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ABSTRACT BOOK

ABSTRACTS: DOCTORS

ABSTRACT NUMBER: 001 (INVITED LECTURE)

PRE-HOSPITAL MECHANICAL VENTILATION IN CRITICALLY ILL PATIENTS

Vesna Janačković*(1), Tatjana Rajković (2)*
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Introduction: Endotracheal intubation and controlled ventilation reduced hypoxemia, hypercapnia and possible hypocapnia in critical ill patients. Some studies show better outcome, as well the reduced mortality of the patients who were intubated and ventilated in pre-hospital settings.
Data source and the choice of material: A retrospective analysis of literature with determinants: Mechanical Ventilation, artificial ventilation, pre-hospital. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON.
Results of the synthesis: In most cases, after successful cardiopulmonary reanimation, patients with politrauma, intoxicated patients, patients with respiratory failure and other combination of different critically situation, physicians chose to maintain patient's airway with endotracheal tubes. After successful intubation the lung usually ventilated using manually operated ventilator bag (AMBU-bag). Oxygen usually supplied using the oxygen bottle. Because of limited ability to monitor ventilation in the field, the quality of tissue oxygenation is uncertain in most cases. Most often portable ventilator available in Emergency Medical Services in our country is Drager Oxylog 2000. Oxygenation usually monitored by pulse oximetry. Blood gas analysis as the gold standard for monitoring is not practical method in pre-hospital setting. Our fundamental aim is restoration tissue oxygenation; unfortunately some studies point that only in average 40% of patients optimal and adequate ventilation was achieved after pre-hospital initiated endotracheal intubation and artificial ventilation upon hospital admission. The next problem is that most emergency physicians unintentionally hyperventilated the lungs, while hypoventilation is much rarer. As we know hyperventilation may deteriorate cerebral ischemia and therefore should be avoided as much as possible. This is especially important for all patients with politrama and head trauma also. Portable ventilators in emergency services allow to be set ventilator frequency and minute volume. Some of studies have shown that in nearly all commonly used automatic portable ventilators, the delivered minute volume differs by up to ±20% from the preset minute volume.
Conclusion: The pre-hospital role of adequate oxygenation seems to be the most sensitive, which lead to better or poor outcome of critically ill patients.
Keywords: mechanical ventilation, artificial ventilation, pre-hospital.

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ABSTRACT NUMBER: 002 (INVITED LECTURE)

TRANSPORT OF CRITICALLY ILL PATIENTS - WHAT WE MUST KNOW ABOUT IT IN EVERY MOMENT?

Tijana Smiljković*, Ljubiša Mirić, Jelena Stanisavljević Stanojević, Milan Tasić*
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Introduction: Transport of critically ill patients implies: transport from accident place to the hospital, intrahospital- transport inside of hospital for diagnostic procedures and interhospital- transport between hospitals for upgraded treatment.
Method: A retrospective analysis of literature with determinants: intrahospital-transport, interhospital-transport. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON.
Results of the synthesis: Critically ill patients have deranged physiology and need extensive monitoring (non-invasive, semi-invasive and invasive) during initial treatment and diagnostic procedures with continuous support of vital signs. Hemodynamic and respiratory instability are the main problems. Patients preparation implies: secured airway, provided venous access (peripheral or central venous),

urinary catheter, nasogastric tube. Staffs with experience- transport team, appropriate monitoring and careful preparation are rules for intrahospital and interhospital transport patient without deterioration.
For interhospital transport patient must be prepare because transport vehicles are not conductive for active intervention and we are alone without addition help. Contact between referring and receiving hospital must be conducted before transport, also transport team must be familiar with patient condition before transport start. During transport staff and patient are vulnerable to vehicular accidents. Vehicles for transport must be designed to ensure good trolley access and fixing systems, lighting and temperature control. Equipment must be lightweight and battery powered with alarms (visible and audible) for patients safety. The vehicle should carry sufficient oxygen to last the duration of the transport plus a reserve of 1-2 hours. Monitor must be visible for staff and required to record heart rhythm, oxygen saturation, blood pressure (non- invasive and invasive), end tidal carbon dioxide and temperature. Suction equipment and defibrillator should be available.
In our country road transfer is most important with advantages of low cost, rapid mobilization, less weather dependency and easier patient monitoring. Transfer should be undertaken smoothly and not at high speed. Despite careful preparation unforeseen clinical emergencies may occur, the vehicle should then be stopped at the first safe opportunity to facilitate patient management.
Conclusion: Every hospital need standards and protocols for transport which are rules. Transport team must be educated with continuous education and exercise, when staffs start transport for first time it must be like an observer.
Keywords: critically ill patient, intrahospital-transport, interhospital-transport, transport team

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ABSTRACT NUMBER: 003 (INVITED LECTURE)

ACUTE ABDOMEN: CLINICAL AND RADIOLOGICAL CORRELATION

Milica Stojadinović
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Introduction: The acute abdomen is a clinical condition characterized by severe abdominal pain requiring the clinician to make an urgent therapeutic decision. This can be a challenge because the differential diagnosis of acute abdomen involves a wide spectrum of disorders ranging from life-threatening diseases to benign self-limiting conditions.
Synthesis: The radiological strategy implies that after clinical examination and laboratory analysis, a plane abdominal radiography is made to determine the existence of signs of pneumoperitoneum, a significant distension of the bowels with significant HA levels, the existence of a shadow of intensity of calcium or other radio oplascent foreign bodies. Then, patient evaluation, if necessary, continues with ultrasonographic examination (US) or computed tomography (CT) to confirm or exclude most common disorders: in the lower right quadrant-acute appendicitis, in the lower left quadrant-diverticulitis, in the upper right quadrant- cholecystitis. We look for existence of general signs of inflamed fat, bowel wall thickening, ileus, ascites and free air. Differential diagnosis represents a wide range of conditions: mesenteric lymphadenitis, bacterial ileocecitis, right sided diverticulitis, pelvic inflammatory diseases, epiploic appendicitis, urolithiasis, ruptured aneurysm and pancreatitis. The indicated management can vary from emergency surgery to the reassurance of patient and the wrong diagnosis can easily result in delayed necessary treatment or unnecessary surgery. Through the presentation of cases we present practical clinical and radiological guidelines for everyday work.
Conclusion: Plane radiography of the abdomen, ultrasonography, and CT enable an accurate and rapid triage of patients with an acute abdomen.
Keywords: acute abdomen, clinical signs, diagnostics

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ABSTRACT NUMBER: 004 (INVITED LECTURE)

ABDOMINAL SEPSIS -CURRENT EVIDENCE BASED APPROACHES

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Introduction: Abdominal Sepsis is a worldwide problem, faced by general surgeons due to its persisting morbidity and mortality. Over the years, the approach taken to manage abdominal sepsis has gradually progressed to Evidenced Based Surgery (EBS). EBS has become a fundamental component for current and future surgeons, improving the standards of surgery and better patient-oriented surgical practice.
Objectives: The primary objective of this study was to describe how the approach taken in the management of abdominal sepsis has evolved over time to Evidence Based Surgery.
Material and Methods: By using thorough research of relevant literature, collecting best evidence and applying knowledge we will be able to achieve the best combination for care. Applying the Grades of Recommendations Assessment, Oxford hierarchy of evidence and lastly using Quality of Evidence are vital for efficacy, comparisons and we can use them to predict the risk, benefit and implications. Through Evidence Based Surgery, we analyzed the different approaches taken in the management of abdominal sepsis and we provided the optimal therapy approaches proven by high quality Evidence Based surgical research publications
Results: Our literature search disclosed a two fold increase of publications on abdominal sepsis treatment in the last 5 years/2014-2018/, of an average rate of 250 – 300 per year, where a chronological increase of higher quality publications has been noticed. There have been 95 publications on Evidence Based treatment of abdominal sepsis, of which 41 studies are reviews. Surgical treatment has been dominantly recommended as the main and first line treatment modality, with emergent or urgent timing, dependent by the patient systemic and local status, extent, site and etiology of infection.
Discussion: Sepsis is a life threatening organ dysfunction caused by a deregulated host response to infection. The new definition of sepsis describes a patient with at least 2 of the 3 clinical variables: Glasgow Coma Scale Score of 13 or less; systolic blood pressure of 100mmg or less and respiratory rate 22/min or greater. Abdominal Sepsis represents the host's systemic inflammatory response to intra-abdominal infections, being one of the most prominent causes of morbidity and mortality. The key evidence based surgery factors in managing abdominal sepsis nowadays are prompt diagnosis, adequate resuscitation, on time initiation of appropriate antibiotic therapy, early and effective source control, reassessment of the clinical response and appropriate adjustment of the management strategy.
Conclusion: Currently there exist enough evidence based guidelines and recommendations for standardization of abdominal sepsis treatment. Surgical operation remains the primary and most important treatment modality, where source control is priority
Keywords: Abdominal Sepsis, Peritonitis, Surgical treatment, Evidenced Based Surgery (EBS)

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ABSTRACT NUMBER: 005 (INVITED LECTURE)

EMERGENCY AND DISASTER MANAGEMENT: MY EXPERIENCE IN THE FIELD WITH DIFFERENT ORGANIZATIONS

Ricardo Ignacio. Rodriguez
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Goal: The goal of the present paper is to share with other emergency colleagues some lessons learned directly from the personal experience working in the field, in several missions with different Humanitarian Organizations, in natural disasters and Complex Emergencies.
Design/Method: Compare the personal experiences working in several contexts with different organizations.
Result/conclusions: From my opinion, for any health professional working in the field as a professional/ volunteer is an enriching and rewarding experience that I strongly recommend. Perhaps working all together, we cannot build a better world but we can alleviate suffering of the populations in danger (natural disasters, Complex Emergencies, etc.)
Keywords: Complex Emergencies, emergency doctor, humanitarian aid, natural disasters, personal preparedness

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ABSTRACT NUMBER: 006 (INVITED LECTURE)

DISASTER AND MASS CASUALTY EDUCATION IN EMERGENCY MEDICINE AND HUMANITARIAN AID

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Goal: Describe the importance of education in the management of emergency medicine and humanitarian aid. Moreover, a review over the most required training for these personnel.
Design/Method: Disaster and mass casualty are events or situations which could cause serious damage to human welfare, deaths and injuries. Furthermore, some events result from natural causes and some from man-made causes and in some cases they can be considered Complex Emergencies. The management of those emergencies requires preparedness planning and institutional arrangements to engage and guide the efforts of governments, voluntaries and United Nations Agencies in a comprehensive and coordinated way to respond to the whole spectrum of needs. The Humanitarian Agencies and Organizations have specific Disaster and Mass Casualties training programs focused on the preparedness of humanitarian workers. Others educational levels are obtained individually by masters or post-graduated training. In the background of doctors and nurses who want to collaborated with NGOs or International Agencies of UN, usually a Master in Public Health / Epidemiology, and/or Master and/or specific education in Tropical Medicine are usually required. For all participants in programs of humanitarian action, training focus on security in the field is also necessary. English, French, and other languages are desired. For emergency doctors it is very useful education tool in ultrasound and basic surgery technics. It is also very important the knowledge of the essential KIT of the WHO IEHK, and the standards of Sphera Project.
Result/conclusions: Education is a useful tool in order to improve skills of the personnel of the EMS (Emergency Medical Services) personnel and other health workers in the field in national and international interventions in humanitarian aid.
Keywords: Complex Emergencies, disaster preparedness, education, Sphera Project, training

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ABSTRACT NUMBER: 007 (INVITED LECTURE)

EARLY ULTRASOUND DETECTION OF ANEURYSMS AND THEIR MEDICOLEGAL SIGNIFICANCE

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Ultrasound (US) is a diagnostic method that has many advantages in prehospital and hospital emergency medicine. The main advantages are: targeted and quick examination, no patient preparation needed, it can be performed in the field or on the patient's bed, it is affordable, easily accessible, it is not invasive, not harmful to the patient and staff, there is no ionizing radiation, it can be repeated several times and ultrasonic devices are portable. Modern US devices work on principle of live image-real time. A real time image can either be frozen for measurement and storage or distributed. The appearance and morphology of organ tissue and blood vessels are very easily detected when looking at the ultrasound scan. The word "aneurysm" comes from the Greek language, which means enlargement. Aneurysm is a localized, permanent expansion of the blood vessel diameter by at least 50% compared to the normal size of the blood vessel. The number of vascular diseases and, therefore, aneurysmal disorders has progressively increased in the last fifty years. The increase in the number of aneurysms brings with it an increase in the number of ruptured aneurysms, except in countries with an organized screening program, such as Sweden, which has been doing screening for two decades and thus reducing risk factors. The number of ruptured aneurysms in this country has dropped drastically, almost to zero. In the case of an aneurysm of the abdominal aorta (AAA), the data are the following – out of the total patient number with AAA rupture, 25% of them die before hospitalization, and 51% die during diagnosis or preparation for surgery. Mortality for the remaining 24% who manage through surgical treatment is 46%, which in fact means that from the initial number of patients who have experienced AAA rupture, only 11% survive for the first 30 days. Early US diagnostics is also significant for one kind of AA type, marked as aortic dissection or aortic aneurysm dissection (AAD), caused by a longitudinal splitting of its wall into the endothelium or into the media when it comes to Marfan syndrome or cystic necrosis of the media. In the further course, a false lumen can be reconnected with the real one or it can spread to the outer wall, all the way to its cracking and bleeding, where mortality is almost 100%. Early US diagnostics is important for AAD, because it can be a great simulator at the early stage of development, i.e. it can have an atypical image. Starting from

dysphonia, which can happen because of paralysis of the left recurrent laryngeal nerve or because the said nerve can be pinched between the left branch of the pulmonary artery and AA, Ortner syndrome or cardio-vocal syndrome can occur. Other manifestations such as congestive heart failure, syncope, neurological deficit, paraplegia, shock, breathing difficulties, pleural effusion, hemoptysis, peripheral pulse deficiency, abdominal pain, melena, renal colic, compressive presentation (pain in the hip and lumboishialgia) can occur as single or associated symptoms. Doctors who have not recognized early symptoms of AAD and have not used early US diagnostics or urgently referred patients to educated doctors in this area are at risk of getting a fatal outcome in a patient and a trial against them with the possibility of losing a license to work!

Key words: ultrasound, aortic aneurysm, medicolegal significance

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ABSTRACT NUMBER: 008

ACUTE GASTROINTESTINAL BLEEDING

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Acute gastrointestinal bleeding (AGB) is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization. Aging population, increased prevalence of alcoholic liver cirrhosis, gastroesophageal reflux disease and obesity, Helicobacter pylory antibiotic resistance, using dual anti-aggregation therapy, anticoagulants, and excessive use of nonsteroidal anti-infl ammatory dru gs are the reasons for the increasing number of ill patients.
The aim of this paper is to show the incidence and the most common signs and symptoms of gastrointestinal bleeding, to present initial clinical evaluation, diagnostic methods, the main causes of gastrointestinal bleeding, endoscopic hemostatic modalities and treatment of AGB. The initial evaluation of patients with AGB involves an assessment of hemodynamic stability and resuscitation if necessary. Endoscopy should be undertaken within 24 hours, with earlier endoscopy considered after resuscitation in patients at high risk, such as those with hemodynamic instability. The prognosis of patients presenting with AGB is dictated by the presence of medical co-morbidities and by the severity of liver disease in patients with varices. Validated prognostic scoring systems, based upon the severity of bleeding, diagnosis, endoscopic findings and extent of co-morbidities, predict mortality and have clinical utility. Early resuscitation and supportive care are key to reducing morbidity and mortality from gastrointestinal bleeding. Treatment of AGB is highly dependent on the cause and severity of bleeding. Initial evaluation and management in all cases should include history and physical examination, with simultaneous stabilization interventions, such as placement of intravenous access and intravenous fluid resuscitation. Emergent endoscopy (within 6 hours) is rarely indicated, but urgent endoscopy (within 12 hours) in selected circumstances can be considered, and is mandatory if variceal bleeding is suspected. Administration of a PPI is warranted in patients with suspected peptic ulcer disease but should not delay endoscopy. Transfusion practices should target a hemoglobin threshold of 7-8 g/dL. Outpatient follow-up should be individualized based on the etiology of a patient's bleeding and their estimated risk of re-bleeding.

Key words: gastrointestinal hemorrhage, upper gastrointestinal tract, lower gastrointestinal tract, endoscopic hemostasis

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ABSTRACT NUMBER: 009

ORGANIZATION OF EMERGENCY MEDICAL CARE OF INJURED WITH HANDS TRAUMA – CASE STUDY

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Introduction: Injuries from explosives with severe soft tissue damage and traumatic amputation of extremities and parts of extremities with indications for reimplantation represent medical indication for primary transport of the injured via helicopter.
Aim: Goal of this paper is to demonstrate that providing care for the injured with indications for reimplantation represents a complex assignment that requires the involvement of numerous institutions, cooperation between different departments and organizational units at local, regional, and state levels.
Case: On April 21, 2018 at approximately 4PM at the Pasuljarske Livade test range, during unexploded ordnances removal, upon blasting cap activation, a police officer sustained severe injuries to both hands.
The medical crew that provides support during the destruction of unexploded ordnances was comprised of a doctor of medicine, a medical technician carrying the necessary medical equipment and supplies, and the ambulance driver. After the detonation, the medical crew, via radio connection, received a call and arrived at the accident site within 3 min. The crew found the injured police officer at the accident site and established the following symptoms – paleness, cold sweat, consciousness, communicative activity, traumatic amputation of the left-hand index, middle, and ring fingers at proximal phalanges, as well as compound fracture of the proximal phalanges of the right-hand index and middle fingers.
The medical crew immediately provided primary care according to rules of priority and prepared the injured for transportation, while coordination via radio connection was taken over by the person in charge of all the test-range activities, who notified the military superiors, the General Hospital(GH) in Ćuprija, and the Military Medical Academy(MMA) in Belgrade. While administering primary care, the priority was to stop the bleeding, open the continuous venous line, and immobilize the injured extremities. In order to preserve the amputated parts for reimplantation, they were wrapped in gauze and placed in a bag, which was then closed, wrapped in stupe, and placed in a portable refrigerator. During transport to the GH, the injured was given liquid to compensate for the loss of liquid sustained during the trauma. Additional tamponed was performed, and the injured was administered analgesic. After 20 minutes, the injured arrived at triage reception of the General Hospital in Ćuprija, where he was handed over to the surgical team for further care and in good overall condition. The surgical care at triage reception lasted for approximately 30 minutes, and the injured was then transported to the MMA, with medical escort, via helicopter supplied by the Ministry of Internal Affairs. The patients arrived in 25 minutes.
Conclusion: Adequately and efficiently administered first aid at the injury site, knowledge of all the procedures concerning amputated parts of extremities, helicopter transport which is, in terms of organization, staff, and equipment capable of adequately providing medical care to the injured, are prerequisites of providing optimal treatment and increasing the chances of successful reimplantation.
Keywords: connection, transport, care, reimplantation

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ABSTRACT NUMBER: 010

POMPE DISEASE

Milan Elenkov*(1), Dragan Mitić(1), Momčilo Bojkić(1), Vladan Mateović(1), Ivana Ilić(2), Dušica Janković(2)*
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Introduction: Pompe disease is a single disease continuum with variable rates of disease progression and different ages of onset. Pompe disease occurs in various populations and ethnic groups around the world. Estimates vary, but its incidence is generally placed at approximately 1 in 40,000 births in the United States. Males and females are affected in equal numbers. African Americans may have the highest incidence of IOPD, as Pompe disease has been projected to affect 1 in 14,000 African Americans. Estimates of IOPD incidences in those of European origin, however, are lower and range from 1 in 100,000 to 1 in 200,000

Data source and the choice of material: A Retrospective analysis of literature with determinants: Pompe Disease. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON as well as literatures available at the Library of the Medical Faculty in Niš

Results of the synthesis: Pompe disease belongs to a group of diseases known as the 'lysosomal storage disorders' (LSDs) as an autosomal recessive genetic trait. Because of the shortage of this protein (an enzyme) a complex sugar named 'glycogen' cannot be degraded to a simple sugar like glucose. This causes the glycogen to accumulate in all kinds of tissues, but primarily in skeletal muscle, smooth muscle and cardiac muscle, where it causes damage to tissue structure and function. usually presents within the first three months of life with rapidly progressive muscle weakness (floppy infants),hypotonia, respiratory insufficiency, hypertrophic cardiomyopathy, mainly the left chamber and the wall between the left and right chamber resulting in diminished cardiac function. These problems together culminate in cardio-respiratory failure within the first 2 years of life. DG: Clinical evaluation of presenting symptoms, Chest x-rays, ECHO, and ECG, Elevated creatine kinase, alanine aminotransferase, aspartate aminotransferase, Lysosomal enzyme acid alpha-glucosidase (GAA) activity and confirmatory testing, Molecular genetic profile. Enzyme replacement therapy is an approved treatment for all patients with Pompe disease. It involves the intravenous administration of recombinant human acid α-glucosidase. Some patients may need respiratory assistance through mechanical ventilation.

Conclusion: Pompe disease is an inherited disorder caused by the buildup of a complex sugar called glycogen in the body's cells. Mutations in the GAA gene.

Keywords: Pompe disease, glycogen, lysosomes, rare disease

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ABSTRACT NUMBER: 011

PROGNOSTIC VALUE OF PREOPERATIVE NEUTROPHIL-TO LYMPHOCYTE RATIO FOR PREDICTION OF SEVERE CHOLECYSTITIS

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Introduction: The predictive value of preoperative neutrophil-to-lymphocyte ratio (NLR) in patients with cholecystitis has not been established. The aim of this study was to investigate preoperative NLR in patients with cholecystitis and to identify a relevant NLR value that discriminates between simple and severe cholecystitis.

Methods: This study consisted of 136 patients who underwent laparoscopic cholecystectomy due to cholecystitis. The Receiver Operating Characteristic (ROC) analysis was performed to identify the most useful NLR cut-off value in relation to the severity of cholecystitis. The patients were divided into two groups according to the cut-off NLR value: high NLR group (4.18, n=23) and low NLR group (<4.18, n=113). Severe cholecystitis was defined as state which including inflammation, empyema, gangrene, perforation of gallbladder, adhesions or difficulty in dissecting Calots triangle.

Results: High NLR group had significantly more frequent severe cholecystitis ($p<0.0001$) and higher C-reactive protein level (CRP) and white blood cells count (WBC) ($p<0.0001$). There was no difference in homeostatic model assessment-insulin resistance index (HOMA-IR) between both groups before the operation ($p<0.634$). The incidence of severe cholecystitis was 16.9 %. The NLR of 4.18 could predict severe cholecystitis with 78.3% sensitivity and 74.3% specificity. Spearman's correlation revealed significant association between the preoperative NLR and HOMA-IR on day 1, ($\rho=0.254$, $p=0.030$) and between preoperative NLR and CRP on day 1($\rho=0.355$; $p<0.0001$).

Conclusion: NLR ≥4.18 was significantly associated with severe cholecystitis. The preoperative NLR in patients undergoing cholecystectomy due to cholecystitis could be a useful surrogate marker of severe cholecystitis.

Keywords: Cholecystitis, Inflammatory biomarkers, neutrophil-to-lymphocyte ratio, prognosis

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ABSTRACT NUMBER: 012

ACUTE PANCREATITIS AFTER ERCP IN THE MANAGEMENT OF PATIENTS UNDERGOING LAPAROSCOPIC CHOLECYSTECTOMY

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Introduction: Acute cholecystitis is one of the most common gastrointestinal diseases which require hospitalization and surgical treatment. ERCP is a useful adjunct in the management of patients undergoing laparoscopic cholecystectomy who have common duct stones. It is also necessary for the management of residual stones and complications after laparoscopic cholecystectomy.
Methods: This study consisted of 200 patients who underwent laparoscopic cholecystectomy due to cholecystitis and choledocholythiasis.
Results: A significantly higher conversion rate was encountered when LC was done 2 - 6 weeks after ES, as compared to 1 week after ERCP. It is estimated that pancreatitis after ERCP affects roughly three to 10 percent of patients and many endoscopists quote a post-ERCP pancreatitis rate of 3–5%. However, 10–15% is probably a more realistic answer for the majority of ERCP endoscopists. Wise endoscopists inform their patients that there is a spectrum of post ERCP pancreatitis severity, from mild (>95% of cases) to severe (1–5% of cases). In mild forms, pancreatitis after ERCP may resolve itself.
Conclusion: Endoscopic retrograde cholangiopancreatography is a procedure used to diagnose and treat disorders involving the pancreatic and bile ducts. Acute pancreatitis is the most common and feared complication of endoscopic retrograde cholangiopancreatography.
Keywords: laparoscopic cholecystectomy, ERCP, pancreatitis, choledocholyhiasis

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ABSTRACT NUMBER: 013

MADELUNG'S DISEASE

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Introduction: Madelung's disease is a disorder of fat metabolism (lipid storage) that results in an unusual accumulation of fat deposits around the neck and shoulder areas. Adult alcoholic males are most often affected, although women and those who do not drink alcohol can also get Madelung's disease. Madelung's disease most frequently affects middle-aged males. The condition is most common in those who abuse alcohol. However, this disease is also found in women and persons who do not consume alcohol. For reasons that are unclear, the disorder appears to be more prevalent in Europe than in the United States. The exact cause of Madelung's disease is not known. The body's inability to properly metabolize fat indicates that it may be an endocrine disorder
Data source and the choice of material: A retrospective analysis of literature with determinants: Pompe Disease. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON
Results of the synthesis: Madelung's disease is a disorder of fat metabolism (lipid storage) that results in an unusual accumulation of fat deposits around the neck and shoulder areas. Adult alcoholic males are most often affected, although women and those who do not drink alcohol can also get Madelung's disease. Madelung's disease most frequently affects middle-aged males. The condition is most common in those who abuse alcohol. However, this disease is also found in women and persons who do not consume alcohol. For reasons that are unclear, the disorder appears to be more prevalent in Europe than in the United States. The exact cause of Madelung's disease is not known. The body's inability to properly metabolize fat indicates that it may be an endocrine disorder
Conclusion: Medelung disease is a rare disorder characterized by the presence of multiple, symmetrical and none capsulated lipomas, located in the neck, face and upper trunks, which can lead to difficulty in management of airway in emergency situation

Keywords: Madelung's Disease, rare disease, difficult airway

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ABSTRACT NUMBER: 014

LAPAROSCOPIC EXPLORATION IN EMERGENCY SURGERY

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Introduction: Laparoscopy has become a routine procedure in the treatment of acute abdominal conditions and can be used both for the purpose of treatment and for the purpose of supplementary diagnostics. In recent years, the number of indications for laparoscopic approach in acute surgical conditions has increased, so it is now already routinely used in acute cholecystitis, acute appendicitis, and peptic ulcer perforation. Although laparoscopy is increasingly used in acute surgical conditions, there is still insufficiently tested and proven benefit, as well as potential shortcomings and complications in abdominal trauma.
Methods: Hemodynamic instability, perforative carcinomas, stercoral peritonitis, and pronounced abdominal distension are relative contraindications for laparoscopy. The advantage of laparoscopy versus classical surgery is especially emphasized in unclear abdominal pain, most commonly in young women with a suspicion of acute appendicitis.
Results: In the Emergency Center of the Clinical Center of Serbia, laparoscopy is most often used in cases of acute cholecystitis and apendicitis, and in fewer cases in the case of ulcer perforation. It is also often used as a complementary diagnostic method for unclear pain, but also for exploration in injured, haemodynamically stable patients.
Conclusion: Laparoscopy is a very useful approach when routine diagnostics does not give conclusive conclusions, and unnecessary laparotomy can be avoided.
Keywords: laparoscopic exploration, emergency surgery

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ABSTRACT NUMBER: 015

OVERLOOKED EMERGENCY – BURNOUT SYNDROME AMONG EMERGENCY DEPARTMENT STAFF

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Introduction: Examination of the burnout syndrome in various healthcare fields is of paramount importance for better understanding of the disorder as well as for the establishment of a suitable preventive and intervention program. The emergency departments' employees are a risk group among healthcare workers, so it is our objective to further expand the knowledge on the characteristics of the burnout syndrome among the Hungarian emergency department staff. Aim of this study is to examine the burnout syndrome and its associations with different variables among the workers of the Department of Emergency Medicine at the University of Szeged moreover to develop and fine-tune a prevention and intervention training for the medical staff to help coping with everyday stress as well as raise awareness to burnout symptoms
Methods: Cross-sectioned design utilizing a self-administrated questionnaire was used to collect data from the staff (n=72). Burnout was measured using the Malachi Burnout Inventory, while psychological immune competence was measured using the Psychological Immune Competence Questionnaire. Upon data collection a training was developed and implemented for the staff of the Department of Emergency Medicine after which the measurement of burnout was repeated using the same test battery
Results: We found burnout syndrome to be considerably prevalent among the workers especially nurses and physicians. In both, original and post-training study we found a negative relation between burnout and age, number of children, number of years in healthcare system, number of physical symptoms, social support and psychological immune system. Due to personnel fluctuation we were able to retest only 54% of the original sample, with no change in burnout results. Nonetheless, the data shows the need for

individual burnout intervention which presents in significantly stronger relationship with the psychologist as well as in frequency of contact with the psychologist.
Conclusion: The results obtained show correlations and reveal protective and risk factors in burnout which can be key to establishing a preventive and intervention strategies. The training on burnout syndrome rose awareness among the departments' staff, while personal one to one interventions helped the workers develop individual coping strategies. This data allows us to further develop new institutional intervention techniques
Keywords: burnout syndrome, employees of emergency department, psychological immune system

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ABSTRACT NUMBER: 016

INSTITUTE FOR EMERGENCY MEDICINE OF CANTON SARAJEVO EXPERIENCES IN MAINTAIN OF INTRAOSSEOUS ACCESS

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Introduction: The use of the intraoseous access (IO) is indicated in all situations where it is not possible to open a peripheral vein access to a critically ill patient. The beginning of the application of the IO access dates from the 1920s when it was originally reserved for the pediatric population.
Methods: descriptive, empirical
Results: It is suppressed by the widespread use of IV times until the beginning of the twenty-first century. In the current recommendations of the ERC, the IO route is preferred as an alternative option in cases where there is no possibility of opening IV times. All medications and fluids that are necessary for a critically ill patient can be administered intraosally. Lately, at the Institute for Emergency Medical Assistance of Canton Sarajevo, the need to apply the IO route on three occasions. Through a detailed presentation of one of the three cases, we will get acquainted with the methods and equipment for opening the IO access, which is available to the Institute for Emergency Medical Care of Canton Sarajevo.
Conclusion: The Institute for Emergency Medical Care Canton Sarajevo is equipped, and staff trained for the use of IOs in pre-hospital conditions.
Keywords: intraosal access, intravenous access, critically ill patient, Institute for Emergency Medical Care Canton Sarajevo

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ABSTRACT NUMBER: 017

I DO NOT WANT TO BE TREATED, I KNOW MY RIGHTS

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Introduction: Emergency medicine physicians are often faced with the problem of getting patient consent for medical treatment. In those circumstances, we have very little time to determine patient's medical decision capacity. Medical decision-making capacity is the ability of a patient to understand the benefits and risks of, and the alternatives to, a proposed treatment or intervention. This includes understanding of the risks if there is no medical treatment, if patient decides not to give consent.
Data source and the choice of the material: Retrospective Analysis of Literature with Determinants: Medical treatment refusal, medical decision capacity, emergency service. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON as well as literatures available at the Library of the Medical Faculty in Niš.
Results of the synthesis: It has been estimated that approximately 1-3% of all patients in emergency department (ED) in United States refuse medical treatment and leave against medical advice. The capacity to make one's own decisions is fundamental to the ethical principle of respect for autonomy and is a key component of informed consent to medical treatment. Patients have legal rights to refuse even life-sustaining medical treatment. Exception is when patient is posing an imminent risk of harm to themselves or others. Capacity can be assessed intuitively and is often readily apparent. There are multiple conditions

that can impair capacity, such as alcohol intoxication, substance abuse, psychosis, pain, neurologic disorders and all form of cognitive disorders. Cognitive disorders are not age related but they are most often seen in elderly population. Any physician can evaluate capacity, and a structured approach is best. The most recognizable situations in which emergency medical teams are faced with, pre-hospital and in emergency departments, are patients under the influence of psychoactive substances. Those patients, most of the times have diminished decision making capacity, but that disability is not permanent. Determining whether an individual has adequate capacity to make decisions in some cases can be time consuming if we use available tests and is not applicable in pre-hospital settings. Documentation of an encounter in which a patient refuses medical treatment should include several essential elements in order to alleviate possible medico legal consequences.
Conclusion: Most of the patient can and will provide informed consent for medical treatment. For those that want to refuse medical treatment and leave against medical advice, there is obligation for the physician to inform patient of all aspects and negative consequences of that action, as well as to make documentation that should include assessment of patient capacity, delivery of information and patient's autonomous choice.
Keywords: emergency medical treatment refusal

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ABSTRACT NUMBER: 018

FEBRILE CONVULSION IS ALWAYS DRAMATIC SITUATION

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Introduction: Febrile convulsions (FC) occur in children with high temperature during an infection that does not primarily affect the CNS. Febrile convulsions are muscle spasms caused high body temperature. Although they are scary for the parents, they do leave rare any future disorders. According to some studies, FC in basic is hereditary origin and often occurs in twins, but also at in children whose mothers have had difficulty in giving birth.
Children who have experienced FC have the risk of developing epilepsy in 2-5%. The Etiology of FC is still unknown. Genetic factors play a significant role. FC most commonly occurs during a sudden, rapid increase in body temperature (38.5-39.5 degrees). Clinical manifestation is very dramatic and frustrating for every parent.
Method: case report of a child with FC in EMS Vlasotince no.2146 on 15.02.2019. The aim is to present the universal and well trained emergency physician in process of treatment critically ill child.
Case: On February 15, 2019 at 21h in the EMS stagnant parents run with the 4 year old child, wearing him wrapped in a blanket. The child is placed on the bed and we could see that he has skeletal muscular spasms in the form of tonic-clonic cramps. The body temperature was 38.8 degrees. We start with the friction method. At the same time, we applied rectal diazepam. During the next few minutes we noticed vegetative attacks in the form of vomiting, sweating and salivation. We turned child to the side and aspirate the child airway. As the attack did not stop, we decided to add another half of diazepam. The attacks have stopped and the child becomes sleepy because of given drugs. The child have transported with medical supervision to the General Hospital Leskovac for further diagnosis and treatment.
Conclusion: Emergency medicine specialist has been trained in the most difficult medical situations, but it's always hard to treat the child, especially when you have over your head parents in understandable panic.
Keywords: febrile convulsions, child, specialist of emergency medicine

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ABSTRACT NUMBER: 019

SUBGLOTTIC LARYNGITIS–EMERGENCY IN PRE-HOSPITAL CONDITIONS IN CHILDREN

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Introduction: Subglottic laryngitis is often an early childhood illness, which represents 15% of all respiratory infections in children. It is a clinical syndrome of upper respiratory tract obstruction that mainly involves a space just below the vocal cords (subglottic space) and is expressed by a biphasic, predominantly inspiratory stridor in peace or agitation (whistling high tones during breathing), hoarseness, barking cough and in severe cases, increased breathing effort. The subglottic space is the narrowest part of the upper respiratory tract in small children, and therefore obstruction is the easiest to occur. The disease occurs in children aged between 6 months and 6 years (usually around 2 years) and is often preceded by nose leaking, moderate fever and inflammation of the throat. The most common triggers are in 2/3 cases viruses of parainfluenza and rhinoviruses, and rarely enteroviruses, respiratory syncytial virus, and human Boca virus
Method: Retrospective analysis of the protocol of the children's service of the Public Health Center "HIPOKRAT" in the period 01st October 2018 – 31st December 2018.
Results: During this period, the pediatricians of the Health Centre "HIPOKRAT "examined 2451 patients and set up Dg: Subglottic laryngitis in 61 children (2.5%). Of these, 36 patients (59%) were male and 25 (41%) female. Children aged 1 year were 26 (42%), aged 2 years 11 (18%), age 3 years 10 (16%), age 4 years 4 (6.5%), age 5 years 4 (6.5%) and 6 years of age 6 (10%). In therapy, the majority of children - 23 (37%) received only budesonide inhalation (Pulmicort); in 20 patients (32%), a combination of Pulmicort + antibiotic was applied; 10 patients (16%) received only an antibiotic; the combination of Dexason + Pulmicort was administered in 3 children (5%); Two patients (3%) received Lemod Solu + Pulmicort + antibiotic; also two children (3%) received Lemod Solu + Pulmicort; Only 1 patient (1.5%) received the Dexason + Pulmicort + antibiotic. No patient was sent to the hospital.
Conclusion: Subglottic laryngitis (viral croup) is an acute illness that can (in truth rarely) endanger the life of our little patient. The fact that 51 children (84%) received Pulmicort therapy (alone or in combination with another medicine) says that our institution uses modern therapy and results are following: all patients are treated at the primary level, no children are hospitalized.
Keywords: subglottic, laryngitis, croup, viruses, budesonide

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ABSTRACT NUMBER: 020

CLINICAL AND MEDICO-LEGAL ASPECTS OF SUDDEN DEATH IN PREGNANCY DUE TO CARDIAC TAMPONADE IN MARFAN SYNDROME. CASE REPORT

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Introduction: Marfan's syndrome (MFS) is a hereditary disorder that affects the body's connective tissue. Alteration to skeletal system, eyes, and cardiovascular system is the main clinical manifestations of MFS. Rarely, changes are present in lung tissue, skin and dura mater. Clinical findings supported by family history are the key for diagnosis of MFS. Affected persons share typical appearance, high stature; they are thin with elongated limbs, arachnodactyly, pectuscarinatum or pectusexcavatum, scoliosis, vision disturbances elevated and narrow palate with dental crowding, etc. Nevertheless, the most frequent and potentially fatal manifestations of MFS are that one associated with cardiovascular system such as medial aortopathy resulting in dilatation, dissection, and valve regurgitation. Risk of cardiovascular complication is increasing in pregnancy due to haemodynamic stress and perhaps hormonal effects.
Case: Primigravida28 year-old in the 34th week of gestation was admitted to hospital due to epigastric pain and vomiting. Medical history was not indicative for any serous disorders, and conditions. Lenses were used for correction of myopia. With the exception of mild hypoproteinaemia (58g/L), laboratory screenings were within the reference limits. The patient remains afebrile, alert, and mobile, complains on abdominal discomfort, and has up to two episodes of vomiting per day. Ultrasound examination reveals no fetal morphological and developmental abnormalities. It also shows adequate quantity of amniotic fluid, normal placental blood flow, no pathology of placenta that was of usual maturity (I/II degree). In repeated

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CTG recordings, was showed no uterus activity. No abnormalities were discovered by ultrasonography examination of abdomen. Assessment of Cardiovascular system reveals no apparent pathological findings. Patient has reported amelioration of abdominal discomfort and improvement subsequent to symptomatic therapy. On the third day after being admitted into the hospital, the patient's condition suddenly deteriorated due to loss of consciousness. "On call" medical team reveals cardiorespiratory arrest and started CPR. Patient remains unresponsive, and following repeated CPR attempts she was pronounced dead.

Discussion: A Court order issued for full postmortem examination Forensic report/finding. Marfanoid appearance was apparent including height stature (190 cm), gracious constitution, pectus carinatum, gothic palate, as well as arachnodactyly. Other external findings included well-established postmortem signs. Internal examination exposed cardiac tamponade (approximately 1,600ccm) caused by complete intra pericardial cleavage of aortic wall in the length of 1.2 cm, localized on ascendant part, approximately 1.5 cm above medial aortic valve. An accumulation of flabby clotted blood up to 4 mm thick was visible beneath adventitial layer of aorta including thoracic aorta. Microscopic examination of aorta wall revealed the signs of medial cystic necrosis with the progressive expansion of dissection. Other internal organs, womband placenta, the autopsy of fetus showed no signs of pathological changes.

Conclusion: The presented case is a clear example that indicates the necessity of careful physician examination followed by detailed interview of family and personal medical history.

Keywords: heart tamponade, Marfan syndrome; medico-legal aspects; pregnancy

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ABSTRACT NUMBER: 021

RUPTURE OF THE ANEURYSM OF THE SPLENIC ARTERY IN A PREGNANT WOMAN AS A CAUSE OF THE SUDDEN DEATH: A CLINICAL AND MEDICO-LEGAL ASPECT

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Introduction: Aneurysms of splanchnic arteries, including those on the splenic artery (SA), are very rare and of great medical significance. Rupture of the aneurysm of the SA is manifested as an acute surgical condition that ends very often with death due to bleeding. When pregnant women are in question regarding such tragic cases, they usually attract attention not only to the medical community, but also society as a whole, and become subject to medico-litigation in court proceedings. The risks of aneurysm rupture range from 2 to 10% with a significant mortality rate. In pregnancy, the risk of rupture is much higher and then the mortality of fetuses and mothers is 70-95%. It is considered that pregnancy is a risk factor for the occurrence of aneurysm of SA due to altered hormonal status and hemodynamic disorders caused by compression, which is associated with damage in the arterial wall media.

Case: A 35-year-old woman in the 38th week of gestation was admitted to the hospital, accompanied by a doctor of the Emergency Medical Service, under resuscitation measures. According to the doctors from the transport, the patient was found in her bed, without consciousness, breathing and heart action. Upon receiving, all cardiopulmonary resuscitation measures were taken with the simultaneous application of blood derivatives, the provision of mechanical ventilator support and the taking of materials for laboratory analysis. An ultrasound examination of the gynecologist found that in the uterus cavity there are two babies with no movements and cardiovascular activity, a sufficient quantity of amniotic fluid, a normal appearance of the placenta. Inspite to the implemented measures of resuscitation, there is a death outcome.

Discussion: The prosecutor ordered an autopsy in aim to determine the cause of death. An autopsy finding showed the presence of about 3500 ccm of fluid and about 1500 ccm of coagulated blood in the abdominal cavity with the accompanying anemia of all organs. Preparations of the SA was done and have found to be spiked, about 40 cm in length, while the baggy sub capsular aneurysm was 3.5 x 3.5 cm in diameter with a 3 x 2 mm diameter wall split in the hilus of the spleen. In addition, it has been found that there is a sub capsular hematoma around the hilus of the spleen with a diameter of about 4 x 3 mm. In the uterus cavity there were two fetuses, one male weight 1840 g, and another, a female weighted 2240 g.

Conclusion: Aneurysms of the splenic artery rarely occur, but they carry the potential for fatal outcome, and it is necessary to pay attention to this segment of the pregnant woman's examination during pregnancy monitoring

Keywords: aneurysm, splenic artery, pregnancy, autopsy

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ABSTRACT NUMBER: 022

INJURY OF BRAINSTEM IN USERS OF TWO-WHEELERS

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Introduction: In the period from 2013 to 2017, 2971 people died in our country, 17011 seriously injured, and 80725 people were lightly injured. The incidence of fatal outcomes is 86, while in the EU 63per/million. The users of the two-wheelers in this black chronicle participate in about a fifth of cases.
Aim: was to determine the incidence and characteristics of brain damage in the users of the two-wheelers and the association with the occurrence of other injuries, which primarily involve indirect forces.
Material and methods: The research is based on the analysis of the autopsy material of the Institute of Forensic Medicine of the Medical Faculty in Belgrade. We analyzed 502 autopsy records of users of two-wheelers in which the traffic accident could be reconstructed reliably. An analysis of the nature of the injuries sustained in comparison with the documents of the investigative bodies, post-mortem surveys, and medical documentation of those who overcame the injuries was made. In all cases, a number of modified autopsy techniques have been applied to identify such injuries. Data processing methods were used for descriptive and analytical statistics.
Results: Brain lesions in the form of pontomedular lacerations, cerebral clefts, and pons lesions were found in 20.5% of cases. In the analyzed autopsy material, the pontomedular split was more likely to occur as a single brain lesion, and more often associated with injuries to other regions of the brain. All those who had a pontomedular compound lesion died on the spot or within 24 hours of the injuries. In more than 2/3 of the dead two-wheelers users, this lesion was associated with disorders and fractures of the upper cervical spine, primarily atlanto-occipital localization. That was statistically confirmed.
Discussion: The drivers and co/drivers body with two-wheeler represent a stable whole until the moment of contact, when independent movement of the body and vehicles occurs, and they should be separately analyzed. In forensic expert practice, the most common cases of traumatic brain lesions are on its ventral side which is in close contact with bone structures from the upper cervical region to the Turkish saddle. The laceration between the pons and the extended brain, as a separate traumatic entity, was first described in the early seventies. It may be incomplete and complete (avulsio). It also occurs without signs of injury to the bone-joint and soft structures of the head and neck, in the absence of a direct effect of force on the head. In such cases, the sudden hyperextension of the neck was produced by a strong trunk traction due to inertia of the head.
Conclusion: Co/drivers are generally more vulnerable than drivers, which can be explained, in particular by frontal collisions, from the front of the passenger's "free flight" on the driver's attitude, as well as by the lower tone of the neck muscle due to the fact that the passenger does not see almost usually the encountering danger, and often its deflection-reflex reaction is absent.
Keywords: two-wheelers; brainstem injuries, pontomedular split; forensic autopsy

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ABSTRACT NUMBER: 023

ACUTE ESOPHAGEAL NECROSIS "BLACK ESOPHAGUS": CASE REPORT

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Introduction: Acute esophageal necrosis, necrotising esophagitis or "black esophagus" are terms that are called a very rare condition whose patoanatomic characteristic is necrosis of esophagus, mucosa and submucosa. The macroscopic expression is dominated by the black color according to which this is a rare condition, named in the medical literature "Black esophagus". Localization of necrosis is most often on the distal part of the esophagus, and it can spread to its proximal segments. The most common clinical

manifestation of this rare condition is gastrointestinal bleeding. According to the scant information from the literature, the cause of this necrotic damage is still unclear. It is believed that the pathogenesis includes hypovolaemia associated with a reduced function of a protective mucosal barrier that can be associated with gastric secretion reflux. Cardiovascular diseases and conditions of cardiogenic shock, hypoxemia, gastric outburst obstruction, renal failure, trauma, malnutrition, alcohol intake, etc. are listed as risk factors. The case of the occurrence of this condition in cocaine users is also described. It occurs more often in older men. A retrospective series of endoscopically identified cases suggests that the prevalence varies from 0.001 to 0.2% and mortality approaches 32%, mainly due to complications in the form of perforation and mediastinitis.

Case: The body of a 61 year old female, obese, found on the public surface (in a city park next to the bench) was sent to the Forensic Medicine Institute at the court's order

Discussion: At the time of autopsy, the body was in the state of initial post-mortem changes. An autopsy finding, among other things, pointed to the necrosis of a distinctly black color distal two thirds of the esophagus to cardia. Toxicological analyzes excluded alcoholics, poisoning with caustic and other poisons. The tissue of the mouth of the cavity and the environment of the mouth, tongue, throat and the initial part of the esophagus were without signs of damage. Heart finding included mild left ventricular hypertrophy (15 mm) with signs of moderately to severe atherosclerotic changes in the coronary arteries and on the aorta. Kidneys were with signs of nephrosclerosis. We did not have any data from heteroanamnaesis, or any medical data. Death is related to acute necrosis of esophagus was most likely due to complications of existing diseases of vascular origin.

Conclusion: Acute esophageal necrosis is a rare clinical entity with a poor prognosis that should be thought of during the treatment of patients belonging to the aforementioned risk groups.

Keywords: Acute esophageal necrosis, Black esophagus, Gastrointestinal bleeding, Autopsy

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ABSTRACT NUMBER: 024

ACUTE HEMORRHAGIC BLEEDING FROM GASTRIC POLYP AS A COMPETITIVE CAUSE OF DEATH

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Introduction: Polyps present abnormal growths on the mucous membrane, and, gastric, develops on the wall and are significantly rare in comparison to other localizations. They most commonly occur in people older than 50 years, much more common in men. A generally has benign character, although malignant alteration cannot be excluded. They are usually of a rounded shape, usually up to 1 cm in diameter and up to 4 cm. They are mostly asymptomatic and symptoms occur when become enlarged and ulcerous changed, both the pain and painful sensitivity of epigastrium, and anemia. They are localized more often in the fundus and more often on the gastric corpus. Individual polyps are found in 47% of cases, multiplied by 52%; About 1 to 2% of patients have diffuse gastric polyposis .

Case: A male, aged 74 years, was driven with SHMP because of nausea, nausea, vomiting, diarrhea, severe breathing with chest pain. The heteroanamnaesis (neighbor) showed that a few hours before admission to the hospital he felt "severe pain in the stomach and chest", which prompted the SHMP. He claims to suffer from arrhythmia and hypertension from before. Negates heart infarction. He is using Farin and Dilcoran. Since two days ago, he had a hard time walking when he fall and injured his head. On admission to the hospital according to the report of the neurologist and the internist was "conscious, acyanotic, TA 100/70, pale, dehydrated, with wet skin, afebrile, with hematoma on the left hand and on the stomach". The abdomen was soft and palpatory insensitive, with no defenses, no edema extremities, an auscultatory sinding normal. ECG:"AF, SF120/min without ST changes". Blood for laboratory analysis was taken. A RTG examination of the thorax, EHO abdomen and MDCT endocarnium was performed, which did not show pathological content. In the course of diagnostic procedures, the condition and death of the patient is aggravated, and besides the application of resuscitation measures

Discussion: Due to the unclear cause of death, they issued an order for carrying out a judicial autopsy. By autopsy, the presence of round polyp, pea grain size on the broad stem in the area of the gastric fundus, immediately below the cardia and perforation, was shown with ulceration. The thin and colon were studied by the hematitized mucous contents and without pathological changes in their mucous membranes. Heart autosclerosis is marked by signs of atherosclerotic disease, a postinfarctic scarring

change on the intrachamber barrier and a zone of fresh ischemia of the heart around the scar. The dead spots were poorly traced and the organs were very flabby. It was concluded that death occurred directly due to a heart attack in collaboration with the loss of large amounts of blood from the perforation of the blood vessel at the site of the gastric polyps.
Conclusion: Ulceration of the gastric polyps may give an abnormal bleeding with the potential for exacerbation of associated illnesses which in a fusion can cause a fatal outcome.
Keywords: gastric polyps, bleeding, autopsy

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ABSTRACT NUMBER: 025

FORENSIC IMPORTANCE OF INJURIES INCURRED DURING CARDIOPULMONARY RESUSCITATION

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Introduction: Cardiopulmonary resuscitation (CPR) is a lifesaving emergency procedure generating various injuries. The most frequently reported complications of CPR were skeletal injuries, specifically fractures of the ribs and sternum.
Material and Methods: A retrospective study was conducted at the Institute of Forensic Medicine of the Medical Faculty in Belgrade and covers a period of one year, from January 1st, 2017 to December 31st, 2017. 1518 autopsy records were processed, out of which in 525 cases cardiopulmonary resuscitation was applied.
Results: The study included 322 male patients and 203 females, with an average age of 69 ± 16(range 5 to 96 years). In the observed sample, 278 fractures were identified, representing 53%. The results of the autopsies show a break in sternum in 158 cases, which makes 30.1%, while the incidence of rib fractures is recorded in 258 cases (49.1%).
Conclusion: Injuries of thoracic skeletal structures are the most common complications of cardiopulmonary resuscitation. In our study, no statistically significant relationship was found between the duration of cardiopulmonary resuscitation and the incidence of injuries. The type, number and location of all complications are directly related to the quality and type of education as well as to the skills of individuals applying the pre-hospital CPR.
Keywords: cardiopulmonary resuscitation, injuries, thoracic, forensic medicine

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ABSTRACT NUMBER: 026

VIOLENCE TOWARD EMERGENCY MEDICAL SERVICE STAFF

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Introduction: Most physicians and nurses have been reported harassed by patients or their family members during work time. Violence is most often verbal but often outgrow in physical violence. This harassment may be especially severe in the house of patients, and according to a recent report harassed by patients are significantly more nurses.
Method: A retrospective analysis of literature with determinants: violence, aggression and emergency medicine staff. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON.
Results of the synthesis: Growing violence towards emergency doctors and nurses are reported almost daily. Most often there are patients who are experiencing opioid addiction or trying dangerous new substances like synthetic marijuana, alcohol intoxication, psychiatric patents or people who are aggressive to other persons.
The societies do not have appropriate tools to solve these big issues, lawmakers and EMS staffs have urged to strengthen low to make lower safety risks for staff. Security in Emergency Department tried to solve in different ways. For example New Hyde Park, N.Y. based Health plans to have retired police officers

serves as armed guards at its 23 hospitals within a year. Many hospitals in EU spent billions on increased security, adding to in medical care, staffing, insurance and other costs as a result of violence against staff.
Although the many federal governments does not gather specific data on violence in EMS and ED, but somedata shows the rate of attacks on nurses more than doubled from 2008 to 2016. There seems to be a change in people's willingness to make threats. Either people are dissatisfied with the treatment plan, or, in some cases, people are delusional. All efforts should be made to identify address, and eliminate factors that contribute to violence. The main reason for violence toward the EMS staff indicated by patients is waiting time for getting the EMS team. In addition, ineffective communication, and the absence of effective antiviolence policies exacerbate the problem. The proposed solutions include enhancing communications between EMS and patients.
Conclusion: Healthcare workers, doctors and nurses are continuously at risk of workplace violence incidents- strangling, punching, kicking and other physical attacks-that can cause severe injury or death. This is simply unacceptable.
Keywords: violence, aggression, emergency medicine staff, patients

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ABSTRACT NUMBER: 027

EDUCATION AND TRAINING FOR DISASTER AND EMERGENCY RESPONSE

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Introduction: Emergency medical response competency is the mutual knowledge, skills and experience for management in disaster relief. A large number of doctors and nurses strengthen existing professional skills and develop knowledge and their skills through short courses delivered by institutions where they work or universities, training agencies or courses developed by national societies for emergency medicine. In North America and Europe there are postgraduate education programs related to disasters. Training modalities vary, from theory-based lectures and discussions, to exercises and simulations.
Method: A retrospective analysis of literature with determinants: education, training, disaster, medical emergency response. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON.
Results of the synthesis: Team of EMS members need to prepare for their deployment as part of a multidisciplinary team. This education and training should goes beyond the individually focused training. Pre-deployment courses should be mandatory from the EMS in order to learn main protocols, communication pathways, security guidelines, teamwork dynamics and basic aspects of personal health protection. These courses have both theoretical and practical learning process. First, it is important to conduct theoretical education but the most important is that trainees require more real or practical and hands-on training sessions in which to apply these theories. It is clear that it's not possible to expose trainees to the real context of the disaster emergency. This training must be practical and multidisciplinary, and inclusive of all health care workers and non-medical professions. It is anticipated that the team members who train together may not always be the same that deploy together; but a standardized pre-deployment course should allow those taken from an organization's roster to work as an effective team.
Conclusion: Multiple attempts to standardize the education and training of disaster and emergency responders have been made; these focused mainly on an individual's professional development rather than improved team operational performance. Further work is required to fully develop an agreed curriculum and open access training materials for the members of EMS.
Keywords: education, training, disaster, medical emergency response

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ABSTRACT NUMBER: 028

THE USE OF TRANSCUTANEOUS PACING IN PREHOSPITAL SETTING

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Introduction: The concept of non-invasive cardiac pacing has been known for over 200 years; however, it was only practiced in the early 50's of the past century thanks to the work of dr Zola. The development of this technology is of particular importance for pre-hospital treatment of patients with rhythm disorders by type of bradycardia.
Method: A retrospective analysis of literature with determinants: transcutaneous pacing, pre-hospital settings. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON
Results of the synthesis: It is a method for rapid and effective cardiac pacing until the moment of establishing a transvenic pacemaker or a condition that does not require cardiac pacing. It is important to note that the transcutaneous pacemaker is a temporary measure that improves the final outcome of patients who find themselves in distant places from hospitals in emergency situations. The main indications for the use of transcutaneous pacemakers are patients with symptomatic bradycardia and bradycardia leading to hemodynamic instability, and patients with high-level blood blocks. Transcutaneous pacemakers can also be used in heart rhythm disorders due to drug toxicity and electrolyte disturbance. One indication is also an uncomplicated acute myocardial infarction without the evidence of a disease of the conduction system. In general, pacing is not effective in cardiac arrest and no studies have proven the benefit of survival in cardiac arrest. Contraindications to this intervention are significant hypothermia, thoracic lid, extreme agitation of the patient and children weighing less than 15 kg, unless pediatric electrodes are used. Modern transcutaneous pacemaker devices have two variables: the power of the electrical pulse (current intensity in mA) and the frequency of the heart rate. For the procedure, it is necessary to adjust the desired heart rate, and then the heart muscle is supplied with varying strain currents that change until an adequate hemodynamic response from the patient is obtained and an adequate ECG appearance. Since the procedure is painful, it is also necessary to carry out the appropriate analgesia. Failure to carry out the procedure is most often due to severe toxic-metabolic changes that are at the heart of the rhythm disorder, which is very difficult to prove and treat in prehospital conditions, and there is a large number of unsuccessful procedures due to insufficient experience with the staff who carry it out.
Conclusion: The first transcutaneous pacemaker on the territory of Bosnia and Herzegovina was set up in 2007 by the staff of the Institute for Emergency Medical Aid in Sarajevo Canton. From that date till today, this procedure has been successfully implemented 17 times. Cardiac pacing is an urgent, life-saving intervention that has found its place in the therapist protocol of an ambulance. For this reason, the fear and inexperience of doctors, for whom transcutaneous pacing is available, is unjustified in relation to the invaluable benefit to the patient.
Keywords: non-invasive cardiac pacing, bradycardia, prehospital conditions

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ABSTRACT NUMBER: 029

THE EFFICACY OF NIFEDIPINE IN THE TREATMENT OF SYMPTOMATIC ARTERIAL HYPERTENSION IN PATIENTS WITH SINUS BRADYCARDIA

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Introduction: In patients with arterial hypertension and present symptoms, rapid and effective reduction of arterial pressure is necessary. Treatment of arterial hypertension in patients with sinus bradycardia is a major clinical challenge, given that we have two clear therapeutic goals: reduction of arterial pressure and acceleration of the heart rate. The aim of the study was to investigate the efficacy of nifedipine in the treatment of symptomatic arterial hypertension in patients with sinus bradycardia, in the absence of acute ischemic changes on the standard ECG.
Method: The study involved 37 patients with symptomatic arterial hypertension and sinus bradycardia, in sinus rhythm, with no AV blocks and branch blocks, the average age of 54.7 years. Among the examined

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patients there were 21 women and 16 men. The most common symptoms were headache, buzzing in the ears and vertigo. Before the therapy was administered to the patients, standard ECG was registered, where acute ischemic changes were not present. Patients received 20 mg nifedipine in therapy and after 30 minutes, arterial pressure and heart rate were measured again.
Results: After the applied therapy, we have found significant reduction of systolic blood pressure from 193.5 ± 14.8 to 148.3 ± 9.2 mmHg (p <0.001), of diastolic blood pressure from 112.3 ± 9.5 to 98.2 ± 5.3 mmHg (p < 0.001), and a significant increase in heart rate from 47.3 ± 4.6 to 56.5 ± 4.6 beats / min (p <0.001) in the observed patients. In 11 (29.7%) patients due to an insufficient decrease in arterial pressure (mean systolic blood pressure: 163.7 ± 8.2 mmHg and mean diastolic blood pressure: 106.9 ± 5.7 mmHg), captopril was aded at a dose of 25-50 mg. After the applied therapy there was a significant reduction in symptoms, the patients felt significantly better.
Conclusion: The study showed that in patients with symptomatic arterial hypertension and sinus bradycardia, nifedipine rapidly and efficiently led to a significant reduction in blood pressure and acceleration of heart rate, with significant improvement in subjective symptoms. In follow-up patients, further investigation of the causes of arterial hypertension and sinus bradycardia is necessary, with adequate treatment and monitoring.
Keywords: arterial hypertension, sinus bradycardia, nifedipine

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ABSTRACT NUMBER: 030

DO WE KNOW EVERYTHING ABOUT MONITORING AND USE IT ON APPROPRIATE WAY?

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Introduction: Critical illness is any disease process which causes physiological instability leading to disability or death within minutes or hours. Monitoring of critically ill patients implies continuously measuring and monitoring vital parameters and ensures rapid detection of changes in clinical status. Monitoring provides us information about patient condition throw time with assessing the effect of the therapy and directing the further course of treatment. The parameters are monitored continuously for 24 hours, with a view to the timely observations of change and active treatment (trend in measuring of vital sign). The level of monitoring applied primarily depends on the general condition of the patient, followed by available equipment and training staff to use the equipment.
Method: A retrospective analysis of literature with determinants: noninvasive monitoring, invasive monitoring, critically ill patients and intensive care unit. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON.
Results of the synthesis: The approach to the critically ill patient meets the following criteria: A – airway, B – breathing, C- circulation, D- disability, E – exposure. Monitoring can be non – invasive, semi – invasive and invasive. Always is better for patient to use non – invasive or semi – invasive monitoring if you can, at first because of potential infection, coagulopathy and etc. Invasive methods are based on the penetration of the skin and mucous membranes and catheter placement , disruption of natural barriers what is the most reason for not to do invasive procedures if you can change it with noninvasive monitoring. Invasive procedures represents the placement of the monitor catheter penetrating the skin and mucous membranes and addition to all the above indications always in mind we must have contraindications and potential complications. The process of placing the monitor catheters and their maintenance requires strict aseptic conditions to prevent complications in terms of possible infection. Monitoring implies: clinical assessment of patients condition, vital signs (hemodynamic monitoring - pulse, heart rate, arterial tension and invasive monitoring , respiratory monitoring – arterial blood gas analysis (blood analysis, electrolyte balance, toxicology analysis), skin – (color, temperature, hydration), aware (GCS, APVU scale), urine output), biochemical parameters, radiology asses (radiography, CT scan, NMR, ultrasound examination), microbiology asses.
Conclusion: Monitoring in emergency care significantly reduces the number of complications accelerates decision about the best treatment at any given time, and the same effect, reduces morbidity and mortality. But what is most important to be a simple, easily accessible, safe and properly used.
Keywords: noninvasive monitoring, invasive monitoring, critically ill patients, intensive care unit

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ABSTRACT NUMBER: 031

HYPERTENSION IN ACUTE STROKE IN PREHOSPITAL SETTINGS

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Introduction: Stroke is the second leading cause of death, and one of the most common causes of neurological disability, whilst hypertension is the main risk factor for stroke. More than 75% of patients presenting with acute stroke will have systolic blood pressure higher than 140mmHg at the time of admission to the hospital, and most patients will have blood pressure values return to those present before stroke onset within one week. In the first 24 to 72 hours from stroke onset, a transient rise in arterial blood pressure is common, but the best management in this phase of acute stroke is still unknown.
Method: The study is retrospective, epidemiological, descriptive and analytical, and was conducted based on a group of 250 patients examined in the year 2018. Research contained the analysis of data collected from the medical records of the Emergency Medical Assistance Centre Canton Sarajevo protocol of patients referred to definitive hospital treatment under the diagnosis of suspected stroke, and which were later verified by CT in the hospital, as either ischemic or hemorrhagic. Parameters that were taken into account were patient age, sex, age structure, whether blood pressure was elevated in these patients with stroke symptoms, was the stroke later verified as ischemic or hemorrhagic, whether these patients had antihypertensive treatment beforehand, as well as the values of blood pressure in ischemic as opposed to hemorrhagic stroke.
Results: The study included 250 patients in the time period of the year 2018, which were referred to hospital treatment under the diagnosis of suspected stroke. The results of the study show that in the examined sample there was a majority of female patients, 132 of them (52.8%), in comparison to male patients of which there were 118 (47.2%), mostly above the age of 65 in both sexes. Ischemic stroke is the most common, and hypertension was present in 154 patients (61.6%) at the moment of examination. The results show that most patients also had arterial hypertension as co-morbidity, before stroke onset. Antihypertensive treatment was given to 22 patients (8,8%) in pre-hospital conditions.
Conclusion: The outcome of stroke is determined by the type of stroke and the initial values of blood pressure. Factors that further influence the outcome of stroke are age, sex, and antihypertensive treatment before stroke onset. There is significant evidence that high blood pressure values bring a worse prognosis for patients with acute ischemic stroke – defined either by neurological disability as a consequence, reoccurring stroke or lethal outcome. Also, elevated values of blood pressure are associated with the expansion of the hemorrhagic zone. Epidemiologically, a conclusion can be drawn that it is necessary to lower elevated blood pressure levels in patients with acute stroke. However, pathophysiological, given the loss of normal cerebral auto regulation, two concerns rise: high blood pressure can lead to cerebral edema, hematoma expansion or hemorrhagic transformation, whereas low blood pressure can lead to cerebral infarction and perihematomal ischemia. Even though the American Stroke Association and the European Stroke Initiative have provided guidelines for the treatment of hypertension after acute stroke, more research is needed when it comes to developing guidelines for the treatment of hypertension in the acute phase of stroke.
Keywords: Acute stroke, hypertension, ischemic stroke, hemorrhagic stroke, pre-hospital treatment

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ABSTRACT NUMBER: 032

INITIAL BLOOD RESUSCITATION OF TRAUMA: A GUIDELINES OR CLINICAL PRACTICE

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Introduction: Massive transfusion is administration of 10 or more red blood cell (RBC) units which approximates the total blood volume (TBV) of an average adult patient in 24 hours(h) or replacement of more than 50% of TBV by blood products within 3 h, or more than 4 RBC units in 1 h, with anticipation of continued need for blood product support in adults.
Case report: A 33-year -old women injured in a traffic accident as a driver, brought to the resuscitation room due to polytrauma, with multiple injuries, spontaneous sufficient breathing, with a blood pressure of 120/95mmHg measured on the left leg, heart rate 122/min and oxygen saturation of 99%. According to

the ATSL protocol, the patient has been examined by a surgeon, neurosurgeon, orthopedic and vascular surgeon. She went through all the warranted diagnostic procedures which detected multiple fractures, pleural effusion and retroperitoneal hematoma. After diagnosis she was transported urgently to the operating theater where external fixation and closed reposition were performed. In our hospital, the results of the ROTEM test are obtained for 24 hours; therefore we have to rely on a clinical experience. Initially, in the resuscitation room she got five units of blood and Tranexamic acid. Due to massive blood loss in the operation theater and constant fall in the complete blood count she also received eight units of blood, five units of fresh frozen plasma and eighteen units of platelet. After the operation had been completed, the patient was taken to the intensive care unit for further observation and recovery.
Conclusion: In the absence of complete coagulation testing, although some studies disagree, we had to rely on an empirical rate and clinical practice despite massive transfusion protocol, which recommend the immediate administration of coagulation components with a 1:1:1 ratio for RBC, plasma and platelets. In this case massive transfusion found to be safe and effective.
Keywords: massive transfusion, protocol, polytrauma

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ABSTRACT NUMBER: 033

TRANSFUSION MANAGEMENT OF TRAUMA PATIENTS IN RESUSCITATION UNIT

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Introduction: The Resuscitation Unit (RU) of Emergency Center of the Clinical Center of Serbia provides care of hemodynamically unstable patients who require respiratory support. About one third of patients are trauma patients. Severe trauma is a major global public health issue, resulting in the annual death of more than five million people worldwide. The so-called lethal triad of hypothermia, acidosis and coagulopathy has been recognized as a significant cause of death in patients with traumatic injuries. Transfusion treatment of trauma patients should be carried out with the highest degree of urgency. It has been observed that goal-directed coagulation management, use of hemostatic drugs and early resuscitation reduce trauma-induced coagulopathy and the mortality rate.
Method: Patient files were retrospectively reviewed for trauma patients admitted to RU between January and December 2018. Data about distributed blood components were collected from the BTIS database
Results: During 2018, 3138 patients were admitted to RU and 960 (31%) were trauma patients. In total, 1360 packed red blood cell, 460 fresh frozen plasma, 25 platelet doses and 95 doses of cryoprecipitate were distributed to RU. Almost 90% of patients who received blood were trauma patients, other patients were transfused due to bleeding of another etiology; 12% of transfused patients received 2 units of RBC, 81% received 2-4, 7% more than 4. The blood release takes from 10 minutes (when patient sample is not available) to up to 45 min (with all necessary pretransfusion tests) depending on the level of urgency, as defined by the BTIS procedure. No adverse transfusion reactions were reported. Patients remain in RU for about 1-1.5 hours, after that they are transferred for further treatment. Trauma patients are treated by the Advanced Trauma Life Support protocol. The point-of-care method (thromboelastography), providing 'real time' laboratory data to guide blood component replacement, was applied in 7 patients only.
Conclusion: The appropriate management of trauma patients with major hemorrhage and coagulopathy remains a major challenge in routine clinical practice. Successful management requires a protocol-driven multidisciplinary team approach and well organized communication between clinicians and transfusion laboratory. The implementation of locally adapted treatment algorithms and providing faster blood component distribution should be imperative of transfusion management of trauma patient.
Keywords: Resuscitation unit, transfusion, lethal triad

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ABSTRACT NUMBER: 034

THE TREATMENT OF PATIENTS WITH NEW-ONSET, RAPID ATRIAL FIBRILLATION AND HEART FAILURE

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Introduction: Patients with new-onset, rapid atrial fibrillation and heart failure due to the complexity of their illness require rapid and adequate therapy that reduces the heart rate and stops the progression of heart failure In these patients, urgent treatment of heart failure is also necessary.
The aim of the study is to examine the efficacy of applied therapy in patients with new-onset, rapid atrial fibrillation and heart failure.
Method: The study involved 33 patients with new-onset, rapid atrial fibrillation and heart failure, the average age of 60.3 years. Among the examined patients there were 15 women and 18 men. The initial symptoms in the form of breathlessness, fatigue and irregular heartbeat reported on average 5 hours before arriving at the outpatient clinic. In all patients, rapid atrial fibrillation with an average heart rate of 139.6 ± 16.2 beats / min were registered on the ECG. The mean systolic blood pressure was 141.66 ± 11.8 mmHg, and the mean diastolic blood pressure was 99.8 ± 8.3 mmHg. All patients had signs of pulmonary congestion. Patients received the following therapy: Digoxin 0.50mg intravenous; Furosemide 20-40mg intravenous; Amiodarone 400 - 600 mg intravenous, Metoprolol 5 mg intravenous, followed by 50 mg Metoprolol orally.
Results: After one hour, we have found significant reduction of heart rate from 139.6 ± 16.2 to 93.6 ⍰ 6.4 beats /min (p <0.001) in the observed patients. In 12 (36.4%) patients, a sinus rhythm was established. Regression of signs of pulmonary congestion has occurred in all patients and they had a significant diuretic. After the applied therapy there was a significant reduction in symptoms, the patients felt significantly better.
Conclusion: The study showed that the applied therapy led to a significant reduction in the heart rate and a significant reduction of pulmonary congestion, with a significant improvement in subjective symptoms in patients with new-onset, rapid atrial fibrillation and heart failure.
Keywords: atrial fibrillation, heart rate, heart failure, management

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ABSTRACT NUMBER: 035

COMPLEX TRIGGERS AND CAUSES OF DELIRIUM IN AN ELDERLY PATIENTS – A CASE REPORT

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Introduction: Delirium, also known as acute confessional state, is a sudden disturbance of cognitive function, and can be a frequent, serious and often fatal complication alongside other primary diseases or conditions. Although it can occur in all ages and both genders, the highest risk is present with the geriatric population. As the diagnosis of delirium is usually clinical, an assessment of cognitive function and history of the acute onset are necessary.
Objective: The aim of this paper is to indicate the importance of predisposing conditions and precipitating states for the onset of delirium.
Design and Method: A case study of an acute confusion state with an 89 years old female patient.
Results: At the moment of the examination, the patient is somnolent (Glasgow score 12/15), hypotensive (TA = 80/50), afebrile, dehydrated, eupneic, acyanotic. Auscultation: weakened breathing noise without accompanying phenomena. Heteroanamnesis: we have received data that she has dementia, visual hallucinations periodically, and that her condition worsened generally, 3 days after the death of her husband, when she stopped communicating, eating and drinking water. The patient was brought to ZC Knjazevac accompanied by medical personnel, after which we continued with a diagnostic examination. ECG: sinus rhythm, fr 80/min, nmg, without S and T changes. SpO2 = 95%. While we were waiting for the results of laboratory blood tests, the patient was treated with the following therapy: Sol. NaCl 0.9% 500ml iv, Amp. Ascorbit No I iv, Amp. Bedoxin No I iv. After the therapy, TA = 100/70, the patient showed

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symptoms of confusion, agitation and disorientated behavior. After psychiatric consultation, we administered therapy: Amp. Bensedin 5mg No I im. Laboratory and biochemical analysis results: glycemia 40.2 mmol/L, urea 52.3 mmol/L, creatinine 319 micromol/L, CRP 14.5 mg/L, phosphorus 2.25 mmol/L, magnesium 1.18 mmol/L. Results of gas analyzes: pO2 53 mmHg, cNa^{+} 150 mmol/L, cK^{+} 6.19 mmol/L, cCa^{2+} 0.85 mmol/L, cCl^{-} 107 mmol/L. Considering the results of clinical and diagnostic examination, predisposing factors for the development of delirium in this patient are: age, stress, depression, cognitive impairments and visual hallucinations within dementia, and precipitating factors are: hyperglycemia, uremia and electrolyte imbalance. The patient was referred to the Department of Internal medicine at ZC Knjaževac in order to correct metabolic and electrolyte disturbance. After correction of the metabolic imbalance, patient subjective condition was better, and the symptoms of the delirium gone. After hospital treatment, the patient was released in good general condition with recommendations for further internist and neuropsychiatric therapy.

Conclusion: Delirium in geriatric population can frequently be triggered by multicausal etiology, and the goal of this paper is to present a holistic approach to elderly patient with an acute confusion state. Delirium with underlying dementia is often misconstrued, which can lead to inappropriate management and prescription. Detection and correction of all potential risk factors is crucial for management and treatment of delirium.

Key words: delirium, geriatric population, etiology

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ABSTRACT NUMBER: 036

SUICIDAL BRIDGE JUMPER AND SURVIVAL

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Introduction: There are different ways of committing suicide. One of them is jumping from a height. Injuries in suicidal bridge jumpers depend of many factors: victim demographics, bridge height, and position of the body upon impact, and velocity at impact, type of surface, etc. The American College of Surgeons (ACS-COT) Committee on Trauma defined a "critical threshold" for a fall height in adults as >20 feet, (6 meters). One of the recent studies has found that the height more than 90 feet is associated with 100% mortality.

Method: Descriptive data display, Data source: the protocol of the Emergency Medical Bor, discharge letter from the GH in Bor, IHOD “Banjica”, Urgent center and Center for Physical Medicine and Rehabilitation “Sokobanjska”.

Case report: We report the case of a 40-year old woman, who jumped from a bridge 28 m high in a shallow stream, up to 10 cm deep, attempted suicide. Upon arrival of ambulance the patient was aware, oriented, but she couldn’t move and states that feels pain in the chest and back. Both sides of chest were painful during palpation. After a complete pre-hospital care, the patient was transported to the General Hospital in Bor. During the transport, we found out that the motive for attempt suicide was quarrel in family. From describing of jumping we concluded that the position of the body was "legs-head". After admission to the GH Bor, the patient was hemodynamically stable, in mild hypothermia (BT 35ºC, Hr 110/min, Rr 25/min, Gly 9mmol / l, SvO2 33%). The CT showed the serial fracture of the ribs (right II, III, IV and left II, III) without dislocation. There was also a cominutive fracture Th12, with the propagation one part of the fragment into the spinal canal. The results of the Trauma scores were: ISS score 6/75 – no polytrauma, APACHE score 7 and SOFA score 4 - low mortality. The next day patient was hospitalized at trauma center "Banjica", and soon afterwards she was in Urgent Center, due to the deterioration of the general condition. The repeated CT has discovered a fracture C1 of the cervical spine. All the time she was treated symptomatically. The patient is currently in the Center for Physical Medicine and Rehabilitation in the state of quadriplegia.

Conclusion: This case report is one of the rare documented surviving falls from a height of 28 meters (91 feet and 10 inches) on a shallow aquatic surface. According to the ACS-COT, a fall from this height exceeds the so-called "critical threshold". Compared to results of several studies, our case agrees in certain factors: female survival is more common, it is about middle-aged people, survival is more frequent in "legs-head" position and if the surface is softer. The types of injuries that are expected in patients who jump from a extreme height are not present in our case report. Most often there are life-threatening injuries. Our patient suffered from fractures only in the spinal column.

Keywords: suicide, bridge jumper, survival

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ABSTRACT NUMBER: 037

THE BEGINNING IS ALWAYS IMPORTANT

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Introduction: An undetected pulmonary embolism may have a lethal outcome, but it self often manifests with nonspecific symptoms, present in many illnesses. Diagnostic procedures such as determine D dimer an imaging, are not routine, making anamnesis and clinical exam the most important factor in creation decision, which way we will continue to exclude or confirm existence of a pulmonary embolism.
Method: This paper presents the case of a patient , who came into Emergency center for non-specific pain in the right blade. The patient s problems and his hemodynamic state did not indicate the existence of acute internal disease. Information on the operation of umbilical hernia in general anesthesia three weeks ago was the only reason why it was decided to determine d dimer.
Case report: Patient, 48 years old, appears in emergency center due to sharp pain in the right blade. tha pain spreads occasionally to the right lumbar bed, and sometimes to the chest. It is amplified when he moves; it does not increase during breathing. The pain lasts for a couple of days. He had a fever a night before the examination. Three weeks ago he had ventral hernia surgery, in general anesthesia .Since then he has been sleeping on the back, on the advice of a surgeon, and these problems are associated with that.
Objectively: conscious, oriented, hemodynamically stable. TA 120/70 mm<hg, F 100/min, above the lungs and heart a tidy finding. ECG: Sin rhythm, F 100/min, without significant ST and T changes. RTG pulmo: an accurate finding. lab: Er 4,85 Hgb 142 Hct 0,423 Le 13,8 Glycemic 4,6 mmol/L.
Because of elevated values of D dimer 1,72 (cut 0,5) the patient refers to MSCT pulmonary arteries. This method showed sub massive pulmonary embolism, with the formation of infarct sub pleural areas in certain parts of the parenchyma. The patient, hemodynamically stable, was transferred to the pulmology department to hospitalization and treatment.
Conclusion: The Geneva score and Wells criteria are merely the scale of determining the degree of risk that a patient may have for the presence of pulmonary embolism. When planning diagnostic procedures, for our patients, it is always necessary, in the foreground to have a precisely taken anamnesis and clinical exam, which should have the greatest difficulty in making decisions.
Keywords: pulmonary embolism, chest pain, emergency center

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ABSTRACT NUMBER: 038

PTE - WHERE WE DO NOT EXPECT IT

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Introduction: Thrombophilia is a tendency for the occurrence of thrombus that occurs as a result of congenital or acquired coagulation disorder in the field of genetic predisposition, due to mutations in the gene that controls blood clotting under the influence of external factors such as smoking, hormonal therapy, obesity, dyslipidemia, diabetes, pregnancy, postpartum period, age, trauma, surgery, long sitting, temporary immobilization. The most typical version of thrombophilia is a deep vein thrombosis followed with lung thromboembolism.
Aim: presentation of a patient with lung TE in the field of genetic thrombophilia.
Material and Methods: The data that are used are from medical documentation of a 21 year old man with a repeated case of LTE that showed thrombophilia as a result of mutation of genes for Prothrombin II.
Case report: June 2017. patient, man, student, 21 years old, nonsmoker, sportiest, without bad habits, comes to doctor for general weakness, feeling the lack of air, temperature up to 38 degrees, occasional pierces in the back, in front down left area and extinguishing a small amount of blood in morning hours third day from the beginning of the symptoms. We find: Tachypnea, normal breathing sound, heart action rhythmic, tones clear, heart rate around 85. LAB: WBC 14000, CRP 166, d-dimer 1179. Rtg of the lungs shows accentuated bronchi vascular drawing with soft tissue shadow left basal. MSCT of the lung arteries

- in some sub segment branches for lower lobules there are both sides' defects in contrast display that watch the LTE. There is Total of three focal zones of the diameter of 40 mm. Echo of the heart neat. Low molecular weight heparin was given, and later overlapped with OAK. INR: from 1.2 - 1.8. Clinical recovery was complete. Perfusion scintigraphy was suggested for 3 months and testing in the directions of thrombophilia. He is going to cardiologist for control tests; Doppler after 6 month neat, stopping the therapy was suggested. On November, 17th 2018 was performed MSCT of lung arteries which shows massive LTE of the right pulmonary arterial with expansion in right lobar bronchus. Normal physical exam on heart and lungs with TA 120/70, HR70, eupnoea. LAB: D dimer 2372; 3715; 1121; 892. Echo of the is neat. EF: 65%. Doppler of the blood vessels of the legs: OVT left leg, VFC and VPOPL thrombosis without flow. Control MSCT of lung arteries: ridding thrombus on the intersection of right lung artery. OAK applied. It was total clinical regression. Foreword OAK suggested and regular following. Test for thrombophilia done, and showing the mutation of gene for Prothrombin II.
Conclusion: This is about patient with repeated lung embolism that was developed on the field of deep venal thrombosis as a result of genetic mutation for coagulation factor Prothrombin II. Our "healthy" patient was normal physical conditions, with development of lung embolism which fortunately with therapy that was given didn't leave any consequences. Considering the non-specific symptoms and signs of LTE, patients not knowing of thrombophilia existence and because of the possibility of developing the clinical picture with fatal consequence, this is a condition that we find very difficult to discover in pre-hospital treatment and with this case report for who knows which time we are confirming that we have to be careful and concentrated on every patient with no exception.
Keywords: Thrombophilia, lung embolism.

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ABSTRACT NUMBER: 039

FORENSIC ASPECTS OF OUTLIVING PERIOD AFTER ROAD TRAFFIC ACCIDENTS

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Introduction: Injuries which could potentially lead to serious health damage they may cause shortening of the period of outliving. Recognition of these injuries allows for quick and effective intervention and a greater chance for outlive.
Material and Methods: This is an epidemiological, analytical, retrospective and cross-sectional autopsy study which included 525 road traffic accidents (RTA) subjects who died from sustained injuries or complications of the injuries in the territory of Kragujevac during the 2001-2016 period.
Results: Out of the total number, 291 (55%) subjects who died at the scene of the accident or on their way to the hospital (213 i.e. 73% men and 78 i.e. 27% women, the highest number was men ($\chi 2$=62.629; df=1; p=0.000)). The number of 234 (45%) subjects outlived the injuries for a certain period of time (178 i.e. 76% men and 56 i.e. 24% women, whereas the number of men subjects was significantly higher ($\chi 2$=63.607; df=1; p=0.000)). Subjects who outlived their injuries were of older age (their average age was 57±19) than subject who died at the scene of the accident (their average age was 49±19) (t test=4.89; p=0.000). According to the age group the highest number of subjects who died at the scene of the accident were in ages group 15-35 years (79, i.e. 27%), while subjects who outlived their injuries was older than 65 years (92, i.e. 39%) ($\chi 2$=26.156; df=3; p=0.000). Statistical difference was observed for outliving period according to RTA participation ($\chi 2$=35.16; df=7; p=0.000). Pedestrians (119 i.e. 54%) and bicyclists (26 i.e. 68%) outlived their injuries more frequently, while motor vehicle drivers (73 i.e. 75%) were more frequently died at the scene. In the group subjects who died at the scene leading causes of death were head injuries (120 i.e. 41%) and exsanguinations (67 i.e. 23%). In the group subjects who outlived their injuries leading causes of death were head injuries (118 i.e. 50%) and complications of the injury (46 i.e. 20%). Head injuries was commonly present at bicyclists (32 i.e. 84%) and motorcyclists (24 i.e. 73%), and after head injuries there was the equal distribution of subjects who died at the scene (49%) or outlived injuries (51%). Tractor drivers (20 i.e. 91%) and motor vehicle drivers (81 i.e. 83%) were subjects with the highest percentage of identified chest injuries. Subjects who had sustained injuries to a certain part of the chest were more frequently died at the scene (60%), rather than outlived the injuries (40%), ($\chi 2$=14.99; df=1; p=0.000). The subjects with the highest percentage of identified abdomen injuries were

front-seat passengers (39 i.e. 50%) and motor vehicle drivers (44 i.e. 45%). Subjects who had sustained injuries to a certain part of the abdomen were more frequently died at the scene (68%), rather than outlived the injuries (32%), ($\chi2=18.93$; df=1; p=0.000).

Conclusion: The results of this study can help doctors who provide first aid at the scene of accident, to better organized, in order to be more effective.

Keywords: autopsy, road traffic accidents, outliving period

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ABSTRACT NUMBER: 040

NEXUS SCORE AND CANADIAN C-SPINE RULE

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Introduction: NEXUS (National Emergency X-Radiography Utilization Study) is a set of validated criteria used to decide which trauma patients do not require cervical spine imaging.

Method: A retrospective analysis of literature with determinants: criteria, decision, cervical spine imaging. The search was carried out through: PubMed, Medline and electronic journals available through KoBSON

Results of the synthesis: The NEXUS Criteria have been prospectively validated in the largest cohort of patients ever studied for this indication. If a patient is NEXUS Criteria negative, further imaging is likely unnecessary.If a patient has a clinically significant c-spine injury identified on imaging: Maintain cervical spine protection with an appropriate collar; Consult neurosurgery; Keep patient non-ambulatory and NPO until treatment plan plan is complete; Patient may require emergent operative stabilization and/or admission to neurosurgical ICU. Because of concerns that the NEXUS Criteria do not perform as well among patients > 65 years of age, providers may want to consider further imaging if they are concerned about the mechanism or exam in elderly patients. Although more complicated to remember, the Canadian C-spine Rule appears to perform as well or better than NEXUS in terms of sensitivity for CSI. In cases where a patient does not rule out under the NEXUS Criteria, it may be appropriate to apply the CCR. If the patient is CCR negative then further imaging is probably unnecessary. For example, a patient with midline C-spine tenderness would need imaging according to NEXUS, but could potentially be cleared by the CCR if they did not have any high risk features but could range their necks 45 degrees to the left and right. There is also concern that NEXUS was derived and validated in an era when plain films were much more commonly ordered to assess for C-spine injuries. CT imaging of the C-spine is now much more common, and there is some evidence that computed tomography may identify CSIs that would be missed by NEXUS and/or the CCR. Trauma patients who do not require cervical spine imaging require all of the following:alert and stable, no focal neurologic deficit, no altered level of consciousness, not intoxicated, no midline spinal tenderness, no distracting injury

Conclusion: The NEXUS criteria have a sensitivity of 99.6% for ruling out cervical spine injury in the original study validating the criteria (95% confidence interval, 98.6-100%)The NEXUS criteria may not be reliable with patient >65 years of age.

Keywords: Nexus score, Canadian C-spine Rule

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ABSTRACT NUMBER: 041

HEMATOMA SUBDURALE CHRONICAL-CASE REPORT

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Introduction: Head injuries are the main cause of important number of morbidity and more percent mortality younger of 50 years, even 60%younger. Clear clinical case – delusion headache, strong headache and vomiting of central type it includes to acute high intracranial pressure no matter age in different of clinical different of chronicle subdural hematoma with elderly and alcoholic (change with CVI, TU and mental disorder) especially head injury is insignificant or forgotten. Headache, vomiting, hemiparesis, dysarthria, aphasia, TIA, Epi with Horner Sy and Chachins iris and with anamnestic data of any kind of

head injury 3 weeks ago it in plods to eventually chronically bleeding it can be solved by gold dg standard – CT. Aim is of work is to imply importance early recognize clinical symptoms, data and data of trauma 3 weeks ago which give suspicion of hematoma subdural chronicle given of emergency physician considering only surgical choice.

Case report: Patient, 59 ages, came emergency station because of acute shorter transitory disorder of vocabulary function. He had 3 min weakness of right hands. Sportsmen, nonsmoker, aware of diabetes well controlled diet and 3 month ago had traffic accident as driver and he was tied up and air bag open and crashed. Lost of conscience was shortly with posttraumatic amnesia and headache during few days. Transported to EC where they did emergency diagnostic (chest and abdomen ECHO, head CT) without injury of importance and he sent home. Neurological exam was normal, BP: 120/80, Gl:4,9mmol/l. Because of new trauma, normal neurological exam and anamnesis data of traffic accident he was sent neurological consult exam. Next neurological exam was normal also, urgent CT head – both side front parietal sickle changes 16 mm left and 24mm right chronological a just subdural hematoma. Emergency sent to NSC KC of Nis where he was operated. Control CT shows regression of hematomas and with regular post operated period he went back to everyday activities.

Conclusion: Good taken anamnesis – diabetes (change vessels) accident- high force implant (open air bag) conscience lost followed by amnesia and new motoric and verbal problems justify doubt on chronicle subdural hematoma. Thanks highly developed technologic – CT scan of our patient solved the dilemma of cause newborn transitory dysfunction and confirmed golden standard and emergency neurosurgical intervention gave quality life chance.

Keywords: accident, CT diagnostic, transitory dysfunction, chronicle subdural hematoma

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ABSTRACT NUMBER: 042

INFLUENCE TYPE A AND B AS CAUSE OF ARDS-CASE REPORT

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Introduction: Acute respiratory distress syndrome represents acute respiratory insufficiency syndrome based on the damage of parenchymal lungs. Patients with ARDS symptoms due to a reduction in lung compliance show signs of ischemia and dyspnoea while massive lung infiltrates are demonstrated on X-rays. Often, these patients end up on mechanical ventilation with often fatal outcome. In Montenegro, from the 40th week of 2018, the season of the type A and B flu season began. So far 31 people died due to respiratory complications.

Aim: The purpose of work: is to emphasize the importance of monitoring and detailed diagnosis of patients who have symptoms of influenza and cold during the current epidemiological situation, taking into account risk factors, monitoring the frequency of complications following influenza infection, all risk factors that can lead to acute respiratory failure.

Case report: Case report: A 43-year-old patient was sent from the HMP to UC KKCG beacuse was suspect on lung inflammation. Emergency medical doctor (HMP), wanted to continue diagnostic treatment. The patient had a temperature up to 40 degrees in the evening, swallowing pain, weakness and fever, 7 days from occurrence in the HMP. He was treated from purulent angina and he used augmentin 1000 mg (penicillin). The patient did not feel better, and after 7 days he went to emergency medical treatment with the following symptoms: Cough, chest pain, wheeze, hemoptysis, high temperature up to 40 degrees, shortness of breath, , weakness, tiredness and sweating. After a detailed examination of the HMP, due to lung inflammation, he was sent in UC for further diagnostic processing.

In the physical examination we find: Patient conscious, orientated, febrile with 38 degrees, eupnoic, tahipnoic, and tachycardic. The skin is pale, sprayed with sweat . Heart rate, 100 beats per minute. TA 80/60mmHg. SAT O2 90%, Pulmo: Decreased breath sounds with discret crackles on lung base, on both side. Labaratory values showed: leukocytes 6.8, lymphocytes 1 (20%), neutrophils 4.9 (65%), thrombocit 145, CRP 115, LDH 520, glucose 7.2, d dimer 2.05, fibrinogen 4.5 , ABB status: pH 7.45, pCO2 4.3, pO2 8.1, BE -2.4 sO2 90%, lactate 3.3, glucose 7.3. During the observation we gave him: O2 2 l/min, inhalation of the berodule, 250 ml NaCL with Ranisan amp NI, Urbason 20 mg and 1/2 aminophillin. X rey findings was showed consolidation caused by inflammation etiology, on both side lungs. During the observation of the

patient, there was a exacerbation of primary condition, the patient was transferred to the pulmonary intensive care unit. ABB status and other labaratory parameters get worsing, SAT O2 was 83%. CT shows multiple pulmonary changes and enlarged lymph nodes in the mediastinum up to 15 mm. MSCT: pulmonary opacification (ground glass opacification), with dense consolidation in all areas of the lung with tendency to tie up to larger condensation with mediastinal lymphadenopathy. When we took into account the clinical picture, laboratory diagnosis was confirmed by the ARDS diagnosis. Test on influence A i B was positive.
During hospitalization included oseltamivir therapy (antiviral therapy), meropenem , azithromycin and metronidazole (antibiotic therapy), , inhalational, antimycotic, gastroprotective and other supurative therapy.
The applied therapy after 6 days the general condition was improved , the auscultatory finding in regression. Control findings: leukocytes (neutrophils and lymphocytes) in reference values, CRP 10, 5, LDH 300, O2 94%, acid status in reference limits. The MSCT showed regressive changes
Conclusion: The patient has survived ARDS without mechanical ventilation due to the rapid reaction of HMP and UC. Knowing the epidemiological situation in Montenegro, knowing possible complications of flu viruses and resume all the physical factors in a given situation, the patient with primary signs of lung inflammation sent to further diagnostic treatment that saved his life.
Keywords: influence, pneumonia, ARDS

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ABSTRACT NUMBER: 043

SEVERE ARM TRAUMA - A CASE REPORT

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Introduction: A progressive increase in traumatism over the last 40 years, where trafficking traumatism occupies a special place, despite the engagement of society as a whole. High mortality and the injuries are becoming more and more difficult, their treatment more complicated, more expensive and long lasting. The injured most often belong to a group of young people who are capable to work and they in the shortest, longer, or permanently become incapable of work, which endangers their own existence and the survival of their family
Case report: On 12.septembre 2018, at 21:12, the team of EMS Bijelo Polje received a call to care for a man injured in an accident on the road. The call was made by a colleague who was at the scene so, the information was reliable and clear. The location was 12 km from the team; EMS crew was there in 8min. At the scene of the accident, they find police officers who have secured a place for further work. The driver of a car who was returning from the wedding, attempting to pass the vehicle on the road hit whit high speed to the tractor, more precisely to a part of the tractor that is used to work with the ground (a series of steel spikes). Because of the blow, the tractor and the car slid and they were standing on the flat side of the road. At the arrival of the team, we find man around the age of 50, conscious, slightly pale of the face, overcrowded in the driver's seat. At the entire length of the left forearm (in the subcutaneous and muscular space), starting from the wrist of left arm and up to the middle of the humerus, it was blocked a metal rod (part of the bone marrow) that scarcely bleeds. The person was visibly alcoholic and reactions to the situation was inadequate (he tries to remove the metal part, refuses to receive painkillers, refuses co-operation). The vital parameters are stable (TA, SF, RFSpO2) within the normal range. We did not notice other injuries. The fire department comes to the site after 5 minutes. The release of the patient first attempted by hydraulic scissors, and as it was not possible to perform with them; the cross-section of the metal rod was done with the grinder at a sufficient distance from the point of entry. The patient immobilized with improvisation according to PHTLS principles and with a foreign body was taken out of the car and transported to the nearest general hospital. In the further course of his treatment, the patient continued to suffer from major damage that he had preserved, as well as its function.
Conclusion: Adequate and timely joint action of emergency services (police, firefighters and HMPs) has enabled a high-quality tertiary care of the injured. All services have done the best in their activities, and the expertise and good cooperation is the key to success
Keywords: hand trauma, treatment

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ABSTRACT NUMBER: 044

DOG BITES

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INTRODUCTION: Because of their frequency and forensic importance, dog bites require a good knowledge of the care process and prevention of transmissible diseases. Every patient with a dog bite wound needs primary care and than, deepending of the severity of injuries, secondary hospital treathment and epidemiological control. Most bite cases are result of the natural dogs reaction at the some situation. Groups with increased risk are children, men and pet owners, but also all persons who have close contact with dogs when they as a result of fear or panic react impulsively.
METHODS: Review of literature available in medical journals and on the Internet
RESULTS: Dog bites wounds are usually wide lacerations, which smaller or larger skin and subcutaneous structures defects, depending on the morphology of the teeth. Their localization is usually in the lower extremities in adults and in children on the face and neck, but can be localizated in all parts of the body. The greatest immediate danger is large blood vessels damagre, expecially in the neck, causing massive bleeding and death in very short thime. Also, other wounds with large tissue defects are important because they may required repeated surgical and other procedures and lead to loss of function of the injured part of the body. Each dog bites wound has the risk of infection, especially wounds wich affect deep structures, wounds on the face, neck, hands and genitals, especialy in immunocompromised persons and in those who have delayed medical care. In primary care, after stopping the bleeding, it is necessary to clear and disinfect the wound awith a sufficient amount of water, physiological solution and povidone-iodine and remove foreign bodies if they are present. The wounds need to be covered with dry sterile dressing material. Dog bites wounds generally not require primary sewing, except in the cases of large defects in a well-vascularized regions. In some cases, after the initial treatment immobilization of the injured limb may be necessary. Primary care treathment may be different according to elapsed time. In a further procedure, after primary care, patients are referred to the surgery and / or epidemiology. Dog bites wounds have their microbiological specificity, and except of antibiotic prophylaxis or therapy, tetanus and rabies profilaction is necessary, depending on background of the case (elapsed time, owners dog or not, dog is vaccinated or not, dog can be monitored or not. It is also necessary to inform the Police about dog bites cases.
DISCUSSION: Although it is impossible to prevent all dog bites cases, their number can be reduced. Because of the great medical and socio-economic importance of these injuries it is necessary to work on educating people how to safely keep and threat pets and animals generaly and what to do when the dogs are anxious, hurt, sick, when eat, when care about their puppies and not to insist on playing with them. It is also necessary to educate people how to protect themselves in case of dog attack , introduce them with first–aid procedures and explain the importance of medical care and profilaction.
Key words: dog bites, primary care

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ABSTRACTS: NURSES

ABSTRACT NUMBER: 001 (INVITED LECTURE)

SPECIAL ASPECTS OF THE AIRWAY IN CHILDREN

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Introduction: Anatomical and physiological differences in childhood are the most expressed in infants and represent the greatest challenge to medical staff in providing first aid and treatment. This can perplex medical caregivers not specialized in pediatrics and leads to missed diagnosis, inadequate medical treatment or marginalization of care.
Data source and the choice of material: A Retrospective analysis of literature with determinants: Anatomical and physiological differences in infants, The search was carried out through: PubMed, Medline and electronic journals available through KoBSON as well as literatures available at the Library of the Medical Faculty in Niš.
Results of the synthesis*:* By birth, the organic system matures and the most changes occur in the respiratory system. Relatively large nose shells and round, with narrow corridors beneath them, allow the breathing of the newborn through the nose during the first years of life. Any obstruction of nasal openings may cause asphyxia. The oral cavity in the newborn and infants is small and shallow, while the tongue inside it, is large and fills a large part of the oral cavity, more closely positioned towards the palate and less mobile which complicates its examination and endotracheal intubation. The infant's pharynx is only 4 cm long and during growth the pharynx changes significantly with descent of the epiglottis in the larynx and movement of the tongue posteriorly, changing the pharynx from a funnel shape to a cylinder. The larynx of the newborn is about 7 mm long and 6 mm wide, tall, pre-set and takes a sharp angle between the base of the tongue and the glottis opening, making it difficult to direct the laryngoscope. Epiglottis is narrower, shaped like letter omega, and is at an angle to the trachea, which makes it difficult to lift it with a laryngoscope blade. The narrowest part of the larynx is the subglottic region in the area of the cricoid cartilage. By compression of tracheal mucosa with an unsuitable endotracheal tube, edema of subglottic structures and a significant increase in respiratory tract resistance during extubation can occur. The trachea in the newborn is 5 to 9 cm in length, funnel shaped and prone to collapse in hyperextension or hyper flexion of the neck. Neonatal lungs are relatively shorter and wider than in adults and at birth are still at alveolar stage of development that continues during neonatal and childhood. The infant chest is characterized by high stretch ability and poor support to the lungs to maintain negative intra thoracic pressure, so that during each breathing cycle functional breathing of the airways is performed. The smaller conducting airways may produce resistance if further narrowed by inflammation, secretions, edema or bronchospasm.
Conclusion: Children are not small adults. Because of the specificity of anatomy and physiology, they require a special medical approach.
Keywords: airway, children, differences

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ABSTRACT NUMBER: 002 (INVITED LECTURE)

LITTLE TRICKS FOR ESTABLISH THE IV LINE

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Introduction: An intravenous (or IV for short) line is one of the most common, important tools in emergency medicine. Doctor Thomas Latta was the first pioneer during the cholera epidemic of 1831—32 that use of intravenous saline infusion in the treatment of cholera. Now, a peripheral cannula is the most common intravenous access method utilized in both hospitals and pre-hospital services. Any accessible vein can be used although arm and hand veins are used most commonly, with leg and foot veins used to a much lesser extent. In infants, the scalp veins are sometimes used.
Data source and the choice of material: Retrospective analysis of the literature

Results of the synthesis: To make the procedure more tolerable medical staff may apply a topical local anesthetic (lidocain) to the skin of the chosen venipuncture area about 45 minutes beforehand. Infiltration is one of the most common adverse effects of IV therapy and is usually not serious unless the infiltrated fluid is a medication damaging to the surrounding tissue, most commonly a vesicant or chemotherapeutic agent, in which case it is called extravasation and extensive necrosis can occur. In this procedure we should be fallow some steps to avoid the mistakes. The steps are: Step 1: Choose the right catheter/cannula size; Step 2: Prepare the patient; Step 3: Find the right vein; Step 4: Insert the IV needle; Step 5: Secure the catheter with a paper-type tape
Conclusion: IV insertion for patients seem to be a very daunting task, but with practice and enough exposure to these types of challenges, a nurse can surely get the fulfillment from a job well done
Keywords: IV line, tricks.

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ABSTRACT NUMBER: 003 (INVITED LECTURE)

BURNOUT SYNDROME

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Introduction: Burnout syndrome can be defined as long-term stress at work that is the result of the interaction between constant emotional pressure, which is for a longer period of time associated with intensive interpersonal engagement and individual characteristics of person. It represents the state of mental and emotional exhaustion, which leads to reduced productivity at work. Exhaustion occurs due to the discrepancy between ambitions, ideas, goals and tasks at work, which makes the person exposed to chronic stress and tension. As a result, discontent, tension and stress will rise, which is in literature named burnout syndrome at work. Stress that is causing burnout syndrome occurs most often as a result of poor interpersonal relationships, and the persons most affected by this syndrome are usually those with good leadership abilities, enthusiasts, open, communicative and oriented towards a positive goal. Burnout is a progressive loss of idealism, energy, and the meaningfulness of one's own work as a result of frustration and stress at work.
Objectives: Recognize the symptoms of burnout; Measure the degree of "burnout" of employees in the Health Center Zajecar; Strategies for overcoming and preventing burnout.
Material and Methods: The research was conducted in the HC Zaječar, in the Emergency Medical Service (EMS), General practitioners' (GP) unit and the Emergency Department within General Hospital in March 2019 for doctors and nurses. Based on the obtained data, a comparison was made, especially for doctors and nurses. For research we used questionnaire for determining the degree of burnout syndrome according to the Freudenberger scale of burnout.
Results and discussion: By analyzing the questionnaire we came to the following data, as for the physicians from the EMS, 80% of the respondents had a good result, 10% should be concerned, while 10% "burnt out". The GPs in 67% had a good result, 22% should pay attention to things that could lead to burnout, while 11% "burnt out". The highest number of burnout candidates 43% were in Emergency Medical Service. The same percentage of respondents are well and they are mostly young physicians within 5 years of service. However, the situation is quite different for nurses. Namely, 54% of nurses from EMS are prone for burnout, 15% are at risk, while 31% have a good score. In the Emergency Medical Service, 38% are a burnout candidate, 8% have "burnt out" and 54% have a good result. The GP service is similar to the situation in the EMS, where more than half of the respondents are candidates for "burnout". In this service, 15% of respondents "burnt out", 15% are candidates, 31% at risk, while 39% have a good result.
Conclusion: Based on the results of this research, we can conclude that among physicians, the highest percentage of burning candidates is in the Emergency Medical Service and that corresponds with the data of other researchers, where physicians working in emergency services are ranked as the victims of burnout syndrome. As for nurses, the situation is alarming. Namely, more than half of the respondents, in all departments, are candidates for burnout or are at risk, while about 20% present with signs of burnout at work.
Keywords: burnout syndrome

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ABSTRACT NUMBER: 004 (INVITED LECTURE)

MEDICAL SAFETY COVERAGE ON LARGE PUBLIC EVENTS; FORM PLANNING TO ACTION - OUR EXPERIENCE

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Introduction. Medical safety on major public events can be a challenging task for the EMS. The most important influence on the organization of the medical coverage are type of event, number of participants and coverage area. Based on that it is necessary to plan the number of teams, levels of communication, activation methods and the supervision of the whole events with the goal to prepare a proper medical coverage plan.

Methods. A simple web search was made with Google for a combination of words "Medical coverage public safety events."

1. A published professional or scientific paper about medical coverage of the public events.
2. Guidelines of institutions, corporations, local authorities and the legal act.
3. Documents chosen following the criteria under pt. 1 must not be older than y. 2014.

Results. The literature confirms the fact that the proper planning of medical safety coverage of an event has significant importance. Among other things it is necessary to provide different levels of communication, methods of activation by sections and to not forget the communication with the public. The events where EMS Izola provided the medical safety and were considered for analysis were 3 marathons and an Iron Man (IM) competition. Medical coverage of the event is covered by the dispatcher who works on a separate number just for this event. The work in the medical tent is coordinated by a nurse who is in charge of scheduling the patient's arrival, triage and of communication with the dispatcher and to help the MD, who should not be burdened with the care of patients arriving or departing. Vehicles are moving along the route by pre-scheduled plan and off just as instructed by the dispatcher. There are special modes of driving, activation or self-activation and communication. All teams as well as responsible persons that are in charge of coordinating positions are taking written records of the event. The difference on the medical coverage of IM is that the organizer requires an additional representative of EMS in the IM headquarter. On all routes of the 2017 marathon there was 4580 competitors, on 2018 the number was 4468 and on 2019 the no. of the runners was 4747. Each year, the finish line was in another city as the start too. The marathon usually is covered by 3 teams with MD and 4 or more teams with EMS nurses (MT/RN). In addition to those there are MT on bike and one on a motorcycle (scooter). The interventions situation through the years was the following; 2017; 28 treatments, 24 competitors, 3 visitors and 1 EMS provider. In 2018; 33 treatments, 27 competitors, 3 visitors and 3 from the organizers team. 2019; 18 treatments all runners. On the marathon the most common reason for the treatment is a general weakness, difficulty breathing, changes in the ECG and dehydration. The review of the documents from the medical coverage of the IM 2018 where about 1500 competitors was registered to the competition is shown that 28 patients were treated in the medical tent and only one was transported to the hospital. One of the treated patients was member of the organizing team all others were competitors. The first treatment of an athlete in the medical tent was 5h 30min after the start of the swim race, while on the route there was 6 interventions of which 5 on a cycling race with 2 transport to the hospital and 1 at the marathon part transported to the medical tent.

Discussion. Depending on the area or region of coverage it should be planned if necessary, the evacuation plan in case of a major accident and procedures in case of unexpected emergencies as well as for the expected intervention. There are some influence factors that must be taken into consideration in the planning phase of medical safety of the event. The Slovenian regulative of the EMS regulate this topic in the chapter VIII from article 24 to 27. The act lists types of events and obligations of the organizer and in which cases the medical coverage plan is obligatory and what it should contain. Local EMS in cases of preparation of this document is authorized to check and confirm or not the content before an administrative authority issue a permit to the organizer. The highest percentage of all treatments is between the second and fourth hour after the start of the half marathon. Competitors of this segment are the most common among all patients. Number of evacuations from the route and transport in a tent or directly to the hospital are depending on the location of the incident as well as of the configuration of the competition. In any case at the marathon the largest number of treatments start in the medical tent that is on the finish line and from where are the most of the transport to the hospital. On the IM which is a competition in 3 disciplines; swimming (1.9 km), cycling (90 km) and half marathon (21 km) there are some differences. In **conclusion** it should be noted that it is impossible to predict all potential incidents and include them in the plan, but nevertheless it should be carried out a detailed plan for medical

coverage of major events in cooperation with the organizer. An essential preliminary agreement regarding the route, if necessary, review sites and participation with other services is highly recommended. Obviously is needed to plan the activation mode, moving and to plan the coverage of all areas with more vehicles with the aim of reducing intervention time and within the possibility it should be predicted the route passage with EMS vehicles, and reduce it to a minimum. There is a very little space for improvisation, but if there is no other option it should be foreseen to do it within a plan.
Keywords: organization, communication, emergency medical service

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ABSTRACT NUMBER: 005

SEPSIS-YOU HAVE TO SUSPECT!

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Introduction: Sepsis is a life-threatening condition caused by infection and most dangerous in particularly sensitive groups (child-bearing woman, chronic conditions, immune deficient patients). Early recognition of sepsis, usually with antibiotics and large amounts of intravenous fluids, improves outcome. It appears that on average; approximately 30% of patients diagnosed with severe sepsis do not survive. Up to 50% of survivors suffer from post-sepsis syndrome.
Data source and the choice of material: Retrospective analysis of the literature
Results of the synthesis: For sepsis early recognition, the most important to recognize a probable infection. While any type of infection-bacterial, viral or fungal — can lead to sepsis, the most likely varieties are: pneumonia, infection of the digestive system, infection of genitourinary system. The symptoms of early sepsis are vague and may be easily dismissed. The most common signs are: change in mental status, low systolic pressure-less than or equal to 100mm Hg, respiratory frequency higher than or equal to 22/min. If we need medication to maintain blood pressure greater than or equal to 65 mm Hg and also high levels of serum lactate .we could call this situation as septic shock. The most common tests that may be done to help determine if you do have sepsis are: complete blood count (CBC), Lactate level, C-reactive protein (CRP), Blood culture, Prothrombin time and partial thromboplastin time (PT and PTT), platelet count, and d-dimer. The following three tests are confirmatory tests: Endotoxin, Procalcitonin (PCT) and SeptiCyte Sepsis has been named as the most expensive in-patient cost. When Severe Sepsis or Septic Shock are identified, initiate broad spectrum antibiotics immediately. These antibiotics should be organism specific.
Conclusion: Clinical judgment remains important since a significant number of patients presenting to emergency departments will meet criteria for Sepsis
Keywords: sepsis, symptoms

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ABSTRACT NUMBER: 006

CARE OF PATIENTS ON VENTILATOR-ROLE OF NURSE

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Introduction: Mechanical ventilation is indicated when the patient's spontaneous ventilation is not sufficient to provide adequate tissue oxygenation. There are many reasons for implementing ventilatory ventilation, but it is most common in trauma, ARDS, CNS disease, drug overdose patients and etc.
Data source and the choice of material: Retrospective analysis of the literature
Results of the synthesis: The obligation that the nurses have in these patients bears more responsibility than at other patients. First of all, it is about continuous monitoring of vital parameters, knowledge of the nature of the disease, as well as the identification of the device itself and adjustment of possible complications also We can say that the role of a nurse is divided into 4 groups: control and care of respiratory functions, control of vital parameters, prevention of infection and decubitus and adequate nutrition. Nurse should to recognize any abnormal deviations, describe the function of alarm settings and the relevant ventilation parameters. On daily bases to do procedure of checking cuff pressure, prevent

tracheal damage, prevent aspiration of stomach content, keep daily records of ventilator settings and parameters (Hourly or if any Ventilator setting changes) Size and Lip level of the ET tube, Cuff Pressure. (Each shift/any changes). Alarm limits (Each shift/any changes). The nurse must recognize the symptoms of possible complications as: increased heart rate, decreased blood pressure and perfusion to vital organs, decreased CVP and cool clammy skin. As invasive device in critically ill patients becomes colonized with pathological bacteria within 24 hours in almost all patients nurse should closely monitoring the patients for possible develop of nosocomial pneumonia. So, one of most important things are maintain sterile technique when suctioning provide and monitor color, amount and consistency of sputum. Provide adequate nutrition: begin tube feeding as soon as it is evident the patient will remain on the ventilator for a long time and weigh daily. Communicating with the patient is essential, too. Provide writing tools or a communication board so she can express her needs. Ask simple yes/no questions to which she can nod or shake her head.
Keywords: Nurse care, ventilator patients

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ABSTRACT NUMBER: 007

GUIDELINES FOR BLOOD DRAWS

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Introduction: For nurses to learn skills in order to provide the best patient care is still critical. Obtaining blood samples, either via venous sticks or from a central line, is a critical nursing skill. Phlebotomy is essential for a variety of medical diagnoses, procedures, and tests. Without proper specimens, unhelpful or even harmful medical treatment could happen.
Data source and the choice of material: Retrospective analysis of the literature
Results of the synthesis: The skill of taking the blood sample we can divide in three steps. Step 1: Identify the proper vein. For adult patients, the most common and first choice is the median cubital vein in the antecubital fossa. This is an extremely large vessel and if stuck properly can yield excellent blood results. This vein is the first choice because it is close to the skin's surface and tends not to roll when punctured. Learning the anatomy of the main veins and arteries in the body is essential to becoming competent in phlebotomy. Other commonly used veins include: basilic vein at cephalic vein. Areas that should be avoid are: edematous sites, scarred or burned areas, fistulas and grafts hematomas from an IV cannula, sites above an IV cannula in the same vessel, arm with a preexisting or current blood clot, arm on side of a mastectomy, via an open wound or area of infection, arm in which blood is being transfused, arm on the side of a surgical procedure. Step 2: Gather Supplies. An important tip - take extra supplies into the patient's room in case you need to attempt a second venipuncture. Step 3: Venipuncture. Explain the procedure and reason for the blood draw to the patient. Identify the patient, Position the patient and the patient's arm. Apply a tourniquet approximately 3-4 inches above the selected site and no more than 2 minutes. Ask the patient to make a fist and not pump the hand. This is a common misconception - pumping the hand does not increase venous circulation. Prep the venipuncture site by cleansing the area with an alcohol prep pad for 30 seconds and allow to air dry for 30 seconds. If properly inserted blood should flash into the catheter. Label appropriate tubes at the bedside and place into transport bags.
Deliver blood specimens to the laboratory promptly. If the blood is not delivered in a timely manner it can cause hemolysis and skew the lab results.
Keywords: Nurse care, phlebotomy,

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ABSTRACT NUMBER: 008

EMERGENCY MEDICINE APPS - LITTLE THINGS THAT MAKE EM LIFE EASIER

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Introduction: A modern age represents a new era of high technology, and slowly takes control over the jobs that a man once performed. Today, everyone has a mobile phone, which, in addition to the basic

function that the phone has, has become an unavoidable assistant to the everyday life of each of us. The many applications we use have become our everyday need, both in life and at work. We will show several FREE applications for Android and iOS platform, which could be invaluable when we need fast, reliable and clear information.
Data source and the choice of material: Retrospective analysis of the literature. Basic sources: www.efficientmd.com, www.play.google.com
Results of the synthesis: ACEP Toxicology Antidote App (Android and iOS) Resource for emergency care providers have easy access to dosing regimens for a variety of medications and antidotes used for common poisonings encountered in emergency medicine. It is a succinct resource designed for quick access that is essential to emergency care providers. It was created by the Toxicology Section of the American College of Emergency Physicians (ACEP), WikiEM (Android and iOS). Online wiki and database of emergency medicine knowledge can to assist physicians with their daily practice. The content is continuously updated from WikEM.org allowing for rapid reference of key information. The content is available offline with this mobile application"The Chief Complaint (Android and iOS) This app uses an algorithmic approach to over 50 of the most common complaints encountered in emergency medicine. Never feel lost or overwhelmed again, not knowing what the next step in the work-up is. Not sure what tests to order or if the patient can go home? The Chief Complaint helps you answer all those questions. Mdcalc (Android and iOS).Provides access to more than 450 easy-to-use clinical decision tools including risk scores, algorithms, equations, diagnostic criteria, formulas, classifications, dosing calculators, and more. QxMD (Android and iOS) i dedicated to creating high quality, point-of-care tools for practicing health care professionals. QxMD develops content in cooperation with expert physicians from their respective fields."Sublux (Android and iOS) is Radiology app for the rest of us. Hundreds of diagnoses, all with sleek overlays highlighting pathology, make it easy to get comfortable with plain films. Each diagnosis has a tailored description with clinical pearls and evidence-based management. One Minute Ultrasound (Android and iOS)
Full lectures, instant access to an incredible amount of content, videos demonstrate all aspects of the scan, including hand position, descriptions, normal images and pathologic images SonoAccess: Ultrasound Education App (Android and iOS) First-class ultrasound app with extensive clinical education content, How-To videos and reference guides for over 12 medical specialties. With the latest version of SonoAccess you can download content for offline access, customize your user profile to generate a recommended list of content, and use the "What's New" feed to browse the latest content.
Conclusion: This, of course, is only a small part of the many applications that make life easier for us. Certainly difficult words are the best among them, but they are certainly very useful in everyday work.
Keywords: Androis, iOS, App, Emergency Medicine

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ABSTRACT NUMBER: 009

SUBCUTANEOUS FLUID ADMINISTRATION: NEW TOOL IN PREHOSPITAL CARE

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Introduction: The need for assessing alternative mechanisms for intravascular compartment access has already been recognized. The main alternative at this time, to IV access, is the intraosseous (IO) line. Despite the widespread acknowledgment of the importance of prehospital intravascular access, obtaining that access through the traditional intravenous (IV) line is not always simple. Simple fact is that many other procedures, which is common in the hospital and emergency department (ED) setting can be difficult in the field
Data source and the choice of material: Retrospective analysis of the literature.
Results of the synthesis: Subcutaneous infusion or hypo dermoclysis, is a technique whereby fluids are infused into the subcutaneous space via small-gauge needles. This is a useful and easy hydration technique suitable for mildly to moderately dehydrate adult patients, especially the elderly. The method is considered safe, requires minimal equipment and does not pose any serious complications. The preferred solution is normal saline, but other solutions, such as glucose with saline or 5%glucose, can also be used. Technique was first described in 1865 for treating dehydration in patients with cholera. Subcutaneous infusion has been used to provide hydration to infants, children and adults, particularly elderly in whom venous access is difficult. It appears possible that, in some cases where IV access fails, SC may be a more

viable option for fluid and medication administration than IO (e.g., when patient requirements are for minimal fluids and rapid analgesia). The guidance for prehospital personnel and respondents to disasters or MCIs will need to include consideration of both individual patients and aggregate situations. Advantages: Low cost, more comfortable than IV administration, less likely than IV administration to cause pulmonary edema or fluid overload, simple insertion, less distressing than inserting an IV cannula ; easier reinsertion at new site, more suitable for home care, with less staff supervision and less need for hospitalization, it can be set up and administered by nurses in almost any setting, does not cause thrombophlebitis, has not been shown to cause septicemia or systemic infection, can be started and stopped at any time by opening and closing the clamp on clysis tubing; no danger of clot formation. On the other hand, disadvantages are-usual rate only 1mL/min; only 3,000mL (at two sites) can be given in 24h, limitations on administration of electrolytes, nutrition additives and medications, edema at infusion site is common, possibility of local reactions. The most common insertion sites are the lateral aspect of the abdomen, thighs, pectoral region in men, outer surface of the forearms/upper arms, or the interscapular region. Care should be taken to select sites that have adequate subcutaneous tissue (determined by pinching the skin between the fingers) and reasonable skin turgor. Normal intravenous cannulas (tighter is better) is used.
Conclusion: Although SC infusion maybe not for every day's technique in prehospital or hospital EM personnel, we must say that IV access is not always possible or feasible—for example, in patients with fragile veins, those who are uncooperative, agitated, confused, or demented or in situations (eg, palliative care) where the maintenance of a venous line (either central or peripheral) may cause the patient suffering/pain. So, there's chance to think about alternative methods for establish patient rehydration. Subcutaneous fluids are indicated for maintaining adequate hydration in patients who are unable to take adequate fluids orally, who are mildly to moderately dehydrate and in whom it is difficult or impractical to insert an intravenous line.

Keywords: subcutaneous infusion

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