis Index (WOMAC). **Results:** From our total number of 108 TKA's, 89,8% of patients showed satisfaction after the procedure. Postoperative satisfaction was correlated with WOMAC function score ($p = 0.021$), postoperative WOMAC final score ($p = 0.037$) and expectation ($p = 0,030$). **Conclusions:** Even if there was a vast majority of patients satisfied after TKA was performed, there were still a minority who expressed dissatisfaction.

Keywords: total knee arthroplasty, osteoarthritis, function, satisfaction

IMPACT OF OBESITY OVER CEMENTED POSTERIOR-STABILIZED TOTAL KNEE ARTHROPLASTY

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Background: Obesity is known to have an important impact over long term outcome of total knee arthroplasty due to the mechanical stress at the bone-cement-implant interface. **Material and methods:** The objective of this study is to quantify the impact of obesity on cemented posterior-stabilized total knee arthroplasty. A retrospective study was conducted over 78 patients with a body mass index ≥ 30 who underwent total knee artropasty with cemented posterior-stabilized prosthesis between 2010 and 2013 at the Orthopedic and Traumatology Clinic in Târgu Mureş. **Results:** Our study included a total number of 78 patients, from witch 43 females and 35 males, between 52 to 71 years old (mean age 63.5 years) with a body mass index range between 30,49 to 35,59 (mean body mass index of 33,04) in a follow up between 7 to 10 years. From the total number, 24 (30,76%) patients underwent total knee arthroplasty revision within mean time of 8 years follow-up, from witch 19 (24,35%) were cases of failure due to aseptic loosening of the prosthetic components, 2 (2,56%) cases of septic loosening due to infection of joint and 3 (3,84%) cases of polyethylene insert wear. **Conclusions:** Obese patients tend to undergo total knee arthroplasty revision due to the mechanical stress over the cemented components, primarily leading to aseptic loosening.

Keywords: obesity, aseptic loosening, total knee arthroplasty revision, mechanical stress

PATHOLOGY

UNEXPECTED PLOT TWIST IN AN AUTOPSY CASE

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Background: Adenocarcinoma is one of the most common type of malignant pulmonary tumors, but osseous metaplasia of it is a rare and poorly understood, interesting phenomenon. **Material and methods:** We present you an autopsy case of a 79-year-old man, who dies in the emergency department, with the main clinical diagnosis of metastasis in the ribs from unknow origin. During the external inspection we found a nevus, localized on the back, which based on the ABCD system of melanomas we classified as "suspicious for malignancy". The autopsy revealed the presents of multiple black punctiform lesions, costal metastasis and a pulmonary tumoral nodule. **Results:** The histopathology examination infirmed the hypothesis of metastatic melanoma. The microscopical examination of the tumoral lung nodule revealed an infiltrating neoplasic process with papillary architecture, the same aspect beeing present in the secondary determinations too. **Conclusions:** With a double plot twist, we closed the case with the diagnosis of pulmonary papillary adenocarcinoma with osseous metaplasia.

Keywords: Adenocarcinoma, Osseous metaplasia, Autopsy, Nevus

HER2 HETEROGENEITY ASSESSMENT IN GASTRIC CANCER

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Background: Gastric cancer (GC) is still exhibitinng an increase in terms of prevalence, despite the improvement of diagnostic and therapeutic tools. It represents a health problem, not only due to increasing number of diagnosed patients, but also because of its marked phenotype heterogeneity. **Material and methods:** After the histologic assessment on Hematoxylin-Eosin (HE) staining, the sixty included cases of GC were analysed immunohistochemically (IHC) for HER2 and graded according to Ruschoff criteria: membranous staining clearly visible only at high magnification (HER2-1+), membranous staining visible on medium magnification (HER2-2+) and distinct, membranous staining discernible on low magnification (HER2-3+), all of them with complete, lateral- or U-shaped staining in at least 10% of tumor cells, while cases with other than membranous staining or no staining at all were graded 0. All cases were further analysed with fluorescence in-situ hybridization (FISH) for HER2 gene status, using The Bond Max fully-automated IHC and FISH stainer (Leica). The HER2 phenotype of the included tumors was correlated with the pathological parameters, such as tumor histologic type, depth of invasion, presence or absence of distant metastases or lymph node metastases. **Results:** A percentage of 25% of GC expressed HER2 of any degree on IHC analysis, but no more than 70% of those cases were demonstrating amplification on FISH analysis. Different regions of tumor showed different grades of HER2 amplification. 90% of HER2-positive cases represented G1-well differentiated GCs. None of the other features, such as depth of invasion, presence or absence of metastases at distant sites or lymph nodes, were correlated wih HER2 status, analysed on IHC or FISH. **Conclusions:** In gastric cancer, heterogeneity is a feature exhibited in both microscopic morphology and HER2 expression, using either immunohistochemical assessment or FISH technique. This variability is observed not only between different tumors, but also within the same tumor.Grant support: PCCF20/2018/Autoritatea Nationala Pentru Cercetare Stiintifica

Keywords: Gastric Cancer, Heterogeneity, HER2, FISH

TDT/CD34 DOUBLE NEGATIVE T CELL LYMPHOBLASTIC LYMPHOMA IN A 5-YEAR-OLD PATIENT- CASE REPORT

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Background: T cell lymphoblastic lymphoma (T-LBL) is a highly aggressive neoplasm of lymphoblasts committed to the T-cell lineage, which typically presents with a high leukocyte count and frequently shows mediastinal involvement, often with a rapidly growing mass, leading to an emergency with various symptoms. T-LBL comprises about 15% of childhood lymphoblastic lymphomas, and has a worse prognosis among pediatric population in comparison with B-LBL. **Material and methods:** Herein, we report the case of a 5-year-old female patient, who presents superior vena cava syndrome, symptoms of heart failure and respiratory insufficiency. Imagistic investigations reveal a huge mediastinal mass, with 100x55 mm diameter, which compresses the right atrium in association with fluid accumulation in the pericardial and pleural cavities. The rapidity of the tumor growth and worsening symptoms make it impossible to intervene with a surgical excision, leading to the patient's death.Multiple samples were taken from the tumor mass and the surrounding organs, which were processed with standard histological techniques; consecutively immunohistochemical staining was performed and its characteristics and diagnosis were discussed. Differential diagnostic criteria were also taken in account. **Results:** Histologically the tumor tissue was composed of a monomorphic proliferation of small cells, with scanty cytoplasm, nuclei with condensed chromatin, numerous mitoses and extended areas of necrosis and hemorrhage, and was extended in the adjacent myocardial tissue, lungs, diaphragm. Immunohistochemically the tumor cells expressed diffusely LCA, CD3, CD8, CD99 and Vimentin, but they were TdT, and CD34 negative. Based on the tumor cells immunophenotype, the pathological diagnosis of this mediastinum occupying tumor was consistent with TdT/CD34 double negative T cell lymphoblastic lymphoma. **Conclusions:** The particularity of this case is represented by the tumor cells phenotype. TdT/CD34 double negative lymphoblastic leukemia/ lymphoma are exceedingly rare and aggressive entities, they represent challenging cases which may pose diagnostic difficulties to hematopathologists, but this pitfall should not preclude a correct diagnosis.

Keywords: lymphoma, lymphoblast, T- cell

APPENDICEAL MUCINOUS NEOPLASM (LAMN) – A RARE MICROSCOPIC ENTITY – CASE PRESENTATION

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Background: Appendiceal mucinous neoplasm is a rare entity, accounting for 1% of gastrointestinal neoplasms and is found in less than 0.3% of appendectomy specimens. These tumors are most often clinically silent and discovered incidentally either during a survey or at the time of surgery for other causes. **Material and methods:** We present a rare case of a 69-year-old male who was admitted to the surgical emergency with severe pain in the right side of his abdomen and fever, one month after being treated for a blocked appendiceal abcess. Emergency laparotomy with appendectomy was performed. **Results:** Gross inspection revealed the specimen of appendix in three fragments, with a opalescent serosal surface and hemorragic zones. Microscopically, an epithelial proliferation with mucinous aspect is observed, with villous and filiform architecture, located in the fundic appendicular region. This tumoral proliferation consists of columnar cells with hypermucinous cytoplasm, which alternate with areas where the epithelium is flattened, with mucin depletion. The nuclei show cyto-nuclear atypia with changes in low-grade adenomatous dysplasia. Adjacent to this areas, a process of marked fibrosis of the wall is observed with pools of acellular mucin that dissects the wall and extends on the surface of the appendicular serosa. According to the depth of invasion the tumor was categorised as pT4a. A close clinical and paraclinical follow-up has been suggested. **Conclusions:** The most worrisome complication of these neoplasms, irrespective of grade, is that patients can present with appendiceal perforation and mucin extravasation in the abdominal cavity, leading to pseudomyxoma peritonei, characterised by multiple mucinous implants. This case presents the importance of choosing the appropriate medical treatment and follow-up modality to prevent recurrence, seeding, and later development of pseudomyxoma peritonei.

Keywords: appendix, pseudomyxoma peritonei, mucinous neoplasm

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ELIGIBILITY CRITERIA FOR THE DONATED LIVER TO BE TRANSPLANTED: ONE-STEP CLOSER TO CURRENT PRACTICE AND PRESENTATION OF TWO CASES

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Background: Quality of donated livers, examined on frozen sections, is a key-factor for expanding the donor fund for liver transplantation. **Material and methods:** This study reviews the current knowledge on pre-transplant histology of liver, based on literature data and two cases of frozen section evaluation of liver biopsies taken from extended criteria donors (previously called ''suboptimal grafts''). According to the Eurotransplant definition, a liver donor is marginal (suboptimal graft) if following criteria are met: Donor age >65 years; ICU stay with ventilation >7 days; BMI >30; Steatosis of the liver >40%; Serum sodium >165 mmol/L; Transaminases: ALT >105 U/L, AST >90 U/L; Serum bilirubin >3 mg/dl and a edge liver biopsy is needed. **Results:** The first case is a 69 y.o. female, dead-brain donor with intracerebral hemorrhage with ventricular burglary. A liver edge biopsy was sent for extemporaneous examination. The subcasular parechyma showed steatosis wich affected over 60% of hepatocytes. Also portal fibrosis was observed, with fine septa of fibrosis within the hepatic lobules (METAVIR SCORE GRADE 1). No inflamation and no necrosis are observed. The liver was not suitable for transplant. The second case is a 77 y.o. male, dead-brain donor also with intracerebral hemorrhage. The extemporaneous examination of the liver parenchyma showed areas of fatty change, predominantly macrovacuolar, wich affect up to 30% of hepatocytes. Also portal fibrosis was observed, focally, with fine septa of fibrosis that exceed limitating membrane of the hepatic lobuls (METAVIR SCORE GRADE 2). Reduced inflamation was seen but no necrosis. The liver was succesfully transplanted to a patient with hepatocellular carcinoma. **Conclusions:** Frozen sections represent the gold standard in the selection of donor livers for transplantation, especially in case of extended donor criteria, and should be performed more frequently in order to avoid unnecessary loss of potentially suitable organs and to prevent transplantation of inappropriate organs.

Keywords: liver transplant, liver biopsy, histological criteria, liver biopsy

CHALLENGES IN THE DIAGNOSIS OF SMALL CELL LUNG CARCINOMA ON SMALL BIOPSIES: A CASE REPORT

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Background: Small cell lung carcinoma (SCLC) is a relatively common lung tumor that represents a clinically relevant category of high-grade neuroendocrine carcinoma. Nevertheless, the diagnosis of SCLC on small biopsies is challenging. **Material and methods:** We present the case of 63-year-old man admitted to the hospital for cough and dyspnoea. Computed tomography scans of the chest with contrast revealed a lung mass in the left superior lobe. A bronchoscopy was performed and a biopsy sample was taken from the tumor. **Results:** Microscopically, the biopsy fragments were all infiltrated by a tumor mass. The tumor consisted of a proliferation of densely packed small tumor cells, with a sheet-like diffuse growth pattern. The cells revealed a high nuclear-to-cytoplasmic ratio with scant cytoplasm and indistinct cell limits; the nuclei were hyperchromatic and irregular. Brisk apoptotic debris and crush artefacts were also observed. Immunohistochemically, the tumor cells stained positive for TTF1 (nuclear) and CK AE1/AE3 (dot-like, paranuclear). CD56 staining revealed a fine, diffuse, membranous expression, while Chromogranin and Synaptophysin were negative. The Ki67 proliferation index was high (95%). P16 labeling revealed an intense and diffuse positive nuclear and cytoplasmic staining in the tumor cells. Based on the morphological features and the immunohistochemical profile, a diagnosis of SCLC was set. **Conclusions:** The histopathological diagnosis of SCLC on small lung biopsies is challenging and cannot only rely on morphological features. Immunohistochemistry is these cases is mandatory. The triple marker composed of TTF1, CD56 and p16 may be useful in establishing the correct diagnosis.

Keywords: Immunohistochemistry, SCLC, lung, biopsy, TTF1

NEW INSIGHTS IN THE DIAGNOSIS OF PITUITARY ENDOCRINE TUMORS

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Background: Background. The extremely variable spectrum of evolution and the numerous controversial issues related to the classification of endocrine tumors of the anterior pituitary gland have determined the need to introduce a new terminology. **Material and methods:** Material and method. In 2016 the International Pituitary Pathology Club (IPPC) agreed with the proposal that the neoplasms of adenohypophyseal cells, called pituitary adenomas, should now be called "pituitary neuroendocrine tumors" (PitNETs). Moreover, in order to predict the response to treatment of pituitary tumors, an attempt was made to find useful histopathological markers. **Results:** Results. The expression of LMWK may provide important information about different tumor subtypes. Sparsely granulated somatotroph PitNETs are more common in young people while densely granulated have a higher rate of postoperative remission. The expression of somatostatin receptors, especially in those patients with somatotroph PitNETs, can be very helpful in the management of the disease. **Conclusions:** Conclusions. Recently the European Pituitary Pathology Group (EPPG) has also proposed a standardised diagnostic approach for PitNETs to improve the diagnosis of these tumors. The main objectives of EPPG were to standardize immunohistochemical protocols useful in the diagnosis of PitNETs, and to identify new markers in predicting the response to treatment.

Keywords: pituitary gland, endocrine tumors, PitNET, standardised diagnostic approach

GERM-CELL TUMORS: A SMALL COLLECTION OF CASE REPORTS

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Background: Germ-cell tumors are a heterogeneous group of neoplasms that account for about 2-4 % of all cancers in children and adolescents younger that age 20, with a common origin in the primitive germ cells. They can be benign or highly malignant,

but also mixed-type, comprising a wide variety of histological patterns and causing challenging diagnostic issues. Even if the gonads are typically affected, they can also have extra-gonadal locations. Aim: To present a small collection of four cases of germ-cell tumors, each one with its own particularity. **Material and methods:** The four cases were processed in the Department of Pathology, Tîrgu-Mureş Emergency County Hospital. Were taken into account cases of germ-cells neoplasms comprising both genders, different age groups and various anatomical sites. For the evaluation of the tumors were used usual stains and also a wide immunohistochemical pannel. **Results:** Two of the patients were diagnosed with mixed germ-cell tumors with gonadal involvement, a female and a male, belonging to different age groups. Another case of mixed type germ–cell neoplasm was described in a 3 years old female pacient, with retroperitoneal location, while the fourth case describes a germ-cell tumour involving the pineal gland, affecting a 8 years old male. **Conclusions:** Germ-cell tumor diagnosis can represent serious challenges for the pathologists, taking into account the diversity of morphological patterns that can co-exist in the same tumor, in the case of mixed-cell types. Also, they affect both genders and are described in people of different age groups, involving not only the gonads, but also various extra-gonadal sites. This type of tumors may prompt transdisciplinary attention for the proper therapeutic management.

Keywords: germ-cell tumors, histological patterns, extra-gonadal sites

ENDOCERVICAL MUCINOUS ADENOCARCINOMA ISMC TYPE (INVASIVE STRATIFIED MUCIN-PRODUCING CARCINOMA): A DIAGNOSTIC CHALLENGE - CASE PRESENTATION

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Background: The incidence of endocervical adenocarcinomas has increased from 5% to up to 20-25% and most of cases are associated with high risk oncogenic human papilomavirus, reason for why endocervical adenocarcinomas are classified , according to WHO 2020, in HPV associated endocervical adenocarcinomas and HPV-independent endocervical adenocarcinomas. ISMC (invasive stratified mucin-producing carcinoma) is a HPV-associated variant of adenocarcinoma, microscopically caracterised by a wide range of patterns including solid, papillary, trabecular, insular, micorpapillary, invasive nests of stratified columnar cells, arranged in a palisade on the periphery and contain a variable amount of intracytoplasmic mucin. **Material and methods:** We present a case of 31 y.o. woman in whom the suspicion of a cervical cancer is raised and a cervical biopsy is performed. **Results:** Multiple very small biopsies, whitish, friable were sent for histopathological examination. Microscopically, the tumor tissue sent for examination is very fragmented, most of them are represented by conjunctivo-vascular cores, rich in inflamatory cells, covered by atypical epithelium, but infiltrative agregates with obvious desmoplastic reaction are also present. Some fragments have a microcystic appearance, with columnar basal cells arranged in palisade and cells in the surface layers suggesting scuamous atipical cells. Some cells contain intracytoplasmic mucin. Immunohistochemically, the tumor cells were positive for p16 (block type), keratin 7,and negative for WT1, CDx2. p63 and p40 mark nuclei in the basal cell-layer. CD10 has a membrane staining in half of cells. **Conclusions:** Endocervical mucinous adenocarcinoma ISMC type is a very rare entity that can be misdiagnosed due to various histological aspects and requires an interdisciplinary approach to be detected in the early stages because the most important prognostic factor is stage, with a survival rate near 100% in early invasive adenocarcinomas.

Keywords: endocervical adenocarcinoma, HPV-associated, ISMC, histological aspects

CASE REPORT: SUPRASELLAR GERMINOMA

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Background: Intracranial germinomas are malignant central nervous system tumors that originate from primordial germ cells. Germinomas most commonly develop in the pineal and suprasellar regions, with the highest incidence among adolescents and young adults. We present a rare case of germinoma involving the suprasellar region in a 16-year-old patient. **Material and methods:** The patient presented with loss of visual acuity, hypothyroidism, hypopituitarism and diabetes insipidus. Computer tomography

showed a well-circumscribed, suprasellar mass with high density. He was submitted to the Neurosurgery Department and a partial resection of the tumor was decided. The specimen was sent for histological examination. **Results:** Histologically, the tumor was composed of sheets and nests of large polygonal tumor cells separated by thin septae rich in lymphocytes. The tumor cells show fairly distinct cytoplasmic borders with abundant, clear, periodic acid-Schiff (PAS)-positive cytoplasm, centrally placed nuclei, round to polygonal with prominent nucleoli. Frequent mitotic figures are identified. The infiltrating character of the tumor is observed on adjacent brain parenchyma, highlighted by GFAP immunostaining. Immunohistochemically, neoplastic cells showed strong reactivity for PLAP, CD117, Podoplanin whereas there was no immunostaining with CD30, β-HCG, AE1/AE3 cytokeratins, AFP. **Conclusions:** Given the fact that suprasellar germinomas are frequently associated with diabetes insipidus, early investigations regarding the existence of this tumor should firstly be taken into consideration. Despite the aggressive nature of the tumor, radiotherapy and chemotherapy have shown good results in most cases.

Keywords: germ cell tumor, germinoma, suprasellar, diabetes insipidus

UTILITY OF THE CELL-BLOCK IN THE DIAGNOSIS OF MALIGNANT PLEURAL EFFUSION: A CASE REPORT

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Background: An accurate cytopathological evaluation of pleural effusion specimens is of great importance for the clinical management of cancer patients. **Material and methods:** We present the case of a 71-year-old male patient with a previous history of lung adenocarcinoma, admitted to the Department of Pneumology for severe dyspnoea. Following clinical and paraclinical examination, a diagnosis of pleural effusion was established. Thoracentesis was performed and the pleural fluid was send to the Department of Pathology for cytological examination. The evaluation of the sample was first performed on a conventional smear stained by the Papanicolaou staining method. **Results:** On the conventional smear, reactive mesothelial cells were identified, as well as a second population of highly atypical cells, with enlarged nuclei and prominent nucleoli, most of them arranged in three-dimensional clusters. The cell block technique was further performed. On the cell-block Hematoxylin-Eosin stained slide reactive mesothelial cells were observed, as well as the second population of highly atypical cells, appearing either as individual cells or revealing as micropapillary structures. The diagnosis of malignant smear was established, according to the International System for reporting serous effusion cytopathology. Immunochemistry stains were used to rule out mesothelioma and to confirm lung adenocarcinoma. The malignant cells were positive for TTF-1 and negative for WT-1. PAS-Alcian staining was also performed and revealed PAS positive mucins in the cytoplasm of the malignant cells. **Conclusions:** The cell block technique is simple, reproducible and has a high yield for malignant plerual effusion. It plays an important role in the diagnosis, guiding the treatment of maligant pleural effusion. In our case, TTF1 positivity of the malignant cells confirmed the secondary pleural involvement by lung adenocarcinoma.

Keywords: Cell-block, Cytology, Pleural effusion

AGGRESSIVE VARIANTS OF UROTHELIAL CARCINOMA

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Background: In recent years, pathological evaluation of bladder cancer revealed great tumor heterogeneity, and therefore an increasing number of histological variants of urothelial carcinoma (UC) have been described. The recognition of these histologic variants is important, knowing that some of them may require a different therapeutic approach. **Material and methods:** Wepresent the criteria for the histological diagnosis of UC variants. **Results:** Those with a more aggressive behavior (squamousdifferentiation, glandular differentiation, micropapillary UC, sarcomatoid UC, plasmocitoid UC, small-cell UC) are highlighted. **Conclusions:** Recognizing the presence of UC variants is sometimes challenging, especially in limited tissue sample. A correctdiagnosis is essential, considering that these histological variants often indicates poor prognosis, with increased risk not only forrecurrence and progression, but also for lymph-node and distant metastasis.

Keywords: bladder cancer, urothelial carcinoma, aggressive variants

INTRACRANIAL SOLITARY FIBROUS TUMOR – A CASE REPORT

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Background: Solitary fibrous tumor (SFT) is a neoplastic proliferation of mesenchymal origin, usually arises in the pleural cavity. In rare cases, SFT can occur in the central nervous system, predominantly in female patients, commonly located extra-axially, uncommonly intraparenchymal or intraventricular. Grade 3 malignancy or brain invasion indicates a poor prognosis. **Material and methods:** A female patient, 65-year-old presented with neurological symptoms, therefore she was taken a brain magnetic resonance imaging (MRI), in County Emergency Clinical Hospital of Târgu Mureş, Radiology Department. It was described as a high-density lesion close to the left frontal lobe. According to the patient's clinical history and radiological examination, the diagnosis of meningioma was suspected. The patient underwent the surgery (Neurosurgery Department), which confirms the meningeal origin of the tumor. **Results:** The histopathological examination of the specimen (Pathology Department) suggested a solitary fibrous tumor. The immunohistochemical staining showed that the tumor cells were diffusely positive for Bcl-2, CD99, Beta-Cathenin, Vimentin, focal positive for epithelial membrane antigen (EMA), and CD34, but were negative for GFAP and S100. The Ki67 proliferation index was relatively high. The immunohistochemical profile in our case was strongly suggestive for SFT. **Conclusions:** Differential diagnosis is important in daily practice. This case report highlights that the radiological and neurosurgical appearance of a meningioma-like tumors can suggest another types of mesenchymal tumors, originated on the surface of the meninges.

Keywords: solitary fibrous tumor, mesenchymal, intracranial

PITFALLS IN THE HISTOPATHOLOGICAL DIAGNOSIS OF NON-INVASIVE FOLLICULAR THYROID NEOPLASMS WITH PAPILLARY-LIKE NUCLEAR FEATURES (NIFTP)

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Background: In 2016 Nikiforov and colleagues proposed the reclassification of non-invasive, encapsulated follicular variant of papillary thyroid carcinomas as neoplasms with "very low malignant potential". The term "non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP)" was suggested for these tumors. This was a significant achievement for patients with thyroid neoplasms, as a diagnosis of NIFTP promotes a less-aggressive patient management that is, no need for completion thyroidectomy or radioactive iodine therapy. A year later, the NIFTP diagnosis was included in the fourth edition of the World Health Organization (WHO). **Material and methods:** This paper presents an outline of the history of NIFTP, as well as the current understanding of NIFTP in the scientific community. It also highlights the diagnostic criteria and the burden difficulties when dealing with NIFTP cases. **Results:** Characteristic histological features, inclusion and exclusion criteria for NIFTP, as well as sampling guidelines and differential diagnosis challenges are all discussed. **Conclusions:** The diagnosis of NIFTP requires meeting strict inclusion and exclusion criteria. The rigorous histopathological criteria should be strictly followed to avoid misdiagnosing lesions with more aggressive behavior as NIFTPs.

Keywords: NIFTP, thyroid, diagnosis

EXTENSIVE GASTRIC HETEROTOPIA IN THE DUODENUM: CASE REPORT

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Background: Gastric heterotopia is considered a developmental abnormality or a metaplastic response to injury characterized by the presence of mature gastric tissue outside the stomach. It is frequently associated with Meckel's diverticulum but also with other diseases of the gastrointestinal tract (gastritis with Helicobacter pylori, consumption of proton pump inhibitors) or with renal dysfunction. **Material and methods:** We present the case of a-68-year old patient, known with chronic end-stage renal disease, hemodialyzed, who was admited in the hospital with an episode of a large amount of melena, for which investigation was carried out. **Results:** The angio-CT examination revealed a small blood collection located in the gastric fundus. Endoscopy was performed and two polyps were ectomized, one from the caecum and one from the duodenum. The episodes of hemorrhage and melena worsen, for which surgery is performed and a large, ulcerated polypoid formation is discovered. Histopathological examination reveals in the proximal duodenum an extensive proliferation of polypoid appearance consisting of gastric foveolar type epithelium but also with the presence of antral and body glands. The specimen was negative for dysplasia and malignancy. **Conclusions:** Gastric heterotopia is a rare condition, these extensive lesions represent a favorable ground for the development of ulcerations and hemorrhages, due to high amount of acid secretion. Moreover, the exacerbation of gastrointestinal symptoms is also due to the patient's comorbidities, kidney damage being considered an important risk factor. Particularity of the case consists in the association of these two entities - gastric heterotopia and renal dysfunction, which, in the end, lead to severe gastrointestinal manifestations.

Keywords: gastric heterotopia, renal disfunction, melena

PYLORIC GLAND ADENOMA WITH HIGH-GRADE DYSPLASIA: THE PATHOLOGIST'S PERSPECTIVE

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Background: Pyloric gland adenoma represents 3% of all gastric epithelial polyps and most commonly occurs in body mucosa in females with gastric atrophy and autoimmune gastritis. Approximately half of the pyloric gland adenomas have high-grade dysplasia with the possibility of evolving into adenocarcinoma. For pathologists, gastric pyloric gland adenoma represents a challenge of diagnosis because it is a rare entity that, in particular, must be differentiated from foveolar-type adenoma. **Material and methods:** A 74-year-old man presented to the Gastroenterology Department with epigastric pain, asthenia, and fatigue. The medical history of the patient revealed arterial hypertension and previous cholecystectomy. The upper digestive endoscopy showed duodenal diverticulitis and a sessile polyp within the gastric corpus mucosa measuring 35x25x15 mm in size. An endoscopic polypectomy was performed, then the specimen was sent to the Pathology Department. **Results:** Microscopically, the gastric polyp was composed of closely packed pyloric-type glands lined by columnar or cuboidal epithelial cells. The glandular cells had a pale eosinophilic cytoplasm, small and oval to round nuclei, basally located. Some areas showed architectural glandular distortion, with cribriform glands, nuclear crowding, loss of polarity, and vesicular nuclei. Immunohistochemically, the glandular cells were positive for MUC5AC on the gastric surface but negative for intestinal-type marker MUC2. Periodic acid-Schiff/Alcian blue stain demonstrated the absence of an apical mucin cap. The histopathological diagnosis was pyloric gland adenoma with high-grade dysplasia and chronic inactive gastritis with glandular atrophy and complete intestinal metaplasia in the surrounding gastric mucosa. The polyp was completely resected. **Conclusions:** Pathological examination and immunohistochemistry are essential in the diagnosis of gastric pyloric gland adenoma. Because of malignant potential and its association with high-grade dysplasia, there is also an increased risk of synchronous gastric adenocarcinoma. Therefore, the patient will benefit from periodic endoscopic surveillance, mandatory after complete resection to screen for metachronous gastric lesions.

Keywords: pyloric gland adenoma;, high-grade dysplasia;, immunohistochemistry.

THE HISTOLOGICAL AND IMMUNOHISTOCHEMICAL APPEAREANCE OF NEVOID MELANOMA

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Background: Melanoma is one of the most aggressive tumors known. Naevoid melanoma is an uncommon subtype, which mimics the architectural features of an intradermal naevus or a Spitz naevus. The prognosis for this tumor is depending on the Breslow index and also the proliferation index, similar to the other types of melanoma. **Material and methods:** We describe the case of a 45 year old male patient who presented to the Surgery Department with a nodular tumor located on his face. He described a traumatism at that level, which was the main reason of his concern. The lesion was removed and the specimen was sent to the Pathology Department of the Mures County Clinical Hospital for analysis. **Results:** On the gross examination, we observed a round nodule, with elastic consistency, well limited, of 7x8 mm, which presented a brown color. Microscopically, at low magnification, we observed a relatively symmetrical lesion, sharply demarcated, which was extended towards the reticular dermis. In the upper part of the tumor, the cells were organized in nests that became less visible towards the depth of the lesion. At high magnification, the tumoral cells presented marked atypia, with pleomorphic, large nuclei, proeminent eosinophilic nucleoli and mitoses. In the epidermis, pagetoid upward migration that reached the korneus layer was observed. The immunohistochemical examination showed positivity of the tumoral cells for SOX10, Melan A, S100, with highly characteristic expression in the different parts of the tumor. The proliferation index ki67 was expressed in maximum of 40%. **Conclusions:** The nevoid melanoma is a rare subtype of melanoma that can resemble a naevus, therefore a close examination along with immunohistochemical investigations are extremely important for the identification of this lesion.

Keywords: melanoma, nevoid, immunohistochemestry

HISTOLOGICAL AND IMMUNOHISTOCHEMICAL FEATURES OF EPITHELIOD MALIGNANT PERIPHERAL SHEATH TUMOR – A CASE STUDY

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Background: One of the most rare form of malignant peripheral sheath tumor is the epitheliod malignant peripheral sheath tumor(malignant epitheliod Schwannoma).Most often develop from pre-existing benign tumors of the nerve sheath and generally have a high degree of aggression. **Material and methods:** A 86-year-old man presented to the Plastic Surgery Department with a tumor in the left malar region, ulcerated and also with active bleeding.For further investigations, the specimen was sent to the Department of Pathology. **Results:** The gross features of the specimen were of an irregularly shaped tissue fragment, measuring 26x24x14 mm, with elastic consistency, gray , with multiple hemorrhagic areas on the surface.On the microscopic examination we observed a fragment of ulcerated epithelium, with fibrino-leukocyte deposits on the surface.Underlying, a relatively well-defined tumor proliferation was observed, composed of large epithelioid tumor cells, polygonal, with marked pleomorphism.Tumor proliferation presented alternating hypocellular and hypercellular areas.Tumor cells were generally arranged in bundles; in some places, palisade areas were observed. The cells have abundant cytoplasm, eosinophils, hyperchromic nuclei, vesicles and prominent eosinophils nucleoli. Increased mitotic activity was observed, 60 mitoses / 10 HPF (Ob. 40x). The cells were surrounded by a fibro-myxoid stroma. Among the cells,an abundant inflammatory infiltrate is observed.Outbreaks of bleeding are also seen.To make the differentiated diagnosis we performed the following immunohistochemical reactions: S100,Sox10,Vimentin which were intensely positive in the tumor cell population, Ki67 positive in 80%of the tumor cell population, unlike Melan A, HMB45,CTK AE1/AE3 which were negative.These features guided us to an epithelioid malignant peripheral nerve sheath tumor. **Conclusions:** The difficulty in diagnosing these type of tumors is given by the overlap in terms of appearance and positivity of immunohistochemical reactions with other types of tumors. It is assumed that due to their superficial localization,this tumors have a better prognosis and a lower rate of metastasis but this aspect is still under study.

Keywords: malignant tumor, peripheral sheath, epitheliod

PEDIATRICS

THE ACTORS OF THE EDUCATIONAL SEQUENCE IN MEDICAL PEDAGOGY

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Background: In the context of medical-pedagogical interdisciplinarity, both teachers and doctors, along with the patient-student and not only, are found as actors in the educational sequence carried out in the hospital / hospital environment. **Material and methods:** observation, demonstration, conversation **Results:** Here, the relationship in communication between: teacher-patient student and doctor-patient student, becomes a special one, due to the new approach, so that both educational and medical structure is related to another level of cognizance, starting from age peculiarities of the patient and ending with barriers in communication. **Conclusions:** Therefore, teamwork brings medical-pedagogical benefits, quantified in the results of recovery, in this case, of the patient-student.

Keywords: student, doctor, teacher, communication, results

COVID-19-ASSOCIATED COAGULOPATHY, A FATAL COMPLICATION IN CHILDREN

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Background: Fortunately, life-threating forms of COVID-19 are rare in children and seem to be indirectly related to the patient's age being underlined that half of children with these forms are usually below the age of 1 year. COVID-19 associated coagulopathy was proved to result in an increased risk for venous, arterial and microvascular thrombosis. **Material and methods:** We report the case of a 4-year-old male who died of COVID-19 in order to underline that in spite of the small age, children might develop severe form with fatal complications such as coagulopathy. **Results:** The child was admitted to our clinic for generalized seizures with a history of ureterovesical junction obstruction, mild hydronephrosis, and an episode of generalized seizures for which chronic therapy with sodium valproate was initiated. Both parents presented ageusia and anosmia. The laboratory tests at the time of admission revealed anemia, severely increased monocytes count, and a mildly increased C-reactive protein. The RT-PCR for SARS-CoV-2 infection was positive. The thoracic CT revealed consolidation in the lower lobe of the left lung associated with an opacity in the right apex. We initiated antibiotic treatment, antiviral therapy, corticosteroids, anticoagulants, and antipyretics. Unfortunately, the patient's condition deteriorated progressively, presenting desaturation and bradycardia after approximately 72 hours of admission. We reassessed the laboratory parameters and identified leucopenia, neutropenia, increased creatin kinase and ferritin, hypoalbuminemia, a prolonged time of prothrombin and an increased international normalized ratio. The patient died in the 4th day of admission. **Conclusions:** COVID-19 coagulopathy is one of the most severe complications that might occur as a result of this pandemic condition irrespectively of the patient's age. The early diagnosis of this complication might prevent fatal outcome in children with severe forms of COVID-19.

Keywords: COVID-19, coagulopathy, children

THE CROSSTALK BETWEEN TOLL-LIKE RECEPTOR 2 AND HELICOBACTER PYLORI IN CHILDREN

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Background: Toll-like receptors (TLRs), actors of host's innate immunity, are able to trigger essential signaling cascades for adaptive immune responses through multiple co-stimulatory molecules. In addition, TLRs genetic variation by several single-nucleotide polymorphisms were proved to increase the host's susceptibility to Helicobacter pylori (H. pylori) infection. The aim of this study was to identify the role of TLR2 polymorphisms in children with H. pylori-induced gastritis, those with other types of gastritis and healthy controls. **Material and methods:** We performed a study on 269 children admitted to the Pediatric Clinic I Târgu Mureş for dyspeptic symptoms who were divided according to the histopathological exam into three groups: H. pylori-positive gastritis (51 children- group I), H. pylori-negative gastritis (103 children - group II), and control group (115 children - group III). We assessed the presence of TLR2 rs3804099 gene polymorphism in gastric biopsies of all children included in the study. **Results:** The mean of the three groups was similar, and we found a slight predominance of female gender in all three groups. Rural area and poor living conditions were significantly related to the presence of H. pylori infection ($p=0.0100$/ $p<0.0001$). No statistical significance was noticed regarding the presence of TLR2 rs3804099 gene polymorphism. Assessing the relationship between the genotypes of this polymorphism and laboratory parameters, we noticed that CT carriers of this polymorphism displayed a higher number of circulating neutrophils ($p=0.0325$). **Conclusions:** Female gender, rural area and poor living conditions might represent risk factors for the development of childhood gastritis. Children that carry the CT genotype of TLR2 rs3804099 gene polymorphism might have an increased risk for developing a severe systemic and local inflammatory response to H. pylori infection.

Keywords: toll-like receptor 2, Helicobacter pylori, children

SARS-COV-2 RELATED PEDIATRIC INFLAMMATORY MULTISYSTEM SYNDROME- A REVIEW

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Background: Multisystem Inflammatory Syndrome linked to SARS-COV-2 infection in children is a new illness, which was first recognized in April 2020. The same disease appears under three names (MIS-C (Multisysten Inflammatory Syndrome in Children); PIMS-TS (Paediatric Inflammatory Multisystem Syndrome Temporally Associated with SARS-CoV2) and Multisystem Inflammatory Disorder in Children and Adolescents) and has slightly different definitions. The aim of the paper is to present the essential clinical features, laboratory changes, treatment options, complications, evolution of the disease, in the prism of knowledge gathered up to present time. **Material and methods:** Authentic literature was searched for PIMS, MIS-C and the most relevant clinical, laboratory features, treatment options, evolution, complications were summerized in this paper. **Results:** PIMS appears more frequently in males and in older children with a median age of 8,4 years. Obesity is a common comorbidity. The clinical manifestations are of a multisystem inflammatory syndrome, resembling Kawasaki disease or toxic shock syndrome. Fever lasting more than 3-5 days is almost always present, followed by gastrointestinal symptoms, respiratory symptoms, Kawasaki-like features – skin rashes, oral mucosal changes, conjunctivitis, edema of extremities, cardiac involvement- , neurologic symptoms, shock. Abnormal laboratory findings include elevated inflammatory markers (CRP, D-Dimers, ferritin, fibrinogen, neutrophilia, lymphopenia), elevated cardiac biomarkers (troponin, NT-pro-BNP), confirmed or possible COVID-19 exposure. PIMS need to be differentiated from other, more common diagnoses, such as: sepsis, toxic shock syndrome, Kawasaki disease, myocarditis, surgical abdominal diseases, macrophage activation syndrome (MAS), haemophagocytic lymphohistiocytosis (HLH), malignant diseases, etc. PIMS is treated mostly with human intravenous immunoglobulins, corticosteroids, low-dose aspirin, prophylactic

anticoagulation but in shock-like presentation intensive care and resuscitation may be necessary. **Conclusions:** PIMS develops in a minority of genetically predisposed, SARS-CoV2 infected children, with a potential severe evolution.

Keywords: SARS-CoV-2, child, multisystemic, inflammation, fever

PIMS-TS WITH KAWASAKI-DISEASE-LIKE PHENOTYPE -CASE REPORT

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Background: Covid-19 may affect any age group. The majority of children have mild disease, 0,1-2% of them need hospitalization and mortality rate is low. The disease undergoes three phases: the viral replication phase, the respiratory system and other organ involvements-phase and the late, hyperinflammatory- phase (PIMS-TS - pediatric inflammatory multisystem syndrome temporally associated with COVID-19). A few, genetically predisposed children show a severe hyperinflammatory phase. The phenotype of presentation of PIMS-TS can be categorized in three forms: shock-like, Kawasaki disease-like and undefined inflammatory, presentations. **Material and methods:** We report the case of an adolescent girl who presented with fever, convulsions, symptoms mimicking Kawasaki disease and fulfilling the case definitions for PIMS-TS. **Results:** The patient had leukocytopenia, lymphopenia, thrombocytopenia, elevated ferritin, fibrinogen, C-reactive protein, D-dimers, transaminases, pro-brain natriuretic peptid and high erythrocyte sedimentation rate. Echocardiography showed small pericardial effusion and normal coronary arteries. Pulmonary X-ray showed ground glass opacities in the lower lobes. Renal function was normal. RT-PCR for SARS-CoV-2 infection as well as serology were negative at the beginning and only repeated analyses became positive. Other family members had been ill with COVID-19 during the past month. A differential diagnosis was made with DRESS syndrome, since the patient had been under Carbamazepine treatment for her convulsions. Other diseases were excluded, such as sepsis, Kawasaki disease, macrophage activation syndrome, toxic shock syndrome, malignant diseases, viral myocarditis with Epstein-Barr, CMV, etc. Treatment consisted of high-dose methylprednisolone with gradual dose-tapering, low-dose aspirin, antibiotics until exclusion of severe infections, adjuvant and symptomatic treatment. Human immunoglobulins were not administered because of deficit of this drug from the pharmacy. The evolution was favorable, with resolution of inflammatory markers. **Conclusions:** We presented a case of PIMS-TS with Kawasaki-like phenotype in a adolescent girl, with favourable outcome.

Keywords: PIMS-TS, child, inflammation, Kawasaki-like, COVID-19

FROM COVID-19 (YEAR 2019) TO COVID-19 (YEAR 2021) – WHAT HAVE WE LEARNED MEANWHILE?

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Background: Coronaviruses are important animal and human pathogens. In February 2020, the World Health Organization (WHO) designated the disease produced by coronavirus: COVID-19 (coronavirus disease 2019). The virus that causes COVID-19 is severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). But there are many other abbreviations related to this disease that we learn on the go. **Material and methods:** The authors reviewed the literature about Covid-19 from the first articles about the pandemic, published back in 2019, to the latest updates. The guides about methodolgy of diagnosing and treating Covid-19 has been studied, as well as new findings and new conditions related to coronavirus infection. **Results:** From the beginning of the pandemic to the present, the Methodology for the Surveillance of Acute Respiratory Syndrome has changed several times, depending on the international protocols used and the improvement of the clinical experience. Many drugs, which seemed promising at first, were abandoned because they did not prove useful in clinical trials. Ongoing guidance has been issued by the WHO and by the CDC. What do we now by far? Children of all ages can get COVID-19 andmay transmit Covid-19. Most cases in children resulted from household exposure - usually with an adult. In children of all ages — The frequency of symptoms vary (less respiratory but more digestive signs and symptoms than in adults. Elevated inflammatory markers and lymphocytopenia may indicate MIS-C. These are underlying conditions that may increase the risk of severe disease, similar to adults. SARS-CoV-2-rBut post-Covid condition is a reality in children as well as in adults. vaccination of adults reduced the number of CoVid 19 in children too young to be vaccinated. **Conclusions:** Covid-19 is a serious infection in children. Understanding all the facts of SARS-

CoV2 is a still difficult task. The main goal of all of of us should be vaccination.

Keywords: children, Covid-19, MIS-C, vaccination

PNEUMOLOGY

CARDIOVASCULAR DAMAGE DURING COVID-19 AND IN THE POSTCOVID PERIOD

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Background: Patients with established cardiovascular disease (CVD) but also those with CV risk factors (smoking, hypertension, obesity, sedentary lifestyle, diabetes, dyslipidemia) are vulnerable group patiens for severe COVID-19 forms. At the same time, CV complications in severe SARS-CoV2 are more common, including increased mortality. The pathogenesis of CV impairment in COVID-19 includes several mechanisms: a). direct cytopathic effect of the virus (on endothelium, pericytes, myocardial cells); b). cytokine storm (T activation imbalance, IL 1,2,6,7,8,17 release, reactive oxygen species); c). immunometabolic changes that lead to atheroma plaque instability and coronary ischemia or thrombosis and embolism; d). hypercoagulability; e). decreased nitric oxide with vasoconstriction; f). increased cardiac workload; g). prolongued hypoxemia. The CV lesions are: a). myocardial ischemia and acute coronary syndromes; b). high blood pressure (sometimes difficult to stabilize); c). acute myocarditis, arrhythmias; d). heart failure (through myocarditis, increased heart rate, thrombosis and arrhythmias; e). cardiogenic shock; f). thromboembolism; g). Peripheral ischemia and Kawasaky's disease in children; h). effects of some drugs (hydroxychloroquine, azithromycin, some antivirals). **Material and methods:** The thromboembolic risk is higher in ICU patients despite effective anticoagulation. Specific investigations include: repeated BP measurement and pulse-oximetry, ECG, cardiological consultation, echocardiography, troponin dosing, D-dimers, natriuretic peptide, CT-angiography in suspected pulmonary embolism. At the same time the measurement of some inflammatory markers (PCR, ferritin, fibrinogen) helps to monitor the severe inflammation. The treatment of CV damage will depend on the type of CV complication and will include mandatory for moderate/severe forms of COVID prophylactic or curative anticoagulant treatment (as appropriate). **Results:** Symptoms and signs that appear after the acute period of COVID ("long covid" status) but also later, include: fatigue, dyspnea, palpitations, hypercoagulation, arrhythmias, acute coronary attacks, heart failure, chest pain, cough, headache, insomnia, anxiety, cognitive impairment, arthralgia and myalgia **Conclusions:** Active monitoring becomes mandatory through clinical examination, ECG and echocardiography for early targeted treatment

Keywords: CARDIOVASCULAR DAMAGE, COVID19 INFECTION, POSTCOVID PERIOD

THE ROLE OF THORACIC CT IN COVID-19 INFECTION

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Background: COVID-19 infection has an important morbidity with respiratory/extrarespiratory involvement and a significant risk of mortality for severe pneumonia. The confirmation of the disease depends on the performance of RT-PCR but the correct diagnosis of the disease severity and prognosis depend on clinical aspects, comorbidities, lung lesions extension on imaging, functional damage of the organs and treatment. The most important imaging techniques for respiratory SARS-COV2 characterization are thoracic computed tomography (TCT) and thoracic ultrasound. TCT could have a crucial role in lesions description. **Material and methods:** Typical signs of TCT imaging in COVID-19 included ground-glass opacities with ill-defined margins and peripheral distribution, air bronchogram, vascular enlargement, interlobular septal thickening and consolidation. Abnormalities usually are bilateral disposed in the lower lobes with posterior predilection, sometime with "crazy-paving pattern", pleural thickening and halo sign. Pleural/pericardial effusion, lymphadenopathy, central lesion distribution and cavities are incommon findings. A negative TCT result does not exclude COVID-19. Always it must be done correlation between TCT findings and epidemiology, medical history, clinical presentation, and RT-PCR tests. It will be used a non-contrast, low radiation-dose TCT unless CT-angiography is required in pulmonary embolism suspicion. The percentage and characteristics of TCT lesions are correlated with the stage and severity of the SARS-COV2 disease. In 10% of early stages of infection in symptomatic patients TCT could be normal. **Results:** In the same time TCT could show abnormalities in asymptomatic patients (49%). Chest imaging is not indicated as a screening test for COVID-19 in asymptomatic patients or in mild respiratory symptoms of COVID-

19. The percentage and characteristics of TCT lesions are correlated with the stage and severity of the SARS-COV2 disease. In 10% of early stages of infection in symptomatic patients TCT could be normal. **Conclusions:** Chest imaging is not indicated as a screening test for COVID-19 in asymptomatic patients or in mild respiratory symptoms of COVID-19

Keywords: COVID-19 INFECTION, THORACIC CT, LUNG LESIONS

PSYCHIATRY

NEW PERSPECTIVE OF INTERVENTION IN AGGRESSIVE BEHAVIOR

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Background: The state of knowledge from scientific literature will be presented from biologic perspective, psychopathology and social context in development of agression. The aim of this presentation is to create a bio-psycho-socio model of agression which will help in found new intervention in aggresive behaviour. **Material and methods:** the literature review in risk factors of aggressive behaviour was done, and the results grouped in three domains biologic, psychologic and social. A didactic bio-psycho-socio model was constructed. **Results:** The complex picture of aggressivity could be distorted if we reduce understanding to a narrow super-specialization perspective. This presentation enlarge approach with genetic, endocrine, neurologic, psychologic and sociologic perspective.All this data will be include in a schematic bio-psycho-socio model, and describe the application in mental health practice in understanding the patients with psychiatric disorder. The main result will be a Bio-psycho-social model of aggressive behavior, which could be helpful in understanding and predicting aggressive behavior. **Conclusions:** Complex perspective of aggresive behaviour could help better understand, prevent and intervene in aggresive behaviour.

Keywords: aggressive behaviour, bio-psycho-social model, intervention

SCREENING OF CERVICAL CANCER

NUTRITIONAL MANAGEMENT IN SCREENING OF CERVICAL CANCER: GUIDELINES

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Background: Within the Romanian project "Program for prevention, early detection, diagnosis and early treatment of cervical cancer, Romanian Center Region", experts in nutrition have studied the literature for the purpose of evaluating the international nutritional support guidelines for Dietitians and patients as well. Our goal was to increase the awareness of the importance of nutritional screening for malnutrition, and cancer prevention, based on a specific guide for proper intervention. **Material and methods:** We analyzed recent studies and guidelines from medical platforms (Medline, Pubmed), towards the association between diet, food behavior and the risk of cervical cancer. Based on this materials, we developed a Romanian guide out of 28 recommendations to be used by the nutritionists for cervical cancer patients management. **Results:** Nutritional assessment variables chose were dietary history, behaviors and social determinants, evaluation of patient's needs (energy, protein, fluids, vitamins and minerals), anthropometry indicators, biochemistry parameters, malnutrition scores, and clinical examination. The quantity and quality of water consumed is an important factor for hydrating the female genital tract: hydrogen rich water is characterised by exhibiting a negative ORP **(Oxidation-Reduction Potential) and** inhibits cancer growth via a ROS/NLRP3/caspase-1/GSDMD-mediated pyroptotic pathway. Also a FFQ can be added to the nutritional assessment of each patient, and starting from all these determinants the Dietitian can develop a personalized nutritional plan for each patient, towards the aim for prevention or improving the patient's life quality. **Conclusions:** Nutritional interventions are various and complex, and play an important role in disease prognostic and evolution from diagnosis to terminal care, that's why must be efficient and accesible.

Keywords: diet, cervical cancer, guide, malnutrition

SURGERY

ANNULAR PANCREAS – DIAGNOSIS AND TREATMENT. CASE PRESENTATION

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Background: Annular pancreas is a rare congenital anomaly, characterized by complete or partial circumferential envelopment mostly of the second part of the duodenum. The prevalence of diagnosis is 1-3 cases from 20,000 surgical interventions or autopsies. Improved diagnostic modalities are able to recognize more asymptomatic individuals. Most patients present clinical manifestations during adulthood. **Material and methods:** A 33-year-old patient was hospitalized within the Gastroenterology Clinic and subsequently transferred to the 2nd Surgery Clinic from Târgu Mureş. He accused epigastric pain, nausea and vomiting. Through the nasogastric tube 1000 ml of gastric contents were evacuated. Computed tomography and gastroenterological investigation revealed duodenal stenosis of uncertain cause, along with reflux esophagitis, axial hiatal hernia and dehydration. After 8 days a second computed tomography was performed, which described a possible para-duodenal pancreatitis. The patient signed the informed consent regarding his participation in research activities. **Results:** Surgical intervention was performed in general anesthesia. Intraoperatively the presence of an annular pancreas was detected at the level between the second and third part of the duodenum, due to which resection of the annular pancreas segment was performed. The patient presented a favorable prognosis and was discharged on the 7th day postoperatively. **Conclusions:** Annular pancreas is a rare pathology and in some cases its diagnosis can be challenging. As treatment, in symptomatic cases, it has an absolute surgical indication. Within the surgical intervention resection of the annular pancreas or bypass surgery can be performed with duodeno-duodenostomy or duodeno-jejunostomy.

Keywords: annular pancreas, diagnosis, treatment, surgical intervention

LAPAROSCOPIC EXTERNAL DRAINAGE OF A GIANT PANCREATIC PSEUDOCYST. CASE PRESENTATION

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Background: Pancreatic pseudocysts are collections of fluid, rich in amylase and other pancreatic enzymes, that have a nonepithelialized wall consisting of fibrous and granulation tissue, different from true cysts which are closed structures. Theyusually appeare several weeks after the onset of pancreatitis, or following abdominal trauma. Treatment of pancreatic pseudocystsinclude conservative therapy (watchful monitoring), percutaneous drainage, surgical drainage, which can be performed throughclassical or laparoscopical approach. **Material and methods:** We present the case of a 30-year-old patient with a giant, maturepancreatic pseudocyst. Clinical examination reveals a large pseudotumor in the epigastrium and abdominal flanks to the iliac fossa.CT describes an inhomogeneous pancreas with voluminous polyseptate fluid collections that join with other fluid collections from bilaterally parietal colic gutters extending along the psoas muscle to the iliac fossae. We performed a double laparoscopic external drainage of the pseudocyst in the right and left abdominal flank. **Results:** Intraoperatively, approximately 1200 ml of serocitrinfluid was evacuated through the left drain and 500 ml of serocitrin fluid was drained through the right tube. Abdominal CTperformed on day 5 postoperatively describes incomplete evacuation of the pseudocyst, which is why the drain tube from the rightflank is relocated. Postoperative evolution is slowly favorable, the patient being discharged on day 37 with suspended drainagetubes, CT images showing the pancreatic pseudocyst as remitted. **Conclusions:** Laparoscopy, as an alternative to surgical treatmentof pancreatic pseudocysts, should be the first option in case of surgical treatment or in the absence of the availability of current drainage procedures without laparotomy - endoscopic and / or percutaneous methods. It offers the advantages of minimallyinvasive surgery with rapid postoperative recovery, rapid resumption of bowel activity, absence of parietal, pulmonary andinfectious complications.

Keywords: pancreatic pseudocyst, laparoscopic external drainage, surgical drainage

TREITZ ANGLE ADENOCARCINOMA, DIAGNOSIS AND TREATMENT - CASE PRESENTATION

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Background: Duodenal adenocarcinoma is a rare, aggressive malignant tumor. It occurs mainly in the second part of the duodenum, followed by D3 and D4 locations. Symptoms are vague and nonspecific, which often lead to a delayed diagnosis, resulting an advanced tumor stage and resection impossibility. Radical surgical resection of the tumor, when possible, provides the highest survival rate. We aimed to present two cases of duodenal adenocarcinoma located at the level of the Treitz angle. **Material and methods:** Duodenal adenocarcinoma is a rare, aggressive malignant tumor. It occurs mainly in the second part of the duodenum, followed by D3 and D4 locations. Symptoms are vague and nonspecific, which often lead to a delayed diagnosis, resulting an advanced tumor stage and resection impossibility. Radical surgical resection of the tumor, when possible, provides the highest survival rate. We aimed to present two cases of duodenal adenocarcinoma located at the level of the Treitz angle. **Results:** In the first case we performed segmental resection of D4 duodenum and resection of the first jejunal loop, with D3 duodenal stump closing, side-to-side duodenojejunostomy and feeding jejunostomy. On the 7th postoperative day surgical reintervention was performed for suture leakage at the level of the duodenal stump, D3 being sutured again. Due to an unfavorable postoperative evolution, the patient died on the 15th postoperative day. In the second case the invasion of the mesenteric vessels was confirmed intraoperatively. Tumor biopsy and gastro-jejunal anastomosis were performed, leading to a favorable postoperative evolution. **Conclusions:** Duodenal adenocarcinoma is a rare and aggressive, malignant tumor. Due to late and nonspecific symptoms, the diagnosis is delayed or erroneous; patients are mainly diagnosed and treated in advanced stages.

Keywords: duodenal adenocarcinoma, Treitz angle, surgical resection

THE CORRELATION BETWEEN LIVER TRANSAMINASE LEVELS AND HEPATIC TRAUMA

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Background: The liver is the second most affected organ is case of penetrating or blunt abdominal trauma due to its size and location. Hepatic injury is present in 40% of the patients following trauma, therefore an early and effective diagnosis is required. Laboratory tests are the first paraclinical findings that may guide the surgeon and predict the presence or the severity of the lesion. The aim of this study is to find a correlation between hepatic transaminase levels, glycemia and the presence and grade of the liver injury in patients following abdominal trauma. **Material and methods:** A retrospective analysis was conducted on a group of 47 patients admitted in the 1st Surgery Clinic of Emergency County Hospital Targu-Mures between 2013 and 2020. The lot included both surgical and non-surgical treated patients with abdominal trauma in which the liver injury had the highest grade of severity. Patients were divided in two groups, one including Grade 1 and and 2 hepatic injuries and the second including Grade 3 to 5 hepatic injuries. Levels of glucose, aspartate aminotransferase and alanine aminotransferase were evaluated in relation with the two groups. Correlations with coexisting intraabdominal lesions, LOS and mortality were also analyzed. **Results:** More than 80% of the patients presented abnormal liver transaminase levels. There was a strong association between the circulating ALT, AST levels and the injury severity grade. This correlation increased correspondingly with the grade of lesion, being more pronounced in the second group. **Conclusions:** Elevated hepatic enzymes may be a good predictor of the presence of liver injury and a useful tool in establishing the severity of the lesion in patients with abdominal trauma. A higher accuracy of this method is achieved as the grade of injury rises.

Keywords: transaminase, hepatic trauma, liver injury grade

UROLOGY

THE PLACE OF TRANSURETHRAL RESECTION OF THE PROSTATE FOR URINARY RETENTION TREATMENT IN A PATIENT WITH DIABETES AND DETRUSOR UNDERACTIVITY

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Background: Diabetes is a disease that causes metabolism disorders and, over time, can affect the functioning of various organs. Detrusor underactivity is a condition urodynamically diagnosed, characterized by a reduced strength and/or duration of the detrusor contraction, leading to prolonged or incomplete bladder emptying **Material and methods:** We present the case of a 56-year-old patient with type II diabetes under treatment for about 12 years, diabetic neuropathy, who is hospitalized in Cl. of Urology Tg. Mureş with lower urinary tract symptoms, with the predominance of the voiding symptoms. Clinical and paraclinical investigations revealed a prostate of 20 cubic cm, inconstant PVR, between 100-200 ml, PSA within normal limits, laboratory examination without significant changes. The uroflowmetry resut shows an interrupted curve with Qmax value= 13 ml /s, PVR value = 100 ml, with alpha-blocking treatment. The pressure-flow study reveal Pdet value= 23 cmH2O, BCI value = 88. **Results:** The patient is informed about the therapeutic alternatives and transurethral resection of the prostate is performed. The postoperative evolution of the patient is favorable with the resumption of spontaneous micturition after the bladder catheter suppression, improvement of the symptoms and of the uroflowmetry curve shape that remains prolonged but without interruption, Qmax = 17 ml /s and minimum PVR. **Conclusions:** Transurethral resection of the prostate is an alternative treatment in patients with detrusor underactivity secondary to diabetic neuropathy that may lead to improved quality of life, improved symptoms, and decreased risk of urinary retention complications.

Keywords: detrusor underactivity, diabetes, neurophaty, urinary retention, pressure-flow study

3D LAPAROSCOPIC RADICAL PROSTATECTOMY: ADVANTAGES, CHALLENGE AND RESULTS

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Background: Radical prostatectomy is the standard surgical treatment for localized prostate cancer. **Material and methods:** We performed a retrospective study over a period of 3 years in which we included 51 patients with prostate cancer for whom 3D laparoscopic radical prostatectomy was performed. **Results:** The mean age of the patients was 65.43 +/- 5.35 SD. 34 patients were included in the intermediate risk group and 17 patients in the high risk group. The mean PSA value was 12.93 +/- 17.54 SD with limits between 4.62 and 35 ng / ml. The average lengh of the operating time was 288.18 +/- 78.95 SD with limits between 120 and 410 minutes. Intraoperative blood loss was minimal, between 50-100 ml. 8 patients had prolonged postoperative drainage between 10-14 days and remitted spontaneously. The mean lengh of postoperative hospitalization was 5.76 +/- 2.63 SD. Urinary incontinence revealed at 1 month postoperatively was found in 17 cases, and after 6 months in 5 cases. No conversion to open surgery was required for either case. **Conclusions:** Laparoscopic radical prostatectomy is a feasible method of treatment for localized prostate cancer, with minimal intraoperative blood loss, short hospital stay and low number of complications. Besides the laparoscopic approach advantages in the treatment of prostate cancer, the 3D technique shortens the learning curve, providing very good functional results.

Keywords: laparoscopy, prostate cancer, prostatectomy

3D LAPAROSCOPY IN COMPLEX CONGENITAL MALFORMATIONS-CASE REPORT

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Background: Horseshoe kidney is a congenital malformation of the urinary tract that is found in about 0.25% of the population. Other abnormalities like vesicoureteral reflux and ureteropelvic junction obstruction are commonly associated with this pathology. There are several causes that leads to ureteropelvic junction obstruction like high-inserting ureter into the renal pelvis or its abnormal course over the isthmus, anomalous renal blood supply or intrinsic factors. **Material and methods:** This paper is a case report of a 45-year old female known with horseshoe kidney, without other personal pathological history who was admitted in our urology department with left low back pain started two weeks before. We performed an ultrasound investigation and intravenous pyelography and URO-CT which shown the ureteropelvic junction obstruction in the left kidney with grade 3 hydronephrosis. 3D laparoscopic pyeloplasty was performed with the insertion of a double J catheter. **Results:** The outcome of the patient was favorable with remission of symptoms, normal urinary output, clean surgical wound. The double J stent was extracted on 21st day after surgery. **Conclusions:** Laparoscopic approach is a safe and feasible in treatment of ureteropelvic junction obstruction in patients with horseshoe kidney. 3D technology offers a better view with a safer dissection of abberant vessel at this level and a much better quality of outcomes with less postoperative operative complications.

Keywords: horseshoe kidney, laparoscopic pyeloplasty, ureteropelvic junction obstruction

THE IMPORTANCE OF RESTAGING TRANSURETHRAL RESECTION IN MANAGEMENT OF BLADDER CANCER

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Background: The first and the most used approach in the diagnosis and treatment of bladder cancer is transurethral resection of the bladder with the removal of the tumor (TURBT) followed by anatomopathological evaluation for the final diagnosis. A restaging transurethral resection, the so-called repeat TURBT (reTURBT), is mandatory in case of incomplete first resection. Currently it is recommended to perform reTURBT according by EAU guideline after incomplete TURBT, if there is no detrusor muscle in the specimen after initial resection (exception in TaLG/ G1) and primary CIS, pT1 tumors. If reTURBT is indicated, this should be made within two to six weeks after the initial resection. **Material and methods:** In our study we analysed the database of the Urology Clinic of Tîrgu Mureş between January 2019 and October 2020. The most important inclusion criteria was a re-TURBT within 90 days after the first resection. The objectives of the study are to evaluate the anatomopathological findings of the first and re-TURBT. Comparing these, we want to highlight the cases in which progression occurred. Examining the extent of progression represent's the main objective of our study. **Results:** The data of 358 (100%) patients were studied, of whom 36 (10%) met the criteria of selection. Of these patients, 30 were male (83%) and 6 were female (17%). Their average age is 70.25 years. The re-TURBT showed progression in 14 patients. There were complete resections in 4 cases (28.57%) and incomplete resections in 10 cases (71.43%) after the first TURBT. In 42.86% of cases (6 cases), RE-TURBT occurred within the first week, and in 57.14% (8 cases) between the first and third month. **Conclusions:** The causes of reTURBT's in most cases are related to the primary incomplete resection of multiple or large tumors. The time for restaging TURBT is mandatory for well-sustained therapeutic behaviour.

Keywords: bladder, bladder neoplasia, TURBT

SCIENCE AND TECHNOLOGY

LAW AND PUBLIC ADMINISTRATION

PARTICIPATORY BUDGETING, A FORM OF CITIZENS INVOLVEMENT AND CONTROL OVER THE PUBLIC ADMINISTRATION. MUREŞ COUNTY CASE STUDY.

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Background: The concept of participatory budgeting, concept that first appears in Brazil in 1990 (paradoxically, this method aimed to eliminate corruption from the local public administration) soon became one of the ways of involving citizens in the process of making and controlling public decisions. The relationship between citizens and the local public administration has become, in recent years, one in which the voice of citizens is listened to and taken into consideration in the decision-making process. This transformation has become possible due to the adoption of a package of laws impacting the citizen-administration relationship, namely: the law on free access to public information, the law on decisional transparency in public administration, the law regulating the activity of solving petitions. Considering this legislative framework in Romania, the concept of participatory budgeting has managed to gradually impose itself, lacking any particular legal regulation. Currently, a number of administrative-territorial units have managed to implement this concept by attracting citizens in the process of distributing a share-part of the local administration budget to a series of public projects proposed by citizens themselves. Basically, electronic platforms have been set up that allow citizens to propose public projects, then citizens vote for these projects, and finally the winning projects are implemented by the local public administration, obtain budget funding within the limit of 10% of the locality's budget. Mures County is a special case in the landscape of territorial administrative units regarding the implementation of participatory budgeting in the sense that at county level, merely the first steps are taken to attract citizens towards decision-making using this strategy.

Keywords: law, Participatory budgeting, public administration

DOCUMENTS ISSUED BY PUBLIC UTILITY ASSOCIATIONS AND FOUNDATIONS

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Background: According to the provisions of art.38 and following of the O.G. No.26/2000 regarding associations and foundations, private law non-profit legal persons, may obtain the status of public utility, following the fulfillment of certain conditions and the completion of an express procedure provided by the provisions of the above-mentioned ordinance. Derogatory from the provisions of O.G. No.26/2000 can be established legal entities of public utility as an effect of the law, through laws, ordinances, decree-laws, decisions of the Government, these remaining subject to the special regulations that were the basis for their establishment. Due to the public utility, as it is defined by the provisions of the art.381 of O.G. No.26/2000 as any activity that is carried out in areas of general public interest, or of certain communities, documents issued by private legal entities, declared to be of public utility, acquire the quality of administrative acts, requiring compliance of the conditions of validity specific to administrative acts.

Keywords: non profit legal persons, public utility, administrative acts

CRIMINAL LEGAL RULES

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Background: Any criminal law is made up of all the legal norms that configure the normative content of this law.Criminal legal norms represent those of legal norms that are characterized by their specific content and structure, establishing rules of criminal law, as well as the sanctions that will be applied in case of violation of the norms.The content of the criminal norm implicitly

determines the conduct to be followed. Sanctions are shown for each crime, the imperative nature of the conduct required to be adopted is established.The structure of a criminal law differs according to whether it is a general criminal law or a special criminal law.

Keywords: criminal law, rules, legal norms, crime

LAW AND PUBLIC ADMINISTRATION

THE PRIORITY OF EU LAW IN ROMANIA. LANDFILL SITES CASE-STUDY.

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Background: Directive 1999/31/EC, also knows as the Landfill Directive, regulates the conditions and standards that guide the operation of landfills, such that the negative effects of waste landfills over different environmental life-cycles are reduced as much as possible. Burying waste in the ground, as practiced in Romania for many decades, is the least sustainable means of dealing with waste, having the biggest impact on the environment and its many components. Romania was obliged, after becoming a EU member-state in 2007, under the provisions of the European treaties and secondary legislation, to close and rehabilitate all substandard landfills by 16 July 2009. In 2017, after numerous warnings, the European Commission, following the infringement procedure, took Romania to the EU Court of Justice for its failure to comply with this particular obligation - close and rehabilitate 68 illegal landfills and, as a result, Romania was found guilty of non-compliance with its obligations as a member-state. According to the EU law and its core principles, if the European court finds that a country has breached EU law, the national authorities must take action to comply with the Court judgment. In November 2021, the Commission decided to refer Romania back to the Court of Justice of the European Union for failing to fully comply with the Court judgment of 18 October 2018. When referring a country to the court for the second time, the European Court may impose financial penalties. We try to analyze in the present study the causal chain that lies behind this chronic pasive attitude of public authorities on this particular environmental issue - substandard waste landfills. Given the magnitude of the problem, its national spread, its long-time existence, we try to analyze different possible legal, political, economic and social reasons.

Keywords: EU Court of Justice, infringement, waste, substandard landfils, priority of European law

THE ROLE OF FOREST CERTIFICATION IN ENSURING THEIR SUSTAINABLE DEVELOPMENT

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Background: Forest certification or forest management certification, is a complex, important and necessary process, through, following an audit performed by a certification organization, it is confirmed that a certain forest area is managed according to an accredited standard. This is done in accordance with the certification standards that have been developed based on the principles and criteria of the Forest Stewardship Council, created in 1993 following the Rio de Janeiro Environmental Summit World, which identified the need for a strategy for the sustainable development of forests around the world. The aim is to promote sustainable forest management by ensuring the most balanced representation of social, economic and environmental interests. Therefore, forest management certification is based on the concepts and principles of sustainable development on the basis of which many of the criteria underlying forest certification standards have been developed. Because the decision to start forest management certification procedures belongs exclusively to the forest owner/administrator, and the certificate is a market tool, the owner will consider the advantages that certification can offer in conjunction with the effort required to meet the requirements of certification standards. At national level, the forest certification started in 2000, this being a new solution used in the Romanian forest policy and, at the same time, a way to expand the markets of forest products obtained from responsibly managed forests.As we have mentioned, forest certification systems require the observance of certain principles of forest resources management in a sustainable way, in order to verify the origin of the raw material used in the wood industry. We will expose in this paper, a series of advantages but also some disadvantages that this process of forest certification implies. We recall, for example, that it has identified forests with high conservation value, respectively forests that have ecological attributes.

Keywords: certification, forest ecosystem, sustainable development, forest management, certification standard

ABOUT THE EUROPEAN CLIMATE LAW

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Background: Addressing the issue of European Climate Law, it is appropriate to clarify this concept, in the sense that it means the European legislative act aimed at transposing into legislation, of the goal set in the European Green Deal, namely, that of achieving climate neutrality by 2050, by the European economy and society. Taking into account the complex stakes of climate change, the aim of European climate law is to ensure that all European Union policies will contribute to the achievement of this ambitious and important goal. In addition to the objective of climate neutrality and indicative objective of the EU regarding the steps and efforts in order to obtain negative emissions after 2050, this law sets a binding climate target for the EU, which is to reduce net greenhouse gas emissions by at least 55% by 2030. The European normative includes a set of measures for monitoring progress and adapting actions accordingly, based on existing systems (the governance process for Member States regarding national energy and climate plans, the European Environment Agency's regular reports on climate change and its impact).Being conditioned by the European Green New Deal, it designates a new global ecological commitment, which is intended to be a new ecological order, a green revolution of the 21st century meant to reconcile human development with the limits physical properties of the Earth. In fact, the Green New Deal involves the adoption of new public policies to address climate change, while achieving other social goals, combining economic approach with renewable energy and natural resource sustainability. We will set out, the position adopted by the EU at the Climate Summit, COP 26, Glasgow, November 2021, in order to intensify the global response in the context of the climate emergency and the need for a fair and equitable climate transition.

Keywords: European climate law, European Green Deal, climate change, ecological order, global ecological commitment

NEW TRENDS IN HUMANITIES

TECHNOLOGY GOES TO CLASSROOM – ON THE NECESSITY OF ADOPTING TECH-ENHANCED TEACHING METHODS

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Background: The article aims at underlining the importance of adopting technology to the classroom, in light of the current necessity to adapt to the realities of the world we live in and to meet the needs of the digital-native beneficiary of the educational process, i.e. the student of today. To achieve that, the paper captures the journey taken by technology-enhanced methods and tools applied to teaching and exploits the so-called New Learning-transformative, 21st century learning, that includes and make reference to the seven affordances of e-learning ecologies: Ubiquitous Learning, Active Knowledge Making, Multimodal Meaning, Recursive Feedback, Collaborative Intelligence, Metacognition, and Differentiated Learning. Last, but not least, several instances of good practices are presented and discussed, in order to highlight the magnitude and significance of the phenomenon of bringing technology into the classroom.

Keywords: technology, digital-native, teaching tools, e-learning, teaching methods

ONLINE EDUCATION – HOW CAN CHEATING BE PREVENTED?

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Background: Distant education has been an alternative to traditional brick and mortar classrooms for many decades. The introduction of technology in education shifted it to higher grounds: online education. Online education proved to be the only viable solution during the COVID-19 pandemic, but it brought along several challenges to both educators and students. One of the greatest problems that online education is still struggling with, and will probably do so in the foreseeable future, is academic dishonesty which has various underlying reasons, but also multiple ways of prevention. This paper discusses the types of cheating in online education and ways of reducing its occurrence.

Keywords: online education, online cheating, academic dishonesty, technology in the classroom, distant education

SUBVERSION, IRONY AND PARODY IN THE WORK OF MARIN SORESCU.

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Background: Demystification of the poetic forms consecrated by tradition, diversion in the daily derision of serious forms, of accentuated symbolic prestige, poetry of Marin Sorescu can be considered as an immersion in the original layers of the word, as a recovery of its mythical roots or as a nostalgia for its archetypal symbolic purity. The poet, aware that he inscribes his existence in a universe of signs, formal hypertrophy and atrophy of meaning, look back nostalgically to the original background, to the natural primordiality of things, as to a forbidden territory, in which can no longer penetrate. Sorescu is inventive, he prefers the subversive spectacular, demystifying the creative act and undermining the myth of the great poetry.

Keywords: Marin Sorescu, subversive, antilirism, irony, and parody

PAULE MARSHALL'S TRAUMA NARRATIVES

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Background: Trauma is becoming an important and influential paradigm for the reading of contemporary American literature. Many contemporary novels are concerned with traumatic events, whether these emerge from collective experiences such as war or the more individual experiences of sexual abuse. The article analyzes the literary potential of trauma, bringing trauma theory and literary texts together. We look at how Paule Marshall's short stories explore the theme of trauma and identify the key stylistic features associated with trauma fiction. The conclusion will highlight the idea that these traumatic narratives overlap and borrow from both postmodern and postcolonial fiction in the way they illustrate the theme of trauma and the use of stylistic devices as modes of reflection.

Keywords: trauma, memory and past, alternative history, postmodern, postcolonial

THE BEST OF THE TWO WORLDS - STUDENTS' PERCEPTIONS OF SHIFTING FROM REMOTE LEARNING TO TEACHING WITH SOCIAL DISTANCING

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Background: The return to classical foreign language teaching at the beginning of the academic year 2021-22, with all it entails in terms of personalised delivery and distraction-free human interaction, was acclaimed with much relief and expectation of normality by higher education teachers and students alike. Halfway through the first semester in this configuration, positive aspects of previous virtual learning that seem to have been taken for granted and underestimated, also emerge. We have performed a contrastive questionnaire-based analysis of the medical students' online English learning experience (N=93) in the first year versus their shift and re-adaptation to onsite learning in special Covid conditions, in the second. Preliminary perceptions of significant differences, past and present challenges for a communicative language class in the persisting pandemic are balanced against convenience, networking, time saving, accessibility of resources, and personal predilection. While teaching and speaking with a mask during a foreign language class and keeping a safe distance are daunting, the best of the two worlds that students have been experiencing, can be reconfigured and capitalised on for current and future learning formats in volatile times.

Keywords: online learning,, teaching with social distance,, Medical English

THE LEGAL TRANSLATOR AND THE LEGAL BACKGROUND

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Background: This paper aims to outline the main areas of law that a legal translator needs to acquainted with. If a legal professional needs to have a minimum of linguistic awareness, the legal translator needs to be at least familiarized with the main concepts in the field of law. This legal training is a prerequisite for any legal translator given the well-known disparity between the Anglo-American legal system and the Continental law. The linguistic difficulties that result from the differences between these two legal systems can lead to absolute terminological asymmetry, gaps that signal the translator the need for systematic comparison, patient approximation and selection of the proper term that ultimately needs to convey the source language legal intent.

Keywords: legal translation, legal systems, translator, legal professional, legal terminology

EDUCATIONAL STRATEGIES DURING THE COVID -19 PANDEMIC WITHIN GEORGEEMIL PALADE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY OF TARGU MURES: A CASE STUDY.

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Background: As a profession, teaching is a process that involves teacher-student interaction. However, the COVID-19 pandemic has changed our lives and ways of communication. Each day, teachers and students face additional difficulties in the teaching and learning process, challenges that they have to cope with by using their critical judgement and expertise. The academic community had to adapt face-to-face teaching to the online one, ensure students a teaching platform and give access to online materials. Working under stress and with limited resources at first, teachers did their best to pave the way for online education. The aim of the present case study, based on an online questionnaire addressed to both teachers and students, was to highlight teachers' awareness and students' receptiveness towards online education within George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures. The research also wanted to shed light on the need to include and use modern student-centred teaching techniques and methods within the educational process in order to improve quality of education. In a world that is continuously changing and developing, the use of innovative teaching strategies will help students to improve their learning abilities, stimulate critical thinking and engage them in the learning process. Acknowledgement/Funding: "This work was supported by George Emil Palade University of Medicine, Pharmacy, Science, and Technology Research Grant, number 10128/3/17.12.2020."

Keywords: online education, COVID-19 pandemic, online questionnaire, educational strategies

WEAPON OF WAR AND IDENTITY MARKER: THE ROMAN GLADIUS

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Background: One of the most characteristic weapon of the Roman army was the so called "gladius". Like most of its equipment and weaponry this was also "borowed" from conquered populations but in a short period of time became one of the most specific piece of weaponry of the Roman army. Iconic weapon, it was rerpesented on many historical monuments like The Traian's Column in Rome, but its usage was somehow unknown and was largely discussed by archaeologists,historians and even by reenactors. TThe paper analyses not only the evolution of this versatile weapon,but also how was it perceived in the Roman military and civilian society.

Keywords: Gladius, Army, Evolution, Art, Representation

NARRATIVE TECHNIQUES IN JUNOT DIAZ'S NOVEL. THE BRIEF WONDROUS LIFE OF OSCAR WAO

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Background: Junot Diaz's prose surprises with a mixture of narrative techniques and historical, social, political, ethnic, and gender references brought together in a quasi-mythical context, a context specific to South American literature. The act of narration in the novel *The Brief Wondorous Life of Oscar Wao* belongs to Yunior, the author's alter ego, who tells the story of the Leon and Cabral families, making Oscar de Leon, an atypical Dominican, the protanogist. This paper aims to highlight and analyze the combination of modern and postmodern techniques used by Diaz - fragmentarism, analepsis, collage technique - but above all to explain this narrative role-playing, in which the omniscience of the narrator is often disguised by the artifice of homodiegesis.

Keywords: Junot Díaz, narrative techniques, künstlerroman, analepsis, fukú

APPROACHES TO TECHNICAL ENGLISH DISCOURSES

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Background: English being the international language of science, technology and human relations, it is natural that there have been several scholarly attempts to make it accessible to the large public for which it is not always the first language. Such attempts aim, on the one hand, to conceptualize the specific features that technical English has in comparison with general discourses. Other attempts are driven by more pragmatic objectives, such as to increase the readability and comprehensibility of technical documents in English. The paper presents an overwiew of the two categories of approaches to technical discourses, in the context of using them as learning material in language learning environments.

Keywords: Technical discourse, Simplified Technical English, English for Specific Purposes, language learning

COMMUNICATION AND PUBLIC RELATIONS FROM THE PERSPECTIVE OF PROFESSIONAL ETHICS AND DEONTOLOGY

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Background: We often find that, regardless of our will, communication and public relations frequently change their mechanisms of operation, their tools, platforms and channels of message transmission, as a result of technological evolution and innovation. The developments in the space of public communication are also fueled by the constant increase of the audience and of the participants in the interactions in the virtual space of expression, through the Internet and social media. However, what remains invariably a constant, and would be unfortunate to change in the existence of communication and public relations implicitly from the perspective of specialists in this field, is the ethics and deontology of communication in public space. The concern and respect of the public interest and welfare must continue to prevail with the codes of ethics being constantly adapted to the new realities in the communication space. Difficult as it might be to reach an agreed and deontologically instrumentalized unitary framework, from the perspective of communication and public relations, ethical principles and values must prevail and remain generally guiding, independent of the technological evolution of communication in the public space.

Keywords: communication and public relations, ethics, moral values, deontology and codes

INFINITIVE - SUBJUNCTIVE RELATION IN DIFFERENT SYNTACTIC STRUCTURES

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Background: The present paper presents the relation that a personal mood in Romanian (and other Romance languages) can have with a non-personal mood. We refer to the possibility of replacing one mood by the other one, a situation that appeared in old Romanian and continues in the contemporary language. The frequency of this linguistic phenomenon will be illustrated in different subordinate sentences and will be analysed according to various criteria required by the system of Romanian language. The phenomenon presents some differences in some Romance languages and we will make a comparison between Romanian and these languages, especially underlining the frequency in direct object clauses, temporal clauses or even in independent sentences.

Keywords: subjunctive, infinitive, mood, system, norm

MENTORING AND PROFESSIONAL INTEGRATION OF STUDENTS AS A FUTURE TEACHER

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Background: Teaching profession is one of the most interesting, complex and requiring profession. Learning how to teach, training yourself to became a teacher is a complex process, due to a number of information, competences and personal skills that had to be aquired and developed based on learning experience of the pupils, conceptions, theories and beliefs about teaching and learning. Pedagogical practice activities are involving students in the school enviroment, introducing them in the real didactical activities, giving the chance to apply what they learned, theoretical, to deal with all kind of school's situations. Educational sistem nowdays is looking for solutions for effectiveness of modernisation of the school and education, one of the most important element is the human resource, the mentor, because is one of the most important variable on which depends the succes of educational reforms.

Keywords: education, mentor, practice activities, professional development, partnership

"FROM ALWARDA, OUR FRAGILE AND STRONG SIDE" (RUXANDRA NOVAC)

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Background: Existential confusion, indeterminate tense states, behavioural uncertainty, peculiarity, fears and anxieties, pathological abnormalities, dystopia, assuming an excessively visceral poetics of the body, scans of a vulnerable body, obsession of the enclosed space, gallery of evil acting aggressively on one's own being, confessions addressed to the Other, eluding the pathetic squandering are just a few traits of Ruxandra Novac's poetry, representative of the "dark" Neo-Expressionism, one of the directions of the Romanian poetry of the 2000.The breaking "structure" of a complex imagery (as attitude as well), the stylistic language and acrobatics, the emotion, the narrated cut-outs of alienated frames, paradoxically assumed as familiar worlds are landmarks in the analysis of the poetic discourse as well, which we consider as sample for the shift of paradigm to be found in contemporary Romanian poetry.

Keywords: “dark” Neo-Expressionism, dystopia, Ruxandra Novac, fracture, visceral poetics

PROJECTING "TURKISH ISLAM" AS AN "ANTIDOTE" TO RADICALIZATION. POLITICAL IMPLICATIONS AND RECEPTION OF TURKEY'S RELIGIOUS DIPLOMACY IN ROMANIA

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Background: The fall of communism opened new opportunities for international Islamic actors to spread their own understanding of Islam and engage in ideological "cold wars" for Muslim leadership abroad. Relying on the common Ottoman heritage, Turkey has been projecting itself as a natural Islamic ally to local Balkan Muslim communities and as a moderate alternative to radical Islamic movements, aiming to counter and challenge Salafi influence and secure its role as a "guardian" of Muslims. While there are many studies focusing on security challenges and Islam in former Yugoslav states, the Romanian case has been insufficiently studied regardless of its historical Tatar and Turkish communities and the important number of Muslim immigrants who arrived more recently due to regional political crises. This study aims to fill a research gap by exploring the purpose, political stakes and reception of Turkey's religious projections in Romania and by investigating how Ankara's changing understanding of radicalization after the 2016 failed coup attempt has impacted Romanian-Turkish relations in the religious and security fields.

Keywords: Religious diplomacy, Romanian Islam, Turkish-Tatar minorities, transnational religious networks

PODCASTING - A NICHE COMMUNICATION WITH A GROWING AUDIENCE IN ROMANIA

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Background: Introduction Podcast is a relatively recent type of communication, in which digital content is broadcast periodically and can be accessed depending on the user's availability, in audio and / or video format. Methods Our methodology is based on analyzing the data provided by the Study of the Romanian Transmedia Audit Bureau and Transilvania Bank (2020) on the consumption of digital audio content among Romanians and on making a comparison with statistical data of Internet users in other countries. Findings The mentioned study shows that there is an upward trend in the consumption of digital audio content among Romanians, currently 37.8% of people aged between 16 and 50 listening to podcasts. Conclusions The evolution of podcasting since 2019, in the context of the Covid 19 Pandemic, when people spent a lot of time on the internet, announces the coming years as extraordinary for their audio content. Beyond increasing the number of podcasts, an important aspect will be the development of the listener's experience.

Keywords: Digital audio content, hearing on devices, access at the desired moment

CLAUSTROPHOBIC WORLDS: SCARRED JOURNEYS OF IDENTITY

Cristina Nicolae[1]

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Background: Claustrophobic Worlds: Scarred Journeys of Identity Rooted in the vacillation between reality within and reality without, the act of writing constructs and/or deconstructs identities at both auctorial level and character level. Our approach delineates the vibrant quest for self of two female characters for whom the world proves too much and is internalised as claustrophobic: Gayatri Rozario in Anuradha Roy's All the Lives We Never Lived and Katya Zeldin in Chris Cander's The Weight of a Piano. Their struggle to survive the alienating (manifestations of) otherness triggers a transgression of imposed boundaries (moral, religious, cultural) which weigh down their convoluted search for the deeper layers of coherent ontological meaning that would soothe their Sisyphean scars.

Keywords: identity, otherness, journey

INTERFERENCE AND CODE-SWITCHING IN TRANSLATION ACTIVITIES

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Background: Interference and code-switching are obvious features of bilingual language use and they represent our main interest in carrying out this research. In translation activities, but also in language teaching, interference might have negative implications, since it is commonly considered to be associated with the literal translation, especially when it is accomplished by inexperienced translators. Code-switching is considered to be the process which interchanges the use of two languages in the same situation or during the course of a specific conversation. Both interference and code-switching consist of certain techniques and in the present article we will emphasize their importance in translation activities developed during our lectures and seminars.

Keywords: translation, code-switching, interference, research, competence

ESTABLISHING IDENTITY AND CONNECTING WITH ALTERITY THROUGH STORYTELLING. CASE STUDY: THE WRITER ELIF SHAFAK

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Background: Storytelling is more than the need to share stories. Throughout history, as well as in the contemporary world, storytelling has been and continues to be a real, multi-disciplinary field of study, work, and action, but the value, importance, and popularity of a story lies in the fact that regardless of the age, status, profession and affiliation of the narrator, it represents the device that offers one the possibility to manage one's own life, one's own cultural, social and professional identity, the global feeling of one's being in the world, and to relate correctly and adequately to otherness. The paper aims to provide an analysis of the purpose of the narrative and highlight its ubiquity, in order to show that the story was primarily part of life before finding exile in literature. Elif Shafak is one of the contemporary voices which has been demonstrating the value and the impact of authentic storytelling, in her conferences, her articles, and particularly through her novels.

Keywords: storytelling, identity, alterity, Elif Shafak

TRADE AND TRADERS: PERSPECTIVES ON ROMANIAN FICTION

Alina Bako[1]

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Background: Considering that any attempt at discussing Romanian Fiction implies advancing a means of integration into an ample global system, the present study is based on a demonstration of the correspondence between commercial relations in the XIXth and XXth centuries and an ingenious reflection in literature. We can note that just like commercial relations with Lipsa (Leipzig) influenced and shaped the development of Bucharest (see George Potra's study), similarly Slavici's novel, Mara, advances a perspective interconnected with European realities, or that the story Negustor lipscan (Leipzig Wares) from M. Sadoveanu's volume Hanu-Ancuței (Ancuta's Inn) describes trade relations which bring about prosperity and knowledge. We hold that such interactions bear a double meaning and constitute an element of progress, and in the literary context, they are a proof of the fact that knowledge can be achieved through literary means.

Keywords: Romanian fiction, economic and commercial relationships, Lipsca (Leipzig), knowledge

METAPHORICAL TERMINOLOGY'S (UN)TRANSLATABILITY INTO ROMANIAN IN ECONOMIC JOURNALISTIC DISCOURSE

Daniela Dălălău[1]

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Background: This paper aims to highlight the evocative power of the English metaphorical terminology used in the economic journalistic discourse and to address its un(translatability) into Romanian by studying how the metaphorical terminology identified in our corpus was rendered into Romanian and by analysing how apposite the identified translations are for the Romanian language and reality. The paper employs a corpus approach to study and analyse the metaphorical terminology used in economic journalistic discourse and its un(translatability) into Romanian. Thus, we used a corpus of 80 English economic and financial articles, which were selected from those published, between 2011 and 2013, in the English magazine The Economist.

Keywords: conceptual metaphor, metaphorical terminlogy, Translation Studies, translation procedures

ADVERBIAL PARTICLES IN PRESENT DAY SPOKEN ROMANIAN

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Background: In his study, the author proposes to discuss adverbial particles that accompany adverbs (mainly deictic adverbs), and can be found in the present day spoken Romanian language. In order to support his endeavor, the author calls upon established case studies of spoken language that prove the dynamic of contemporary Romanian language. The peculiar language elements that were encountered will be discussed from various points of view, such as the synchronous, diachronic and diatopic perspectives, that will allow a proper circumscription of the specificity of the Romanian language (from today and yesterday), thus resolving in a proper radiography of the matter at hand.

Keywords: adverb, particle, nowadays Romanian language, spoken language, linguistic dynamics

CULTURAL PARADIGMS IN CREATIVE WRITING. EXPERIMENT (2)

Eva Monica SZEKELY[1]

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Background: Starting from the experiments and conclusions of analysis of cultural paradigms made by Geert Hofstede, Hampden-Turner & Trompenaars (1997), we will propose a (re)reading of three tipes of creative writings: from Suthern-Central-European cultural paradigm vs. Transatalantic/ Anglo-Saxon paradim vs. Orient/ Japan paradigm. Accepting the premise that creative writing can (re)produces aspects of cultural paradigms, we will loking for if the World Wide Web era and the accessibility of the Internet lead to a cultural paradigm shift, especially regarding to digital creative writing, in the relations between the traditional author-text-reader triad, the public and its effect/feedback being privileged. We will compare some products of creative writing from academic vs media vs. literature environment harnessing conclusions of Trompenaars and Hampden-Turner that what distinguishes people from one culture compared with another is where their preferences fall in one of the seven aspects (1. Universalism vs particularism/Rules vs relations/2.Individualism vs communitarianism/ Individ vs. grup/ 3. Specific vs diffuse/ how how far people get involved/ 4. Neutral vs. emotional/ how people express emotions/ 5. Achievement vs. ascription/ how people view status/ 6. Sequential time versus synchronous time/ how people manage time/ 7. Internal direction vs. outer direction/ how people relate to their environment). We will search for answers to the following problems: Is/ should creative writing be a form of cultural paradigm? How do creative writing/ digital writing and cultural paradigms interact? How has the digital era shifted the balance between the freedom of creative process and the limits/ borders of cultural paradigms? Is the creative process more important or rather the cultural paradigm of creative product? In teaching classic and/ or creative writing, should the creative process or the cultural paradigm of commercial paradigm be privileged?

Keywords: cultural paradigms, creative writing, cultural preferences, borders of cultural paradigms, transtextuality

SCIENCE AND TECHNOLOGY

OPTIMIZATION AND SIMULATION OF A POWER SYSTEM WITH DISTRIBUTED GENERATORS AND STORAGE UNIT

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Background: The increasing number distributed generators and storage units in the power system make it important to study the proper functioning of the system. The objective is to study the power flow (PF), on which the proper functioning of the system is based, and the optimal power flow (OPF), then compare the results. The goal of the OPF is to minimize the power losses and generation cost. After the proper functioning of the system was assured and possible system problems were avoided in the PF and OPF, such as exceeding the transmission capacity of power lines or failure to ensure the full amount of power required by the consumer, I simulated the system considering the active power losses results from the OPF. This was done for a test system with four buses, to which two distributed generators and one storage unit were connected. The year seasons were considered in the PF, OPF and simulation: spring, summer, autumn and winter. In order to perform the PF and OPF studies I used the NEPLAN software. For the simulation I used the CitectSCADA software. The results give the optimal power flow between the buses, the values of the active and reactive power losses and the generation cost. The simulation results emphasis that the power demand is covered by the power sources and that the system works properly, respecting the regulations for power systems. In conclusion, the power flow and optimal power flow studies were successfully performed for all seasons, the power losses and generation cost were lower in the case the optimization was performed and the simulation was done according to the generation cost. Acknowledgement: This work was supported by the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" of Târgu Mureş Research Grant number 10128/2/17.12.2020.

Keywords: optimization, simulation, power system, distributed generators, storage unit

IOT SOLUTION TO EMPOWER THE DIGITAL TRANSITION TOWARDS A SMART COMMUNITY

Mihai Timus[1], Liviu Ciucan-Rusu[2], Alexandru Turc[2], Marius-Petru Poptamas[2]

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Background: The aim of this study is to discover and validate new usability model of trending digital technologies applied in public services, environment management, public health, and safety. SMART Community models, first presume upskilling and reskilling people, upgrading existing services, all this by using technology to: collect and process data, ensure digital content management, and monitor KPIs in a user-friendly dashboard intended to support the decision-making process. Our project is based on LoRaWAN infrastructure, being one of the few open innovation academic environments in Romania, associated with the global TTN (The Things Network) community for SMART services deployment. The existing LoRaWAN infrastructure in the university together with project team competences in this area covers the IoT and Big Data technology trends needed for research idea and future projects. LoRaWAN, which stands for Long Range Wide Area Network, is a network protocol that is built upon LoRa modulation technique, providing low power, low bit rate and secure characteristics that are ideal for telemetry use cases. The achieved result is a functional solution providing services as: traffic monitoring, environment quality monitoring and manufacturing processes automations qualified as a validated model in a lab environment according to TRL principles.

Keywords: SMART Community, IoT-LoRaWAN, Business Process Management, Digital services, TRL

THE IMPACT OF DIGITAL READINESS ON THE INTENTION TO MIGRATE

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Background: This research aims to analyze the links between the use of social media, the level of development of migrant networks, and the intentions to migrate. The analysis was performed using data from people living in Romania in order to find out their intention to migrate, using questionnaires applied online. Following the research, we found that social networks and the level of digital readiness of migrants have a significant impact on the intention to migrate, as a result of facilitating migration by providing information necessary to find a job or a place to live. At the same time, the large number of diaspora and the expansion of migrant networks have a positive impact on the intention to migrate. People who use social media for information and have a higher level of digitization are more likely to get more information about their destination countries than potential migrants with a lower level of digital readiness.This study contributes to the understanding of the importance of digitalization on migration, especially in the context of the COVID-19 pandemic and the phenomenon of globalization.

Keywords: digital readiness, migration, social media, Romania

SOCIAL SCIENCES

DIGITAL TRANSFORMATION IMPACT ON HEALTH AND SOCIAL SERVICES: CHALLENGES AND OPPORTUNITIES

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Background: The phenomenon of digitalization is influencing more and more aspects of our economic, social, political life, having an impact in the health sector as well. Digital transformations in health and social services raise questions about values for society and values for individuals, about individuality versus public interest, about participation and social inclusion especially from the perspectives of "digital divide" principle. The occurrence of this changes across European countries are implemented with different speeds and unevenly in different parts of societies, causing in new social divisions and differences between various social groups, age, and communities. Our paper targets the challenges and opportunities that digitalization brings in health and social care services especially in effective health systems in prevention area and health promotion in Romania. The purpose of our study is to evaluate the role of digital transformation in enabling the sharing of best practices and cultivation of time use efficiency for activities that are suitable for process automatization, in relationship with the social impact on end-users of digital health service, particularly on employed persons, elders & retired, people with chronic diseases etc.

Keywords: digital transformation, digital readiness, social impact, COVID-19, digital health

THE IMPACT OF DIGITAL ERA ON FINANCIAL REPORTING: A ROMANIAN CASE STUDY

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Background: In recent decades, a number of financial reporting scandals have had a global impact. Thus, the functions of financial reporting, internal control, corporate governance and audit, as well as ethics have become essential. In addition to these scandals, the changes that the digital age has brought has set a new way of organizing business, highlighting the importance of accounting, financial and non-financial reporting. In our study, through a comparative approach, we analyze the trends, strategies and ways of digitizing the financial reporting of companies listed on the Romanian capital market. In this paper, we aim to emphasize the importance of financial reporting to achieve the objectives of companies.

Keywords: digital era, financial reporting, emerging market, digitalization, accounting

QUALITY ASSESSMENT FOR CORPORATE GOVERNANCE COMPLIANCE IN CASE OF BVB - MTF LISTED ENTITIES

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Background: Over the past two years a significant number of issuers have emerged on the AeRO Multilateral Trading Facility (MTF) organized and managed by the Bucharest Stock Exchange (BSE). Preliminary assessments concluded that investors' interest for the recent AeRO public offerings of equity and debt seemed to be even greater than in case of the regulated market, possibly explained by a higher return on investments. On the other hand, a preference for the AeRO market instead of the regulated market has been also noticed among the inssuers trying to avoid compliance costs related to financial reporting and corporate governance. These assumptions are relevant to sustain a research direction related to a quality assessment of compliance with relevant corporate governance principles that AeRO issuers must also embrace and implement. The research methodology includes governance compliance inspections, website screenings, annual report reviews and questionnaire based interviews. The sample of issuers is

formed by the 20 issuers included in the BETAeRO Index launched on 11th of October, 2021. We expect that our findings will provide a relevant basis of conclusions to support a broaden utility of the Vektor transparency index, which should be extended for AeRO issuers as well.

Keywords: corporate governance, compliance statement, investors' protection, multilateral trading facility, securities' issuer

GREATER FINANCIAL SUSTAINABILITY FOR HEALTH. DIVERGENT FINANCIAL POLICIES ON COMMON HEALTH THREATS. AN EMPIRIC ANALYSIS BASED ON OFFICIAL DATA

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Background: Background: After more than a year of the beginning, the coronavirus pandemic continues to cause negative economic impacts and huge pressure on national health systems and on national public budgets. The official data and the scientific literature continue to reveal that during the COVID-19 pandemic, governments, all over the world adopted different national, uncoordinated financial policy measures to protect their healthcare systems. Although severe, the crises didn't generate, yet a common solution. The study aims to examine and to compare the national different financial policies scenarios in the world to overcome the pandemic, grouped by countries income, as the base for a future common model to obtain greater financial sustainability for health at the national and global level. Material and methods: The present study represents a continuation of previous research of the author and uses qualitative methods. Considering the urgent need of finding a solution to the pandemic, the study aims to offer an overview of the different national anti-pandemic financial measures in different countries, grouped by their income, for 2020 and 2021, to compare them and to create a framework of financial tools as part of a future common model. The study uses official IMF and WHO data. Results: The study has identified and compared the available data regarding the financial measures of 184 countries in the world grouped by their income. Conclusions: Although the threat is common at the world level, the national solutions are very different, subject to countries income and political choices.

Keywords: Public Health Policies, Financial Sustainability, pandemic

INDEX OF AUTHORS

INDEX OF AUTHORS

INDEX OF AUTHORS

INDEX OF AUTHORS

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PhD stud. Anamaria HELGIU- Member of C.S.U.D.
PhD stud. Mădălina ANCIUC- Member of C.S.D.
PhD stud. Iulian- Gabriel COCUZ- Member of C.S.D.

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Prof.dr. Mark SLEVIN
Mihai NICULESCU, MD

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Prof.dr. Gabriela Jimborean
Prof.dr. Ábrám Zoltán

Section 9- INFECTIOUS DISEASES/ CRITICAL CARE MEDICINE
Prof.dr. Anca-Meda Georgescu
Prof.dr. Septimiu Voidăzan

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Prof.dr. Iulian Boldea
Prof.dr. Alexandru Cistelecan
Prof.dr. Anişoara Pop

SECTION 2. PHILOLOGY II
Prof.dr. Doina Butiurca
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Prof.dr. Giordano Altarozzi

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International Conference of PhD Students and Young Doctors

MEDICINE AND PHARMACY

ANESTHESIOLOGY AND INTENSIVE CARE MEDICINE

GLDH (GLUTAMATE DEHYDROGENASE), A POSSIBLE NEW MARKER FOR THE SEVERITY OF THE CORONAVIRUS 2019 (COVID-19) DISEASE

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Background: COVID-19 is an ongoing pandemic, secondary to infection with SARS-CoV2. The main purpose of this study was to identify the potential negative outcome factors. **Material and methods:** This is a single-center, retrospective, observational study, which included 98 critically ill patients infected with SARS-CoV2, hospitalized between May and July 2021, in the ICU from in the Mureș County Clinical Hospital, Romania. ALAT, LDH and GLDH were measured in the first 5 days after admission. Statistical tests were performed using SPSS. We studied ROC curve to observe the relation between sensitivity and specificity. The cut-off value was determined by the Youden index. **Results:** For predicting a severe form the sensibility is: 63.50% for ALAT, 71.40% for GLDH and 81.00% for LDH. The specificity: 56.50% for GLDH, 60.90% for ALAT and 69.60% for LDH. The cut-off points for predicting a severe form: 6.80 pg/ml for GLDH, 43 UI/l for ALAT and 450.50 UI for LDH. These results are statistically significant for LDH ($p < 0.005$) and GLDH (p 0.005), but not for ALAT (p 0.25). As for predicting a negative outcome the sensibility is: 40.70% for ALAT, 69.50% for GLDH and 86.40% for LDH. The specificity: 55.60% for both ALAT and GLDH, 63.00% for LDH. The cut-off value for predicting a poor outcome: 7.15 pg/ml for GLDH, 57 UI/l for ALAT and 450.50 UI for LDH. These results are statistically significant for LDH ($p < 0.005$) and insignificant for GLDH and ALAT. **Conclusions:** GLDH is a potential new, superior marker for liver injury in the context of COVID-19. LDH has the highest sensitivity and specificity for predicting a severe form of the three markers studied. Our results coincide with the international literature, six other studies. Further studies are needed, an improvement could be its earlier determination in the early stages of COVID-19 disease.v

Keywords: anaesthesia, intensive care, covid-19, gldh, sars-cov2

IS THERE A LINK BETWEEN CLINICAL STATUS AND PARACLINICAL FINDINGS IN SEPTIC PATIENTS?

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Background: The defining pathophysiological element of sepsis is represented by the marked apoptosis induced by it, followed by the depletion of CD4 and CD8 lymphocyte subpopulations, proning patients to the risk of secondary sepsis due to immunoparalysis. APACHE II and SOFA scores are routinely calculated in the ICU in order to determine the level of organ dysfunction and mortality risk. The main objective represents establishing correlation between the degree of CD4 and CD8 depletion and its association with severity and mortality prediction scores. **Material and methods:** The present study, part of a more complex project, represents a case series conducted on 5 patients admitted to the ICU with sepsis or septic shock. The inclusion criteria was Sepsis-3 definition, patients suffering from autoimmune disorders, cancer or under immunosuppressive treatment were excluded. In the first and fifth days after ICU admission blood samples were collected to determine biological and inflammatory status and lymphocyte phenotyping, identification of the etiological agents of sepsis from biological samples and calculation of severity scores were also carried out. **Results:** At admission, 3 patients were intubated, one required oxygen mask and one nasal cannula, all patients required vasopressor support with Norepinephrine. The predominant site of infection wasabdominal, Gram-negative bacteria, especially Pseudomonas aeruginosa and Acinetobacter baumanii, were the most commoninfectious agents found. Median values for severity score on the first day of admission were: SOFA score was 13 points, APACHEII score was 26 points. The preliminary results show that the highest CD4/CD8 ratio was found in a patient presenting the lowestSOFA and APACHE II scores, CD4 percentage being almost triple compared to CD8. High SOFA and APACHE II scores werecorrelated with low CD4/CD8 ratio. **Conclusions:** Hitherto, despite the small number of patients enrolled in this study, acorrelation between the clinical evolution, the CD4/CD8 ratio and the severity scores could be assessed.

Keywords: Sepsis, CD4 lymphocyte, CD8 lymphocyte, APACHE II score, SOFA score

IMPACT OF COVID-19 ON INTENSIVE CARE UNIT MEDICAL STUFF, USING COPENHAGEN BURNOUT INVENTORY AS A TOOL OF THE ASSESSMENT OF BURNOUT IN THE FIRST THREE WAVES OF THE PANDEMIC

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Background: Determined as organism's reaction to chronic stress, burnout syndrome (BS) could be increased in intensive careunits (ICU), peculiarly in special work conditions as those generated by its intensification during the COVID-19 pandemic. Themain aim of this study was to identify the prevalence of the burnout syndrome amongst healthcare workers. **Material and methods:**A cross-sectional study was carried out in ICU Department of Emergency Clinical County Hospital of Târgu Mureş. By June2021, an online questionnaire consisted of socio-demographic data, work circumstances and Copenhagen Burnout Inventory (CBI)was completed, in order to investigate the status of BS in the first three waves of the pandemic. **Results:** CBI questionnaire was answered by 155 participants, the majority being doctors and nurses, under 30 years of age, having no previous experience in ICU. More than 1/3 worked at least 7 months with COVID-19 patients. According to Spearman coefficient, fatigue and emotional exhaustion (⊠=0.67905), fatigue and physical exhaustion by the end of the day (⊠=0.637169) were moderate correlated, respectively fatigue and personal collapse (⊠=0.824162) were strong correlated. About 20% of healthcare workers resented physical or emotional fatigue, but there was no difference between male and females (p=0.191, p=0.648). Taking care of critically ill patients is more problematic for man than woman (p=0.022). Prolonged physical exhaustion related to the work was noted between different age groups: 20-30 years of age versus 41-50 years of age (p=0.003), 31-40 years of age versus more than 50 years of age (p=0.028).More than 1/3 of medical stuff wondered how long will be able to continue working in ICU and about 40% had only sometimesor rarely enough energy for leisure time. **Conclusions:** BS can be identified as an ongoing issue related to COVID 19 work environment.These findings could ease the understanding BS's effects and may help to implement management strategies.

Keywords: burnout, intensive care, COVID 19, Copenhagen Burnout Inventory

EVALUATION OF THE ROLE OF VEGF AND ITS GENETIC VARIABILITIES IN PROGNOSIS AND OUTCOME OF ARDS - NEW OPPORTUNITIES IN DIAGNOSIS AND TREATMENT

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Background: ARDS is notable for complexity and heterogeneity, as its pathophysiology is not completely understood. VEGF isone of the strongest activators of angiogenesis which stimulate proliferation of endothelial cells. Despite significant progresses in dotation of clinics of intensive care, the outcome remains to be poorly predictable and the survival rate is low. **Objective:** To review the research progress of genomic contributions in development of ARDS **Material and methods:** This review is based on the latest studies in the field that identified new targetable options via DNA sequencing, which contribute to the development of ARDS. I searched the literature for prospective studies which identified candidate genes via medium and high through-output characterization of polymorphisms in the last 4 years or via alternative splicing. **Results:** Up to date 81 candidate genes were identified to have contribution in development of ARDS. VEGF is encoded on chromosome 6p21.3 and that has been found to have mitogenic and angiogenic properties. The gene has affinity to bind to VEGFR1 or VEGFR2, both were found to be a potential therapeutic target on ARDS. VEGF is increased in plasma and reduced in alveolar space in various lung diseases,especially in ARDS. Also, its isoform expression changes during different phases of ARDS (early stage: VEGF165, late stage:VEGF165b). VEGF165 has effect on proliferation, and its effect can be inhibited by VEGF165b. **Conclusions:** This reviewaddresses the importance of candidate genes on outcome and also on development of the severe phenotype of ARDS. Identificationof single nucleotide polymorphisms as new biomarkers via human genome sequencing seem to be the target for new therapeuticconduits in this regard, as well they would offer personalization of ARDS treatment.

Keywords: ARDS, VEGF, genetic polymorphism

COMPUTER TOMOGRAPHY ASSESSMENT OF DIAPHRAGM ALTERATIONS IN CRITICALLY COVID-19 ILL PATIENTS – A PILOT STUDY IN PANDEMIC'S FOURTH WAVE

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Background: Pathological diaphragmatic muscle involvement is found in the majority of patients hospitalized in the intensive care unit (ICU), with a characteristic type of muscular dysfunction that has been proven to appear in mechanically ventilated patients. Length of stay (LOS) in ICU, malnutrition and infections are among the leading causes that have been identified. Therefore, COVID-19 in critically ill patients could be of an utmost importance in this concern. **Material and methods:** The current observational research was conducted during the fourth wave of the COVID-19 pandemic on patients admitted in ICU Department of Emergency Clinical County Hospital of Târgu Mureș. Statistical analysis included patients' characteristics and diaphragm alterations using dynamically computer tomography (CT) scans. Regarding axial plane, the thickness of the right and left diaphragms were measured at level of the origin of the celiac artery. **Results:** The investigated group included 20 critically ill patients, aged between 27-89, 75% being male, all of them presented with multiple comorbidities quantified by Charlson Comorbidity Index (CCI) and a high COVID-19 Gram Risk Score (>40.4%). Moreover, patients had a mean LOS in hospital of 14 days, a mean ICU stay of 9 days and 90% were intubated for respiratory failure, with a high physiologic stress level, neutrophil to lymphocyte ratio (NLR) being over 18. Furthermore, the CT scans showed decreased diaphragm muscle thickness in 50% of patients, having no statistically significant correlation. **Conclusions:** Decreased diaphragm thickness is observed in the majority of COVID-19 critically ill patients, in which comorbidities, LOS and NLR may have a substantial influence. Still, a larger research, continuous and consistent work on the existent data is to be done.

Keywords: COVID-19, diaphragm, critically ill patients, intensive care unit, computer tomography

BIOCHEMISTRY

A PRELIMINARY ANALYSIS IN THE DEVELOPMENT OF AN ENZYME ASSAY FOR 5ALPHA-REDUCTASE FROM HUMAN PROSTATIC TISSUE

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Background: The enzyme 5alpha-reductase is involved in steroid metabolism being responsible for the conversion of testosterone to its more potent androgen dihydrotestosterone. Blocking enzymatic conversion offers a potentially useful treatment for androgen-dependent diseases. The aim of the project is to obtain an ideal ratio of substrate-enzyme concentration in order to optimize an *in vitro* method for assessing the inhibition activity of the 5alpha-reductase enzyme process, extracted from human prostatic tissue, of phytocompounds by determining the substrate/product ratio (dihydrotestosterone /testosterone) as a biomarker of catalytic activity. **Material and methods:** The human prostate tissue was minced and homogenized with 10 ml medium A (sodium phosphate 20 mM (pH=6.5), EDTA 1 mM). The resulting homogenate was centrifuged and the supernatant was used as an enzyme source. In the following step, enzyme activity was assessed in the presence of different substrate concentrations (50 ng/ml, 100 ng/ml, 200 ng/ml, 300 ng/ml, 400 ng/ml). Substrate concentrations were indicated by the value of Km of 5alpha-reductase (Km= 0.004 - 1 μM). The enzyme activity was determined by incubation of the various concentrations of the substrate with a constant concentration of enzyme for one hour at 37°C. **Results:** To obtain the results, enzyme activity was assessed by quantifying changes in substrate concentrations (testosterone) using a LC-MS/MS analysis method. In the presence of substrate concentration 300 ng/ml, the enzyme showed the highest enzyme activity. **Conclusions:** The study allows us to obtain an optimal ratio of substrate-enzyme concentrations for which the enzyme is not oversaturated and has an increased enzyme activity. Based on this aspect, other parameters (incubation time, pH, temperature) will then be tested to achieve optimal enzymatic reaction conditions ensuring the maximum speed of the catalytic process.

Keywords: 5alpha-reductase, testosterone, dihydrotestosterone, enzyme activity

CARDIOLOGY

COMORBIDITIES IN PATIENTS WITH CHRONIC HEART FAILURE – A RETROSPECTIVE MONOCENTRIC STUDY

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Background: Morbidity and mortality rates in community-based populations with chronic heart failure still remain high. The 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure guidelines highlight the importance of identifying the main comorbidities as a way of multifactorial approach for treatment. **Material and methods:** The study compromises data from a cohort of 186 patients (IQR: 31-90 years) admitted with chronic heart failure in Internal Medicine 2 Clinic, Emergency Clinical County Hospital of Targu Mures over a period of 2 years. Patients were divided into 3 main subgroups according to the type of heart failure (HFrEF=36 pts, HFmrEF=31 pts, HFpEF=119 pts). The mean age was 65.13±11.5 years, male subjects consisting of 58.60%. The mean value for NT-proBNP was 2252±2968 pg/mL. A total of 10 major comorbidities (hypertension, coronary heart disease, rhythm and conduction disturbances, valvular disease, pulmonary arterial hypertension, chronic kidney disease, thyroid and liver disorders, metabolic disorders, anemia) were assessed. For the entire cohort, echocardiographic assessment of left ventricular systolic function for the entire sample determined an ejection fraction of 47.2±12%. **Results:** Natriuretic peptides (NT-proBNP) levels were greater in patients with HFrEF and HFpEF. There were substantial differences in NT-proBNP between the analyzed subgroups ($p<0.0001$). All subjects had at least 3 comorbidities, with an average of 7.8±2.08 per patient. There was no significant difference related to the number of comorbidities between samples ($p=0.2987$). The most frequent comorbidity was arterial hypertension, but without statistical significance between samples. Statistical analysis between the number of comorbidities and NT-proBNP serum values revealed a strong positive correlation ($p=0.0019$, Anova test). **Conclusions:** The number of comorbidities is correlated to the values of NT-proBNP. Associated conditions are frequent in patients with HFmrEF/HFpEF compared to HFrEF which underlines the role of inflammatory status and comorbidities in the pathologic pathways. More subjects should be enrolled for further data validation.

Keywords: heart failure, comorbidities, hypertension, natriuretic peptides

ANTICOAGULATION IN ATRIAL FIBRILLATION PATIENTS – DATA FROM FAMILY MEDICINE PRACTICE

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Background: The study apprehend the adherence of atrial fibrillation patients to oral anticoagulation regimen, respectivelystandard vitamin K antagonists (VKA) compared to the direct oral anticoagulants (DOACs) along with the compliance in monthlyINR determination. **Material and methods:** A number of 90 patients with non-valvular atrial fibrillation were enrolled in this retrospective study, recruited from urban and rural family practice areas. For stroke risk assessment CHA2DS2-VASC score was used (3 for women and at least 2 for men). Anticoagulation regimens were approved VKA's or NOACs. Demographic data and medical history were recorded for all patients. The adherence to anticoagulation therapy and frequency of INR monitoring were analysed, as well as the therapeutic target range (TTR-Rosendaal method) during the VKA regimen. **Results:** Of the enrolled patients, 51 come from urban areas and 39 from rural areas. Concomitant risk factors were counted: arterial hypertension was identified in 90% of database as well as obesity in 32,2% of patients. There were 26.6% type II diabetic mellites patients, 15.56% reported history of stroke and in 14.4% patients a history of acute myocardial infarction was documented. More than half of the patients in urban and rural areas had an AVK regimen but only 44.44% of the patients in urban areas are in TTR and only 14.28% of those in rural areas are in TTR. **Conclusions:** Due to social conditions or inadequate medical education, a considerable number of patients on standard VKA regimen do not perform an INR test at least monthly, consecutively they are out of therapeutic target. Ineffective anticoagulation leads to embolic complications. That's why the next step in the general practitioner's office could be the extended use of a point-of-care device making possible a facile and precise INR determination at the same time with the monthly scheduled visit for chronic concomitant therapy prescription.

Keywords: atrial fibrilation, anticoagulation, adherence, time in therapeutic range, family practice

EVALUATION OF RIGHT VENTRICULAR SYSTOLIC FUNCTION USING THE SPECKLE TRACKING ECHOCARDIOGRAPHIC METHOD IN A GROUP OF PATIENTS WITH PULMONARY HYPERTENSION

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Background: Pulmonary hypertension is defined as an increase in mean pulmonary artery pressure to≥25 mmHg at rest, invasively measured by right heart catheterization. Two-dimensional speckle tracking echocardiography is an independent angle technique based on frame-by-frame tracking of small ecodense spots in the myocardium, with further measurement of myocardial motion and its deformation. The strain is used to describe local shortening and elongation of ventricular myocardium as a measure of regional myocardial function in longitudinal, circumferential and radial directions. **Material and methods:** A retrospective study including data from a cohort of 24 adult PAH and CTEPH diagnosed and treated patients was completed. Transthoracic cardiac ultrasound included routinely echocardiographic parameters, and global longitudinal strain (GLS) value for right ventricle. During admission in Targu Mures Center for treatment of pulmonary hypertension 14 patients underwent speckle tracking and global longitudinal strain measurements. We hypothesized that changes in GLS values are linked to the risk of cardiovascular events. **Results:** Evaluation of the GLS compared to the associated risk guideline-related, demonstrated a statistically significant difference (p=0.01). This can demonstrate that as GLS increases, the risk of events decreases. Analysis of the global longitudinal strain in the basic characteristics of the studied group did not show a statistically significant difference (p=0.49) compared to the WHO functional class, most values over 20% being represented in WHO class II and the lowest GLS value (6.4%) was present in WHO class III patients. **Conclusions:** Evaluation of GLS compared to the risk showed a statistically significant difference, thus demonstratingthat with the increase in GLS value, the risk of a possible cardiovascular event decreases. The value of the GLS did not show asignificant statistically difference between the 4 groups of pulmonary hypertension patients. The GLS values did not show astatistically significant difference from the WHO functional class in the basic characteristics of the enrolled patients.

Keywords: right ventricular systolic function, speckle tracking, global longitudinal strain, cardiovascular events, pulmonary hypertension

DENTAL MEDICINE

EXPERIMENTAL STUDY ON THE MECHANICAL BEHAVIOR OF ORTHODONTIC ARCHES EXPOSED TO THE ENVIRONMENT IN THE ORAL CAVITY

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Background: The arches used in orthodontic therapy are subject to increasing physical and chemical stresses. **Material and methods:** We used 40 springs, 20 of Ni Cr and 20 of Co Cr, of different diameters: 0.7 mm; 0.8 mm and 1.2 mm, subjected to the environment of artificial saliva and artificial saliva with cola for one month and two months, respectively. 5 springs of each material were tested at different times: T0, before application in the oral cavity , then at time T1 , T2 , T3, T4. 3 types of lengths of the lever arm with which the spring was deformed were simulated: 15 mm, 10 and 5 mm. These wires were tested under the action of bending forces on a Hans Schmidt HV 500N stand, obtaining the characteristics of the wires: deformation - force - time. **Results:** Graphical determinations show that the degree of deformation of the wires is influenced by the applied force, diameter and obviously by the immersion time, respectively by the type of solution in which the springs were immersed. **Conclusions:** The final degree of bending is higher for Co -Cr arcs than for Ni -Cr at all three dimensions.

Keywords: orthodontic arches, orthodontic treatment, wires, oral cavity environment, deformations

ORBITAL RECONSTRUCTION AFTER HIGH MAXILLECTOMY FOR PAPILLARY ADENOCARCINOMA – A CASE REPORT

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Background: Papilary adenocarcinomas are rare malignancies of the sinonasal tract, a subcategory of intestinal type adenocarcinoma which are highly associated with wood dust exposure. They may mimic a metastatic intestinal tumour, have an aggressive behaviour and may require combined therapeutic strategies. **Material and methods:** A 73 years old man was diagnoseA 73 years old man was diagnosed with a papillary adenocarcinoma of the right maxilla and ethmoid in the oral and maxilla-facial department of Sibiu Military Hospital. Due to the tumour extent and involvement of the regional nodes, the treatment consisted in 2 stage surgery and postoperative radiotherapy. High maxillectomy, partial ethmoidectomy and immediate reconstruction with a customized titanium mesh, iliac bone block graft and temporalis muscle flap were performed in the first operation. Radical neck dissection was performed in the second operation, then the pacient was referred to radiotherapy unit. **Results:** There were no postoperative or postiradiation complications during the 6 months follow-up period. The temporalis muscle flap spontaneously epithelialized in the first 3 weeks after operation, there was no residual orosinusal fistula and the iliac bone graft remained stable during radiotherapy. **Conclusions:** Titanium customized mesh combined with iliac bone block graft and temporalis flap is one of the feasible reconstruction options in floor of the orbit reconstruction after high maxillectomy and it withstands also irradiation.

Keywords: orbital reconstruction, maxillectomy, titanium customized mesh, papillary adenocarcinoma

DENTAL IMPLANTS OSTEOINTEGRATION FROM THE PERSPECTIVE OF PARACLINICAL LABORATORY EXAMINATIONS

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Background: Vitamin D (25 hydroxy vitamin D3) is a precursor of human hormones with a role in regulating calcium and phosphate metabolism, being synthesized by skin cells under the influence of UV radiation. Vitamin D deficiency, which is associated with high levels of HDL cholesterol, LDH cholesterol causes a decrease bone density, osteoporosis, progression of periodontal disease and resorption of the maxillary bone. The benefits of vitamin D are immunomodulatory and anti-inflammatory effects implicated in bone metabolism and prevention of tooth loss. **Material and methods:** We included 83 patients (24 men/59 women) from urban backgrounds with a average age of 46.66 years; being inserted 278 dental implants. All patients had to present laboratory tests: Vitamin D, HDL cholesterol, LDL cholesterol, Total Cholesterol, Triglycerides, CBCT examination. If the analysis parameters were out of normal limits, the surgery was postponed. The insertion of dental implants was done after the stabilization of the paraclinical parameters. **Results:** Dental implants had a primary stability at the time of surgery over 35 N / cm, no failed dental implants were identified at 14 days after the surgery and the osseointegration rate of dental implants was 92.8% regardless the type of dental implants used. **Conclusions:** Maintaining the optimal levels of Vitamin D, HDL cholesterol, LDL cholesterol we can achieve a rate of osseointegration of dental implants over 92%.

Keywords: VITAMIN D, DENTAL IMPLANTS, OSTEOINTEGRATION, CHOLESTEROL

CONSERVATIVE MANAGEMENT OF MIH RESTORATION IN OUR PEDIATRIC CLINICAL PRACTICE

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Background: In this particular case MIH is defined as a structural defect in the tooth enamel, asymmetrical affecting the first permanent molars. Thist type of developmental defect may also have systemic origins (birth hypoxia), well known for the hypersensitivity and highly difficult management. **Material and methods:** The article presents a case report of a restoration in a female patient, with severe opacities identified on the first upper left molar (2.6), the most affected tooth. In this case the developmental defect of the enamel was identified and diagnosed at the moment of eruption, at 6.5 years old. At the age of 7, a minimal invasive restoration was performed as a result of poor cooperation from the patient and indication of hypersensitivity even after anesthesia. First restoration was done using glass-ionomer FUJI IX to prevent further post eruptive breakdown of the enamel, respectively to conserve the tooth structure. At the age of 12, at a clinical examination, multiple fractured margins of the restoration were found, along with a significant loss of the enamel. After removing the old filling, a dentine carious lesion was certified using sable seek caries indicator. **Results:** The restorative treatment was performed using composite resin by applying the adhesive technique. The treatment was performed under effective local anesthesia with articain. **Conclusions:** The resorative treatment option using composite resin and adhesive technique showed a functional restoration at 6 months recall, no marginal infiltration or breakdown and good esthetics.

Keywords: dental enamel hypoplasia, temporary dental restoration, permanent dental restoration

EPIDEMIOLOGY

DERMATOSCOPY AS A TOOL FOR MONITORING THERAPEUTIC RESPONSE IN ERYTHRODERMIC PSORIASIS

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Background: Erythroderma is a severe and potentially life-threatening condition characterized by erythema and scaling involving more than 90% of the body surface. Common causes of erythroderma include exacerbation of preexisting inflammatory dermatoses, as well as lymphoproliferative skin disorders. Dermatoscopy has become increasingly useful in differentiating various inflammatory diseases and its role has gained more ground as an important tool in monitoring and predicting therapeutic response.
Material and methods: A 51-year-old male with no known comorbidities came to our clinic presenting with generalized erythroderma. Dermatoscopic examination revealed the presence of dotted, homogeneous vessels occupying the entire dermatoscopic field and fine, white scales with diffuse distribution on an erythematous background. Histopathology confirmed the diagnosis of psoriasis as the cause of erythroderma. PASI and DLQI scores were calculated and values of 44.8 and 22 points, respectively, were registered. We started systemic treatment with Methotrexate and Folic acid. **Results:** After 3 months of treatment, an important clinical amelioration was confirmed by PASI 75 and by the improvement of the dermatoscopic aspect, with an essential reduction in dotted vessel density, as well as disappearance of scales. At the 6 month visit, almost complete remission was demonstrated by PASI 90 and by the dermatoscopic image of approximately 90% disappearance of dotted vessels and lack of scales. **Conclusions:** Dermatoscopy adds essential value to the clinical diagnosis of inflammatory dermatoses and their erythrodermic exacerbations. Moreover, it has been shown to be a useful tool in monitoring and predicting therapeutic response.

Keywords: erythroderma, dermatoscopy, psoriasis, treatment, monitoring

FORENSIC MEDICINE

A MEDICO-LEGAL PERSPECTIVE OF DOMESTIC VIOLENCE IN CLUJ COUNTY AT THE BEGINNING OF COVID-19 PANDEMIC

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Background: In Romania a domestic violence victim needs a medico-legal certificate to quantify the presence of traumatic injuries in front of the court of law before requesting a protection order against his or her aggressor. The aim of this study is to determine if there was an increasing number of women among the victims of domestic violence. **Material and methods:** We conducted an observational retrospective study regarding the domestic violence in Cluj County, Romania, among the persons who solicited a medico-legal certificate at the Institute of Legal Medicine Cluj-Napoca, between 2019-2020, and we comparted the obtained data with the public data regarding the protection orders from the national justice website. **Results:** In 2019, 76 persons declared they were victims of domestic violence from a total of 1415 who requested medico-legal certificates. 66 (87%) of them were women with urban residence, between 41-60 years, with mild traumatic injuries, requiring below 20 days of medical care. 26 persons demanded protection orders against their aggressors. In 2020 from a total of 1043 persons who demanded medico-legal certificates, 82 were victims of intrafamily violence. 72 (88%) were women with urban residence, between 21-40 years, who suffered mild traumatic injuries. 31 victims of domestic violence demanded protection orders against their aggressors. **Conclusions:** In the first year of the COVID-19 pandemic there was a slightly increase compared to 2019 in demand of medico-legal certificates from women victims of domestic violence.

Keywords: domestic violence, medico-legal certificate, women, protection order

HEMATOLOGY

CARDIOTOXICITY IN A PATIENT WITH PRE-EXISTING CARDIAC CONDITIONS AND THE NEED FOR CARDIOVASCULAR RISK ASSESSMENT PRIOR TO THE INITIATION OF CHEMOIMMUNOTHERAPY.

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Background: Non-Hodgkin's lymphoma represents the most common form of lymphatic system cancer. Anthracyclines have been acknowledged as the most effective drugs in disease treatment. The use of anthracycline-containing regimens plus immunotherapy must be rational in individual patients, especially the elderly, which can present severe adverse cardiovascular effects related to the drug cardiotoxicity. **Material and methods:** A 66 y.o. female patient, very-high cardiovascular risk (SCORE2 algorithm:42), former smoker, with a personal history of hypertension, chronic coronary syndrome, COPD, was diagnosed with non-Hodgkin marginal lymphoma stage IIIB, confirmed by the histopathological and immunohistochemistry of biopsy specimen from left submandibular adenopathy. The presence of symptomatic mediastinal compression syndrome, low peripheral oxygen saturations, determined a CVP (Cyclophosphamide, Vincristine, Prednisone) regimen for decompressive purposes. Subsequently, due to the aggressive character of the hematological condition, advanced stage and "resounding" debut chemoimmunotherapeutic treatment were initiated according to the RCHOP protocol. **Results:** During the 4th cycle of chemotherapy, the patient experienced symptoms and signs of acute heart failure, severe congestion, pulse oximetry down to 81%. Physical examination and echocardiography displayed acute heart failure, moderate pulmonary hypertension, mild mitral and severe tricuspidal regurgitation; a personalized heart failure treatment was started. High flow oxygen delivered via a nasal cannula and escalating intravenous loop diuretics alongside mineralocorticoid receptor antagonists improved clinical status, increased oxygen saturation up to 94%, and marked decongestion. The cytostatic regimen was modified corresponding to cycle 5 and the initial anthracycline (Epirubicin) was replaced with a less cardiotoxic drug (Idarubicin), but subsequently, anthracycline and monoclonal antibodies (Rituximab) were completely excluded from the protocol due to reappearance of congestion. Finally, the CVP regimen was reloaded with a good midterm outcome. **Conclusions:** Cardiotoxicity remains an important issue in treating malignant hematologic patients with preexisting cardiac disorders; due to the aggressiveness of the malignant condition, we must consider the optimal efficient treatment with the lowest cardiotoxicity outcome.

Keywords: cardiotoxicity, chemoimmunoterapy, Non-Hodgkin's lymphoma, cardiovascular risk

HYGIENE

SUSCEPTIBILITY TO SMOKING AMONG NON-SMOKING STUDENTS FROM CHISINAU, REPUBLIC OF MOLDOVA

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Background: Susceptibility to smoking is defined as lack of a firm commitment not to smoke, never-smoking persons who seem less determined not to smoke in the future and / or when they are offered a cigarette by a friend. For preventing young people from initiating smoking and becoming regular smokers, it is important to understand the causes of susceptibility to smoking. The aim of the study was to determine the prevalence of susceptibility to cigarette smoking and associated factors among high school students in Chișinău, Republic of Moldova. **Material and methods:** The current study is a repeated cross-sectional secondary analysis of data collected using a questionnaire administered in 2015 and 2018 among ninth-grade students in Chisinau, Republic of Moldova. From 368 students in 2015 and 819 in 2018 included in the study as eligible students, 329 (89.4%) in 2015 and 698 (85.2%) in 2018 declared themselves as non-smokers. **Results:** The prevalence of susceptibility to cigarette smoking among the study participants was 38.6% in 2015 and 50.2% in 2018. From the non-smokers, 24.3% of students were susceptible to smoking in 2015 and 34.1% of students in 2018. A share of 14.3% of students in 2015 and 16.1% in 2018 were very susceptible. Our result indicates that there is a strong association between the smoking status of friends and the level of susceptibility to smoking among adolescents. Smoking friends represent a strong predictor of high smoking susceptibility among those who have never smoked. The low level of education of the parents was also an important predictor of susceptibility to smoking. This may be due to the insufficient involvement of the parents in the education of children. **Conclusions:** Determining the level of susceptibility among students is an important factor which should be considered in the process of elaboration of anti-smoking school policies and establishing target groups for action.

Keywords: smoking susceptibility, students, non-smokers, Moldova

INFECTIOUS DISEASES

SYSTEMIC INFLAMMATORY INDEX AS AN EARLY PREDICTION MARKER FOR INTENSIVE CARE UNIT ADMISSION FOR COVID-19 PATIENTS

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Background: Inflammation is a driving mechanism for severe disease and poor outcomes in SARS-COV-2 infected patients. Several markers were analyzed in relation to disease severity, intubation necessity and intensive care units (ICU) transfer, some of them expensive or unavailable for the routine practice. The Systemic Inflammatory Index (SII) is a calculated parameter derived from the complete blood count (CBC), a routine test requested in the lab for each patient, even several times a day. The aim was to assess the utility of SII as a predictor for patients' admission in ICU. **Material and methods:** A total of 220 patients with SARS-CoV-2 infection confirmed by a positive RT-PCR test admitted into the First Infections Clinic of Târgu Mureș were recruited. Data from the routine laboratory investigations were recorded and analyzed in relation to SII as a presumable predictor for ICU admission. The SII was calculated according to the formula (neutrophils/µl x platelets/µl)/lymphocytes/µl), all parameters were extracted from routine CBC. A cut-off value for SII was estimated using a ROC analysis and the severe form of Covid-19 as an outcome. A value above 1141 was established as a cut-off for admission in ICU. Additionally, metabolic parameters, as well as other inflammatory markers, were analyzed. **Results:** Of the total 219 patients recruited, 143 (65.3%) were below the CO and 76 (34.7%) above the CO, with 126 male 41 (53.9%) above CO. Except for diabetes mellitus type II (p=0.005), no other associated condition was found significantly related with SII. The risk estimate for ICU transfer was 2.075 (95% CI 1.041-4.134) for SII above 1141 (p=0.045). **Conclusions:** The SII could be a useful inflammatory biomarker for ICU transfer in the case of SARS-CoV-2 infected patients. This work was supported by GE Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures, Romania, Research Grant no10126/1/17.12.2020.

Keywords: COVID-19, inflammation, Sistemic Inflammatory Index

EVOLUTIVE FEATURES OF LISTERIA MONOCYTOGENES MENINGOENCEPHALITIS IN AN ADULT PATIENT – CASE REPORT

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Background: Listeria monocytogenes, a gram-positive rod with low pathogenicity, but high neurotropism, is a foodborne zoonosis affecting primarily individuals with impaired immunity and pregnant women, causing serious infections, of which the most notable are sepsis and CNS infections. This article aims to highlight a severe meningoencephalitis case aggravated by hydrocephaly and healthcare-associated infections. **Material and methods:** A 62-year-old dipsomaniac and hypertensive male patient is admitted at the UPU-SMURD ER six days after the onset of a seemingly CNS infection, objectifying fever, chough and progressive left hemicorporeal muscle weakness, being found by his relatives, after falling in the bathtub. **Results:** The clinical exam showed nuchal rigidity, bilateral positive Babinski test and stage 4 left hemiparesis. CSF exam revealed low cellularity (28 erythrocytes/uL, 208 leukocytes/uL), while biochemical samples of CSF described severe hypoglycorrhachia (GCSF/GSerum=0.17) and overwhelmingly high protein levels (3.7g/dL). Bacteriologic sampling of CSF indicated Listeria monocytogenes, consecutively ampicillin, meropenem and amikacin treatment now substitute the empirical treatment. After a few days, the patient's, neurocognitive and general status worsens, requiring ICU admission, where seriated imaging findings reveal increasing hydrocephalus. He is later transferred to the Neurosurgery Department, where an EVD is set. The patient's status slightly ameliorates, only to destabilize drastically within the next days, by becoming comatose, showing signs of sepsis, requiring inotropic and vasoactive support and progressively desaturating down to the point where high-flow invasive ventilation and tracheostomy were required. Bronchial aspirate bacteriological exams are performed, revealing Pseudomonas aeruginosa MDR, then both Acinetobacter baumannii and the previous. Despite many days of vigorous antibiotic, anti-inflammatory, depletive, homeostatic and life-supporting treatment, the patient passes away after two months since his admission. **Conclusions:** Listeria monocytogenes infections remain a life-threatening condition, given that they are the appanage of a weakened immune system, thus being a mark of the whole range of complications that immunosuppression leads to.

Keywords: Listeria monocytogenes, Meningoencephalitis, Infection, Healthcare-associated infection, Hydrocephalus

CLINICAL CHARACTERISTICS AND RISK FACTORS ASSOCIATED WITH MORTALITY IN SEVERE COVID-19 PATIENTS IN INFECTIOUS DISEASES CLINIC I – TÂRGU-MUREŞ

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Background: As the COVID-19 pandemic continues, understanding the clinical outcomes of mortality has become critically important. **Material and methods:** In this retrospective cohort study, we extracted demographic, clinical and biological data, radiological characteristics of patients with COVID-19 who were hospitalized and died between 1st January to 1st November, 2021, in the Clinic Infectious Diseases I Târgu-Mureş. **Results:** The group included 561 patients, from wich 81 deaths were recorded (14,43%). The highest mortality was in September 27% (13 deaths), with a decreas in July - August. The median age was 71 years (IQR, 34 - 95); deaths were predominant in males 58,9%. The average duration from symptom onset to admission was 6,81 days and the hospital stay was 12,7 days. The transfer to the intensive care unit occured on average 3,88 days before hospitalization. Obesity was present in 20 patients (25,64%) and 38,46% (30 patients) was hyperstenic. Hypertension was themost common comorbidity present (64,1%), 34,6% of patients had type 2 diabetes. The computed tomography scan from the presentation found a damage to the lung fields from over 60% to 41,02%, and 15,38% of patients had a lung damage between 30 - 60%, 10,25% damage below 30%. The median lymphocyte being 690 cells/mm^3. Unfavorable evolution of the biological paramaters registered: the ferritin value reached maximum values on the 8th day of hospitalization, and the C - reactive protein on the 5th day, 6,02% of patients had positive D-dimers. The most common acute complication was respiratory distress syndrome, followed by sepsis (32 patients). Acinetobacter baumanii (6,41%), Enterococcus (8,97%), Candida albicans (6,41%) were the most incriminated ethiological agents. In 4 patients (5,12%) the death was the consequence of thromboembolic complications. **Conclusions:** The mortality rate among patients with COVID-19 was higher in older patients, male sex and the presence of comorbidities. The reported in-hospital mortality corresponds to the national trend.

Keywords: mortality, COVID-19, risk factors

INTERNAL MEDICINE

IMMUNOTHROMBOSIS IN CANCER PATIENTS

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Background: Immunothrombosis refers to the participation of immune cells in thrombotic events. A particular role is played by neutrophils, capable of NETosis - the process of developing a net-like structure, composed of neutrophil extracellular traps (NETs). As NETosis has been described in various physiopathological processes, including cancers, the present paper aims to review the publications on this topic from the last two years. **Material and methods:** A systematic search was performed on PubMed using the following combination of key-words and boolean operators: NETosis AND thrombosis AND cancer. The results were filtered to correspond to the last two years of published research (2020-2021). A total number of eleven articles were evaluated, from which three were excluded - as the publications were erroneusly given by the search engine as related to cancer. **Results:** The reviewed articles described the role of NETosis in the development and dissemination of different neoplasia. NETs have been identified in both human and animal models biological samples. A particular process of neutrophil recruitment in the tumor microenvironment, resulting in the so-called "tumor-associated neutrophils" (TANs), showed to have pro- or anti-tumor activity, as TANs are divided into two phenotypes: the antitumor N1, respectively the protumor N2 phenotype. The protumoral activity is further supported by immunoediting caused by the inter-relation between TANs and NETs. NETs can wake dormant neoplastic cells, causing relapse and can catch circulating ones, promoting dissemination. Evidence showed that NETs also promote angiogenesis. The interaction cancerous cells-neutrophil-thrombocites-vascular endothelium is essential for cancer progression. As NETs trap platelets and promote platelet activation and thrombus formation, thromboembolic events are frequent complications in neoplastic patients. **Conclusions:** This recent data leads to the open question on how we can employ NETosis-related biomarkers to predict thrombotic events in cancer patients, or even target NETs in the attempt to develop new potential cancer therapies.

Keywords: immunothrombosis, NETosis, NETs, cancer, neoplasia

MONITORING THYROID FUNCTION IN THE EVOLUTION OF LIVER CIRRHOSIS

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Background: The liver plays an important role in the metabolism of thyroid hormones, as it is the most important organ in the peripheral conversion of tetraiodothyronine (T4) to T3 (triiodothyronine) by type 1 deiodinase. The liver is involved in the conjugation and excretion of thyroid hormones. T4 and T3 regulate the basal metabolic rate of all cells, including hepatocytes, and thus modulate liver function. **Material and methods:** We tried to find a correlation between T3, T4, TSH levels, the severity of liver cirrhosis expressed by the Child Pugh score, the presence of liver encephalopathy and the clinical evolution of patients. We studied a group of 91 patients (Constanta County Emergency Hospital) diagnosed with liver cirrhosis. **Results:** Patients, with different etiologies of liver disease and in different stages of its evolution, were investigated on the integrity of thyroid function in parallel with the degree of progression of liver disease. Patients with chronic liver disease may have thyroiditis, hyperthyroidism, hypothyroidism. Patients with subacute thyroiditis or hyperthyroidism may experience abnormal liver function tests, which return to normal as thyroid function improves **Conclusions:** As a preliminary conclusion, we sound the alarm on the impairment of thyroid function in patients with liver cirrhosis, but also on the need to continue research by studying the consideration of T3, T4 and TSH, ATPO, in cirrhotic patients, as a prognostic factor and / or to assess the severity of liver damage.

Keywords: Thyroid function, cirrhotic patients, prognostic factors.

MICROBIOLOGY

THE INFLUENCE OF FARNESOL AND TYROSOL ON CANDIDA ALBICANS GROWTH RATE

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Background: *Candida albicans* rely on Quorum Sensing Molecules (QSMs) like farnesol and tyrosol for intermicrobial communication. The aim of the study was to assess the influence of farnesol and tyrosol on *C. albicans* growth rate. **Material and methods:** To determine the growth rate, a standard fungal inoculum was created by mixing *C. albicans* ATCC 90028 reference strain in saline solution. Either farnesol (98%, Sigma-Aldrich) or tyrosol (98 %, Sigma-Aldrich) were added in nutrient broth, in a concentration of 100µM/ each QSM and then mixed with 10µl of fungal inoculum. Samples without added substances served as growth control. All samples were incubated for 48 hours and their optical densities (OD) were read by spectrophotometry (620 nm) after 6, 9, 24 and 48 hours of incubation. The experiments were conducted in triplicate. The mean OD values of the samples were compared with the mean OD of the control samples (Δ-Index). An Δ-Index ≥ 1.25 was considered suggestive for stimulation of fungal growth rate, while an Δ-Index of 0.75 was sugesstive for growth rate inhibition. This research was funded by UMFST G.E.Palade Tg.Mures grant number 10127/17.12.2020 **Results:** Although initially, farnesol inhibited the growth rate of *C. albicans* (Δ-Index values of 1.34 after hours of incubation, and 3.62 after 9 hours of incubation), after 24 and 48 hours the growth rate was inhibited by the added farnesol (Δ-Index of 0.23 and 0.25). Tyrosol inhibited the growth rate of *C. albicans* at all measured time points (Δ-Index ranging between 0.01 and 0.18). **Conclusions:** QSMs can directly influence the growth of *C. albicans*. Both farnesol and tyrosol have inhibitory effects on *C. albicans* after 24 and 48 hours of incubation. The study highlights the possibility of using QSMs as *C. albicans* growth rate modulators, but more research is needed for establishing the exact molecular mechanisms that stand behind this observation.

Keywords: farnesol, tyrosol, growth rate, candida albicans, quorum sensing molecules

THE INFLUENCE OF GLUCOSE, FRUCTOSE AND LACTOSE ON C. ALBICANS, C. PARAPSILOSIS, C. KRUSEI, C. AURIS AND C. GUILLIERMONDII BIOFILM FORMATION

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Background: Nutrient availability is known to influence the ability of a microorganism to multiply and to cause infections. Organized in biofilms, *Candida* spp. are more refractory to antifungal drugs and have an overall increased virulence. The study aimed to assess the influence of three carbon sources (glucose, fructose and lactose) on the biofilm production ability of *C. albicans* and also, of some rare, understudied *Candida* spp. **Material and methods:** Five 0.5 McFarland inocula were created by using mixing *C. albicans* ATCC90028, *Candida auris* CBS10913, *Candida krusei* ATCC6258, *Candida parapsilosis* ATCC22019, and *Candida guillermondii* (IC184, Cantacuzino Institute, Romania) reference strains. Fungal suspensions were transferred in RPMI-1640 medium with either glucose, fructose, or lactose (400mg/dl, 200mg/dl, 100mg/dl and 50mg/dl). The samples were incubated for 24 hours in microtiter plates. The biofilms in the wells were stained with crystal violet, then destained in acetic acid. Thebiofilm production was quantified by spectrometry, reading the optical density (OD) in each well at 420nm. The experiments were conducted in triplicate. The mean ODs of the samples with added substances were compared with the mean ODs of the control samples, without added substances. The data were expressed in percentages (≥ 25% represented biofilm stimulation, and ≤ -25% represented biofilm inhibition). This work was supported by UMFST G.E.Palade Tg.Mures grant number 294/5/14.1.2020. **Results:** Glucose (50-400mg/dl) and fructose (100-400 mg/dl) reduced the biofilm production for *C. albicans* by 39-54%, respectively by 39-41%. Lactose (400 mg/ml) enhanced the biofilm production for *C. albicans* by 39%. The non-albicans species were not significantly influenced by glucose, fructose, and lactose. **Conclusions:** *C. albicans* biofilm formation was influenced by glucose, fructose and lactose, while non-albicans species are less responsive to these nutrient sources. The nutrient acquisition strategies used by fungal cells inside biofilms might be different than those used by planktonic cells.

Keywords: biofilms, non-albicans, Candida, nutrients, metabolism

MOLECULAR BIOLOGY/NEUROSURGERY

EXOSOMES AND THEIR IMPORTANCE IN THE CEREBRAL METASTATIC PROCESS

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Background: Exosomes, the smallest extracellular vesicles, are being intensively studied nowadays because of their significant roles in intercellular communication, cancer development, metastatic process and drug resistance. Cerebral metastases represent more than half of all the brain tumors that are encountered during clinical practice, these tumors also being the ones with the worst outcome because of their rapid evolution, late diagnosis and inefficient therapy. It seems that exosomes released by the primary tumor have the capability to travel along with the bloodstream and destroy the blood-brain barrier, contributing to the development of the premetastatic niche. Hopefully, future discoveries will contribute to the earlier diagnosis of cancer by using exosomes as liquid biopsies and also to an improvement in the therapeutic results of chemotherapy by using exosomes as drug carriers. This presentation tries to summarize the latest knowledge and future directions related to the role of exosomes in the cerebral metastatic process. **Material and methods:** Exosomes, the smallest extracellular vesicles, are being intensively studied nowadays because of their significant roles in intercellular communication, cancer development, metastatic process and drug resistance. Cerebral metastases represent more than half of all the brain tumors that are encountered during clinical practice, these tumors also being the ones with the worst outcome because of their rapid evolution, late diagnosis and inefficient therapy. It seems that exosomes released by the primary tumor have the capability to travel along with the bloodstream and destroy the blood-brain barrier, contributing to the development of the premetastatic niche. Hopefully, future discoveries will contribute to the earlier diagnosis of cancer by using exosomes as liquid biopsies and also to an improvement in the therapeutic results of chemotherapy by using exosomes as drug carriers. This presentation tries to summarize the latest knowledge and future directions related to the role of exosomes in the cerebral metastatic process. **Results:** Exosomes, the smallest extracellular vesicles, are being intensively studied nowadays because of their significant roles in intercellular communication, cancer development, metastatic process and drug resistance. Cerebral metastases represent more than half of all the brain tumors that are encountered during clinical practice, these tumors also being the ones with the worst outcome because of their rapid evolution, late diagnosis and inefficient therapy. It seems that exosomes released by the primary tumor have the capability to travel along with the bloodstream and destroy the blood-brain barrier, contributing to the development of the premetastatic niche. Hopefully, future discoveries will contribute to the earlier diagnosis of cancer by using exosomes as liquid biopsies and also to an improvement in the therapeutic results of chemotherapy by using exosomes as drug carriers. This presentation tries to summarize the latest knowledge and future directions related to the role of exosomes in the cerebral metastatic process. **Conclusions:** Exosomes, the smallest extracellular vesicles, are being intensively studied nowadays because of their significant roles in intercellular communication, cancer development, metastatic process and drug resistance. Cerebral metastases represent more than half of all the brain tumors that are encountered during clinical practice, these tumors also being the ones with the worst outcome because of their rapid evolution, late diagnosis and inefficient therapy. It seems that exosomes released by the primary tumor have the capability to travel along with the bloodstream and destroy the blood-brain barrier, contributing to the development of the premetastatic niche. Hopefully, future discoveries will contribute to the earlier diagnosis of cancer by using exosomes as liquid biopsies and also to an improvement in the therapeutic results of chemotherapy by using exosomes as drug carriers. This presentation tries to summarize the latest knowledge and future directions related to the role of exosomes in the cerebral metastatic process.

Keywords: exosomes, brain, metastases, blood-brain barrier, pre-metastatic niche

NEUROLOGY

MRNA EXOSOMES AS POTENTIAL BIOMARKERS FOR SPHINGOSINE 1-PHOSPHATE RECEPTOR MODULATORS TREATMENT RESPONSE IN PATIENTS WITH RELAPSING REMITTING MULTIPLE SCLEROSIS

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Background: Exosomes (EXO) are an heterogeneous group of membrane-bound vesicles released from most body cells into the extracellular space, playing important roles in intercellular communication, both locally and systemically. EXO contain different proteins, among which are non-coding RNAs such as microRNAs (miRs). MiRs being secreted from central nervous system (CNS) cells and protected by the membrane of EXOs might represent biomarkers for monitoring the neuroimmune processes behind and at the level of the blood-brain barrier (BBB) at patients with relapsing remitting multiple sclerosis. **Material and methods:** The purpose of the study is to develop two EXO-miR panels of biomarkers: for prediction of treatment response to a specific disease-modifying therapies (DMT) and for DMTs' response monitoring during treatment by comparing the data obtained from patients with RRMS compared with the control group. Furthermore, to investigate miRs from EXO of CNS-cells (microglia, astrocyte), cells which promote neurodegeneration **Results:** A specific miR signature in acute or chronic demyelinating brain lesions, with a few miRs of glial-CNS cells' origins found to be dysregulated compared with those of control group. The expression of miRNAs originating from central CNS cells that play a central role in MS pathogenesis as published in studies are the one from astrocytes as miR-146a, miR-155, miR-326, and from microglial cells as miR-146a, miR-155, miR-223 **Conclusions:** A precocious, reliable biomarker collected from the periphery that could signal that the treated MS patient's neuroimmune process is not sufficiently controlled could allow the clinician to choose the therapy for a better control of the disease.

Keywords: Multiple sclerosis, Exosomes, microRNAs, Sphingosine 1-phosphte receptor modulators, biomarkers

THE LIPID PROFILE - BETWEEN GUIDELINES AND PARADOX

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Background: Atherosclerosis is a chronic inflammatory disease, which affects arteries, being the leading cause of cerebrovascular disease.The progression process of atherosclerosis is a complex mechanism based on the metabolic dysregulation of the lipidic profile, endothelial dysfunction, and inflammatory activity. Dyslipidaemia is a significant risk factor of all arterial diseases and represents the increase of the low-density lipoproteins and the decrease of the high-density lipoproteins from the serum. **Material and methods:** We performed a comparative review of the latest guidelines and other clinical studies that provide contradictory results regarding the lipidic profile of stroke patients and their clinical outcome. **Results:** The current medical approach regarding dyslipidemia is based on decades of clinical practice, studies on large cohorts and is available as standardized up-to-date guidelines.The current guidelines recommend evaluating the population's cardiovascular risk and offering personalized treatment options for each risk category.However, in recent years, a new trend began to appear in the research field regarding the lipidic paradox, as more and more authors showed evidence that stroke patients with dyslipidemia had a series of positive effects, such as functional prognostic, the severity of the stroke and short and long-term prognostic.This inverse epidemiologic phenomenon seems to be a turning point in the future research of the lipidic profile. **Conclusions:** There is not enough evidence yet to create the basis of new therapeutic protocols based on the lipidic paradox.The benefits of statin treatment in primary and secondary cardiovascular events are uncontested, proving helpful in reducing the number of major events. The current guidelines offer the best clinical and scientific evidence, which should be followed in clinical practice.

Keywords: lipid profile, lipid paradox, stroke, dyslipidaemia

THE CURRENT STATE OF KNOWLEDGE ON THE CO-OCCURRENCE OF EMOTIONAL DISORDERS IN PATIENTS WITH MULTIPLE SCLEROSIS.

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Background: Multiple sclerosis (MS) is a neurodegenerative disorder manifested by inflammation and demyelination of the central nervous system that mainly affects the young population. Objective: The aim of this paper is to identify the mental health disorders associated with MS and their impact on the disease progression. **Material and methods:** An analysis of the scientific literature investigating the occurrence of emotional disorders in adults with MS was conducted. ScienceDirect, Web of Science, PubMed and Scopus databases were accessed to identify articles, using the following terms: "depression in multiple sclerosis", "anxiety in multiple sclerosis", "quality of life in multiple sclerosis". **Results:** The most common mental health disorder associated with MS is depression, followed by anxiety disorders. The prevalence of depression and anxiety symptoms is higher in patients with MS that in general population, especially in the first years after the diagnosis. The incidence of depression is explained by a mixture of neurobiological and psychosocial factors like atrophy of the cortical areas of the brain, imbalances in the functioning of neurons, socio-professional integration and disease progression. The occurrence of anxiety disorders is related to increased levels of disability, depression, as well as uncertainty about the evolution of the disease. The presence of emotional disorders affects patients' adherence to disease-modifying therapies, increases the suicidal risk and social isolation, exacerbating MS symptoms and significantly reducing the quality of life. **Conclusions:** Identifying and treating depression and anxiety symptoms was associated to an improvement of MS symptoms and increased quality of life.

Keywords: depression, anxiety, multiple sclerosis, quality of life

THE GLUCOSE KETONE INDEX: AN IMPORTANT CLINICAL BIOMARKER IN TREATMENT INDIVIDUALIZATION OF PATIENTS WITH GLIOBLASTOMA

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Background: Glioblastoma (GBM) is the most common and aggressive primary brain tumor, with a survival rate of 15-18 months after the current standard multimodal treatment (surgical resection, radiotherapy, chemotherapy). The distinct metabolic profile consisting in a high glycolytic rhythm is the key in GBM cell development. Glucose Ketone Index (GKI), the ratio between blood glucose over blood ketone (beta- hydroxybutyrate), is an important marker which helps in tracking the metabolic management of brain tumors. **Material and methods:** Determining the GKI from venous blood a jeun, according to a predetermined formula- (blood glucose/18)/ blood ketones, in 2 groups of patients: a group of 15 patients with GBM de novo (histopathologic confirmation) and a control group of 15 patients with common demographic characteristics. **Results:** There was no significant difference between the two groups of patients in terms of general data: 9 men in the control group versus 10 in the GBM group; the mean age was 57.8 in the control group versus 57.6 in the GBM group. The mean blood glucose was 123 mg / dL and blood ketones 0.1 mmol / L in the GBM group, respectively 94.4 mg / dL and 0.23 mmol / L in the control group. The mean GKI was 11.43 in the control group and 35.77 in patients with de novo GBM. There is not statistically significant difference between the two groups of patients in terms of GKI ($p = 0.063$). **Conclusions:** GKI could provide a good quantification of carbohydrate metabolism and ketones in patients with GBM, and may be useful for establishing an individualized adjuvant treatment (ketogenic diets) in certain patients.

Keywords: glioblastoma, glucose, ketone, biomarker

OBSTETRICS AND GYNECOLOGY

CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY BENEFITS IN 1-YEAR SURVIVAL IN OVARIAN CANCER PATIENTS: A CASE-CONTROL STUDY

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Background: The purpose of this paper is to emphasize the benefits of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in the survival of advanced stage ovarian cancer patients. **Material and methods:** Was conducted a retrospective case-control study between June 2013 - January 2019 including 110 patients with a mean age of 55,3 years diagnosed with ovarian cancer staged III-IV who underwent a cytoreductive surgery and HIPEC in several moments during the evolution of the disease, being analyzed data regarding preoperative, intraoperative aspects and 1-year survival. Patients were divided in 3 groups based on 1-year evolution: disease free (75 cases), survival with recurrence (20 cases) and decease (15 cases). **Results:** Was observed that the highest chances for an unfavorable prognosis belonged to patients aged between 41 and 60 years (OR = 3.31, P = 0.04). CRS and HIPEC as primary treatment (OR = 0.11, P = 0.05) and interval surgery performed after initial systemic chemotherapy (OR = 0.24, P = 0.05) can be considered protective factors against a critical prognosis, while secondary CRS and HIPEC after a suboptimal cytoreduction during a previous surgical intervention (OR = 6.44, P = 0.05) is associated with a high risk of precocious relapse or death. Also, a complete cytoreduction is associated with a significantly increased survival period (OR = 0.17, P = 0.03). The presence of previous systemic chemotherapy was revealed as a protective factor against relapse or death. **Conclusions:** A complete cytoreduction and performing a timely surgical intervention completed by hyperthermic intraperitoneal chemotherapy which contributes in annihilating microscopic tumoral residues offers notable benefits in the treatment of patients with ovarian cancer in advanced stages.

Keywords: ovarian, cancer, chemotherapy, cytoreduction, HIPEC

ONCOLOGY/RADIOTHERAPY

OLD AND NEW ACTORS INTO AN AGGRESSIVE APPROACH FOR A CASE OF RELAPSED HYPO-PHARYNGEAL CANCER: POLY-CHEMOTHERAPY, MOLECULAR TARGETED THERAPY, AND IMMUNOTHERAPY

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Background: Hypo-pharyngeal cancer, even if it is not one of the most common cancers of the head and neck, is distinguished by an unfavorable prognosis and a late diagnosis. Radical surgery or organ preservation with chemo-radiotherapy are options with similar results. In case of recurrence or metastasis, therapeutic options are limited. **Material and methods:** We present the case of a patient with recurrent hypo-pharyngeal cancer after 16 years of radical treatment, treated intensively with poly-chemotherapy, targeted molecular therapy and immunotherapy, with a survival of 18 months from the diagnosis of recurrence. **Results:** During the treatment of relapse, 8 cycles of poly-chemotherapy taxanes, platinum, fluorouracil (TPF) polychemotherapy were administered, followed by 9 cycles of chemotherapy with Carboplatin and Gemcitabine, biological therapy with Cetuximab and immunotherapy with Nivolumab, the patient surviving 18 months after the diagnosis of recurrence **Conclusions:** The TPF plus Cetuximab chemotherapy regimen may have advantages in response reporting to the EXTREME regimen but selection criteria should be proposed to patients given the detoxification rates demonstrated in clinical trials. The identification of biomarkers is necessary to maximize the potential of immunotherapy in head and neck cancers and to avoid administration in cases where it will generate hyperprogression. The use of modern radiotherapy techniques can open new horizons for radiation with doses> 60Gy, limiting the risks of severe toxicity. Radio-induced second primary malignancy (SPM) can be considered especially if the recurrence of cancer is located in another anatomical segment of the head and neck and the interval after completion of radiation therapy is longer.

Keywords: chemotherapy, hypopharyngeal cancer, radiotherapy, immunotherapy, target therapy

ORTHOPEDICS

DESIGN OF PERSONALIZED SCREW FIXING GUIDES FOR TIBIAL PLATEAU FRACTURE FRAGMENTS USING THREE-DIMENSIONAL TECHNOLOGIES

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Background: In internal osteosynthesis, the use of personalized surgical instruments designed and printed with the support of three-dimensional (3D) technologies is effective in orthopedic surgical treatment for the anatomical reconstruction of tibial plateau fractures. **Material and methods:** With the support of three-dimensional technologies we have designed a personalized guide for screw fixing the fragments of tibial fractures Schatzker type IV, V, VI. The contact surface with the tibia of the patient's personalized fixing plate is detached from the realigned surface of the tibia. This is obtained in Standard Triangle Language (STL) format with the support of an innovative Iterative Closest Point algorithm type that allows the fracture fragments alignment and anatomical reconstruction of the bone. **Results:** The personalized surgical guide assembly consists of the fixing plate and the aiming arm tool that are produced by 3D printing, based on the STL model, from a PLA Silver metal filament on an Ultimaker 2+ printing machine. Due to the two mutually enveloping surfaces, a perfect contact is achieved between the fixing plate and tibia. The aiming arm tool allows a precise execution of the screw conduction holes, as well as the mounting and tightening of the surgical fixing screws, in an optimized direction. It provides maximum tightening without damaging the bone and eliminates the risk of loosening the screw due to vibration. **Conclusions:** The customized screw fixing guide is used in the treatment of more severe tibial plateau fractures, Schatzker type IV, V, VI that require fixing with plate and screws. It facilitates a good reduction of the tibial plateau fracture, ensuring the orthopedic surgeon that the bone fragments are aligned and matched correctly, as established in the preoperative planning stage, by applying the algorithm for aligning the fragments of comminuted fractures.

Keywords: Orthopedic surgery, Tibial fracture, Personalized guide, Three-dimensional technologies, Surgical screw

PATHOLOGY

SPLENIC MESOTHELIAL CYST IN AN ADOLESCENT: A CASE REPORT

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Background: Non-parasitic splenic cysts (NPSC) are considered to be uncommon findings in pediatric surgery field. The main clinical symptom that may suggest its existence is a left upper abdominal pain. It is frequently diagnosed incidentally following an imaging examination. Our aim is to highlight its rarity among pediatric surgical cases and to present the particular histological aspects of a true splenic cyst. **Material and methods:** We present and discuss the case of a splenic mesothelial cyst in a female adolescent patient accusing left upper abdominal pain. Physical examination revealed a left hypochondriac mass. The preoperative diagnosis of a possible splenic cyst was made by ultrasonography, it appeared as an anechoic mass with thin walls and septations. Due to the impossibility in preserving any splenic parenchyma, laparatomic total splenectomy was performed. **Results:** Microscopic examination of the spleen revealed a multilocular cyst with fibrous wall lined on the inside of the epithelium formed by cubic cells. Immunohistochemistry reactions for mesothelial differentiation were requiered, showing positive immunoreactivity for panCitokeratin and other markers associated with mesothelial cells (Mesothelin and Calretinin). Based on this immunophenotype, differential diagnosis was made with the epithelial variant of true splenic cyst. **Conclusions:** In the face of a potential diagnosis of non-parasitic mesothelial splenic cyst in pediatric surgical cases, a careful histopathological evaluation along with immunostaining for identification the nature of epithelial lining is mandatory for diagnosis.

Keywords: cyst, spleen, total splenectomy, immunohistochemistry, pediatry

UROTHELIAL CARCINOMA OF THE RENAL PELVIS: A CASE REPORT

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Background: Urothelial carcinoma (UC) of the renal pelvis is defined as a malignant neoplasm of urothelial origin involving the pelvicalyceal system. With an incidence of 2 to 3% of all UC, it affects the male patients in their 6th decade. The aim of our paper is to highlight the characteristic morphological features of this challenging tumor. **Material and methods:** We discuss the case of an elderly male patient who presented in the Urology department for macroscopic hematuria and hypertension. Surgery revealed the presence of a lateroaortic and left perihilar limphadenopathy. Due to the adhesion of the perihilary region to the abdominal aorta, laparoscopic nephrectomy was perfomed. On macroscopy, a white-yellowish infiltrative tumor was described. **Results:** Microscopically, a tumoral proliferation with histopathological features similar to those of UC in urinary bladder was observed, with irregular cell nests infiltrating the entire thickness of the renal parenchyma to the perirenal adipose tissue, the renal sinus fat and the periureteral adipose tissue. Vascular invasion was also observed. **Conclusions:** This malignant neoplasm has a reserved prognosis and a low life expenctancy. Pathologic stage is single most important prognostic factor for UC of upper urinary tract.

Keywords: upper urinary tract, neoplasm, cell nests, infiltration, vascular invasion

NEPHROGENIC ADENOMA OF THE URINARY BLADDER - A CASE REPORT

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Background: Nephrogenic adenoma (NA), also known as nephrogenic metaplasia, is a rare benign lesion which occurs in the urinary tract, mainly in the urinary bladder, more common in adults, with a male predominance. **Material and methods:** We present the case of a 42 year-old man in which a transurethral resection of the urinary bladder was performed for hematuria and a bladder cancer suspicion. **Results:** Microscopically, the lesion revealed papillary and small tubular structures lined by cuboidal cells, some of them with hobnail appearance. These cuboidal cells expressed PAX8, CK7 and focally AMACR. The morphological features and the immunohistochemical profile led to a diagnosis of NA in the bladder. **Conclusions:** NA is a rare benign lesion which could be misdiagnosed as a malignant lesion of the urinary bladder or a prostatic adenocarcinoma. Knowledge of wide spectrum of morphologic patterns and imunohistochemistry are mandatory for a correct diagnosis.

Keywords: nephrogenic adenoma, urinary bladder, rare benign lesion, hobnail cells, imunohistochemistry

ENDOMYOCARDIAL BIOPSY INTERPRETATION AFTER CARDIAC TRANSPLANTATION

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Background: Endomyocardial biopsy is the gold standard for identifying and following lesional changes after cardiac transplantation. With the introduction of this method in the histopathological diagnosis, the grading systems of the rejection phenomen also appeared, which were revised in 2004 according to ISHLT. **Material and methods:** Endomyocardial biopsy is typically performed by passing a bioptome through the right internal jugular vein across the tricuspid valve and into the right ventricle. Usually, targeted patients are those who show complications in different stages after transplantation, the most common being acute cellular or humoral rejection and chronic rejection. Biopsy sections of endomyocardial tissue are evaluated using the usual hematoxylin eosin staining and special van gieson and trichrome masson staining to quantify the degree of fibrosis. Immunohistochemical determinations help asses the biopsy sample for changes of antibody mediated rejection and also identify endothelial dysfunctions or possible posttransplant infections. **Results:** Histopatological result schematically includes the existence of the patient in a certain post-transplant stage. Thus, can be observed microscopic lesions suggestive of non-functional graft and immediate graft insufficiency, histological signs of hyperacute rejection and acute cellular rejection classified according to ISHLT, based on inflammatory infiltrate, myocyte damage, endothelial lesions, as well as the association of these lesions with humoral rejection sustained by the immunohistochemical positivity of specific reactions CD4, CD8, CD20, CD68, CD31, CD34, VEGF. The histopathological report also includes the phenomenon of chronic rejection, ischemia and reperfusion lesions, quantification of the degree of fibrosis, calcifications and very importantly the existence of Quilty effect - an endocardial inflammatory infiltrates associated with allograft heart transplantation coupled with cyclosporine A immunomodulation. **Conclusions:** It is necessary to establish a protocol for histological and immunohistochemical evaluation of endomyocardial biopsies, especially for patients with acute humoral rejection, because the main objective is to provide a real chance for long-term survival to all patients with cardiac allograft.

Keywords: endomyocardial biopsy, acute cellular and humoral rejection, cardiac transplantation

NEW PROGNOSTIC MARKERS IN MELANOMA

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Background: Melanoma is the most aggressive tumor of the skin and occurs as a result of the malignant transformation of melanocytes. It has a high potential for remote invasion and dissemination and in many cases is discovered in advanced stages. Numerous studies have been performed for the development of immunological therapies in melanoma and the most recent markers targeted are PDL-1 and VISTA. **Material and methods:** In this project, we aim to evaluate the morphological characteristics of melanoma by conducting a study that will include 200 patients diagnosed with melanocytic lesions. Patients will be divided into two groups: group 1 - patients diagnosed with benign melanocytic lesions (n = 100) and group 2 - patients diagnosed with cutaneous and mucosal melanoma (n = 100), from 2020-2022, belonging to the Anatomy Service Pathological. The project will include the following four studies: a prospective descriptive epidemiological study, a morphological study, a molecular study and a descriptive and analytical statistical study. **Results:** The present study aims to analyze the new markers VISTA and PDL-1 for tumor progression and prognosis of patients with melanoma. We will compare the expression between them and the diagnostic markers currently used (S100, SOX10, HMB45 and Melan A) but also their relationship in relation to BRAF. Morphological aspects with impact in clinical practice will be highlighted and their role as potential therapeutic markers will be emphasized, in order to develop the future of a therapy that would significantly improve the prognosis of patients. **Conclusions:** A low number of studies has been published in the literature that evaluated the prognosis and the aspect of the association between PDL1 and VISTA. The relationship between them, as well as the heterogeneity of VISTA expression in tumor tissue is a topical issue under debate, which requires further analysis.

Keywords: melanoma, vista, pd-l1, braf, immunohistochemestry

PRIMARY LYMPHOMA OF THE BLADDER - A CHALLENGING DIAGNOSIS

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Background: To present a rare case of primary bladder mucosa-associated lymphoid tissue (MALT) lymphoma. **Material and methods:** A 74-year-old man with polyuria and dysuria, which was installed in the last month, was hospitalized for supplementary investigations. In the past, the patient underwent antibiotic treatment, but the symptoms recurred and worsened progressively. **Results:** Cystoscopy revealed a polypoid lesion of about 3 centimeters; and a transurethral resection of bladder tumor was decided. The biopsy specimen revealed, under microscope, proliferation of atypical B-type lymphocytes. They expressed positivity for CD20, PAX-5, and bcl-2, associated with a low Ki-67 proliferation index (did not exceed 10%). No immunohistochemical positivity for CD5, CD10, bcl-6, or cyclin D1 was revealed. As the imagistic investigations did not show lymph node involvement even other modifications, the diagnosis of primary bladder MALT lymphoma was established and oncologic consult was recommended. **Conclusions:** Primary bladder MALT lymphoma is an unusual lesion in which a proper transdisciplinary approach is necessary for an adequate management of the patient. To confirm the monoclonal nature of the neoplastic cells, additional molecular studies should perform.

Keywords: bladder, mucosa-associated lymphoid tissue, transurethral resection

THE IMPACT OF IMMUNOSUPPRESSIVE MOLECULES PDL-1 AND SIGLEC-15 ON TILS ASSOCIATED WITH GASTRIC ONCOGENESIS

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Background: In gastric cancer (GC), a low density of TILs (Tumor-infiltrating lymphocytes)- is frequently reported in patients with lymphatic metastases. Anti-PD-L1 antibodies suppress the inhibitory function of PD-L1 (programmed death ligand-1) on T lymphocytes, followed by their activation and effective destruction of neoplastic cells. Siglec-15 (sialic acid-binding immunoglobulin-type lectin-15) inhibits the proliferation of T cells, similar to PD-L1. For the first time in non-small-cell lung carcinoma was observed that the two markers are mutually exclusive. There is no data to highlight whether this finding applies in CG. The project aims to analyze TILs and the expression of modern immunohistochemical markers PD-L1 and Siglec-15 in GC.
Material and methods: The patients included in the project from Gastroenterology and General Surgery Departments will be diagnosed in the Pathology Service. The morphological and immunohistochemical analyses will be performed using the CCAMF infrastructure of UMFST Târgu Mureş. The project will begin with an observational epidemiological study of premalignant and malignant gastric lesions: glandular atrophy, intestinal metaplasia, "early and advanced GC". A descriptive study will focus on the clinical, endoscopic, and histopathological characteristics of patients with pre/malignant gastric lesions. The third study will evaluate TILs in GC: T-lymphocytes (CD3+, CD4+, CD8+), B-lymphocytes (CD20+), and macrophages (CD68+). The last study will analyze the expression of modern immunohistochemical markers PD-L1 and Siglec-15 on TILs and gastric tumor cells.
Results: The expression of immunohistochemical markers will be analyzed in about 90-100 patients. Statistics will focus on correlations with the clinical-pathological characteristics (age, sex, Helicobacter pylori infection, histological type, angiolymphatic invasion, pTNM stage). **Conclusions:** Determining the density of TILs could help select the candidates for immunological therapy in CG. If the principle of mutual exclusion also applies in GC, immunotherapy directed to Siglec-15 could act complementary, improving the prognosis of patients with CG refractory to anti-PD-L1 therapy.

Keywords: gastric cancer;, immunohistochemistry;, TILs;, PD-L1;, Siglec-15.

GESTATIONAL TROPHOBLASTIC DISEASE: HYDATIDIFORM MOLE IN A YOUNG CAUCASIAN GIRL – CASE REPORT

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Background: Hydatidiform mole is the most common form of gestational trophoblastic disease (GTD), with an incidence of 1-3 out of every 1000 pregnancies. These abnormal conceptions have excessive placental development and little or no fetal evolution, divided in two major categories: complete hydatidiform mole (CHM) and partial hydatidiform mole (PHM). These two differ clinically with distinctive pathologic and genetic features. A precise diagnosis is important for clinical purposes and investigational studies, also. **Material and methods:** We present the case of a 15-year-old girl with an obstetric score G1P0, who presented to the Obstetrics and gynecology department of our clinic with complaint of minimal metrorrhagia. The ultrasound examination revealed round transonic formations surrounded by echogenic areas occupying the entire uterine cavity. The beta HCG value was >200.000 mUI/mL, corresponding to 14-weeks pregnancy. Aspirative and hemostatic uterine curettage was performed and the resulting sample was sent further for histological and immunohistochemical evaluation.Routine histological stain (Hematoxilin & Eosine) and imunohistochemistry tehniques were applied in order to confirm the diagnosis of complete hydatidiform mole. **Results:** H&E stain revealed chorionic villi with avascular hydropic changes in the axis, lined by a hyperplastic trophoblast, morphological aspects which raise the suspicion of a hydatidiform mole diagnosis. The maternal component of the placenta distinguished by the presence of deciduous placards. Immunohistochemistry revealed a negative and correlate with the morphology p57 nuclear immunostain, an immunohistochemical profile that supports the diagnosis of complete hydatidiform mole. **Conclusions:** We intend to highlight the importance of monitoring the hCG levels after the evacuation of the molar pregnancy and also to perform the patient's genetic profile in order to prevent the occurrence of choriocarcinoma.

Keywords: gestational trophoblastic disease, molar pregnancy, hydatidiform mole

A RESIDUAL INVASIVE MUCINOUS CARCINOMA OF THE BREAST – TYPE A (HYPOCELLULAR). CASE REPORT.

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Background: Mucinous breast carcinoma is an invasive carcinoma characterized by nests of tumor cells suspended in extracellular mucin lakes. **Material and methods:** We present the case of a 73-year-old woman with a clinical diagnosis of right breast cancer and right axillary lymphadenopathy, who underwent chemotherapy in the past. The mastectomy specimen with the axillary emission was sent further to the Pathology department of our clinic, for histological and immunohistochemical evaluation. Macroscopically, an ulceration area was observed on the nipple's surface, per section with heterogeneous, whitish-gray, gelatinous appearance, measuring 76 x 60 x 85 mm, which was infiltrating the deep margins of surgical resection. **Results:** Microscopically, groups of atypical cells with different shapes and sizes, suspended in abundant extracellular mucin were identified. At the level of the axillary emission, we identified metastases in 17 of 21 examined lymph nodes, without extracapsular extension, with a maximum size of 6 mm. Following the immunohistochemical exam, the suspicion of Paget's disease was infirmed. **Conclusions:** Mucinous breast carcinoma is, generally speaking, associated with a low rate of local or distant recurrences. The peculiarity of this case consists in the presence of residual disease (RCB III) and lymph node metastases.

Keywords: breast, residual cancer, hypocellular, mucinous

SPECIAL TYPE OF SYNCHRONOUS MALIGNANCY OF THE LIVER: A CASE REPORT

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Background: Synchronous tumors are defined as the second primary lesion is diagnosted either simultaneously with the primary lesion. The incidence of multiple primary tumors is reported to be between 0.3% and 4.3%. Hepatocellular carcinoma (HCC) and intrahepatic cholangiocarcinoma (ICC) are the two main primary liver cancers. Developement of these synchronous malignancy is reported 1% to 6%. **Material and methods:** We report a case of a 67 years old man who was admitted to the hospital with melena, wight loss and abdominal pain. Clinical and paraclinical examination reveals hemoperitoneum caused by liver mass rupture, followed by emergency surgical intervention. **Results:** Macroscopic findings have been described two nodular mass. One of them was resected from the 5th-6th liver segments which average maximum diameter was 38 mm. The other nodular mass was 20x15x10 mm resected from the 4th liver segment. Further histopathological examination confirmed the diagnoses of synchronous hepatocellular carcinoma and a special type of cholangiocarcinoma. **Conclusions:** Synchronous malignancy of the liver is a rare entity with a worse outcome. The partial hepatectomy accompaniated by chemoembolization seems to be efficient, but its therapeutic effective is unclear.

Keywords: hepatocellular carcinoma, synchronous, cholangiocarcinoma, chemoembolization

MELANOMA: A TUMOR WITH UNCERTAIN EVOLUTIVE PATHWAYS AND BEHAVIOR

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Background: Nowadays malignant melanoma is not the most frequently encountered skin tumor, but it is the deadliest. The aim of this paper was to report the possible diagnostic and prognostic use of conventional immunohistochemistry (IHC) as well as for SOX11, BRAF, KIT, KRAS in malignant melanoma. **Material and methods:** Consecutive cases of malignant melanoma diagnosed between 2015-2018 were retrospectively selected from the Department of Pathology of the Emergency Clinical County Hospital of Târgu-Mureş. We also selected a benign naevi group control to compare IHC expression. IHC was performed for the conventional markers in both groups completed by SOX11, KIT, BRAF and KRAS. Statistical analysis was done using GraphPad Prism 9.1.0-licensed software. Correlations with histopathological features were done using the non-parametric Spearman test and overall survival rates were estimated by Kaplan-Meier curves. A $p < 0.05$ was considered statistically significant. **Results:** 95 cases of skin melanoma and 30 cases of benign naevi were retrospectively evaluated. SOX11 was directly correlated with lymphovascular invasion and Ki-67. BRAF nuclear and cytoplasmatic positivity was directly correlated with death event. Neurotropism or lymphovascular invasion were positively correlated with nuclear BRAF expression ($p < 0.05$), while both were inversely correlated with KRAS expression. KIT positivity was inversely correlated with key histopathological features such as Breslow index, ulceration, mitotic rate and pT stage. **Conclusions:** Conventional melanoma cocktail remains a valuable tool for diagnosis while SOX11, KIT, KRAS expression as well as BRAF subcellular localization could be added to outline melanoma aggressiveness and prognosis. Discrepancy between benign and malignant melanocytic lesions can be done using S100 in conjunction with HMB-45, SOX10, tyrosinase and Ki-67, but we concluded that the most reliable tool to be used could be SOX11.

Keywords: skin melanoma, SOX11, KIT, KRAS, BRAF

CUTANEOUS LEIOMYOSARCOMA: CASE REPORT

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Background: Cutaneous leiomyosarcoma is a very rare soft tissue neoplasm of smooth muscle derivation arising from the dermis or from the subcutaneous tissue of the skin and it represents 3% of the soft tissue sarcomas. **Material and methods:** We report a case of a 63-year-old-male with a clinical diagnosis of lipoma on the right calf. The surgeons performed an excisional biopsy and sent for the histopathological examination an elliptical specimen measuring 36x10 mm long with subcutaneous tissue of 30 mm. On the cut surface was observed a white nodular lesion measuring 17x30x24 mm. **Results:** Microscopic examination revealed within the dermis extending into the subcutaneous fat a relatively well-circumscribed unencapsulated nodule composed of fascicles of eosinophilic spindled cells with cigar-shaped nuclei, arranged in a storiform pattern. In the center of the tumor there was an area observed with marked pleomorphism, with the presence of enlarged, hyperchromatic, polylobate nuclei and a high mitotic activity (15 mitoses per 10 High Power Fields). The tumor extended into the lateral margins of the specimen. No necrosis was noted. The overlying epidermis was intact with no atypia. On immunohistochemistry, tumor cells showed strong immunopositivity for SMA and Desmin and negative for S100 and CD68. The Ki-67 proliferation index was 25%. Grading based on the FNCLCC was grade 1. **Conclusions:** Cutaneous leiomyosarcoma must be considered when confronting with neoplasm of the skin with spindle morphology. Histological differentiation with specific immunohistochemical markers is necessary in most cases.

Keywords: Cutaneous, leiomyosarcoma, sarcoma, immunohistochemistry

CANCER STEM CELLS IN CUTANEOUS MELANOMA

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Background: Melanoma represents one of the most lethal and dangerous skin lesions, characterized by a high heterogeneity, which is responsible for having an aggressive malignant character, a high metastatic potential and resistance to standard therapy. **Material and methods:** The malignant transformation of the melanocytes is involved in the development of this tumor and the process is described as dependent of the appearance of some progenitor phenotype cells. These cells, also known as cancer stem cells (CSC) represent a subpopulation of the tumor, which possesses a high tumorigenic character and chemoresistant properties. **Results:** Their development and survival rate depends on the neural crest stem cells transcription factor - SOX-10. This dynamic cell population may be influenced by and may influence a multitude of factors, such as somatic evolution, the tumoral microclimate or the aggressivity of the tumor. There is a group of markers specific of the cancer stem cells in melanoma: Nestin, CD20, CD133, CD271, ALDH. **Conclusions:** The aim of this review is to present the information gathered regarding the tumoral stem cells so far, the challenges encountered in their identification and the characteristics of this extremely dynamic cell population.

Keywords: Cancer Stem Cells (CSC), Melanoma, Cutaneous malignancy

ANTI-CXCR4, ANTI-MMP-13 AND ANTI-□-CATENIN ANTIBODIES IN THE PROGNOSIS OF NON-MELANOCYTIC SKIN CANCERS - A SHORT REVIEW

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Background: Non-melanocytic skin cancer is the most common type of skin cancer,. Within this category of cancer, the maintypes are basal cell carcinoma, squamous cll carcinoma and basosquamous cell carcinoma. **Results:** A number of chemokinereceptors are well known for their role in cell proliferation. One of the most expressed chemokine receptors in cells is CXCR4(CD184), which has a well-known role in various physiological and pathological processes, being expressed by hematopoietic cells,endothelial cells, neurons or stem cells. CXCR4 expression at the NMSC level correlates with the histopathological type,respectively the aggressiveness of the tumor, its expression being involved in the prognosis of this type of tumors. Matrixmetalloproteinases (MMPs), a series of zinc-dependent endopeptidases, are involved in the degradation and remodeling of the extracellular matrix in physiological and pathological processes but also have a proven role in cell proliferation, cell migration, and angiogenesis and apoptosis. Of these, MMP-13 has been shown to be one of the proteins involved in cell proliferation as well as in oncogenesis. □-catenin is a versatile pathway in oncogenesis due to the aberrant activation of the Wnt / □-catenin signaling pathway, which leads to the accumulation of □-catenin in the cell nucleus and thus stimulates the transcription of oncogenes, thus contributing to the progression of tumors such as cancer. colon or hepatocellular carcinoma. **Conclusions:** NMSC presents immunohistochemically a different expression of CXCR4, MMP-13 and □-catenin markers depending on the histopathological type of the tumor, respectively the prognostic factors. Worldwide, very few studies have been published in the literature regarding the immunohistochemical reactivity of NMSC to CXCR2, MMP-13 or □-catenin, markers that once proven to be positive or with increased reactivity in this type of tumor, may leads to new prognostic values □□or treatment modalities.

Keywords: Immunohistochemistry, CXCR4, MMP-13

PILOMATRIXOMA – CLINICAL, HISTOPATHOLOGICAL AND IMMUNOHISTOCHEMICAL ASPECTS

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Background: Described for the first time in 1880 by Malherbe and Chenantais, pilomatrixoma is a benign tumor of the hairfollicle matrix cells. It is also known as pilomatricoma, trichomatricoma, benign calcifying epithelioma or calcifying epithelioma of Malherbe. Usually pilomatrixoma occurs in children and younger adults, but it can also appear in elderly patients, with a higher predilection for the female patients. **Material and methods:** A flesh colored nodule or a chyst, often a solitary lesion, well circumscribed, with a smooth surface. Multiple tumors are rare. Pilomatrixomas can be found mostly on the head and neck area (more than 50%) and upper extremities. The " tent sign" can help us appreciate an angulated shape. Early pilomatricomas usully present as a cyst with a central matrical cornification. Basaloid cells line the cyst's wall. The shadow cells or ghost cells are represented by the central anucleate cornified cells. When the pilomatricoma is fully developed, the cystic configuration is usually lost. **Results:** Early pilomatricomas usully present as a cyst with a central matrical cornification. Basaloid cells line the cyst's wall. The shadow cells or ghost cells are represented by the central anucleate cornified cells. When the pilomatricoma is fully developed, the cystic configuration is usually lost. Similarities are found between the normal hair matrix and the neoplastic cells. The genetic profile highlights at least 2 pathways: Wnt/ -catenin signaling pathway and the Bcl-2 oncoprotein**Conclusions:** Pilomatrixoma is a rare and benign tumor, which is mostly histopathologically diagnosed. Although the tumor is known to emerge in childhood, it can also appear in adults or elderly patients. Often it can be misdiagnosed so it is important that we make the correct diagnosis and treatment, which consist in surgical excision with clear margins, a method that is almost always curative.

Keywords: pilomatrixoma, pilomatricoma, calcifying epithelioma of Malherbe shadow cells

THE MODULATORY ROLE OF PERIVASCULAR ADIPOSE TISSUE IN THE OCCURRENCE AND PROGRESS OF ATHEROSCLEROSIS IN THE LOWER LIMBS.

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Background: The perivascular adipose tissue has been shown to be an active component in vascular homeostasis and in the pathogenesis of atherosclerosis. Under physiological conditions, it has anti-atherogenic properties,but it can become pro-atherogenic under pathological conditions. The mechanisms by which it directly influences the onset and development of atherosclerosis are still being studied. **Material and methods:** In this project we will analyze the implications of perivascular adipose tissue in the onset and progression of atherosclerosis. Macrophages are the key elements in the development of systemic inflammation and also in the perivascular adipose tissue, which will give them an essential role in this study. An inclusion criterion will be patients with obliterating arteriopathy of the lower limbs that required intervention. The project will include the following studies: an epidemiological study, a clinical and paraclinical study (Doppler investigation,CBC,mediators of inflammation from blood samples) and a morphological study: histopathological and immunohistochemical that will analyze the perivascular adipose tissue and the atherosclerotic lesions of the vascular walls, in particular focusing on proinflammatory macrophages (M1) expressing CD68 and CD80, IL-6, IL-1beta, IL-8 or NCP-1, respectively macrophages with anti-inflammatory role (M2) expressing CD206 and IL-10. **Results:** The histopathological and immunohistochemical study is to provide data on the involvement of perivascular adipose tissue and proinflammatory factors from the proximity of adventitia in the onset and development of atherosclerosis. We expect a significantly positive correlation between inflammation at this level and the appearance of atherosclerosis and its evolutionary stage. The association of these data can lead to the implementation of a long-term and medium-term prognostic algorithm for the patient improving the quality of life for this patients. **Conclusions:** This studies about the influence of the perivascular inflammation in the development of atherosclerosis are topical, positive results in this direction would lead to a revolution in the prognosis and the therapy of this pathology.

Keywords: perivascular adipose tissue, inflammation, atherosclerosis

PSORIASIS AND OXIDATIVE STRESS: IS THERE A LINK?

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Background: Psoriasis is a chronic inflammatory disease, with an unclear etiopathogenesis. Redox imbalances are thought to play a role in this disease. The aim of this paper is to review and highlight the association between psoriasis and oxidative stress based on scientific literature. **Material and methods:** To explore the link between psoriasis and oxidative stress, PubMed, Google Scholar and PlosOne databases were searched using the following keywords: "psoriasis", "oxidative stress", "total antioxidant status" and "disease severity". Analytical studies published in the last 5 years have been considered. **Results:** After applying the inclusion and exclusion criterias 9 studies were identified. Patients with moderate to severe psoriasis presented with a higher level of lipid peroxidation products, respectively of protein oxidation products, as opposed to mild forms where these differences were not noted. Total antioxidant status (TOS) and malondialdehyde (MDA) levels were higher than in healthy controls. TOS, MDA, and catalase levels were positively associated with disease severity. **Conclusions:** Even though several studies in the literature focused on the link between oxidative stress and psoriasis, this association is yet to be clarified. Therefore, further studies are required to provide a better understanding of this association.

Keywords: psoriasis, oxidative stress, total antioxidant status, disease severity

PEDIATRIC DENTISTRY

BREASTFEEDING AND EARLY CHILDHOOD CARIES: A CLINICAL STUDY

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Background: Early childhood caries is a chronic disease that affects the child's life quality, as it may lead to infection, swelling and pain. The aim of the study was to assess the corelation between breastfeeding duration and the incidence of early childhood caries. **Material and methods:** A cohort study was conducted with 110 pairs of mothers and children living in the region Mures, Romania. Data collection was performed in 2 moments: when the children were 1 year and 6 months to 2 years old (2019/2020) and second time 2 years and 6 months or older (2021). In both moments, children were divided in 2 groups (1st group children who are breastfed and 2nd group children who are not breastfed). The first evaluation was conducted to form the groups, to exclude children with existing caries lesions, associated and general diseases and to obtain written consent from the mothers to participate in the study. On the second encounter we measured and calculated the Incidence index (Ii) and Intensity Index using dmft index. **Results:** From the 110 pairs of mothers and children that were included in the study we selected 75 (68.18%) for the first group from which 40 girls (53.33%) and 35 boys (46.66%) and for the second group 35 from which 20 girls (57.14%) and 15 boys (42.85%) in the first moment of assessment. In the second moment of evaluation the Incidence Index for group 1 was 60% and for group 2 the Incidence Index was 42.85%. The Intensity Index in the second moment of evaluation for the first group was 28% and for the second group was 17.14%. **Conclusions:** Further studies with more elaborate methods of assessment may be necessary to determine the cariogenic nature of breastfeeding as the early childhood caries is multifactorial disease that affects children quality of life.

Keywords: Severe early childhood caries, dmft, breastfeeding

PEDIATRICS

NEURODEVELOPMENTAL CLINICAL AND PARACLINICAL EVALUATION OF CHILDREN WITH UNREPAIRED CONGENITAL HEART DEFECTS: DO THEY HAVE A NORMAL NEURODEVELOPMENTAL PATTERN?

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Background: In patients with congenital heart defects (CHD), neurodevelopmental impairment occurs frequently, both in cyanotic CHD and in those with adequate cerebral oxygenation (non-cyanotic CHD). The literature considers as main extrinsic factors of neurological damage traumatic events like surgery, especially the extracorporeal circulation, and those during the intensive care unit stay. The aim of this study was to evaluate clinically and paraclinically patients before neurological traumatic events took place. **Material and methods:** The study included 28 children with unrepaired CHD evaluated with Denver Developmental Screening Test II (125 items covering main neurodevelopmental domains: personal-social skills, fine motor-adaptative skills, language skills, gross-motor skills) in order to quantify neurodevelopmental deficit. Neuromarkers, neuron specific enolase (NSE) and protein S100 (pS100) were determined in each child and correlated with the neurodevelopmental scores. Statistical level of significance was considered $p<=0.05$, Pearson or Spearman correlation coefficient were calculated, normality of data was assessed with Shapiro-Wilk test using Stata version 13. **Results:** Estimates of neurodevelopment were calculated: all passed through level, baseline level of competence, highest item passed before consistent failure and the upper limits of children's developmental. Patients with CHD had more delays than normal children, in a percent varying from 27.2-72.7%. Based on these, domain-specific and overall developmental functioning estimates were calculated (delayed in 27.2% of cases) and a developmental quotient score was derived (lower than normal in 27.7% cases). NSE was over the upper limit in a percent of 89.8% cases and pS100 in 54,5% cases. Correlation between neurodevelopmental delay and neuromarkers were found only with pS100 and included the following: personal social domain-all passed through level ($r=-0.69, p=0.01$), personal social domain-baseline level of competence ($r=-0.68, p=0.01$) and language-highest item passed before consistent failure ($r=0.6, p=0.04$). **Conclusions:** Neurodevelopmental delay was found in a high percent of patients regardless of pathophysiology: cyanotic or non-cyanotic CHD, corelated with high plasma levels of pS100.

Keywords: neurodevelopmental delay, unrepaired congenital heart defect, neuromarkers, neuron specific enolase, protein S 100

CHARACTERISTICS OF REACTIVE GASTROPATHY IN A PEDIATRIC POPULATION: A PROSPECTIVE STUDY

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Background: Reactive/chemical gastropathy (RG) is an entity characterized by a response of the gastric mucosa to an injury. Although typically identified in older populations, attributed to non-steroidal anti-inflammatory drugs (NSAIDs) consumptionand bile reflux, RG presents an increasing incidence in children and adolescents, in spite of a frequently unknown underlyingetiology. The aim of the current study was to investigate the most frequent etiologies, as well as macroscopic, microscopic, clinicaland paraclinical features of reactive gastropathy in a pediatric population. **Material and methods:** We conducted a case-control prospective study on 75 children (33 diagnosed with RG and 42 age- and sex-matched healthy controls) who underwent an upper digestive endoscopy for chronic dyspeptic symptoms. Detailed history taking was followed by a complete physical exam in each child. An abdominal ultrasound was performed in each subject. Diagnosis of RG was established upon typical histological changes, such as vasodilation, congestion of mucosal capillaries or foveolar hyperplasia, while gastritis severity was assessed in accordancewith the updated Sydney classification. **Results:** Symptoms and macroscopic visualization of biliary reflux was positively associated with a histological diagnosis of reactive gastropathy (p=0.04). Positive history of NSAID administration was identified in only 4 cases belonging to the RG group (12.12%), while one isolated case was diagnosed with a concomitant herpetic esophagitis. Macroscopically visualized edema of the gastric mucosa was correlated with a diagnosis of RG (p=0.03). Within the study group, in accordance with the Sydney classification, 84.84% of patients suffered from a mild form of gastritis, the rest of the patients being diagnosed with a moderate form. **Conclusions:** In our study, RG was linked to biliary reflux, NSAID consumption being identified in a limited number of cases. In most of the cases within the study group, a clear etiology could not be established. Still, RG manifested through mild forms in most of the cases.

Keywords: reactive gastropathy, children, upper digestive endoscopy

PHARMACOLOGY

METFORMIN - POTENTIAL PROTECTIVE AGENT OF IATROGENIC COGNITIVE DISORDERS INDUCED BY OXIDATIVE STRESS

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Background: Oxidative stress is a particular state of the body, caused by aggressors and characterized by the presence of reactive oxygen species (ROS) in excessive concentrations, which exceed the capacity of endogenous antioxidant systems. It is considered to be one of the defining elements in the development of cardiovascular, metabolic conditions (diabetes, obesity, metabolic syndrome), but also neurodegenerative disorders (Parkinson's, Alzheimer's). Based on these considerations, antioxidant therapy can prevent the appearance or progression of these pathologies. **Material and methods:** 40 Naive Wistar male rats, were randomly divided in four groups, depending on the treatment regimen received, CTR (n = 10) - saline solution, METF (n = 10) - metformin 500 mg / kgbw, HAL - haloperidol 2 mg / kgbw, HALMETF - metformin 500 mg / kgbw + haloperidol 2 mg / kgbw). The medication was administered for 40 days. The Morris Water Maze test was used to test cognitive ability. Finally, brain samples were taken for the quantitative analysis of markers of oxidative stress such as malondialdehyde and glutathione, in order to establish a correlation between the level of oxidative stress and impairment of cognitive abilities. **Results:** We analyzed the time required to perform the Morris test tasks for each group. The use of metformin, an AMPK activator, counteracted the negative effects of haloperidol on cognitive function and contributed to attenuating the level of markers of oxidative stress in the neuronal matrix, statistically significant differences ($p < 0.05$) can be observed between the groups included in the study. **Conclusions:** Due to its ability to cross the blood-brain barrier and reduce oxidative stress, metformin may have a protective effect in the occurrence of central side effects of some ROS-generating compounds at this level.

Keywords: metformin, oxidative stress, glutathione, malondialdehyde, cognitive

PHARMACY

CHALLENGES IN THE DEVELOPMENT OF LC BIOANALYTICAL METHODS FOR THE ANALYSIS OF CARVEDILOL AND ITS ENANTIOMERS

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Background: Carvedilol is a highly lipophilic beta- and alpha1-adrenergic antagonist used in clinical practice as a racemic mixture. In human plasma, it is 98% protein-bound, mainly to albumin. This work aimed to highlight the challenges that carvedilol molecule has raised during the development of LC methods for the study of its stereospecific interaction with plasma proteins. **Material and methods:** The achiral separation was performed on a C18 column using a mixture of 20 mM ammonium formate pH 4.4 and acetonitrile with detection achieved by a QTOF mass spectrometer with ESI(+) in MRM mode (m/z 100.10, 222.15, 224.18, 283.22 from m/z 407.29). Samples of carvedilol and internal standard metoprolol in human plasma and albumin solution from different sources were analyzed after deproteinization with acetonitrile 1:3. The enantiomeric separation was achieved on an ovomucoid column using mixtures of ammonium formate at different levels of concentration and pH, acetonitrile and methanol with detection at 242 nm. **Results:** The method for the racemic carvedilol determination showed good linearity over the concentration range of 2.5-500 ng/ml in both protein matrices, with precision and accuracy in acceptance limits. However, evaluation of the interferences and carry-over showed inconsistent results. The selectivity of the method was within the acceptance limit (<20%) for samples prepared in plasma, but not for all albumin solution samples. For the enantiomeric determination, good resolution was achieved for different mobile phase compositions, but important retention time deviation was observed. **Conclusions:** Our study showed that carvedilol is a very challenging compound, both for racemic and enantiomeric bioanalysis. Its high lipophilia could explain a strong adsorption to parts of the LC equipment and also a very sensitive interaction with protein-base chiral stationary phases due to their small unavoidable conformational changes. This work was supported by George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures research grant number 10127/5/17.12.2020.

Keywords: carvedilol, LC-MS, HPLC, ovomucoid, albumin

DEVELOPMENT AND EVALUATION OF CANNABIDIOL ORODISPERSIBLE TABLETS USING A 2 RAISED TO THE POWER OF 3 FACTORIAL DESIGN

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Background: Orodispersible tablets (ODTs) represent a pharmaceutical formulation used to obtain a fast therapeutic effect. ODTs are usually recommended for geriatric and pediatric patients having the advantage of good palatability. The main aim of this studyis represented by developing orodispersible tablets with Cannabidiol (CBD) an alkaloid used to treat Lennox-Gastaut and Dravet syndromes. **Material and methods:** The tablets were obtained using an eccentric tableting machine and a 9 mm punch. Todevelop CBD-ODTs the following parameters were varied: the Poloxamer 407 concentration (2 levels 0 and 10%), the type of co-processed excipient (Prosolv® ODT G2 - PODTG2 and Prosolv® EasyTab sp - PETsp), and the type of superdisintegrant(Croscarmellose - CCS, and Soy Polysaccharides - Emcosoy® - EMCS) resulting in eight formulations (O1-O8) and 3 centralpoints (O9-O11). The following dependent parameters were evaluated: friability, disintegration time, crushing strength, and theCBD dissolution at 1, 3, 5, 10, 15, and, 30 minutes. The dependent parameters were verified considering the in-force EuropeanPharmacopoeia requirements. **Results:** All the tablets obtained respect the quality requirements in terms of friability (less than 1%),disintegration time (less than 180 seconds), crushing strength between 26 N for O9 (PODTG2, EMCS, 5% PLX407), and 80,33N for O4 (PETsp, EMCS, 0% PLX407). Regarding the dissolution test, only four formulations exhibited concentrations higherthan 80 % at 30 minutes, O8 (PETsp, CCS, and 10% PLX407) and the central points (O9-O11 - PODTG2, EMCS, 5% PLX407). Taking into consideration the results obtained and using the Modde 12.1 software the optimal formulation was developed (O12). **Conclusions:** O12 respected the quality criteria chosen (friability 0.23%, crushing strength of 37 N, a disintegration time of 27 seconds, and the target amount of CBD released at 30 minutes of 99,3±6 %). An increased amount of PLX407 might conduct to smaller crushing strength.

Keywords: cannabidiol, orodispersible tablets, factorial design, dissolution test, co-processed excipients

(UN)EXPECTED DOSE-TOXICITY RELATIONSHIP OF MONOSODIUM GLUTAMATE IN RATS. BETWEEN EVIDENCE AND HYPOTHESIS - IS THERE ANY RELEVANCE FOR HUMANS?

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Background: Monosodium glutamate (MSG) is a food additive with controversial long-term administration toxicity. Oxidative stress is considered to be responsible for MSG chronic toxicity expressed in altering some biochemical parameters' levels. Our paper aims to evaluate the chronic toxicity of MSG on experimental rats. **Material and methods:** In this study, we used 70 adult Wistar rats, divided into five groups. Four groups were administered MSG in different doses (185 mg/ kg bw, 1500 mg/kg bw, 3000 mg/kg bw, 6000 mg/ kg bw), while the fifth one was the MSG non-consumer group. MSG was administered orally, mixed withthe standard food pellets diet, for three months. Subsequently, the serum samples were collected and analysed to determine thelevels of aspartate aminotransferase, alanine aminotransferase, direct and total bilirubin, urea, creatinine and alkaline phosphatase.In addition, the rats were weighed, and the amount of consumed food and water was monitored weekly. **Results:** Although theresults do not present significant dose dependent differences between the groups regarding the levels of biochemical parameters, itwas interesting to observe that for some of them, the third grup presented the highest values, with an obvious decrease in the lastone. Following the study, we observed minor variations in the weight of the rats and some differences in the amount of consumedfood and water within the groups, depending on the MSG dose. Along with the MSG dose increase, an upward tendency of water consumption was observed; the last group presented unexpected polyuria and polydipsia. **Conclusions:** After a three-month MSG administration, the differences in the levels of the biochemical parameters between the groups were not significant. Studies conducted for a more extended period and a correlation of the results with anatomopathological analyses can provide more explicit information on the effect of chronic MSG consumption in rats and implicitly in the human species.

Keywords: monosodium glutamate,, chronic toxicity,, biochemical parameters,, biochemical alterations,, oxidative stress

DETERMINATION OF THE RHEOLOGICAL AND TEXTURE CHARACTERISTICS OF A COSMETIC CREAM BASES ACCORDING TO THE TRADITIONAL / INDUSTRIAL PREPARATION

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Background: This study aimed to evaluate the rheological and texture characteristics of cosmetic cream bases, developed usingboth the traditional and industrial method, to demonstrate that preparation with identical formulation may have different textureanalysis depending on the preparation, pharmacy laboratory or industry. **Material and methods:** Cosmetic cream bases of L/H andH/L type were formulated and prepared. The same formula was prepared by two methods: traditional method (using the mortarand pestle) and an industrial method using a homogenizer with advanced mixing technology, speeds between 300-2400 rpm,GAKO Unguator EM. Texture parameters and rheological characteristics were determined by observing the differences in theformula prepared by different methods. The physicochemical properties were evaluated: appearance and pH with Orion 3 Star pH-meter with a glass electrode. The texture characteristics were analyzed using a TA.XT Plus Texture Analyser whilst the rheological parameters were determined with the RV DV-III Uktra Brookfield Viscometer. **Results:** The formulas showed a pleasant texture and pH between 3.07 and 6.28. The rheological analysis demonstrated a pseudoplastic behavior and a thixotropic flow for both the traditional and industrial preparation methods. The texture parameters were evaluated: firmness (g) had values between 67.697-468.338, consistency between (-g) 42.114-313.804 and cohesiveness (g.s) between 138.547-629.098. All the determined texture parameters indicated a real difference between the traditional preparation in which it is made manually and the automatic one using, they significantly modified the consistency, hardness and cohesiveness of the cream bases. **Conclusions:** The method of preparation may influence the structural characteristics of the same formula. A cosmetic product must be easy to apply, which is why it is necessary to correlate the formulation with the preparation method.

Keywords: cosmetic creams, hardness, firmness, consistency, rheological properties

RETENTION MODELING AND THE ASPECTS OF DESIGN SPACE COMPARISON FOR EZETIMIBE AND ITS RELATED SUBSTANCES

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Background: Experimental design-based retention modeling is a new scientific approach for chromatographic method development. Due to its high level of method understanding this technique is highly welcomed by the pharmaceutical industry.The aim of this study was to investigate the impact of stationary phase chemistry towards chromatographic method performance by comparing the obtained design spaces on different columns. **Material and methods:** Based on the tridimensional experimental design framework 12 corner runs were realized by changing systematically the critical method parameters. The retention behaviors of the molecules were investigated by the construction of the virtual separation models for different stationary phases and the design spaces were compared to search for common area were baseline separation of all peaks was achieved. The simulation and *in silico* robustness testing were realized using DryLab modeling software. **Results:** In the preliminary phase nine different columns were tested with varied chemistries. Results were evaluated based on the area of the design space and the highest achieved critical resolutions. Numerous columns presented critical resolution values higher than 2.0 and a shared area in the design space was also identified, which means that the selected working point could be utilized on either of these columns. By performing the robustness testing the critical method parameters with the highest impact on the resolution were identified for all columns individually and the common method operable design region for these columns was selected. **Conclusions:** Using this experimental design-based approach it was proven that the separation of the model analytes can be achieved on multiplex columns through using mechanistic modeling and experimental design. Constructing the design spaces for a number of columns, in some cases, column-independent working points can be identified, which will allow baseline separation of all analytes, regardless of the column employed. Design space comparisons also revealed that these stationary phases are interchangeable, despite their different chemistries.

Keywords: ezetimibe, chromatography, quality by design, retention modeling software, design space

HEAVY METAL CONTENT DETERMINATION IN HONEY SAMPLES BY ICP-OES: OPTIMIZATION OF SAMPLE PREPARATION

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Background: The environmental pollution with hazardous substances, as heavy metals, represents a worldwide health risk due to their toxicity and bioaccumulative potential. The use of natural environmental bioindicators, such as honey, for tracking and managing heavy metals air pollution in cities, may complement and enhace the information derived from classical physical and chemical methods. The aims of this paper were to develop a viable method of heavy metal determination in honey samples,through digestion procedures optimization and to determine if quality characteristics of honey are influenced by the presence oftrace elements (Cd, Cr, Ni, Pb, Zn, Sb, Cu). **Material and methods:** Samples of honey, of different brands and flowerings, were obtained from several commercial establishments located in different geographic areas in Mallorca, Spain. Variable amounts of honey, were accurately weighed directly into PTFE vessels, followed by the addition of several quantities of concentrated acids and oxidants. Samples were digested using developed digestion conditions, employing a microwave digestion system Multiwave Go. Concentrations of trace metals in honey samples were determined by optical emission spectrophotometry ICP-OES (Perkin Elmer Optima 5300 DV) with ultrasonic nebuliser. In the absence of a certified reference material for determinig trace metals in honey,we have employed the standard addition method. **Results:** The preparation of honey samples, for ICP-OES analysis, represents an important factor for obtaining accurate results. The optimization of acid digestion procedure is crucial for avoiding matrix effect and depends on factors including: the amount of honey sample, the volume of reactives, time of digestion and temperature. Results showed that bio honeys do not differ significantly regarding trace element composition from simple honeys. **Conclusions:** In particular, ICP-OES, as a trace element determination technique, can provide robust, rapid, multi-element measurements, including for digested honey samples. Use of honey as an environmental bioindicator is technically feasible and contributes to the identification of pollutants, such as traces of heavy metals.

Keywords: honey contamination, heavy metals, ICP-OES, sample preparation, digestion procedure

PHYSIOLOGY

IN SEARCH FOR CALCIUM-BINDING PROTEINS WITH POTENTIAL ROLE IN EPILEPTOGENESIS

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Background: Epilepsy is characterized by pathological synchronization of large groups of neurons. The alteration of cellular excitability plays an important role in the spontaneous generation, propagation, and termination of pathological network events. Intracellular calcium regulates activity-dependent signalling, as an ion it affects the membrane potential, and as a second messenger it activates several intracellular mechanisms including neurotransmitter release from the synaptic terminals. Calcium levels among others are modulated by various calcium binding proteins (CaBPs), therefore they serve as fine-tuning agents of the spatial and temporal properties of calcium signals. In this study we wanted to systematically search for those specific calcium-binding proteins in the central nervous system that could influence cellular excitability and therefore play an important role in epileptogenesis. **Material and methods:** We performed a comprehensive analysis of the literature, the Uniprot, NCBI Gene and Gene Ontology databases. We selected those CaBPs, which might play an important role in the regulation of the excitability of the neuronal networks, being involved in activity dependent signalling, modulating Ca2+ channel activity, influencing neurotransmitter release, Ca2+-buffer activity etc. We examined the cell-type specific and regional distribution of these CaBPs in publicly available, high-quality RNA-sequencing and in situ hybridization databases. **Results:** A gene function-based selection of the CaBPs with detectable expression in the brain was created. Quantitative data was compiled in color coded tables which makes it easy to visually recognize expression patterns. Cell-type specific and brain-region dependent distribution pattern and expression profile of the EF- hand calcium-binding proteins was analysed. **Conclusions:** We managed to create a database that helps us identify those CaBPs that play a role in neuronal excitability and show high expression levels in the brain regions mostly involved in temporal lobe epilepsy, namely the amygdala and hippocampal formation.

Keywords: epileptogenesis, calcium-binding proteins, in silico analysis

PNEUMOLOGY

THE ROLE OF LUNG ULTRASOUND DURING COVID-19 PANDEMIC: TÂRGU MUREŞ PNEUMOLOGY CLINIC EXPERIENCE

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Background: Lung ultrasound (LUS) is a valid tool to assess the lung aeration in COVID-19 pneumonia, with specific sonographic features. LUS helps clinicians to diagnose the alveolo-interstitial syndrome (diffuse involvement and impairment of the alveolocapillary exchange). LUS allows in a precise manner establishing the disease severity and complication and avoids computer tomography (CT), which are irradiating, have low accessibility for infectious patients and don't offer real-time imaging as ultrasound. The study highlights the role of LUS in diagnosis and monitoring the COVID-19 pneumonia compared to chest CT.
Material and methods: A prospective observational study, conducted at Targu Mures Pneumology Clinic, included 48 patients aged between 36 to 86 years, confirmed with SARS-CoV2 infection by RT-PCR. Lung involvement was evaluated by LUS at admission and in evolution, quantified by A-BBC standardized score, on a 3-point scale in 16 thoracic areas, obtaining a score between 0 to 48 points. **Results:** The study included 27% mild, 46% moderate, and 27% severe COVID-19 pneumonia, assessed by symptoms, oxygen need, and CT lung damage. The median ultrasound score differs depending on the severity: a score of 11 (IQR 2-16) was recorded in mild COVID-19, a score of 15 (IQR 5-29) in moderate forms, respectively 30 (IQR 15-32) in critically ill patients which were transferred to ICU. A statistically significant difference was observed between LUS scores of the severity forms (p=0.005). Four patients without CT lesions at admission showed mild changes scored until 20 by LUS. The reassessment on the fourth day showed an increased LUS score, with coalescence of B-lines or consolidations at 20 patients (42%), two of them haven't revealed pulmonary changes on initial chest CT. **Conclusions:** LUS is a reliable tool for monitoring COVID-19 pneumonia in evolution furthermore LUS score provides a diagnostic value for identifying disease severity.

Keywords: Lung Ultrasound, COVID-19 pneumonia, A-BBC score, severity

DIAGNOSIS OF PULMONARY TUBERCULOSIS IN INFANT WITH RT-PCR METHOD IN PULMONOLOGY CLINIC OF TÂRGU MUREŞ

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Background: The bacteriological confirmation of tuberculosis (TB) in infants represents a challenge due to the difficulties of achieving pathological samples. It is recommended to collect "á jeun" gastric aspirate but it is usually paucibacillary. Long evolution without treatment can lead to lympho-hematogenous dissemination and complications (meningeal lesions, miliary TB, or extrapulmonary involvement). The GeneXpert method is based on amplification of Mycobacterium tuberculosis (MTB) DNA by polymerase chain reaction technique (PCR) and allows the detection of small amounts of MTB and rifampicin resistance. **Material and methods:** A 4-month-old premature, eutrophic infant, without BCG vaccination, with multiple episodes of sinusitis and otitis, was examined by epidemiological investigation in the TB Dispensary of Târgu Mureş, being in contact with his father (intense bacillary source with extensive polycavitary pulmonary TB, MTB positive on microscopy). **Results:** He was admitted to Pneumology Clinic and performed a chest X-ray which revealed multiple infrahilar micronodular lesions. The baby had pale and dehydrated skin and a loss of appetite. The SARS-COV2 PCR test and the microscopical examination from gastric aspirate for MTB (Ziehl-Neelsen staining) were negative. We performed the GeneXpert test, which was positive with sensitivity for rifampicin. Other laboratory tests revealed lymphocytosis, normochromic anemia, proteinuria, and acetonuria. Directly observed antituberculosis treatment (DOTS) was initiated with doses according to body weight, vitamin- and short-term corticosteroid therapy, and iron substitution. The clinical and biological evolution was favorable with good tolerance of the treatment. The babyis monitored by the TB Dispensary. After 30 days, on Löwenstein-Jensen medium, grew 10 MTB colonies, emphasized again theTB disease. **Conclusions:** The collection of gastric aspirate is the main method of detecting TB in infants from TB outbreaks. The high sensitivity and specificity of the GeneXpert method could confirm TB when the microscopical examination is negative and allows the early initiation of treatment and the prevention of complications.

Keywords: Tuberculosis, Genexpert, RT-PCR, infant

SARS-COV2 SEVERE PNEUMONIA COMPLICATED BY BACTERIAL SEPSIS AND HEPATIC AND RENAL FAILURE – CASE PRESENTATION

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Background: Severe acute respiratory syndrome 2 (SARS-COV2) pneumonia can be complicated by bacterial infection. Hepatic and renal impairment could occur through the cytopathic effect of the virus, systemic inflammation, prolonged hypoxemia, pre-existing diseases or sepsis. **Material and methods:** We presend the case of a 34-year-old patient with BMI 38 kg/m2, with a history of acute pultaceous tonsillitis (2018), without alcohol/tobacco consumption, contact in an outbreak with multiple COVID-19 positive people, was hospitalized for extensive SARS-CoV2 pneumonia with respiratory failure (orthopnea, cyanosis, SaO2 80%). **Results:** Chest CT showed 66% ground-glass infiltrates with a tendency to confluence, cardiomegaly. The patient was immediately transferred to ICU. Initially liver transaminases were elevated (ALT-103 U/L, AST-68 U/L) and subsequently they increased progressively to 973 U/L, respectively 777 U/L), bilirubin 34 mg %, serum urea 230 mg %, Cr 5,85mg %, leukocytosis 28,000 elements/mm3, lymphopenia 6.84%, procalcitonin >10µg/L, Hb 9.79mg%, D-dimers ++, fibrinogen 554 mg%, glucose 228mg%, PCR 25.75%, proteinuria 30 mg% and hematuria 300 ery/µlBlood culture relieved the presence of a resistantstaphylococcus. The patient received hemodialysis, oxygen, nonspecific antibiotics according to antibiogram (carbapenem),systemic corticosteroids, hydroxichloroquine, hepatoprotectors, aminoacid solutions, diuretics, "prone position", anticoagulants,noninvasive and subsequently invasive ventilation. Her initially improved evolution, degraded on day 12, leading to multiple organfailure: respiratory, hepatic, renal and cardiac, without the possibility to recover despite maximized intensive care. **Conclusions:**The unfavorable evolution in a young patient was interpreted by several contributing factors: important obesity, late hospitalisation (advanced COVID pneumonia state), subsequent bacterial pneumonia with sepsis and history of pultaceous tonsilitis. It shouldalso be noted the contribution of the very high viral inoculum (the patient being in prolonged contact in an outbreak with multiple people infected with SARS-CoV2, hospitalized in the same period). It was recorded an outbreak in the village with 76 hospitalized cases and 10.5% fatality.

Keywords: SARS-CoV2, sepsis, hepatic/renal failure

CASES REPORT - LUNG CANCER ASSOCIATED TO SARS COV2 INFECTION

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Background: Lung cancer (LC) has a significant morbidity (second place both in men and women) and first place in mortality considering all types of cancers. LC has been identified as a particularly high-risk disease for SARS-CoV2 infection and for secondary complications (respiratory failure, hypercoagulability) considering subjacent immunodepression and immunosuppressive medication. **Material and methods: Case presentations. Case 1.** A 66-year-old female (nonvaccinated against SARS-COV2) was hospitalised with fever, dyspnea, cough, thoracic pain. RT-PCR confirmed SARS-CoV2 infection. Medical history consisted in maniacal episodes, hypertension, hypothiroidism, chronic smoking. BMI 29,67 kg/m2, SaO2 93%. Thoracic CT shown 75% of lung surface with ground glass pattern (severe viral pneumonia) and a "space replacement formation" 30/15mm. The patient received treatment with oxygen, antiviral antibiotics, corticosteroids, anticoagulants with long but favorable evolution. **Results: Case 2.** A 73-year-old male (nonvaccinated against SARS-COV2) known with squamous LC stage IIIA (T2N2M0) and urotelial carcinoma G2 with ongoing chemotherapy/radiotherapy was actively investigated for COVID-19 and found positive. Fortunately the patient was diagnosed during early stage of COVID infection (15% extension) and treated (by transfer in Pulmonology Clinic) with antiviral medication, corticoids, anticoagulants, oxygen and symptomatics. The patient became negative after 14 days of close treatment with indication for continuing the oncologic treatment after other 2-4 weeks depending on the performance index and clinical status. **Conclusions:** Thoracic CT in SARS-COV2 permited incidentally discovery of a tumor. This case needs further investigations for LC staging and pathological confirmation. Bronchoscopy must be scheduled as soon as possible (depending onthe SARS-COV2 evolution and virus clearance). All patients with LC will be actively controlled for the possible infection during chemo/radiotherapy. For people with LC the imperative need for vaccination must be added to prevent severe forms of COVID-19. The accesibility of medical control is very important, but with all measures taken against infection.

Keywords: lung cancer, vaccination, SARS-COV2

A NEW MARKER OR A PROGNOSTIC FACTOR IN LUNG CANCER ?

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Background: Many clinical studies, as well as meta-analysis, has confirmed the prognostic roles of NLR in cancer patients. However, in clinical trials, lymphocyte count cannot be available directly and instead, only the white blood cell is reported. Increased intratumoral neutrophils have been connected with aggressive biological behaviors, and neutrophilia could lead to the poor overall survival or tumor recurrence. **Material and methods:** We are considering a group of 158 patients aged between 45 and 77 years without significant associated pathologies, hospitalized between 01.01.2016-01.06.2021. The baseline total white blood cell count (WBC) and the neutrophil, lymphocyte, platelet counts were recorded, C reactive protein- as a marker of inflammation . We are searching for the determination of the neutrophil / lymphocyte ratio in both patients without secondary and metastatic determinations. Both, the neutrophils and the lymphocytes are participed in the progression of cancer and have been reported tobe involved in the tumor cells proliferation, invasion, metastasis and tumor angiogenesis. **Results:** Evaluate the neutrophil-lymphocyte ratio in patients admitted to the Medical Clinic II of the Constanta County Clinical Hospital with newly diagnosed bronchopulmonary cancer to have a view of the possibility of considering it as a prognostic factor in respiratory neoplasia, the connection with the inflammatory process and the correlation with the secondary metastatic determinations. **Conclusions:** Lymphocyte played a significant role in the tumor associated immunology and possessed potential antitumor immune functions that could inhibit tumor development, and lymphocytes were involved in cytotoxic cell death and cytokine production, inhibiting tumor cell proliferation and metastasis through immune response against cancer.

Keywords: the neutrophil-lymphocyte ratio, a possible new marker, lung cancer

PSYCHIATRY

POSITIVE ATTITUDES TOWARDS MENTAL ILLNESS ASSOCIATED WITH HIGHER RATES OF HELP-SEEKING

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Background: Two-thirds of people affected by mental illness fail to receive any treatment and only half of the people with common mental disorders (CMD) will consult a mental health specialist. Understanding why many people choose not to seek treatment despite services being available is a major challenge. Personal attitudes towards mental illness or help-seeking seem to play a significant role on the use of mental health services. The aim of the study was to test whether attitudes to mental illness act as a moderator between symptoms of CMD and help-seeking for a mental health problem. **Material and methods:** Data were obtained from the nationally representative Health Survey for England 2014. We used three operationalized items for help-seeking: recent contact with a doctor, antidepressants currently prescribed and use of any mental health service. Attitudes to mental illness were measured by CAMI scale and symptoms of common mental disorder were evaluated by GHQ scale. Three logistic regression models were derived. Other factors known to be associated with this context were included in the regression models. **Results:** Interaction between CAMI score and GHQ score had a significant effect on help-seeking indicated by the item 'recent contact with a doctor for a mental health problem (OR= 0.99, 95% CI (0.990, 0.998); adjusted Wald test P=0.01)). Knowing someone with a mental illness had a significant positive effect on help-seeking indicated by: recent contact with a doctor (2.65 (1.01, 6.98)) and currently prescribed antidepressant (2.67 (1.9, 3.75)). **Conclusions:** Our findings provide support for the influence of attitudes to mental illness in seeking mental health care from a professional. Identifying the behavioural influencers and understanding the causal chain of behavioural change, while developing tailored public campaigns, seems to be the correct approach for improving access to mental health services.

Keywords: attitudes to mental illness, help-seeking, common mental disorder, survey,

SURGERY

SURGICAL MANAGEMENT OF GASTRIC NEOPLASM: SURGICAL CLINIC I EXPERIENCE

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Background: Gastric cancer is the fifth most common cancer worldwide. Advances in the field of oncology with radiotherapy, adjuvant chemotherapy associated with optimal surgical treatment can improve the outcome and patient quality of life (QOL). Current protocols, combined with early detection and better screening, have led to a decrease in the overall incidence of gastric cancer. Standardization of surgical treatment for gastric neoplasm following the patient's profile is important for a better outcome. **Material and methods:** A retrospective study was conducted that included all the patients diagnosed with gastric cancer enrolled in the First Surgical Clinic in Targu-Mures Emergency County Hospital between January 2015 and October 2021. Statistical data was obtained from the patients' files, operation protocol, and informatics system of the hospital. **Results:** We recorded a total number of (n=273) patients over the seven years. The average age of the patients was 71 years ranging from 29 to 93. We observed a male predominance of 69% with 31% female patients. The main surgical procedure performed for gastric cancer was subtotal gastrectomy (n=162) with a neoplasm location predominant at the antral-pyloric region (55%) with adenocarcinoma as the predominant histological diagnosis (73%). The mean hospitalization period was 20 days with a mortality rate of 9%. **Conclusions:** Gastrectomy and adequate lymph node resection can be challenging. Efforts provided by a multidisciplinary team can assure a good outcome regarding the patient's quality of life and the decrease of overall morbidity and mortality. If R0 is achievable, distal gastrectomy can be safely performed for patients with distal neoplasm.

Keywords: GASTRIC CANCER, GASTRECTOMY, GASTRIC RECONSTRUCTION, GASTRIC RESECTION

OPEN TAR – COMPLEX REPAIR IN A GLANCE

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Background: Incisional hernia is currently the most common postoperative complication (15-35% of laparotomy, climb up to 65% in patients with major comorbidities) and at the same time, the pathology with the most common surgical indication.The goal of this paper is to raise awareness among parietal surgeons of the use of posterior component separation techniques when Rives-Stoppa-Wantz is exceeded. **Material and methods:** Sub-lay Rives-Stoppa-Wantz reconstruction represent the gold standard in ventral hernia repair, but this technique has multiple limitations in case of complex hernia. We analyzed the best option when this technique is outdated, the key being represented by the transversus abdominis release (TAR). **Results:** TAR is recommended to be used in large hernia, irreducible hernia or loss of domain, indication given by CT scan, frequently with Tanaka Score >20% and transverse diameter >10cm. A series of advantages are safe and reproducible technique, effectiveness in restoration of linea alba, providing medial advancement for both rectus sheaths with preserving neurovascular bundles, without of use of skink flaps. **Conclusions:** Patients with complex ventral hernia such as large defect or loss of domain, the most proper surgical technique is represented by transversus abdominis release. The low recurrence rate with increased abdominal wall functionality of TAR use has been demonstrated in the case of complex ventral hernia.

Keywords: Complex hernia, Reconstruction, Sub-lay, TAR, Option

HISTOPATHOLOGICAL RESULTS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY IN OBESE PATIENTS

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Background: Laparoscopic sleeve gastrectomy is the most commonly performed bariatric surgery worldwide. Despite being the only procedure that allows for pathological examination from the resected specimens, only several studies describe the histopathological findings encountered in gastric specimens resulted, leading to a scarcity of data about this topic.Therefore, this study aimed to investigate the relationship between baseline characteristics of obese patients and histopathological findings of resected gastric specimens resulted after laparoscopic sleeve gastrectomy. **Material and methods:** Seventy-seven patients undergoing laparoscopic sleeve gastrectomy in a university surgical department from Târgu Mureş, Romania were retrospectively included in the study. Demographic data, preoperative Body Mass Index values, and their relationship with histopathological findings of resected gastric specimens were statistically analyzed. **Results:** The mean age of patients included was 40.2 ± 11.05 years and the mean Body Mass Index was 43.5 ± 7.8 kg/m2. Of patients, 71.4% were female. Active chronic gastritis was the most common gastric pathology (39%) encountered. *Helicobacter pylori* infection was present in 27.2% of the cases. Normal gastric histology was found in 33.7% of the specimens. A strong statistically significant association was noted between *Helicobacter pylori* infection and active chronic gastritis ($p<0.0001$). Similarly, a statistically significant association was observed between age, Body Mass Index, and intestinal metaplasia ($p=0.005$ and $p=0.009$ respectively). No malignancies were found. **Conclusions:** Our study results showed that the incidence of active chronic gastritis and *Helicobacter pylori* infection is relatively high in obese patients. Considering this, we conclude that it is important to send the resected gastric specimens for histopathological analysis after laparoscopic sleeve gastrectomy.

Keywords: Laparoscopic sleeve gastrectomy, Histopathological findings, Helicobacter pylori, Obesity

SURGICAL EMERGENCIES DURING THE COVID-19 PANDEMIC - TIME VERSUS SURVIVAL

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Background: COVID-19 being a public health issue, has caused a lot of changes in the management of surgical emergencies overall, mostly when it comes to time management. The aim of the present study was to investigate how COVID-19 pandemic influenced the time management and survival rates among surgical emergencies. **Material and methods:** We retrospetively enrolled 823 consecutive patients admitted in the Surgical Department 1 of the Emergency Clinical County Hospital of Târgu-Mureș in two distinct timespans, one year before the global pandemic (group 1; n=421) was declared and one year during the pandemic (group 2; n=402), beginning with the instauration of the lockdown in Romania. The time from admission in the Surgical Department, to the beginning of the surgical procedure and its duration, expressed in minutes, as well as survival rates were assesed. All statistical analyses were performed using GraphPad Prism version 8.0.2 (GraphPad Software; San Diego, CA). The p value was set at 0.05 for statistical significance. **Results:** The time from admission in the Surgical Department, to the beginning of the surgical procedure was significantly longer in group 1 compared to group 2 (264.8±23.54; 204.5±12.32; $p=0.01$). Meanwhile, the duration of the surgical intervention was significantly higher during the COVD-19 pandemic (137.6±3.62; 126.2±10.49; $p<0.0001$). When comparing survival rates before and during the pandemic, we observed a higher mortality during the COVID-19 period (O.R.=2.1; 95% CI 1.38-3.26; $p=0.0007$). **Conclusions:** Our results suggest higer durations of surgical intervention and lower survival rates during the COVID-19 pandemic which can be explained by the late presentations, due to reluctance in searching medical help and subsequently to more severale forms of the surgical patologies at admission. Further investigations are needed in order to completely identify all the factors leading to high mortality in surgical patients in times of COVID-19.

Keywords: COVID19 pandemic, surgical emergencies, survival rates, time management

LONG-TERM FOLLOW-UP OF LAPAROSCOPIC SLEEVE GASTRECTOMY PATIENTS- A PROSPECTIVE STUDY

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Background: In recent years, as obesity epidemic spread worldwide, bariatric surgery developed as a standalone surgical specialty. Laparoscopic sleeve gastrectomy(LSG) is one of the most common and efficient techniques in obese patients' treatment. **Material and methods:** We conducted a prospective observational study by reviewing a single surgeon experience database, on a eight years period. We assesed the postoperative evolution of the weight curve as well as the effect of surgery on the main comorbidities. We prospectively followed up our patients every 3 months for the first year after LSG, and then twice a year. In order to evaluate the procedure's efficiency we calculated the percentage excess weight loss(EWL%) and change in body mass index(BMI). Furthermore, arterial hypertension, obstructive sleep apnoea syndrome(OSAS) and diabetus mellitus type 2, were followed along the weight loss process. **Results:** Out of 179 patients that were included so far in our study, 136 were female and 43 were male; the mean age of 40.47+/-11.08 years, median preoperative BMI was 42.93kg/m2. The EWL% was 41.8 at 3 months, 64.1 at 6 months, 75.33 after one year, 77.1 at 18 months, 76.03 after two years, 73.78 after three years, 71.58 after four years, 63.83 after five years, respectively 61.1 after six years from LSG. A negative correlation was observed between EWL% and the following:age, male gender, initial weight and BMI of the patient. After LSG 68.2% of patients with arterial hypertension presented resolution or significant improvement of blood pressure values. As far as type 2 diabetes mellitus is concerned, 65.8% had resolution or significant improvement; 70.4% of patients with preoperative OSAS reported resolution or improvement after surgery. **Conclusions:** We consider longitudinal sleeve gastrectomy to be a both effective and safe procedure; long-term follow up shows a tendency to regain weight at two years from surgery, with a need for revisional intervention in selected cases.

Keywords: sleeve gastrectomy, bariatric surgery, obesity

SURGICAL TREATMENT OF HYPERPLASTIC GINGIVITIS FOLLOWING THE ADMINISTRATION OF CALCIUM ANTAGONISTS

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Background: Hyperplastic gingivitis due to calcium antagonist's treatment, with its aesthetic and functional implications, represents a serious concern for both patients and clinicians. Calcium antagonists (Nifidepine, Nitredipine, Amlodipine, Diltiazem) are substances that inhibit the flow of calcium ions through slow membrane channels. The therapeutic consequences consist in inhibiting the myocardial contraction, depressing the myocardial function. **Material and methods:** We present the case of a 65-year-old patient, accusing chewing pain, functional and aesthetic disorders caused by generalized nodular gingival hyperplasia. Clinically, gingival hyperplasia has a globular appearance, located at maxillary (interdental, vestibular and palatal) and mandible, more accentuated at the maxillary level where it extends in volume, covering 1/2 of the remaining prosthetic abutments and grade 3 dental mobility at the level of the tooth 1.6. The patient has a history of hypertension and has been on chronic treatment with Triplixam for about 2.5 years. In analgesia completed with local anesthesia, surgery is performed by performing gingivectomy atthe maxillary, vestibular, interdental and palatal, curettage of granulation tissue underlying the excised gingival mass, toothextraction 1.6, hemostasis control and suturing with separate threads. **Results:** Post-op, there is a significant reduction in volume ofgingival hyperplasia, especially vestibular, interdental and palatal, with the exposure of the prosthetic abutments. Functional andaesthetic disorders have also improved. Antibiotic, analgesic/anti-inflammatory treatment is continued, irrigations with antisepticsolutions are practiced and complex flasks containing antibiotics, are applied at the gingival level. **Conclusions:** The side effect oftaking calcium antagonists causes aesthetic changes and clinical symptoms that include pain, tenderness, bleeding, speech disorders,dental mobility, malocclusion, increased tooth decay and periodontal disorders. It should be noted that in these forms of thedisease, the main etiological factor is bacterial plaque, and the clinical aspects are the expression of the modification by the drug ofthe tissue response to bacterial inflammation.

Keywords: Hyperplasia, Calcium-antagonists, Surgery, Gum, Treatment

UROLOGY

LOWER URINARY TRACT SYMPTOMS ARE ASSOCIATED WITH CLINICAL SIGNIFICANT DEPRESSIVE AND STRESS SYMPTOMS AT TIME OF DIAGNOSIS

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Background: We aimed to investigate the correlation between lower urinary tract symptoms (LUTS), testosterone deficiency (TD), and erectile dysfunction (ED) with depressive, stress, and anxiety symptoms at the time of diagnosis. **Material and methods:** From October 2019 to March 2020, 113 males who presented at our outpatient clinics were included. The study was approved by the local Ethical Committee. Inclusion criteria: age 40 to 75, no clinical suspicion of prostate cancer or cardiovascular comorbidities. LUTS was assessed using International Prostate Symptom Score (IPSS), ED using International Index of Erectile Function (IIEF-5), and depression, stress and anxiety using Depression Anxiety Stress Scales (DASS-21). TD was defined according to the 2019 American Urological Association (AUA) guideline. **Results:** Median age was 62 (range 40-74). Mean IPSS score 10.94 (SD 7.75), mean IIEF-5 score 13.12 (SD 7.08) and mean DASS-21, 11.35 (SD 8.24). Mean Testosterone was 442.6 ng/dl and 31 (27.4%) patients had TD. According to DASS-21 depression subscale, 28 (24.8%) patients had depressive symptoms, 20 (17.7%) mild, 5 (4.4%) moderate and 3 (2.7%) severe. According to DASS-21 anxiety subscale, 25 (22.1%) patients had anxiety symptoms, 8 (7.1%) mild, 13 (11.5%) moderate and 4 (3.5%) severe. According to DASS-21 stress subscale, 25 (22.1%) patients had stress symptoms, 10 (8.8%) mild, 12 (10.6%) moderate and 3 (2.7%) severe. Depression was associated with LUTS (14.5 vs. 8 score, $p = 0.002$). Similarly, stress was associated with LUTS (IPSS 15 vs. 7 score, $p = 0.0001$) and with ED (IIEF-5 5 vs. 15 score, $p=0.01$). A positive Spearman's rho correlation between depression, anxiety, stress symptoms and LUTS was found, $p<0.001$. **Conclusions:** We found a correlation between depression, anxiety, stress symptoms and LUTS. Interestingly, ¼ of men presenting for a urologic consult have concomitant depressive, anxiety, or stress symptoms. Screening for these symptoms could improve individual counseling and management as well as patient satisfaction.

Keywords: depression, anxiety, stress, testosterone deficiency, lower urinary tract symptoms

DO WE NEED UROFLOWMETRY IN THE MANAGEMENT OF CHILDREN`S VESICO-URETERAL REFLUX?

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Background: One of the investigation making part of the evaluation of vesico-ureteral reflux is urodynamic evaluation. The aim of this study was to present the role of the urodynamics, especially uroflowmetry in the management of children presenting VUR **Material and methods:** We performed a retrospective study(2018-2020) which processed urodynamic data of 41 children with congenital disorders presenting LUTS. In our unit a children`s urodynamic investigation consists of a screening, clinical examination, urinanalysis, abdominal ultrasound , uroflowmetr. **Results:** From the total of the uroflowmetries performed 51 % of the cases were presenting VUR. In theses cases we studied the curve pattern, value of Qmax, duration of micturition, hesitancy,time to Qmax and amount of voided volume. One of the most frecvent complications of the reflux is urinary infection, so it is mandatory to performe the investigations after or during antibiotherapy, in order to obtain a good bladder capacity. Our findings showed reduced bladder capacity in 7 cases, in 10 patients capacity was normal, while in 4 cases, all girls the bladder capacity was more than 300 ml but without residual urine. Regarding the values there were differences caused by age and gender. As of theshape of the curve our results revealed normal shape in 10 cases, interrupted curves in 5 cases , irregular curves in 3 cases and in the remained 3 cases the curves were obstructed one followed by terminal dribbling. In the cases of irregular curve patterns the VUR treatment was combined with behavioural therapy, bladder training or pharmacotherapy **Conclusions:** Uroflowmetry is a non-invasive procedure, can be repeated as many times as it is required and it is well accepted by the little patients, it is a valuable screening procedure with great help in the correct management of reflux .With the help of urodynamics the differentiation between primary and secondary reflux due to bladder outlet obstruction can be easily performed

Keywords: uroflowmetry, VUR, urodynamics

SMOKING AND BLADDER CANCER

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Background: Continued smoking after non muscle-invasive bladder tumor diagnosis is associated with detrimental outcome. This study aims to analyze the impact of smoking on the prognosis of non-muscle invasive bladder tumors and to investigate smoking behavior among bladder cancer patients. **Material and methods:** In our retrospective study we included 182 (100%) patients who were diagnosed with non-muscle invasive urothelial tumors, hospitalized at the Urology Clinic in Targu Mures between January 2016- December 2020, after transurethral resection of bladder tumor. Inclusion criteria were: non-muscle invasive tumors (Ta, T1, CIS), patients who responded to follow-up. **Results:** From the total of 182 patients diagnosed with non-muscle invasive bladder tumor, 90 (49.45%) met the inclusion criteria. The mean age of the included patients was 70.51 (IQR 37-91), 76 were male (84.44%), 14 female (15.55%). Most of them, 62 patients were classic cigarette smokers (68.88%), 19 (30.64%) patients started smoking earlier or at the age of 18. The average smoked cigarettas/day was 18.04. The average years of smoking among these patient was 34.05 years. Affirmtively at the moment of diagnosis 27 patients were still smokers and only 5 of them quit smoking after diagnosed with non-muscle invasive bladder cancer. **Conclusions:** Due to the high number of smokers among patients diagnosed with non-muscle invasive bladder cancer there should be more emphasize on Tobacco Control Interventions, such as Smoking Cessation Programs and regular follow-up. Also the effort for smoking prevention in children and adolescents should be more supported by all healtchcare workers.

Keywords: smoking, non-muscle invasive bladder cancer, prognosis, smoking cessation, prevention

LAPAROSCOPIC PYELOPLASTY USING TRANSPERITONEAL APPROACH PERFORMED ON A PATIENT WITH PYELO-URETERAL DUPLICATION AND RIGHT URETEROPELVIC JUNCTION OBSTRUCTION-CASE REPORT

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Background: One of the most common abnormalities in the renal pathology are horseshoe kidney (0.25%) and reno-ureteral duplication (0.8%). The most frequent area where urinary tract obstruction occurs is the ureteropelvic junction (UPJ). The UPJ stenosis associated simultaneously with other congenital renal tract abnormalities is rare which is the reason why there is not an extensive clinical experience regarding the management of this cases. **Material and methods:** We present the case of a 42 years old female patient who was admitted in the Urology Department of Târgu Mureş Clinical County Hospital for intermittent pain in the right flank associated with nausea and vomiting with the same intermittent characteristics. The CT scan and intravenous urography (IVU) showed reno-ureteral duplication and a UPJ obstruction close to the lower right pole. Also the imagistic investigations showed evidences of stage III hydronephrosis caused by the upper ureter which intersects the lower one as a spiral. The renal function was normal, with urea/creatinine and ionogram within normal limits. **Results:** We performed a 3D laparoscopic pyeloplasty, Hynes Anderson technique by transperitoneal approach, with the insertion of an double J catether (7Ch, 26cm, 6 weeks) during procedure. The intra- and post-operative evolution of the patient was favourable, without any blood loss. The lumbar drainage was suppressed four days after the intervention, and the double j stent after four weeks. **Conclusions:** The laparoscopic approach has many advantages, including dissection, anastomosis, accessibility to the affected area, as well as easier and faster recovery of the patient, even in complex situations that require modification of common surgical technique.

Keywords: Pyeloplasty, Laparoscopy, pyelo-ureteral duplication, ureteropelvic jonction obstruction

HUGE ANTERIOR SACRAL MENINGOCELE SIMULATING BLADDER RETENTION

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Background: Anterior sacral meningocele (ASM) with spina bifida is a rare congenital disorder involving herniation of the dural sac through a defect in the anterior aspect of the sacrum. Congenital spinal anomalies are highly associated with distortion of the spinal cord, the spinal nerve roots or both and can result in neurological abnormalities of the lower limbs and dysfunctional voiding. **Material and methods:** We report a case of a young patient with ASM and spina bifida which presented with dysfunctional voiding and a huge abdominal fluid mass. **Results:** A 36-year-old man with a history of spina bifida was admitted in our department with voiding symptoms (frequency, low bladder capacity, weak urinary stream, nocturia). Physical examination, ultrasonography and magnetic resonance imaging (MRI) was interpreted by the radiologist, neurologist and the urologist as an anterior sacral meningocele (ASM) and bladder retention. It was performed a suprapubic bladder catheterization with evacuation of 8 L of transparent liquid. After the procedure, the patient's condition worsened, so it was performed a Computed tomography (CT) scan, which revealed a *well-defined retroperitoneal oval fluid collection of* 26/19 cm. Exploratory laparotomy was performed with identification of an enormous anterior sacral myelomeningocele compressing the bladder. It was performed the excision of the meningocele and the cystostomy tube was repositioned. Postoperatively, the patient was neurologically normal and was discharged from the hospital on cystostomy drainage. A urodynamic study was performed 30 days postoperatively. **Conclusions:** ASM is rare and has variable clinical manifestations (abdominal mass, constipation, urinary dysfunction) frequently associating chronic bladder retention. ASM should be considered when the differential diagnosis of pelvic fluid masses is performed and should be approached with care in the same team with the neurosurgeon.

Keywords: huge meningocele, simulating, bladder retention

CERVICAL CANCER AND UROLOGICAL COMPLICATIONS: LITERATURE REVIEW

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Background: WHO estimates that over one million females are affected globally by cervical cancer. This research is a literature review of studies regarding this pathology and its urological complications. **Material and methods:** We used the PubMed database to identify articles published on this subject and then extracted the full-text articles from PubMed Central. Our timeline was initially set including the past 20 years for selected publications but was secondly extended because of lack of publications. Furthermore, articles were reviewed in a chronological manner but were secondly analyzed based on a thematic organization. **Results:** After analyzing the selected articles, we may state that, although the interest in the matter of complications of cervical cancer rises early, in the mid-XXth Century, with a certain increase in the years 1967 - 1988, the frequency of more recent studies is decreasing significantly. Moreover, we were not able to identify any study conducted on Romanian grounds. We found a decrease in the rate of urological complications caused by cervical cancer in the past two decades, probably explained by the evolution of surgical techniques. However, the exact incidence of the abnormalities that occurred in the correct functionality of the low urinary tract and caused by the management of cervical cancer is unknown. Furthermore, the rate of complications caused by radiotherapy is also decreasing thanks to the development of imaging-guided radiotherapy. Several modern management protocols were identified, like percutaneous nephrostomy, catheterization of the ureters, introducing the idea of an 'ideal stent', and self-catheterization. However, the quality of life of patients affected by this pathology was briefly discussed. **Conclusions:** The number of recent studies concerning this subject is very low, with no Romanian research on this matter, thus the need for further research. There is a very low interest shown towards the quality of life of patients affected by cervical cancer and its consequent comorbidities.

Keywords: cervical cancer, urological complications, quality of life, radical hysterectomy, imaging-guided radiotherapy

OBSTETRICS AND GYNECOLOGY

INDUCTION OF LABOR USING THE FOLEY BALLOON IN PATIENTS WITH POST-CESAREAN SCAR UTERUS

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Background: Patients with scarred uterus have an increased risk of uterine rupture, representing the main reason for abandon of another method to induce labor. Consequently, the scarred uterus is the most common indication for repetitive caesarean section. The aim of our paper is to evaluate the main parameters of delivery mechanism and to assess the fetal well-being at birth in patients with scarred uterus after a previous caesarean section, induced by Foley balloon, at Brugmann University Hospital in 2017. **Material and methods:** A retrospective study has been performed for the year 2017 in a referral university hospital, analyzing the files of patients enrolled using the software Mosos-O, Mosos-CTG, QPlanner, ASTRAIA. The statistical cohort under analysis consists of the control group (68 pregnant women with scarred uterus after a caesarean section, with the labor induced by using a Foley balloon) and the pilot group (61 pregnant women in which the labor was induced by Foley balloon for patient convenience). **Results:** Patients in both study groups benefited from the onset of labor between 40-41 weeks of amenorrhea. Of the control group, 69% of pregnant women gave birth vaginally, compared to the pilot group in which vaginal births accounted for 70.5%. Patients from the control group - 79% had a eutocic birth compared to 63% of patients from the pilot group. The Apgar score at 5 minutes of life in the case of the control group represented in 86.86% a value higher than 7 compared to the same parameter in the pilot group - 90.15%. There were no cases of uterine rupture. **Conclusions:** Labor induction using Foley balloon for pregnant women with scarred uterus after cesarean section is a feasible technique that deserves to be proposed to this profile of patients providing identical obstetric and neonatal outcome as in pregnant women with non-scarred uterus induced by the same method.

Keywords: Induction of labor, post-cesarean scar uterus, Foley balloon

SCIENCE AND TECHNOLOGY

ENGINEERING-MANAGEMENT

AIR QUALITY AND ITS INFLUENCE ON THE TOURISM INDUSTRY - SYSTEMATIC REVIEW OF THE LITERATURE

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Background: Air quality in Europe is gradually moving forward. In any case, between 2008 and 2018, a significant proportion of the urban population within the EU-28 was exposed to concentrations of certain discuss pollutants over the EU limit or target values. The numbers of individuals exposed were indeed higher in relation to the more rigid World Health Organization (WHO) air quality guideline values set for the assurance of human wellbeing. The main objective of this paper is to study, analyze and present existing research and different approaches of the authors based on the topic "Air quality and its influence on the tourism industry", analyzing both the terms of air quality related to the tourism industry and health also publishes the effects of pollution on the health of the pioneers of this industry, tourists.

Keywords: AirQuality, Tourism, Index

HISTORY

THE DEPORTATION OF ETHNIC GERMANS FROM THE HUNEDOARA COUNTY TO THE USSR. IN THE "MELTING POT" OF TOTALITARIAN REGIMES

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Background: During the final months of the European war theatre, during the autumn of 1944, the Allied Control Comission (ACC) decided on the "removal" of tens of thousands of ethnic Germans from occupied regions and their deportation to USSR work camps in order to help with the war effort. The romanian German minority is the most numerous out of these deportees. Approximately 70.000 people, men and women, were used in what could only be described as a modern form of slavery, for hard work in the mines of Donbas. The deportation of German citizens from Hunedoara County appropriately distills the entire destiny of the German ethnic minority in this part of Europe. After the deportation had initiated between the 10th and 20th of January 1945 and continued over the span of a few years, ethnic Germans were faced with a new mechanism of top-down oppression. Wealth seizures, land reform and re-distribution, suspension of voting rights, the dissolution of German language education, open practice of religious beliefs and free speech suppression, as well as the suspension of free movement etc, constitute the essence of the oppressive measures suffered by the community, leaving the possibility of freedom in the liberal sense of the word, a distant phantasm. The return home from the USSR labour camps meant, in essence, a move from one kind of camp to another. Ethnic Germans were supervised and closely monitored by the communist secret police, systematically surveying all aspects of their lives. A particular unexpected or strange behavior could mean a reintegration into the work camp. After an uninterrupted seven century long settlement of Transylvania, a vital ethnic community was completely engulfed by the melting pot of totalitarianism. It was driven to extinction entirely only after the dissolution of the Great Gulag, what was then called the Great Ally.

Keywords: Germans, deportation, totalitarian regimes, gulag, ethnic minority

ALEXANDRU IOAN CUZA'S STRUGGLE FOR THE FULL UNION OF PRINCIPALITIES IN BRITISH DIPLOMATIC DOCUMENTS

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Background: The year 1859 is a significant year in the history of the Romanians because, by the double election of 5 and 24 January 1859, of Alexandru Ioan Cuza as ruler of Wallachia and Moldavia, the desire to unite the Romanians from the two Principalities is fulfilled.The new ruler has a rather difficult mission because, on the one hand, externally, he must fight for the legalization of the double election and the recognition of the Union, and internally, the Prince had to fulfill the requirements of the Paris Convention of August 7, 1858 and the union full politically and administratively.By the double election of Alexandru Ioan Cuza as lord of Moldavia and Wallachia, we can say that the Union of the two Principalities was only symbolic, they stillfunctioned as two separate states, each with its own government, assembly and capital. Under these conditions, the first three yearsof Cuza's reign were dedicated to the full unification of the two countries. England, being one of the guarantor powers of thePrincipalities, played an important role in the peaceful and legal political-administrative union.English consuls in the Principalitycommunicated constantly with both the Foreign Office and Henry Bulwer, the English ambassador in Constantinople. The Britishdiplomatic documents prove, both, their attempts to calm the tensions accumulated in the Principality, and the pressures exertedon the Ottoman Empire to speed up the settlement of the Principality issue.Diplomatic documents cover a wide range of issues,from current aspects of activity (signaling meetings or protests on the union or bringing a foreign prince to the throne of the Principalities, registration and transmission to the government or Gate of memoranda or protests, etc.) to complex analyses and syntheses on special topics, both regarding the evolution of the Romanian Principalities, and regarding their internal and foreign policy.

Keywords: England, Romanian principalities, Alexandru Ioan Cuza, Union

LINGUISTICS

A COMPARATIVE ANALYSIS OF THE ORTHODOX VERSIONS OF THE NEW TESTAMENT IN ROMANIAN AND POLISH. TRANSLATION ATTITUDES AND TRANSLATION BEHAVIORS

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Background: In this paper I intend to investigate an aspect of the dynamics of the lexicon represented by the problem of linguistic interferences between two genetically unrelated linguistic systems - the Romanian language and the Polish language. Moreover, I aim to study the repercussions of linguistic interferences between Romanian and Polish in the lexicon of Romanian and Polish religious translations of the 21st century, given the Orthodox editions of biblical texts in the two cultural spaces.Orthodox versions are characterized by a doctrine or teaching of faith specific to them, and Polish-language Orthodox editions are recent and the lexicon of Polish-language versions of the Bible has not been systematically and sufficiently researched. As Poland has Catholicism as its main religion, Orthodoxy being a minority religion, in the case of translating cult texts the need to lexicalize new concepts becomes imperious, forcing translators to respect the confessional requirements of organizing the sacred message, perceived and analyzed in the source language and to offer some unique forms of lexicalization in the target language.Therefore, translation is a matter of expressive and semantic choice, and achieving a correct translation from an ideational and formal point of view requires an exacerbated attention to the text. Thus, in the research we will undertake we will show that there is a close link between the preference for a certain equivalent and the membership in a confession of translators, the biblical message being conveyed through the use of certain translation techniques. My research reveals that there is a close relationship between the preference for a certain equivalent and the cultural and theological background of translators, and translation options reflect the theological training of translators, but also certain preferences for denominations, ie translation attitudes and behaviors. **Material and methods:** - **Results:** - **Conclusions:** -

Keywords: biblical text, biblical translation, comparative analysis, semasiology

LITERATURE

SIN AS A WAY OF LIFE

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Background: The aim of this paper is to analyze the strategies of initiation into evil in *The Life of Kostas Venetis* novel by Octavian Soviany. Kostas Venetis is one of the most interesting characters in Romanian literature. He follows an initiatory path at the end of which he becomes totally possessed by evil. The premise from which we start our analysis is that for Kostas Venetis it is inevitable to end up in the hands of evil because evil surrounds him since he was a child, and with the passage of time evil will gradually take possession of him. Our analysis focuses on the main character who is a real sinner. His evolution will be analysed with the help of Paul Ricoeur's theories on mimesis and the phenomenology of evil.

Keywords: evil, Kostas Venetis, hermeneutics, initiation, sin

NEW TRENDS IN HUMANITIES

DIGITALIZATION OF CONTEMPORARY LIBRARIES

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Background: The study analyzes the organization and implementation of the digitization process of documents, the selection of documents subject to digitization, the stages of this process or the terminology used and it is intended as an information document, useful when designing a digital project. In the libraries of the 21st century, the development of digital collections, the conversion of documents from print to digital format appeared as a natural requirement, in an era with an unprecedented development of science, marked by a strong technological footprint. The incorporation of digital initiatives, along with traditional services, is one of the requirements of modern society. The study refers as well to the way in which the digitization of special or patrimonial collections generated essential transformations at the level of contemporary libraries' activity, which, by transposing library documents from analog to digital format, offer them in open access, by means of dedicated platforms. Accepting digitization as a new stage in their evolution, modern libraries are able to obtain a double advantage: to make possible the access to funds of documents that are difficult to access or even unavailable to the public (by allowing full open access to the digitized collection) and to achieve a proper conservation and protection of library funds.

Keywords: Digitization, Library, Institutional repository, Open Access, Conservation

PERSUASION TECHNIQUES IN PANDEMIC ONLINE ADVERTISING

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Background: The COVID-19 pandemic has produced profound changes in all humanity due to the fact that it endangers human life itself and, implicitly, the entire socio-economic structure. Patterns in advertising were also subject to change, as isolation at home and social distancing, as measures imposed by the authorities, have favoured the development of consumption mediated by new IT&C technologies, therefore online advertisements have experienced an unprecedented development due to high exposure. Moreover, advertisments texts had to adapt to the new reality and be in compliance with the needs of the customers in terms of word choice and emotions conveyed. In this sense, this paper, with an exploratory character, showcases the main persuasion techniques used in online advertisements during pandemic, outlining their benefits. Complementarily, the exploratory paper presents the emotional capital linguistically implied in the pandemic online advertisements together with a holistic picture of the impact that the COVID-19 pandemic had on the Romanian online advertisments from a linguistic point of view.

Keywords: persuasion, advertisements, emotions, online, COVID

THE DETECTIVE NOVEL AND THE (UN)SUCCESSFUL RISE OF A LITERARY GENRE IN ROMANIAN LITERATURE

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Background: The latest studies show us an enhanced interest in what we generally call popular culture, a product intended for the general public and whose purpose is, in essence, a commercial one. Literature is no exception to this shift in interest. Moreover, the perspective from which this type of writing is analyzed is not a derogatory one, as we might suspect. The revision of its status determines a complete re-evaluation of the factors and causes that determine its separation and inventory from authentic literature. From this point of view, multiple and diverse fields arise that study the phenomenon of consumerist literature, appealing to the analysis of cultural contexts in a broad sense, which can lead to a better understanding of literary evolution. Among the genres that are part of a revitalization today is the detective novel, our object of study in this paper. Unlike other writings generically called "popular", a term that acquires another meaning since the nineteenth century, police texts seem to be imposed most quickly in the context of cultural studies. In European cultures, they are already "classicized", being analyzed accordingly, from the perspective of literary forms and their historicity. In Romanian Literature, the development of this literary genre has been a difficult one. The detective novel was ignored by the important nineteenth-century critics and the successful writers showed little interest in cultivating this type of literature. The main purpose of this paper is to identify the main factors that helped the Romanian literature assimilate the genre and also to determine the reasons why it did not have a resounding success, as we see in American, English or French cultures. The methods used to achieve the proposed objectives are the cultural and sociological approaches, without ignoring the primacy given to aesthetic value, content analysis, problematization, stylistic and thematic analysis.

Keywords: detective novel, popular culture, literature, bestseller, escapist fiction

NICOLAE BALOTĂ AND THE SIBIU LITERARY CIRCLE

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Background: The Sibiu Literary Circle is a group of writers that continues the liberal and modernist ideas of theorist Eugern Lovinescu. It was created in 1943 during World War II and remains absolutely central for the Romanian culture to this day. The Sibiu Literary Circle contributed to the formation of several prominent writers like Ion Negoițescu, Nicolae Balotă, Radu Stanca, Ștefan Augustin Doinaș. Their works represents one of the massive chapters that legitimize Romanian literature as belonging to the Occidental values.Many writers and historians have tried over time to capture the spirit of the group, dedicating biograpfical and critical writings to scholars. If on the one hand there were writers and historians who tried to dedicate books to them, having an objective view of the situations, but still trying to put themselves in the place of the researchers and in the circumstances given by the era and ideology, on the other hand there were voices condemning and disapproving them, the worst accusations being those concerning the partisans of the communist regime.

Keywords: Balotă, Literary Circle, modernism, Sibiu, literature

IOAN ALEXANDRU - RELIGIOUS LYRIC POETRY

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Background: Ioan Alexandru's religious lyric poetry has its origins in the Byzantine poetry, the author remembering some important names such as Romanos the Melodist, the hymn writer Ephrem the Syrian. The themes, the motives, the symbols, aswell as the functions of the religious poetry are superios, the poet becoming the prophet-poet. The religious-type communicationhas the role to purify, the word having a Messianic and thaumaturgic power. Ioan Alexandru, the only religious poet until 1989,developed the religious symbols aesthetically, his religious lyric poetry taking the form of the hymn. two directions can be found inhis lyric poetry: the purely religious poetry and the religiously elaborated historical poetry, both pointing towards the same message: the saving value of the sacrifice.

Keywords: Ioan Alexandru, prophet-poet, hymn, religious simbols, to purify

GEO DUMITRESCU - POETRY AS FREEDOM OF EXPRESSION

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Background: The poet Geo Dumitrescu`s freeddom of expression is achieved throught poetry, which takes the form of a show that represents unconformably, prosily the reality of his times. The poet`s liberties regard the content and the form. Thus, the demystificatin of the themes, the ironis, sarcastic voice, the militant, social, narrative poetry state the freedom of the content and of the expressive form. The anti-literature, the academic anti-form prove to be ingredients of Geo Dumitrescu`s poetry, the active, militant character supporting the emphasis of the historical, social, political, existential truth. The poet`s freedom is a form of riposte to the lived realities, reality in which inequity es felt, and the tension of theresentment state becomes a constant of Geo Dumitrescu`s work.

Keywords: Geo Dumitrescu, freedom of expression, militant, anti-literature, ironic voice

COMMUNISM, EPIC RECOVERY: COLLECTIVE HISTORIES, PERSONAL HISTORIES

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Background: In the process of metamorphosing the memory of the contemporary generation, the spaces of memories change. Fora long time, writers will wage a real war of memories, guarding them and hiding them in the house of the mind, in order to avoid perhaps the answers to the painful questions from the experience. The pact with the narrative that includes the geography of memory highlights the traces of an insecure, fragile connection between the past and the present, which only a reminder of the existence of universal symbols keeps alive. There is a common space for post-December writers of feelings, of evocations, because, thanks to the totalitarian system, all children had access to the same goods (with small exceptions), frequented the same places, played the same games, wore the same brands of clothes, listened to the same music. they had the same refrains, they ate and drank the same foods, they had the same cutter… Whatever he does, returning to childhood through the artistic word, leads to reconciliation with himself. Along with the writer, the reader becomes a key witness to everything that must be condemned, atoned for, remembered, shared. Maybe writing makes it possible to move on ... There are a number of collective works that address the theme of childhood under communism. We will identify, in general, the same sub-themes: school, house and collateral spaces, patriotic work, celebrations, games, loves and common characters, people of all ages and professions. In the foreground is everyday life, the banal maybe, the normal. On the other hand, from these common stories, a unique story emerges through the emotion released, through the type of writing. Such are the novel-poems of the contemporary writer Andrei Crăciun, small episodes from and beyond communism, short but intense: Aleea Zorilor, Și fericirea era obligatorie.

Keywords: comunism, childhood, memory, contemporaneity, novel-poems

DIALECTAL STUDY IN MUREȘENII BÂRGĂULUI, BISTRIȚA-NĂSĂUD COUNTY

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Background: The presented study aims to describe the linguistic variety of the Northeastern Transylvanian language both by illustrating some fundamental theoretical and practical aspects. To identify these characteristics we used as a starting point a corpus of dialectal texts and a questionnaire. In the commune of Mureşenii Bîrgăului, Bistriţa-Năsăud county, we conducted a direct dialect survey on the spot. In the action of collecting the dialectal linguistic material, we contacted and interviewed fifteen speaking subjects. Analyzing the lexemes that illustrate the consonantism we can observe that pregnant is the phenomenon of palatalization of the bilabials p, b, m through the phonetics p (), b (), m (n ') in different stages and the voiceless palatal plosive transformation k', g 'in the affricates pre-palatal , . The phonetic changes found in the dialectal text include the commune of Mureşenii Bârgăului, Bistriţa-Năsăud county, from a linguistic point of view, in the Transylvanian language of the northeast.

Keywords: dialect survey, questionnaire, phonetic changes, Mureşenii Bârgăului, linguistic variety

PHILOLOGY

THE PHENOMENON OF IMMIGRATION BETWEEN THE CULTURAL AND LINGUISTIC DIVERSITY

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Background: The study starts from the assertion that cultural and linguistic diversity represents today a defining characteristic of humanity. The main objective is to approach the phenomenon of contemporary cultural and linguistic interferences between the Romanian and the Italian languages and to analyze the consequences of neological nature. This phenomenon has an important role in the development of the vocabulary of the Romanian language, especially when we refer to the specialized vocabulary through which the Romanian neological word-stock has been enriched. By using the descriptive-linguistic and comparative method I have drawn some conclusions that allow me to understand the reasons, the mechanisms and the structural and sociolinguistic motivations that govern the contact between the languages in the situations specific to the contemporary world better better.

Keywords: cultural diversity, immigration, sociolinguistic motivations, linguistic diversity, dynamics of languages

"LIFE WRITING" AND THE LIMITS OF AUTHENTICITY IN POSTCOLONIAL LITERATURE

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Background: By focusing on the work of the South African Nobel-prize-winning author, J. M. Coetzee, I intend to explore how his semi-biographical and essayistic writing undermines the paradigm of realism. At the same time, this paper is concerned with the way the postmodern and postcolonial context of his fiction alters how we perceive notions such as truth and authenticity in relation to the reality-fiction binary. In investigating the construction and deconstruction of "the real", I will combine a reader-oriented analysis with a post-structuralist perspective on writing and reading. The aim of my research is not to discuss to what extent his novel, Elisabeth Costello, is autobiographically true, but to what degree it is true to its readers by tracing the limits of its authenticity textually, metatextually, and contextually.

Keywords: life writing, authenticity, postcolonial literature, semi-biographical writing, reader-response criticism

THE ROLE OF LINGUISTICS IN TERMINOLOGY

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Background: The objectives of this paper are mainly descriptive (and not normative), meaning that a priority attention will be given to the general dictionnaries and also to the special ones which are a reference element in the case of specialized vocabulary. We identified a dual vision on the knowledge, the main goal of terminology as a science being to create conceptual theories which structure the objects of the domain and also the activity of the vocabulary. The linguistical descriptive and comparative method showed a few conclusions based on the principle of alternative definitions, which are on one hand accessible to specialized people from various fields, and on the other hand it should have a lower level of abstractisation of the knowledge so they are accesibile to non specialized persons.

Keywords: dictionnaries, definitions, terminology, conceptual theories, vocabulary

VLADIMIR JANKÉLÉVITCH. TREATISE ON DEATH. A PHILOSOPHICAL APPROACH

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Background: Our study entitled *Vladimir Jankélévitch. Treatise on death. A phylosophical approach* is intended to represent an analysis on the great French philosopher's work on the subject of departure from life. The study's main goal is to select and discuss, to compare and classify the main ideas in Jankélévitch's philosophy on this topic and this work will constitute a part of the first subchapter of our Ph.D thesis entitled *Moartea şi lumea de dicolo. O perspectivă etno-folclorică*. The study's structure follows approximately the main chapters of the book. Our study discusses these ideas (like Jankélévitch did) from three different point of views: 1. Death before them moment of death 2. Death in the moment of death. 3. Death after the moment of death.

Keywords: Vladimir Jankélévitch, Death, Perspectives, analysis, philosophy

COMPARATIVE LEXICAL ANALYSIS BETWEEN THE MISSAL OF ANTIM IVIREANUL AND THE ONE FROM CHISINAU (1815)

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Background: The liturgical variety of the religious style is among the most conservative, the innovations being hardly accepted in textual terms. Through this study we propose a comparative analysis of lexical nature of terms with different meanings from the current ones. The texts used are the Missal from Chisinau (1815) and that of Antim Ivireanul, observing the essential role of Antim's book in the printing of Missal from Bessarabia. Our analysis has several different directions of discussion: terms of Latin origin (inherited), terms of Slavic or Slavonic origin, terms of Byzantine Greek origin, terms of Hungarian origin, terms of obscure origin and terms formed in the linguistic field of the Romanian language. **Material and methods:** Comparative analysis **Results:** a comparative analysis of lexical nature of terms with different meanings from the current ones **Conclusions:** a comparative analysis of lexical nature of terms with different meanings from the current ones. The texts used are the Missal from Chisinau (1815) and that of Antim Ivireanul, observing the essential role of Antim's book in the printing of Missal fom Bessarabia

Keywords: liturgical variety, Antim Ivireanul, Gavriil Bănulescu-Bodoni, Missal, Bessarabia

THE CONTRIBUTION OF THE MACEDONSKI FAMILY TO THE HISTORY OF THE ROMANIANS

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[1],

Background: Alexandru Macedonski is an important Romanian writer who comes from a family that has been actively involved over time in various historically significant events for the Romanian people. The poet Alexandru Macedonski will not pursue a military career like his grandfather and father, but will be actively involved in political life by exposing his ideas in articles in various more or less recognized publications. His passion for political events led him to publish the newspaper "Oltul" between 1873-1875 in which he published various pro-liberal articles. Macedonski's strong personality stands out in his ability to zealously convey all his literary or political conceptions. The latest political upheavals are the praiseworthy article dedicated to Field Marshal Mackensen, due to which Ovid Densusianu withdraws his proposal for the candidacy for the Romanian Academy, the brochure "Zacherlina further" and "The Sonnet of Power". The writer draws public disapproval and goes to war against everyone. The writer's death saves him from revenge.

Keywords: writer, historically, literary, Macedonski, family

ION MINULESCU'S PROSE

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Background: The Minulescian epic work remained in the shadow of poetry, being ignored by literary critics and published much less than the lyrical one. Because of this, the prose was not valued, it was not brought into the spotlight of the readers and it was not given its true value at the time of its publication according to the comments, specialized analyzes. Ion Minulescu has taken steps since the beginning of the symbolist movement to popularize this current through aesthetic refinement in his poems, short stories, sketches and novels. The minulescian epic imagination accepts libertinism, indiscretion, spiciness, sociability, the pleasure of conversation, exoticism, eroticism and the instability of feelings, traits that become dominant in his prose.

Keywords: Minulescu, Prose, Epic, Symbolist, Novels

THE AQUATIC IMAGERY IN THE POETRY OF ION PILLAT

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Background: Prezența apei, în anumite volume ale lui Ion Pillat, ca element al oglindirii și efemerității , este unul dintre argumentele cele mai importante aduse de Cristian Livescu în favoarea barochismului. Ea se întâlnește cu tema originară a poetului : pământul, uscatul, în configurația plaiului natal. Obișnuința scrierii cu apă atât de exersată în volumele de început, îl propune drept un simplu gest de rutină. Pastelul nu reprezintă altceva decât conversia terei în acvatic. Mult mai ușoară se dovedește acvificarea timpului, dezvoltată pe imaginea esențială a ,,curgerii" sale. Pe urmele tradiției și ,,specificul" e o apă curgătoare, inevitabil, are și un izvor. Acest izvor nu putea fi decât ,,arta și poezia populară", folclorul nostru întreg

Keywords: apa, timpul, fenomenologia, amintirea, pământul

LITERARY THEMES IN CRISTI PUIU'S FILMS

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Background: Cristi Puiu, a movie director known for his literary culture, has subtly integrated various literary themes into his films. In the approach of the paper, we will focus our attention on an inexhaustible theme encountered in this two arts: love. We can distinguish: love at the limit (Goods and money), love crystallized in the last moments of life (Death of Mr. Lazarescu), love for the woman (Aurora), love for the deceased father (Sieranevada). In a remarkable cinematic language, this theme, which manifests itself in different valences, opens multiple other horizons that are revealed in time to moviegoers, similar to the effect that the book has on the reader.

Keywords: movie, literary theme, love, literature, cinematic language

EUROPEAN EXPRESSIONISM IN ART AND LITERATURE. DIRECTIONS, GROUPING, PROFESSIONS OF FAITH, THEORIZATION, ARTISTS AND WORKS. ROMANIAN EXPRESSIONISM

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Background: The present paper proposes a deep look into expresionism on two separate cultural planes, european and romanian,in order to capture the way this literary movement manifested itself when it comes to art and literature. At the European level, expressionsim manifested itself first and foremost in Germany, at the beginning of the 20th century, as a reaction against naturalism and impresionism as an bourgeois art form. The evolution of expressionism in german art is marked by the following two groupings Die Brücke și Der Blaue Reiter.In the literary field, germanic expressionism going throug a three stage evolution: expressionism as an expression of the current state of mind as caused by the stifled social climate of Wilhem the 2nd's Germany, in expressionism marked by the First World War and the manifestation of expressionism is influenced by the feeling of disaster, defeat. Expressionism in the Romanian literary consciousness can only be talked about after the First World War, and the most important factor that helped spread this movement was the German minority established in our country. Thus, the promotion of expressionism is done first in the local German press and then in the Romanian press. In the literary field, expressionism influenced Romanian poetry and dramaturgy, but also spread into narrative prose. The most important creations made in expressionist style are those belonging to Lucian Blaga. In plastic arts in the Romanian creative space the artists let themselves be influenced by the expressionist principles and whose artistic creations were determined by the idea of establishing a militant attitude, with broad social implications.Even though expressionism was a literary current that was not based on a program or a manifesto, its influences were felt by most artists and writers, initially in the German space and it continued to expand to other areas, including Romania.

Keywords: European expressionism, Romanian expressionism, art, literature

PHYLOLOGY

PEDAGOGY. CONCEPTUAL AND TERMINOLOGY UNIT

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Background: We started from the premise that in the current scientific background the pedagogical language suffers gaps that prevent it to fully accomplish the knowledge functions, communication and operational ones. The main objective is the argumentative analysis on the evolutional perspective of the terminology of educational sciences in general and especially of the pedagogy. We will consider the constitution, development, stabilization, dynamic of the terminology of pedagogy according to the historical landmarks and linguistic peculiarities. I used the descriptive-linguistic and comparative method by means of which I draw a few conclusions like the need of an historical approach of the terms representing the first condition sina qua non of realizing databases and disambiguating in specialized communication.

Keywords: terminology, pedagogy, education, conceptual delimitations

SCIENCE AND TECHNOLOGY

ANALYSIS OF KEY PERFORMANCE INDICATORS IMPACT OF CHANGE REQUESTS

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Background: Key performance indicators (KPIs/KPRs) allow for the gathering of knowledge and explore the best way to achieve the organisation's objectives. Many researchers have offered different ideas for determining KPIs either manually, semiautomatically or automatically applied on different fields. This paper focuses on providing a study of an approach to explore key performance indicators (KPI/KPR). This work presents explanations about the process organization, the selection path of KPI/KPR and a practical example of measuring KPI/KPR in production department with the meaning of providing an interesting image of how people work and analyze complex situations and design or react to their strategies.

Keywords: Performance indicators, Planning phase, Validation phase, Implementation phase

IOAN ALEXANDRU, THE FORESHADOWING OF THE RELIGIOUS PHENOMENON

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Background: Ioan Alexandru remains in the history of literature remains known as a hymn poet, although literary critics appreciated more the first part of the creation, namely the expressionist lyric. However, the two stages of creation cannot be separated definitively because the feeling of belonging to the archaic Romanian background, to the specificity of our national spirituality, stands out in both stages. Along with the hymns, Ioan Alexandru polished his conception of Transylvania, homeland, parents, enriching it with spiritual experience; "The poet did not transform with the appearance of the Hymns, but only polished his long-rooted conceptions", well highlighted in the first anthological appearances. Themes and symbols that we encountered in the first expressionist volumes are resumed in other forms in the second part of the lyrics, being combined with new concepts and ideas. Both in the first volumes and in the second part of the creation, the poet highlighted the nostalgia for the past, the return to ancient origins, characters or symbols. One can observe from the beginning of the creation the influence of Christian values and symbolic elements that stand out in both stages: milk, the first nutritious liquid, flowers; butterflies; Job the classic portrait of patience and humility; the light.

Keywords: Ioan Alexandru, Hymns, Expressionism

AUGUST 23, 1944 IN COMMUNIST CINEMA (1948-1965)

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Background: From the beginning, the Communist Party perceived the first-rate propaganda value of cinema, as evidenced by the substantial financial investments in this field, which had been under total control of the regime since 1948. Cinema propaganda faithfully followed the political lines of evolution of the PCR: it was first pro-Soviet, internationalist, anti-Romanian, then national-communist, anti-citizen, anti-intellectual, anti-Western, the vehicle of Ceausescu's cult. One of the propaganda themes observable throughout the communist period was the anti-capitalist and anti-fascist resistance of the illegal communists, as well as thedistorted representation of the act of August 23, 1944. During the Gheorghe Gheorghiu-Dej period, the number of films dedicatedto the "insurrection" of August 1944 (produced especially in the first half of the 7th decade) was reduced compared to whatoccurred during the Ceausescu period. These films distort the act of August 23, 1944: King Mihai, historical parties, army leadersdo not appear at all or play secondary roles, while the communists are presented as the only initiators and leaders of theinsurrection; wise, visionary, brave, they are the victors who, naturally, deserve to lead the country ... And the friendly relations with the "liberating" Soviets were still promoted in cinema (during the Ceausescu period the praise of the great neighbor from the East will be given up) ....

Keywords: August 23, 1944, Communist cinema, Cinema, Propaganda

PARTS OF THE GREEK-CATHOLIC ARCHDIOCESE OF ALBA-IULIA AND FĂGĂRAȘ THAT REMAINED UNDER THE CEDED TERRITORY (1940-1944) ORGANIZATIONAL ASPECTS

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Background: The new frontier created after the The Vienna Arbitration separated Blaj, partially or fully, from 7 greek-Catholic deaneries. The deanery parishes formed a vicarship which was chosen to be ran by Iosif Pop from Târgu Mureș as their archpriest. All deaneries lost some parishes, except the ones at center to the vicarship. The temporary frontier that crosses the Ulieș county divided the Greek-Catholic deanery from Râciu in half. The part that remained in southern Transylvania formed a new deanery in 1941 with its headquarters in Pogăceaua. The Trei Scaune deanery remained partially in Southern Transylvania and the remaining deaneries from the ceded territories were incorporated in the Odorhei deanery.The lack of priests was vicarship's first problem. Some of them took refuge before being taken over by the Hungarian army. After the first priests took refuge, others have also fled due to the administrative oppressions they were under from the new regime, ending with almost half of the vicar's deaneries priest-less by the end of 1940. Most of the priest-less deaneries were in Gheorgheni, Miercurea Ciuc, Odorhei and Târgu Mureș. Due to this, a priest had multiple parishes under his wing, some even very far away and hard to reach.The Greek-Catholic followers weren't anywhere better than the priests. Some took refuge somewhere else; others, while being persecuted and under continuous threats and oppressions throughout all 4 years, switched to Hungarian confessions specific to their locations. There were some parishes where their priest kept their function and remained in charge, however they had to run it without followers, being forced to move to a different parish later on. At the end of the 4 years of Hungarian occupation, some parishes remained without followers and priests and some of their goods were confiscated by the authorities or the Hungarian churches.

Keywords: 1940-1944, expulsions, Greek-Catholic,, lack of priests, deanery

THE ERASMUS STORY. FROM A PILOT PROGRAM TO A GENERATIONALPHENOMENON

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Background: The Erasmus program is one of the European Union's most successful programs in the field of education and training, being an essential component of the need to "form Europeans from the inside", an idea supported by political leaders since the early beginning of the European construction. The popularity of this program is due to the growing number of participants, as well as the impact it has on young Europeans. International mobility has paved the way for a new type of training young students to become "more European" and having direct implications in shaping the future of the European Union. In fact, regarding the construction of European identity, the Erasmus program is considered to be the most notable tool in this process. Analyzing from a sociological perspective, the Erasmus Program is a social phenomenon that has marked with progressive intensity the generations of students, from its launch until now. The "Erasmus Generation" is becoming an extremely popular construct in studies about the particularities of this cohort of students, as well as in debates on their role in shaping Europe's future. What started from a pilot program of cooperation and interuniversity mobility has become a generational phenomenon and can be considered a symbol of the new generations of young Europeans.

Keywords: Erasmus program, social phenomenon, Erasmus generation, international mobility

A THEORETICAL STUDY OF THE CONCEPT OF NEOLOGISM

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Background: The study starts from the assertion that diacronics and synchrony are two language concepts. The main objective is to approach the perspective of the term neologism with arguments. The descriptive-linguistic and comparative method allowed us some conclusions, one of which is the first condition sine qua non for realization, meaning the need for a historical approach to the terms. Neologisms represent a significant sphere of language lexic and contributing to a great extent to consolidate the romanian language's roman character. Their importance has been highlighted in many studies in the field. This study presents various concepts of general language scientists and and romanian linguistics on the concept of the term neologism.

Keywords: diacronics, synchrony, neologism, concepts, descriptive-linguistic

UNDER THE ZODIAC OF LUCIDITY

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Background: Augustin Buzura's work dazzles by the accurate portray of the human desperation and inadequacy that lies under the mask of totalitarian regime. The central theme revolves around the intricate ways through which the individual is transformed and mutilated by the brutality, injustice, and censorship of the abusive regime, giving prominence to the interiority of the characters. Therefore, the confliction between choosing to be indifferent in the face of the oppressing regime, surrendering to the process of dehumanization and choosing to rebel against it is heightened in Buzura's novels. Built on modern narratives that fixate on internal monologues, each of Augustin Buzura's novels present themselves as inner confessions, a permanent restlessness in face of real or imaginary problems, showcasing characters as victims of their own compromise, caught in between wishing for self-discovery and social compliance. The deep-seated moral anguish is what prevails among the inner world of its characters. What transforms Buzura's heroes into key characters of the anti-communist resistance is the alienation of the individual in the face of aggression and the attempts to rebuke the sense of guilt or the obsessive fear of failure. These individuals are strongly attached to their own family, towards meeting their goals, fighting over themselves for being misfits, vulnerable and insecure.

Keywords: characters, literature, novels, lucidity, Buzura

„ THE GOOD NEIGHBOR'' POLICY AND THE BEGINNINGS OF ITS USE IN THE CINEMA OF THE '30

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Background: Cinema, the youngest of the arts, has been energetic and has quickly gained public attention and became soon, after its appearance in the last years of the 19th century, the most popular of the arts, introducing the audiences to images of the world around them. From the first years of the 20th century silent films with plot came into vogue, substituting the documentary style of filming presented to the viewers. In United States of America, many of these films introduced American viewers to their nearby Mexican neighbors. Usually the mexican image, in film, was dominated by stereotypes deeply rooted in American culture. This habit of portraying the mexicans as bandits or as displaying every vice that could be shown on the screen, by American film industry began to change by the middle of the 1930s. One of the reasons for this change is the new approach to foreign policy implementent by the administration of US President Roosevelt, against the background of overcoming challenges caused by The Great Depression. The first beneficiary of this benevolent attitude towards Latin America, was US's closest neighbor, Mexico. Two american movies are relevenat, during this period, for illustrating this policy in cinematography: Viva Villa (1934) and Juarez (1939). The two movies deal with aspects of Mexican history in a different way than in the past, the use of Mexico and Mexican history as a background for political comments on contemporary events, also demonstrating the role that the film industry has played as a vessel for carrying various messages from the political authorities to the public.

Keywords: cinema, Mexico, history, politics, good neighbor

A PRAGMATIC INSIGHT INTO MEDICAL COMMUNICATION

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Background: The present paper aims to provide an extended overview of the above mentioned approaches and to add a pragmatic framework of analysis towards the healthcare interaction among participants who take turns in exchanging their position of power, scientific authority and goal-oriented control. Parting from the idea that no specialised language exists and develops only and exclusively within the margins of the scientific environment it depicts, it is the dynamic, the clashes, the confusion and misunderstandings that naturally occur whenever the medical language trespasses the borders of the scientific realm that have become subject of inquiry in the recent decades and which still delineate a quite fertile soil for further investigation and research.

Keywords: pragmatics, discourse analysis, medical terminology, health communication, social media

NARRATIVE LEVELS IN MARGARET ATWOOD'S THE HANDMAID'S TALE

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Background: In Margaret Atwood's novel, women and men in Gilead's society have rigorously designated functions. Men have military functions, including Commanders, Guards, Angels, and Eyes. Women are deprived of all rights and are of use according to their physical abilities. Marthas are responsible for the house, while Aunts inspect the indoctrination and punishment of women. Wives serve their husbands, and Handmaids are bearing and delivering the children. Marriages that existed before the establishment of Gilead are not considered legal. In this respect, my paper will closely examine the narrative level to which the narrator belongs, the extent of his/her participation in the story, the degree of perceptibility of her role, and his/her reliability which are considered crucial factors in the reader's understanding of and attitude toward the story. Therefore, according to these criteria, particularly to the narrative level, the variety of narrators will be presented in Margaret Atwood's fiction; these criteria allow cross-combinations between the different types of narrators in the novels.

Keywords: Margaret Atwood, narrative, historical notes, The Handmaid's Tale, narrator

THE PICTURE OF A WORLD ADRIFT: MIHAIL SEBASTIAN: DIARY: 1935-1944

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Background: The present article makes a brief presentation of Mihail Sebastian's *Diary: 1935 - 1944*. A complex book, profound and sad at the same time, the *Diary* is about the beauty and evil in man, about friendship, about a Bucharest ruled by new ideologies and politics, a colourful world dominated by great personalities, a world where everything is evaluated and reevaluated: people, friendships, dreams, tragedies and love stories. The *Diary* is an exceptional book with immense literary and historical value, as it offers a vivid picture of the Romanian history of the '30s and '40s as well as the personal picture of a man who is simply judged through his Jewish descent, a man who who lost the game with History, but also the game with his own self, who searched his identity all his life, but has never really found himself.

Keywords: antisemitism, jurnal, pogrom, identitate, istoric

THE COMMUNIST WOMAN -BETWEEN LIE AND CONVENTIONAL-

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Background: A deep involvement in the development of national patriotism, participation in cultural and educational activities,but also activation in the field of production has increased in self-esteem, confidence in their own organizational skills and abilities.All this encouraged the socialization and major involvement of women in the economic and social life of those times, womenactively participating in both mass culturalization and political life, even obtaining various political rights. By supporting theassertion in various fields, the past time of an environment hostile to development and integration in society is minimized, andgradually access to perfect equality occurs. The woman manages to break through, fulfilling a triple role, both producer, motherand wife.A significant stage in the evolution of feminism is identified between 1966 and 1989. During this time, in local press, thewoman is seen from a nationalist perspective, of political legitimacy, proposing the redefinition and shaping of female identity.Thus, the woman becomes a productive and reproductive model, which always maintains silence, obedience and anonymity.Overtime, the defining phrase of femininity has been represented by fragility, kindness or openness to compromise. The positioning ofwomen in this labyrinth as a pendulum between persecution and collaboration, changes and reconfigures over time, throughambition and seriousness giving birth to an elite Romanian female universe, which manages to become a dynamic force in socio-cultural economic life. Through the promotion and the inevitable ascent of some ideas, intellectual groups eager to survive areborn, which are not upset by modeling influences indoctrinated by the specific ideology of the time. This found vitality is laudablypresented by the transcendent censorship in the vision of which "women work competently, with a spirit of responsibility, making a decisive contribution to the fulfillment of the plan tasks".

Keywords: woman, communism, Mureş, duplicity, local press

FRANCIS SCOTT FITZGERALD. IDENTITY AND ALTERITY

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Background: The present article aims at analyzing Francis Scott Fitzgerald's life and showing that it can be seen in his work; his characters may be his alter ego. The article has a theoretical approach on identity and alterity, in which these concepts are defined and analyzed. The paper illustrates and describes essential points from Fitzgerald's life, such as his marriage with Zelda, their exile in France, their infidelities and his alcohol abuse - which were his main source of inspiration. Lastly, the article briefly analyzes some sequences from Fitzgerald's novel, "Tender is the Night", that is a great illustration of the key concepts of identity and alterity.

Keywords: Identity, Alterity, Francis Scott Fitzgerald, Tender is the Night, exile

THE MYTH IN RADU STANCA'S DRAMATURGY

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Background: Radu Stanca's dramaturgy invites the reader to a fascinating journey, in which the essential element is the myth. The playwright treats ancient myths in a special way and manages to capture existential problems. In all the actions that the man takes in his plays, the lucidity can be observed, his hero is assumed. The tragic is the key concept of his theatre, the writer wants to recover the valences of tragedy through poetry, through a reunion of drama and poetry. The modern tragic represents a total dedication, beyond any doubt that can take over the human personality that is fighting against contrary norms. Doubling and combining his classicist spirit with a modern vision is the process standing at the core of his work.

Keywords: Myth, dramaturgy, tragedy, character, destiny

CORPORALITY IN THE PROSE OF ALEXANDRU VLAD

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Background: Corporality has been a very important theme among time, not only in literature, but in the majority of arts, being continuously analized from different perspectives. Alexandru Vlad is one of the Romanian writers who valorized this concept in his literary creations. In this paper, we will focus on the representations of the corporality in his prose, paying attention to some relevant aspects such as the existence of multiple sorts of bodies, the text as special kind of being, having a body of its own, the embodiment of different feelings and emotions, such as love, frustration, sollitude, disappoiments, fears, and even the embodiment of the rain as a metaphor of the human decline.We will discover the profund meanings of the corporality through a series of writings which proved the literary talent and the indisputable originality of Alexandru Vlad.

Keywords: corporality, the body, embodiment, existence, the text

CONTRIBUTIONS TO UTILITY PRESERVING DATA PRIVACY

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Background: Technological advancements of the physical and virtual world have reshaped all industries and objects used in everyday life. Plenty of sensors are installed on devices, auto vehicles, industrial equipment to enhance their capacities and record valuable data. The collection of valuable data brings unprecedented opportunities, but, at the same time, it brings significant challenges. The external data transmissions and processing are not trivially achievable from security and, more significantly, from a data privacy perspective. Methods and technical approaches to protect data collected from sensors and transferred to third-party systems are necessary to achieve data privacy. Data utility is equally essential when it comes to data privacy. After applying a protection mechanism, the usefulness of the remaining information needs to be measured to ensure that enough information is preserved for data analysis. Utility metrics are essential to data analysts and data processing applications. Additionally, utility metrics are used for comparing various data protection approaches. Therefore, data utility is a core issue that needs to be addressed. The goal of this research is to find efficient approaches for data privacy protection, which can be integrated into devices with low or medium processing power (e.g., auto vehicles, industrial equipment), approaches that not only preserve data privacy by transforming the original data but, in the same time, maintain its utility. The approach leverages data distortion as a core data transformation algorithm. Experimental results demonstrate that the distorted data preserves the characteristics required by additional processing algorithms (e.g., anomaly detection, tampering detection), showing at the same time an adjustable level of privacy. The research is important for all manufacturers interested in complying with the EU privacy regulations (e.g., GDPR), and it should have positive implications for those that rely on the utility of the protected data (e.g., data analysts, data processors).

Keywords: data privacy, data distortion, data utility

FEMININE FIGURES IN ROMANIAN LITERATURE OF EXILE

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Background: The research I propose to lecture is regarded to an unknown history of the postbelic Romania, mostlly regarding the hidden aspects of the European monarchies, seen through the eyes, beliefs and experience of ypung writer of that era Doina Uricariu, whose name is mostly known and presented for her poems, less for her memories. We all know that late 60s and 70s brought out from the exile brilliant minds, the very best of Romanian intelectuality, people who created art within the war and comunism torture. Doina Uricariu is not only one of them, but she is the one who - given her experience of life and the special situation her family has been through - succeded in observing closely a reality less of not known. Therefore, our literature needed a reserach over her memories, *The inferior maxilar,* which is not only the history of a fugitive, but an enciclopedia of true facts, positive facts, as a result of her several interviews realized in the Royal House of Romania, with King Michael and Queen Ana, but not only.

Keywords: king Michael of Romania, memories of exile, Doina Uricariu, war, Europe Royal Houses

APPLIED ENSEMBLE LEARNING METHODS AND ML MODELS TO SUPPORT MULTILINGUAL, REALTIME DISTANT DIAGNOSTICS

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Background: To support collaborative tools with multilingual interpretation using Artificial Intelligence (AI) enabled background for remote video diagnosis, we handle one of the hot topics nowadays: real-time multilingual translation. COVID-19 has forced an accelerated speed of Digital Transformation, highlighting the weakest points of video conference tools: proper handling of language barriers, lack of real-time human interpreters. Bots and translators could sequentially handle the translation topic in one-to-one chat or collaborative tools, but they cannot provide a reliable solution for multi-user sessions. The existing solutions will fail if we use dialects or try to communicate using multiple languages at the same time. The development of real-time video conference supported multilingual captioning or translation, based on AI supported solutions has a relevant impact in the medical field, especially on clinical practice via better video-diagnosis. The performance of multiple machine learning (ML) models can be increased by combining them together and in this way the models can help each other, bringing a more accurate prediction.This study proposes a new model concept to distant-diagnostics medical field, highlighting the differences between "classic" and next-generation end-to-end object detection ML models (like YOLO4, DETR, DETECTRON2), and the two existing approaches of model ensemble learning methods. With a model ensemble we get more accurate results. The main bottleneck based on experiments for further improvements are: the limited data quantity-, quality-, and coverage of all potential use cases. Different models and experiments - after two research phases - resulted same level of accuracy, but there were major differences caused by the models, architectures, hyper parameters as well as the requirements of the training dataset preparation process, specific to case study, after two research phases: with 248/512 (Phase1/Phase2) records train data set, with 55/110 set of validated data instances for 7/10 application category and 3/3 object categories, using same object categories of annotations.

Keywords: Model Ensembling, Object Detection, YOLO4, DETECTRON2, DETR

DICTIONARIULU LIMBEI ROMANE BY AUGUST TREBONIU LAURIAN & IOAN C. MASSIM

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Background: The present study aims to analyze and highlight the way in which are treated the title words recorded in the *Dictionariulu limbei roman*e by August Treboniu Laurian and Ioan C. Massim, from a lexicographical point of view. This paper focuses on the appearance of this dictionary, given the cultural and lexicographical context of the late nineteenth century, namely the need to write a general explanatory dictionary of the Romanian language, long assumed by specialists. We will try, in egual measure, to research the objectives of the lexicographical paper in question, also trying to capture the main criticisms brought to this dictionary by linguists and lexicographers.

Keywords: lexicography, dictionary, nineteenth century, the Latinity of the Romanian language, lexicographic norms

BLOCKCACERT – A BLOCKCHAIN-BASED NOVEL CONCEPT FOR AUTOMATIC DEPLOYMENT OF X.509 DIGITAL CERTIFICATES

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Background: Nowadays, the Internet is heavily used for all kinds of operations,may they be personal or business related. To that end, many of our operations performedon the Internet require a secure environment to operate in. In order to prove the identity ofthe communicating parties, digital certificates (also known as X509 public-key certificates)are used. These certificates prove the identity of a communicating client or server to thecommunicating partner and are also used to establish an encrypted channel in order toperform a secure communication. Digital certificates are mainly used in the HTTPS protocol, for securing websitesand clients by using the the concept of digital signatures and public-key encryption. Digitalcertificates are signed by a third trusted party called a Certificate Authority that supposedlyeveryone trusts. Because of that fact, these certificates provide some degree oftrustworthiness. However, history shows us that Certificate Authorities can also makemistakes, issue false certificates or be compromised in some form or another, leading to adownfall of trust. Some CAs have even fallen and had financial problems because of this.This is a problem of current CAs out there and needs to be addressed. Also, besides the existing trust problems of CAs, the X.509 digital certificatesalso have multiple types of validation implemented over time: DV (Domain Validation), OV(Organization Validation) and EV (Extended Validation). The issuance of digital certificatescost differently, based on the grade of trust. We believe that real trust is not be quantifiablein degrees of trust: we either trust a certificate or we don't. In our paper, we propose BlockCACert, a blockchain-based solution for CAs forissuing all types of X509 certificates using the ring signatures concept, which fixes theproblem of general trust and multiple-level trust.

Keywords: Blockchain, X509, Digital Signatures, Digital Certificates, PKI

REVIEW ON INTELLIGENT CLINICAL DECISION SUPPORT SYSTEMS IN DRUG THERAPY

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Background: The concept of the Clinical Decision Support Systems (CDSS) is basic and admitted in the medical care field, as it has the potential to replace invasive and costly treatments. These have been developed to assist medical professionals in the diagnostic process, using Computerized Prescriber Order Entry (CPOE) with Clinical Decision Support on Medication Error(ME) and Adverse Drug Event (ADE). However, many physicians are cautious to use CDSSs as these are often based on static datawhich sometimes may be out-of-date. It would be more feasible to use these systems if these make use of knowledge discovery indrug data approaches, drug-drug interaction, and drug-drug combination (Combination therapy), with the aid of ArtificialIntelligence tools, based on deep learning solutions while using up-to-date training sets. These Intelligent Clinical Decision SupportSystems (i-CDSS) could reduce the cost of testing and manufacturing drugs for pharmaceutical companies. My research thesis will be mostly based on i-CDSSs solutions, hence the purpose of this review with the main focus on the machine learning solutions and implementations for permissive and synergistic interactions of the drugs and how these drugs can be combined to obtain a positive effect, in order to increase the effectiveness of the drug treatment. The study will cover at the beginning the standard Artificial Intelligence methods chosen for current applications in healthcare, as Decision Trees (DTs), Random Forests (RFs), Artificial Neural Networks (ANNs), Bayesian Networks, and Gaussian Processes (GPs), and later will introduce novel state-of-art approaches on the i-CDSSs. In conclusion, the i-CDSS tools have a significant impact on diagnosis, treatment, and, not ultimately, bring a great contribution to the health of every single patient. There are many provocations on implementing these intelligent medical decision tools, such as the integration and adaptation in the machine learning tools of large and heterogeneous data sets.

Keywords: Intelligent Clinical Decision Support Systems (i-C, Drug-drug interaction (DDI), Combination drug therapy, Prediction of Synergistic Drug Combinations using, Clinical Decision Support System (CDSS)

STRESS AND PROFESSIONAL COACHING IN ORGANIZATIONS

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Background: This study highlights the importance of stress, emotional intelligence and coaching in organization and includes basics such as emotional intelligence in an organization, occupational stress and professional coaching, goal research hypothesis, conceptual basis and methodology, tools for measuring emotional intelligence, stress and openness to professional coaching in the workplace. The results highlight the relationship between intelligence and stress, offering suggestions for reducing it. **Material and methods:** Questionnaire for measuring stress (25 items) and questionnaire for coaching (15 items). The sample consists of 30 employees from a car manufacturing institution in Tg.Mures, who were randomly selected by simple randomization. The observation method, the questionnaire, the interview analysis and the synthesis were used. I used the Spss 20 program, the percentages were calculated by sex, age, stress level, openness to coaching, correlations. **Results:** Emotional intelligence was significantly and positively related to stress ($r=0,346$, $p\leq0.01$)and coaching ($r=0,219$, $p\leq0,01$)The positive relation between inteligence emotional and stres and coaching was also significant $r=0,655$ $p\leq0,01$ **Conclusions:** An important role in organizational management has the reduction of stress that can be achieved by finding and eliminating stressors, by applying relaxation methods and modern professional coaching techniques that emphasize the individual, his passions, his goals. Coaching helps the individual to follow the steps he has established, supports him in the stages of lifestyle change both from an educational, personal and professional point of view. Relaxation and introspective techniques help the individual to better understand himself, to be able to face any obstacle that arises, to have motives and motivation at work, to channel his creativity to something useful in order to achieve goals, to have achievable aspirations. From the results of the study we can see that most subjects are still reluctant to modern coaching and relaxation techniques, which leads to stagnation and average performance, stress being eliminated to a small extent.

Keywords: stress, coaching, relaxation

VISUAL EXAMINATION AS A METHOD OF NON-DESTRUCTIVE TESTING TO IDENTIFY NON-CONFORMITIES IN THE PRODUCTION PROCESSES OF ELECTRONIC MODULES FROM AUTOMATIC GEARBOXES

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Background: Background: Visual examination is the simplest way of non-destructive examination. This type of examination can also be performed with the naked eye and is called visual inspection, or with the help of optical devices, in this case called optical examination. Material and method: Visual inspection highlights only surface and joint defects. In order to have traceability and to be able to carry out the analysis report later, the visual inspection is photo-documented with the help of several equipments: a) High resolution digital camera, through which each step that the human operator inspected is photo-documented according to a catalog and the work instructions; b) Microscope with which the areas of the electronic module are inspected where the analysis and documentation is not possible only with the human eye or with the camera. Results: Nonconformities identified by this evaluation method are: Lack of material in the sensor area, Incomplete inscription / lack of inscription, Inscription quality, Positioning of fasteners, Wire insulation, Presence of fasteners of subcomponents, Scratches and bumps on parts or subcomponents. Conclusions: Statistical data on non-conformities identified by visual inspection over a period of 1 year at Rexroth Bosch Blaj reveals 38 defects in the iTCU module, 40 defects in the pressure sensor, 2 defects in the ELOP module, 7 defects in the iB6B module, 3 defects in speed sensor, 6 defective gearbox connector. The descending order of the identified number of defects reveals the need to apply corrective measures with priority over the pressure sensor and the iTCU module.

Keywords: non-destructive testing, visual examination, non-conformities, electronic modules, automatic gearboxes

A NEW METHOD OF MODELING MULTI-WIRE CABLES

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Background: Background: Experimental research in the literature reveals that there are oversized cables as well as the lack of a method for calculating the number of wires based on dimensional and electrical characteristics. Material and method: The objective of this research is to develop the method for calculating the number of wires in the copper conductor based on the electrical resistance of a single wire. In order to minimize the power and power losses on the cable, the electrical resistance of the multi-wire cable must be kept to a minimum. Each wire was modeled as an electric conductor with a circular section, the nominal diameter ranges and diameter tolerances being imposed by the SR EN 13602 standard. This study was conducted in 2019-2021 on electrical cables for the manufacture of power cords produced by international companies, especially those operating in the European market. Results: Through mathematical modeling it is deduced the relationship which shows that the electrical resistance of the cable depends on both the diameter of the wires and the number of wires and it is inversely proportional to the product Nd2 (N-minimum number of wires, d-wire diameter) which is a constant for each value of the electrical resistance of the cable. The research highlights the variation of the minimum wire diameter depending on the number of wires. Conclusions: The analysis of numerical data reveals that for values of N less than 26 the cable resistance is higher than the value of the maximum resistance 19.5 imposed by the standard SR EN 60228. It follows that if it is imposed a diameter equal to the maximum diameter provided in the standard, the minimum value of the number of wires is N = 26.

Keywords: multi-wire cable, copper conductor, electrical resistance, power cords, mathematical modeling

STUDY ON THE IDENTIFICATION OF MEDICAL PRACTICES THAT FACILITATE THE IMPLEMENTATION OF A SUSTAINABILITY ASSESSMENT FRAMEWORK IN A HEALTHCARE FACILITY

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Background: Background: Implementation of a sustainability assessment framework in a healthcare facility is a strategic option as it supports the sustainable development strategy which ensures the competitiveness of the organization. Material and method: We conducted a qualitative study in the scientific literature from the PubMed database for healthcare facilities considered representative as medical performance, different levels of human capital and forms of public / private property, from which we deduced the most relevant practices, confirmed in metastudies and which can be further used to implement a sustainability assessment framework in a healthcare facility. Results: The exploration of the specialized literature allowed the identification of the successful practices, designed and verified in practice, which is presented grouped on the basic activities of the quality cycle: P. Design and provision of medical services: P.A. Accreditation of health care services with an impact on promoting change and professional development and the availability of performance information, P.B. Design of patient - centered care interventions that require additional integration in hospital management; I. Medical services provision: I.A. Provision of healthcare through computerized support systems for clinical decisions, continuing medical education, dissemination and use of clinical practice guidelines, and promotion of patient safety culture; I.B. Ensuring transfers; E. Evaluation of medical services: E.A. Evaluation and involvement of local opinion leaders, E.B. Assessment of patient and medical staff satisfaction; R. Continuous improvement: R.A. Self-assessment through audit and feedback, R.B. Innovation of healthcare services through Six Sigma and Lean in medical organization, incident reporting and educational visits. Conclusion: Based on the correspondences established between the basic activities of the quality cycle, the basic topics of social responsibility and the results of research in the literature, that allowed the identification of sustainable medical practices, a matrix of indicators composing the San-Q framework for sustainable development can be designed.

Keywords: healthcare facility, quality improvement, sustainable development, reference framework, improvement cycle

STUDY ON THE LIFESPAN OF THE EXOSKELETON

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Background: Background: The rehabilitation of patients with acquired neurological dysfunctions such as: complete and incomplete spinal injuries and stroke has acquired new valences with the introduction of robotization in the recovery plan, e.g. robotic exoskeletons. The study of the lifespan of these devices is a critical factor in ensuring the quality of rehabilitation, because over time they can degrade and lead to an accident with user injury. Material and method: The methods for predicting the service lifespan are based on the model of the device mechanism but also on the acquisition of operating data. Because the exoskeleton, like any series product is not individualized, which offers a certain versatility in use, it is subjected to atypical forces, not reproducible in laboratory conditions. This is due to the individual characteristics of the patients. These characteristics are given by: basic pathology - complete or incomplete spinal injury as well as the level of the lesion, patient weight, change of centre of gravity, patient spasticity, type of gait, the knee joint angle and secondary the hip joint angle. Results: According to the data collected so far with physical wear and tear compared to a session with an average of 2 hours of use of the exoskeleton, 6 days a week, the component that suffers the most is the mechanical structure of the hip orthosis. Following the results of preliminary observations, this component has been modified by the manufacturer. Conclusion: Based on the collected data, quality management norms will be developed that will be applied in order to prolong the life of the exoskeleton.

Keywords: exoskeleton, lifespan, physical wear, mechanical structure, quality management

COMFORT PARAMETERS IN TRANSPORT SYSTEMS

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Background: Background The development of the automobile industry, as well as the sudden increase of competition, dictate the increase of the obligations of the manufacturers to fulfill more and more complex requirements of the users, in terms of economy, comfort, safety as well as environmental protection. **Material and method** In this sense the research is based on an exploratory approach to the analysis of temperature, noise, and vibration, as well as the comfort perceived in vehicles, aiming to contribute both to the enrichment of knowledge in the field in order to identify a solution to reduce noise and vibration in -a vehicle and propose a structure of material for the body, in the conditions of ensuring the comfort parameters, in accordance with the current standards. **Results** It has been observed that a laminated sandwich material (such as high molecular weight polyethylene, open cell polyurethane foam, rubber foam or elastomers) offers the best performance in terms of ensuring vibrational and acoustic comfort and absorption, also impact energy in the event of a collision, while providing an optimal weight-to-strength ratio. **Conclusions** Based on the study of the literature, it was determined that thermal comfort has evolved gradually, currently being able to ensure the optimum temperature to ensure a pleasant and safe driving, in the future car manufacturers focus on automating air conditioning. While the standards for noise and vibration limits accepted inside vehicles are becoming increasingly stringent, in the context of reducing fuel consumption, not growth by introducing new comfort systems, it has been identified the need to propose material structures to absorb sound and vibration, to ensure vibrational and acoustic comfort.

Keywords: comfort parameters, safe driving, structure of material, vibrational and acoustic comfort, reducing fuel consumption

SOCIAL SCIENCES

HAS A CENTURY CHANGED THE HEALTHCARE PROTOCOLS? AN ANALYSIS OF A. J. CRONIN'S THE CITADEL

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Background: Archibald Joseph Cronin's The Citadel was the first novel to dot the i's and cross the t's of the medical realities of the interwar period in England. Many are the problems he had the determination to speak about openly in a novel that is said to have contributed to the foundation of the NHS in 1948. This paper will discuss three of the most representative episodes related to healthcare service challenges, along with the resistance of the authorities to find solutions. A comparison between Cronin's depictions and current realities will be drawn. Despite advances in treatment methods and modern technology, public authorities, attitudes, and their acts have barely been influenced by the passing of time.

Keywords: Cronin, The Citadel, healthcare services, treatment methods, medical research

THE FIRST PARLIAMENTARY ELECTIONS IN THE INTERWAR PERIOD IN BISTRIȚA-NĂSĂUD COUNTY

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Background: The first parliamentary elections in the interwar period in Bistrița-Năsăud county The year 1918 brought great changes in all aspects of life. The political field has also undergone great changes in terms of the right to vote, by applying the principle of universal suffrage. This paper is a mixed research, which combines theoretical research with qualitative and quantitative, and based on data collection I will be able to highlight the motivations, aspirations of political actors and the outcome of elections. In order to achieve the proposed objectives I used several methods: historical, analytical, chronological and systematization. Characteristic of the 1919 elections was the fact that they were held under different laws, depending on the region. At the level of Bistrița-Năsăud county, another characteristic was the existence in most of the electoral districts only of the candidates of the National Party. It was a kind of a single party democratic regime. For Bistrița-Năsăud county, five constituencies were established for the Chamber of Deputies and two for the Senate. There were only one candidate in 4 constituencies in the Chamber of Deputies and one in the Senate. Thus, effective elections took place only in two constituencies, one in the Chamber and one in the Senate, the other parliamentarians were elected based on article 46 of the electoral law for Transylvania. Bistrița-Năsăud County sent 5 deputies and 2 senators to the first Parliament elected on the basis of universal suffrage, and during the general elections, only one deviation was found, regarding the sale of alcoholic beverages, which was also sanctioned. As a conclusion, the elections of 1919 gave the first Parliament of Greater Romania elected on the basis of universal suffrage and in Bistrita-Nasaud County the candidates of the National Party won these first elections without problems.

Keywords: elections, universal suffrage, political parties, parliament

EU COMPETITION POLICY IN THE CONTEXT OF THE EUROPEAN INTEGRATION OFTHE CENTRAL AND EASTERN EUROPEAN COUNTRIES

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Background: The EU competition policy originates in the Treaties establishing the European Economic Community. As an integral part of the Treaty establishing the European Economic Community (EEC Treaty), competition policy is one of the firstfew areas of supranational policy established by the Treaty where the Union has exclusive competence. From a historical perspective, EU competition rules have played an essential role in the process of European integration allowing for the creation of a single market with free competition among enterprises. The historical development of the EU competition policy has been instrumental for the structure of the member states' competition regimes, as well as for the legislative framework in the field of competition of a large number of countries beyond EU borders. The provisions of the EU's competition policy have been gradually adopted into national competition regimes, either by voluntary convergence or by preconditioning the access to the internal market of the countries pursuing EU accession to the harmonisation and implementation of national legislation in line with EU competition rules. This paper argues that the adoption of the EU competition provisions by the associated countries with economies in transition is largely due to the prospects of EU membership. The EU's imminent enlargement to the East coincided with a major reform of the bloc's competition policy. At the stage of the accession to the EU of the Central and Eastern Europe countries in 2004, the enforcement of the competition rules represented a challenge for the European Commission, therefore pushing the European elites to carry out the EU competition policy reform.

Keywords: EU competition policy, European integration, Central and Eastern European countries, Accession to the EU, enlargement

ROMA IDENTITY AND IMAGOLOGY IN THE 19TH CENTURY

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Background: Roma identity and imagology in the nineteenth century, aims at an approach from an imagological perspective, a vision of the image of Roma in history, of one of the oldest and most numerous ethnic communities in Romania and Europe. The past of the Roma, deeply marked by centuries of slavery, has left deep traces, to this day, both in the spiritual development over time of this community and in the relationship of the Roma with society, which is currently facing fear. visible for the assumption of identity, for fear of stigmatization. Gypsies have been ridiculed for centuries, some suspicious foreigners who have neither nation nor country, from the tendency of exaggeration has even reached the statement that "the gypsy ate his church." Roma / Gypsies are placed at the extreme edge of the ethno-confessional value core. In shaping these portraits that the Roma "inherited" over time, medieval stereotypes from prejudices and the imaginary perception of difference play an important role; they are based on visible differences such as skin color, physiognomy, dress, lifestyle.

Keywords: Roma identity, imagology, slavery, Roma / Gypsies, stereotype

THE EPOS OF A FAMILY OF ITALIAN IMMIGRANTS SETTLED IN GALAȚI IN THE 19TH CENTURY: THE DALL'ORSO FAMILY.

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Background: The Epos of a Family of italian immigrants Settled in Galați in the 19th Centuri: The Dall'Orso Family. Galați, a Danubian city and one of the most important Romanian ports, as well as an industrial center, attracted a large number offoreigners, including many Italians, from the 19th century. This city flourished one of the important Italian comunities in thecountry with an important role in the economy, society, and education. Within this community, from the fifth decade until themiddle of the 20th Century, lived one of the most important families of italian emigrants, the Dall'Orso Family. The papers is a first presentation of the subject and it is based on field reserch, archives, and bibliographic sources. **Material and methods:** The papers is a first presentation of the subject and it is based on field reserch, archives and bibliographic sources. **Results:** The Dall'Orso Family was one of the most involved and successful families in the Italian comunity in Galați. **Conclusions:** By being actively inolved in comunity life, the Dall'Orso Family manages to climb all walks of life, contributing to the development of the city and society in general.

Keywords: Dall'Orso Family, immigrants, Italian comunity, Galați, Danubian ports

INDEX OF AUTHORS

INDEX OF AUTHORS

INDEX OF AUTHORS