THE INTERDISCIPLINARY CONGRESS OF EMERGENCY MEDICINE

INTEGRATED HEALTH SERVICES IN SUPPORT OF THE POPULATION: UPU-SMURD-SAJ-ISU

6 – 9 July 2016
Cluj-Napoca

Editor:
Adela Golea

The authors have the responsability for the content of these paper abstracts

- Clujul Medical - **Journal of Medicine and Pharmacy**
Supplement No. 2, Vol. 89, 2016
p-ISSN 1222-2119, e-ISSN 2066-8872

CONTENTS

Oral Communications Session

- Clujul Medical - Journal of Medicine and Pharmacy

Supplement No. 2, Vol. 89, 2016
p-ISSN 1222-2119, e-ISSN 2066-8872

"Clujul Medical"
Journal's Office
Str. Moților, nr. 33
400609 Cluj-Napoca, România
Tel/fax: 00-40-264-596086

E-mail
clujulmedical@umfcluj.ro

Site
www.clujulmedical.umfcluj.ro

Indexed
SCIPIO
EBSCO
Index Copernicus
getCited
JournalSeek
Open Access Directory

Printing house
UMF "Iuliu Haţieganu"
Cluj-Napoca

- Clujul Medical - Journal of Medicine and Pharmacy

Supplement No. 2, Vol. 89, 2016
p-ISSN 1222-2119, e-ISSN 2066-8872

Poster Session

- Clujul Medical - Journal of Medicine and Pharmacy

Supplement No. 1, Vol. 89, 2016
p-ISSN 1222-2119, e-ISSN 2066-8872

"Clujul Medical" Journal's Office
Str. Moților, nr. 33
400609 Cluj-Napoca, România
Tel/fax: 00-40-264-596086

E-mail
clujulmedical@umfcluj.ro

Site
www.clujulmedical.umfcluj.ro

Indexed
SCIPIO
EBSCO
Index Copernicus
getCited
JournalSeek
Open Access Directory

Printing house
UMF "Iuliu Haţieganu"
Cluj-Napoca

- Clujul Medical - **Journal of Medicine and Pharmacy**
Supplement No. 2, Vol. 89, 2016
p-ISSN 1222-2119, e-ISSN 2066-8872

ORAL COMMUNICATIONS SESSION

ELEVATED ANION GAP METABOLIC ACIDOSIS

OANA ANTAL, NATALIA HAGĂU

2nd Dept. AIC, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
*Corresponding author: *Oana Antal, e-mail: antal.oanna@gmail.com*

Elevated anion gap metabolic acidosis is a common finding in the emergency department, with lactic acidosis and uremia being the most frequent causes of this disturbance [1]. In a Lancet Editorial from 1977 the authors opined that "In an age when all too often plasma-electrolyte measurements are ordered without any deliberate judgment, it is refreshing to have a reminder of the subtleties involved in the interpretation of this commonest set of clinical-chemistry tests" [2], establishing the importance of a well interpreted acid-base and electrolyte measurements in the early diagnosis of life threatening disturbances. Even though the statement was made almost 40 years ago, the issue remains fresh; along with it the interest in developing simple interpreting algorithms for the acid-base and electrolyte tests.

For a better identification of the major causes of high anion gap metabolic acidosis several mnemonics were developed. The most recent, GOLD MARK with Glycols (ethylene and propylene), Oxoproline, L-lactate, D-lactate, Methanol, Aspirin, Renal failure, and Ketoacidosis, was published in 2008 in Lancet, stressing again the importance of early diagnosis of these disturbances by interpresting acid-base and electrolyte measurements [3].

Even though definitive diagnostic tests are needed for establishng the cause of high anion gap metabolis acidosis (toxicology for methanol and ethylene glycol poisonings, BUN for renal failure, glycemia and ketone bodies in urine for ketoacidosis, lactate for lactic acidosis) the interpretation of the acid-base balance and electrolytes can guide you towards the right diagnosis.

ULTRASOUND IN DEEP AND SUPERFICIAL VEIN THROMBOSIS IN EMERGENCY

FLORIN PETRU ANTON

Medical Clinic I, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

Venous disorders are common problems and consume a significant proportion of the resources available to health care systems.

Venous thrombosis (VT) occurs due to an occlusion more or less complete, more or less extended, a superficial or deep vein occlusion achieved by a thrombus (clot of blood). In VT occurrence are involved a number of risk factors important to follow and to be avoided. The factors are divided into primary factors (resistance to activated protein C, mutation factor II, etc etc.) and secondary factors (trauma that damages the vein, surgery, heart failure, pregnancy etc.).

At the venous valves, one of the systems involved in the progression favouring blood column, column fragment serving to facilitate transit and venous blood against gravity, thrombus forms are most frequently and it is often accompanied by the destruction of these valves. This venous thrombus level migration is ascending with the risk of a pulmonary embolism.

Venous ultrasound is the main investigation of the morphology and functionality of the venous system in emergency, with the advantages of non-invasive nature, reproducibility, accessibility and low cost. These features make venous ultrasound to be extremely useful in emergency services, helping rapid diagnosis TV or exclude them in the differential diagnosis. Ultrasound examination of the veins must be completely (evaluation of venous segments across their path explorer), compared bilateral and left/right. It also requires the use of longitudinal and transverse sections and examining both static and dynamic by the use of the examiner maneuvers challenge. The examination involves a better knowledge of topographic anatomy and vascular appearance from normal Doppler ultrasound examiner. The examiner should highlight the existence or not of obstruction (intrinsic or extrinsic) in the superficial or deep venous bed.

INTERPRETING BLOOD GAS ANALYSIS. BASIC ACID – BASE DISORDERS

GABRIEL BENȚA[1], OANA BRANGA[2], EUGENIA-MARIA MUREȘAN[1,2]

[1]Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]Emergency Clinical County Hospital Cluj-Napoca
*Corresponding author: *Gabriel Benţa, e-mail: gabi.benta@gmail.com*

An **arterial blood gas test** is often used in patients with respiratory disease or in those who are hospitalized in emergency departments or intensive care units. It measures the level of acidity (pH), oxygen and carbon dioxide pressures (PaO2 and PaCO2) and bicarbonate concentration (HCO3) in the blood of the patient. By using the arterial blood gas (ABG) test, one can determine whether the patient is acidotic or not and whether the origin of the disturbance is primarily metabolic or respiratory.

The two main indications of the ABG are: assessment of ventilation and acid-base balance and the evaluation of the tissue oxygenation.

The body's proportion of acidity and alkalinity is referred to as the acid-base balance. There are two abnormalities of the acid-base balance: acidosis (pH < 7.35) and alkalosis (pH > 7.45). Primary acid-base disturbances are defined as metabolic or respiratory, based on clinical context and whether the primary change in pH is due to an alteration in serum $HCO3^-$ or in PaCO2.

A step-wise **approach to interpreting the ABG includes**:

Step 1: Check the pH - Acidosis or Alkalosis?

Step 2: Check PaCO2 and HCO3 levels- In case of a respiratory problem, as the pH decreases below 7.35, the PaCO2 should rise. If the pH rises above 7.45, the PaCO2 should fall. In regards to a metabolic problem, the HCO3 should also increase as the pH increases. Likewise, as the pH decreases, so should the HCO3. Usually, if the values are moving in the same direction, the problem is primarily metabolic.

Step 3: Check the compensation- When an acid-base disorder is either uncompensated or partially compensated, the pH remains outside the normal range. In fully compensated states, the pH has returned to within the normal range, although the other values may still be abnormal. Neither of the systems has the ability to overcompensate. Compensation in metabolic disorders leads to a change in PaCO2. Compensation in respiratory disorders leads to a change in HCO3.

Step 4: If the disorder is metabolic check for the anion gap. It represents unmeasured anions.

Step 5: Check the assessment of oxygenation - PaO2, SaO2.

Step 6: Check other additional analytes - Base Excess/Deficit, Hb, Glu, Na+, K+, Ca2+, Cl-, Lactate.

CRITICAL APPRAISAL OF SCIENTIFIC LITERATURE ON EMERGENCY MEDICINE

SORANA D. BOLBOACĂ

Department of Medical Informatics and Biostatistics, Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca, Romania
*Corresponding author: *Sorana D. Bolboacă, e-mail: sbolboaca@umfcluj.ro*

Staying up-to-date with the latest scientific literature is mandatory for any medical specialty to assure the best medical decision to any individual patients. Understand the principles of critical appraisal and skills in this regards is recognized as mandatory in early training of medical students as well as part of emergency medicine curriculum content according with The International Federation for Emergency Medicine [ ]. Formal education in critical appraisal is under the frame of evidence-based-medicine is done on a small number of programs [ ]. Emergency scientific literature must be critically read to identify the strengths and weaknesses of the study and thus to assess the validity (is the finding true?) and the generalizability (can the findings be apply elsewhere?) of research findings [ ]. To critical appraise the emergency scientific literature knowledge on both research methods and statistical analysis are needed to answer three main questions: Is the study valid? How I interpret the reported results? Can I apply these results to my patient? The main aspects that need to be evaluated are clearness of research question, if the design was appropriate, blinding and randomization procedures, subjects follow-up, and standardization of randomization procedure. Hundred reporting guidelines are reported in scientific literature (see for example the EQUATOR network available at http://www.equator-network.org/) are used to as basic information for development of critical appraisal checklists (http://www.cebm.net/critical-appraisal/ or http://www.casp-uk.net/#!checklists/cb36). Online tools were also implemented to guide the physicians in appraisal of scientific literature (http://l.academicdirect.org/Medicine/Informatics/Evidence_Based/CAT/) [-].

VICTIM SURVIVES CARDIAC ARREST FOLLOWING ELECTRICAL INJURIES – CASE REPORT

IOANA BOȚA[1], DAN CURTA[2]

[1]Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]Emergency Medicine, UPU-SMURD Cluj-Napoca, Romania
*Corresponding author: *Ioana Boța, e-mail: ioana.bota93@gmail.com*

Introduction. Electrical injuries, although relatively uncommon, can be fatal to the human organism, because of their large spectrum of effects, from minor lesions to devastating multisystem injury, including death. Electrocution usually occurs in occupational settings, for adults, but they can also appear at home, especially involving children.

This following report presents a case of a young adult with cardiac arrest after being electrocuted at work.

Case presentation. A 26 years old male, was found unconscious, following electrical injuries at his work place, according to eyewitnesses. At the primary evaluation the patient presents obstructed airway (abundant salivary secretions), gasping, electrical activity, but no central pulse. In the given circumstances, the non-shockable rythm standard protocol was initiated. The airway was cleared, the cervical spine was protected, followed by endotracheal intubation with mechanical ventilation and peripheral vascular access. On reevaluation, ventricular fibrillation and afterwards torsades de points were detected, switching to shockable rhythm standard protocol (6 shocks in total), as for the torsades de pointes, Magnesium Sulfate was administered. After approximately 20 minutes of resuscitation, the patient presents spontaneous respiration, sinus rhythm, with a ventricular frequency of 83 b/min, blood pressure of 120/74 mmHg, GCS - 3 points and no signs of electrical burns; he was immediately transported to the emergency department.

At the emergency department the patient's state was stationary. Monitorization, mechanical ventilation and sedation were continued. Blood tests were in normal ranges. A CT scan for skull, cervical spine, thorax and abdomen was performed, showing no significant changes.

The patient was transferred to an ICU unit, with favorable neurological outcome, the patient being extubated after 3 days and discharged after approximately one week.

Conclusion. This case shows that in victims of cardiac arrest from electrocution there are higher chances of success, with long-term survival, if the resuscitation is initiated immediately.

Particularities. We report a case of a patient that has survived a cardiac arrest, without any neurological damages, following an electrocution, despite the fact that he was in a critical condition, going through multiple cardiac rythms during resuscitation. Also he didn't present any electrical burns.

PROPHYLAXIS OF HYPOTHERMIA FOR NEWBORNS DURING TRANSPORTATION AND THE IMPORTANCE OF NEOHELP PROTECTIVE FOIL (VYGON)

VERONICA OBADĂ[1], CLAUDIA CHIRA[2]

[1]Neonatology Section, Clinical Emergency Hospital in Cluj, Romania
[2]Avant Maris Medical, Bucharest, Romania
*Corresponding author: *Veronica Obadă, e-mail: veronicaobada82@gmail.com*

One of the multiple complications occurring with a newborn during transportation is hypothermia. Hypothermia represents a major factor of morbidity and mortality for all categories of newborns, but especially for premature newborns.

A newborn is hypothermic when the values of rectal temperature (central) are less than 36.5°C. According to World Health Organization, the hypothermia of a newborn can be classified as follows: ***low*** (36.0-36.4°C), ***average*** (32.0-35.9°C) or ***severe*** (bellow 32°C).

The categories of newborns subject to hypothermia are: premature newborns, newborns with low birth weight, newborn with intrauterine growth restriction, newborns requiring long CPR procedures, newborns with sepsis, newborns with abdominal wall defects, hypotonic newborns due to mother's medication or anesthesia.

The mechanisms through which newborns lose heat are the following: radiation, evaporation, conduction and convection.

Hypothermia has many harmful effects, such as: respiratory distress, hypoxia, metabolic acidosis, hypoglycemia, disseminated intravascular coagulation, pulmonary hemorrhage, shock, intraventricular hemorrhage, sinus bradycardia, increase of neonatal mortality rate.

Hypothermia during transportation can be prevented by using Neohelp polyethylene protective foil. Neohelp is a transparent and sterile foil that can be used both during the transportation of the newborn from the birth room as well as during inter-clinic transportation. Neohelp is especially used for transportation of newborns with very low birth weight.

In conclusion newborns, especially premature newborns having very low birth weight risk hypothermia and require special care and strict preventive measures.

ALLERGY AND ANESTHETIC DRUGS

MIHAELA COCIŞ, CRISTINA PETRIŞOR, NATALIA HAGĂU

2nd Anesthesia & Intensive Care Department, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
*Corresponding author: *Mihaela Cociş, e-mail: mihaela_cocis@yahoo.com*

Induction of general anesthesia represents a critical moment when the patient is exposed to a high number of drugs in o short period of time. During this time the risk of developing an allergic reaction is high. Allergic reactions are unpredictable adverse effects linked to immunological mechanisms. Immediate non-allergic hypersensitivity represents an adverse reaction to a drug, clinically similar to allergic reactions without being linked to immunological mechanisms.

The immediate type I hypersensitivity reaction in allergic patients is a specific immune response to an allergen mediated by the interaction between specific IgE and effector cells- mast cells and basophil. In our case the allergen is represented by the drug or by a specific component of the drug [1].

Clinical manifestation of perianesthetic drug reaction usually appear immediately after the induction of anesthesia. Delayed reactions (up to one hour or more) usually are caused by other agents [1]. Four grades of manifestation are described- grade I: cutaneous signs such as erythema, uritcaria, angioedema; grade II: cutaneous signs, hypotension, tachycardia, cough, difficulty in inflating the lungs; garde III- life threatening reactions: collapse, arrhythmias, bronchospasm; grade IV: cardiac and/or respiratory arrest. The absence of cutaneous signs doesn't exclude the allergic reaction [1].

Drugs responsible for type I hypersensitivity reaction during anaesthesia are neuromuscular blocking agents (NMBA) which account for 63% of reactions, latex 14%, hypnotics 7%, antibiotics 6%, plasma subtistutes 3%. Other substances that may induce an anaphylactic reaction during anaesthesia include- anti-inflammatory drugs aprotinin, clorhexidine, papain, heparin, methylene blue [1]. Anaphylactic reaction to NMBA may appear on first exposure and suxamethonium is most frequently implicated. Cross reactivity between different muscle- relaxants is frequent due to their particular chemical structure which include the presence of quaternary ammonium [1].

The diagnosis of an allergic reaction is a combination of clinical signs, clinical history, measurement of mediators and the performance of skin tests and laboratory tests. The challenge test for anesthetic drugs is not suitable. Biological investigation requested immediately after the reaction, which support the diagnostic of the allergic reaction, include the assay of serum tryptase levels and plasma histamine levels.

Drug allergies are important aspects of iatrogenic pathology and the morbitity and mortality with these syndromes are often underestimated [2]. It is important to be aware of these reaction in the Emergency Department taking into consideration the medical and legal consequences.

DIAGNOSTIC VALUE OF DYSPNOEA IN THE EMERGENCY DEPARTMENT CLINICAL PATHWAY

RALUCA MARIA FINTA[1], LOREDANA TULAI[1], CRISTIAN CORNELIU URSU[1], GABRIELA SUSANA GAGU[1], IOANA MARGARETA CUCERZEAN[2]

[1]SCJU Cluj – Napoca, UPU – SMURD, Cluj Napoca, Romania
[2]SJU Zalau, UPU Zalau, Romania
*Corresponding author: *Raluca Maria Finta, e-mail: ralucaciolpan@yahoo.com*

Dyspnoea is one of the main reasons why patients come to emergency departments. Statistics indicate that the main cause why 3.5% of the patients are registered in the emergency services is dyspnoea.8 If other symptoms associated with dyspnea (cough, chest discomfort etc) are taken into account, the proportion of patients from the emergency department accusing dyspnoea increases to 7.6%.[8]

Dyspnoea is not a disease, it is a term used to describe a subjective feeling of respiratory distress, of variable intensity. Patients describe dyspnoea in many different ways: shortness of breath, air hunger, increased respiratory effort, choking, chest pressure or inability to breathe deeply. How it is perceived is the result of the interaction of several factors, such as physiological, psychological, social and environmental ones. Dyspnoea can be caused by many diseases, the most common being cardiac and pulmonary issues. The distinction between lung and heart diseases which also involve dyspnoea is not always clear. Up to one third of the patients with dyspnoea present a plurifactorial etiology. The clinical history and examination are the starting points for establishing the diagnosis. Some tests, such as complete blood count, determination of D - dimers and BNP / NT pro-BNP, arterial blood gases evaluation and X – rays are useful in certain specific clinical diagnosis. There is no specific biological marker or a paraclinical test that can be used for the differential and positive diagnosis of pathologies, nor to determine the appearance and development of dyspnoea.

Dyspnoea may be caused by a multitude of pathologies [8,9,59,87], some of them not life-threatening, while others, however, especially cardiovascular diseases, can lead to death quickly.[3,87] To recognize life-threatening situations as quickly as possible, it is recommended the rapid assessment of the pacient by using the ABCDE algorithm - airway, breathing, circulation, neurological status, exposure to environmental factors 4-8. This approach allows early recognition of a critically ill patient and the rapid establishment of the effective treatment, providing time to formulate a definitive diagnosis and targeted treatment application [4,6].

This algorithm targets doctors, specialists and residents in emergency medicine, who work in emergency units and emergency departments and also medical doctors of other specialties that are engaged in the same type of health facilities.

This algorithm aims to present a scheme of diagnosis for diseases that most frequently cause dyspnoea appearance. Using the algorithm will provide a tool by which the practitioner can identify pathologies manifested clinically by breathlessness and represent an immediate danger to patients' lives. Clinical diagnostic algorithm must be integrated by the emergency doctor in the general context of patient presentation, but does not replace clinical judgment and experience of the doctor.

CASE REPORT: SUCCESSFUL TREATMENT OF PULMONARY THROMBEMBOLISM IN A MALE TEENAGER

GABRIELA GAGU

Emergency Hospital Cluj-Napoca, Romania
*Corresponding author: *Gabriela Gagu, e-mail: gabriela.gagu@yahoo.com*

Introduction. Pulmonary embolism (PE) is an uncommon, but potentially fatal disease in children. Most children with PE have underlying clinical conditions. The clinical presentation is often subtile or masked by the underlying clinical condition. Diagnostic and also therapeutic strategies for PE in children are mostly extrapolated from studies in adults. Pulmonary angiography is still the gold standard for diagnosis. The choice of treatment depends on the clinical presentation of the patient. Anticoagulation is the therapy of choice for children, however thrombolytic therapy can be considered for patients who are hemodynamically unstable (1).

Case report. A 14-year-old male teenager presented in a lower rank emergency department with chief complaints of pain and swelling in the lower right extremity after minor trauma (he had fallen three days prior to the examination). At that point an ultrasound was performed by the on call emergency physician with no competence in soft tissue or Doppler ultrasonography, with a high probability of deep vein thrombosis. The next step was the patient's transfer to a higher rank hospital with pediatric emergency department to establish the diagnosis and start treatment. On admission in our emergency department the patient was febrile (38.4 °C), with a blood pressure of 133/75 mmHg, heart rate of 115/min, normal breath sounds with a respiratory rate of 20 breaths/min and oxygen saturation in room air was 98%. In this first stage he received antipyretics and a Doppler ultrasound was repeated by the radiologist on call, who confirmed complete thrombosis of the right femoral vein, popliteal vein and saphenous vein. Biological findings revealed within range haemoglobin level, normal white cell count and platelets, normal renal and liver function tests, the C-reactive protein was raised at 5.1 mg/dl (normal: <0.8 mg/dl), and elevated D-Dimer levels of 3860 ng/ml. Chest radiograph and EKG were interpreted as normal. Considering the Wells and Geneva scores a high probability of PE was established and the patient was transferred to the radiology clinic to perform an pulmonary angiography, which confirmed bilateral embolism (massive on the left side), therefore the patient was admitted to the cardiology ward to start anticoagulation. After the initial strategy of anticoagulation, three days in, the chosen therapy was thrombolysis with positive outcome regarding the PE, not the same with the deep vein thrombosis. The patient tested positive for congenital prothrombotic disease. Patient was scheduled for follow-up in the next month.

Discussions. There is ongoing debate about the use of thrombolysis in hemodynamically stable patients with PE and right ventricular dysfunction, a risk factor for poor outcome. Although several case reports and small case series reported successful thrombolysis in children, large clinical trials assessing the efficacy and safety of thrombolytic therapy in children are lacking due to low number of children requiring thrombolysis (2).

CLASSIFICATION OF DENTAL EMERGENCIES

ÁGNES KOLUMBÁN

Dental Prosthetics Department, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
*Corresponding author: *Ágnes Kolumbán, e-mail: dr.agnes.kolumban@gmail.com*

In case of multiple trauma or to make a correct differential diagnosis, general practitioners should know the symptoms and treatment plan of dental emergencies. This presentation's aim is to show a structured classification of emergencies in the oral region, and to point out what are the recommended therapeutic actions in each situation.

BURNS – DIAGNOSIS AND STADIALIZATION

GEORGE-VICTOR LASCU[1], ALEX ZLIBUȚ1, RADU SEICEAN[2]

[1]Faculty of Medicine, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]1st Surgical Clinic, SCJU, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

Burns are damage to the skin caused by heat. Most common causes comprise heat (liquid, solids or fire), electricity, chemicals, friction and radiation. They can range from a minor injury with mild symptoms like minor pain, dry texture, red or peeling skin to severe lesions that need immediate medical care to prevent disability, deformity or even death. The elderly and the children have a higher risk of complication and death from severe burns.

Pathologically, at a prolonged temperature of 40-45 degrees Celsius, occur mild cell damage and protein denaturation; temperatures over 60 degrees develop complete cell necrosis and structural alteration of the proteins. The lesion comprise three zones (Jackson): 1. coagulation (central), 2. stasis, 3. hyperemia (periphery) and edema.

The classification of burns regarding clinical modifications and profoundness include 4 main degrees. First degree involves the epidermis, with redness, dry texture of the skin, moderate pain and healing time (HT) of 5-10 days. Second degree burns includes: superficial partial thickness - it extends to papillary dermis with redness and clear blisters, moist texture of the skin, very painful and HT less than 3 weeks – and deep partial thickness – extends into reticular dermis with red blisters, fairly dry texture of the skin, mild pain and discomfort sensation and HT 3-8 weeks. Third degree extends trough entire dermis with stiff and brown or white appearance, leathery texture of the skin, painless and HT of months and/ or incomplete. Fourth degree extends into underlying fat, muscle and bone, black appearance, charred with eschar, dry texture of the skin, painless and requires excision.

Burn severity can be determined by quantifying the total body surface area affected by partial or full thickness burns as a percentage using methods like Wallace rule of nines (each arm 9%, each leg 18%, each of the following: head, chest, abdomen 9%, entire back 18% and the groin 1%).

In conclusion, burns represent a major emergency problem, with high prevalence. Its accurate and rapid diagnosis is imperative for an efficient management, treatment and for a positive prognosis.

PREHOSPITAL MANAGEMENT OF SHOCK

EDITH MESZAROS[1], DAN CURTA[2]

[1]Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]Emergency Medicine, UPU-SMURD Cluj-Napoca, Romania
*Corresponding author: *Edith Meszaros, e-mail: edi.editzi@yahoo.com*

The shock is a complex pathological entity which presents itself having a high mortality rate despite recent advances. Immediate diagnosis and treatment interventions are accountable for lowering the mortality threshold. This short presentation succintly illustrates the up-to-date guidlines of the main shock entities and their treatment in prehospital settings.

Definition & Classification. Shock is ultimately defined by the oxygen supply-and-demand disbalance thus the demand exceeds the supply which leads to end-organ dysfunction. The classification is based on ethiopathogenical mechanisms and comprises the four categories: hypovolemic, cardiogenic, distributive, obstructive.

Recognition. Gathering information from multiple sources facilitates diagnosis: patient history, vital signs, physical examination (temperature, heart rate, systolic and diastolic blood presure, pulse pressure, mean arterial pressure, neurological status, skin, capilary refill, cardiovascular, respiratory, digestive system, urinary flow rate, metabolic constants), other markers (shock index, blood lactic acid levels, age).

Prehospital management. The early stage of treatment is the same regardless of shock types: A (open and release airway), B (early endotracheal intubation if needed; mechanical ventilation if shock is associated with respiratory disorders), C (fluid therapy). Particular treatment for each shock mechanism is then adressed. Hypovolemic shock is approached by fluid therapy while stopping the cause of the blood loss with the goal of achieving a SBP of 80-90 mmHg. Cardiogenic shock is best managed by administering of inotropes and vasopressors, while mentaining a cautious approach towards fluid therapy. The goal is here quantified by achieving a mean arterial pressure > 65mmHg. Aggresive fluid therapy is recommended against the septic shock. Should the mean arterial pressure > 65mmHg goal not be met, vasopressor administration is to be considered. Because of its different underlying mechanism, maintaining the blood pressure of the critical level in the anaphylactic shock is best done by using fluid therapy in combination with adrenaline.

Early recognition of shock and early administration of a specific treatment, based on the ethiopathogenical mechanisms of different types of shock, increases shocked patients survival rate.

CERVICAL SPINE INJURIES IN CHILDREN - ASSESSMENT ALGORITHM FOR EMERGENCY SERVICES

DANIELA MITROFAN

Emergency Unit, Emergency Clinical Hospital for Children Cluj-Napoca
*Corresponding author: *Daniela Mitrofan, e-mail: danamitro@yahoo.com*

Cervical spine injury (CSI) is a controversial chapter in the management of trauma patients. Delay in diagnosis and immediate stabilization may have serious neurological consequences.

There are significant differences between developed and developing countries, in the incidence, prevalence and causes of CSI.

In a multicenter cohort study achieved in Europe over 10 years, 250 584 patients aged ≥ 16 years were enrolled and 3.5% had cervical spine injuries; 2.3% had fractures / dislocations of cervical spine, without associated neurological damage, and 0.8% had spinal cord injuries associated or not with fractures / dislocations of cervical spine.

In Romania, epidemiological data is limited. The annual incidence of spinal injuries reported for the period 1975-1993 was 28.5 to 1,000,000 inhabitants; out of which 57.2% had cervical spine injuries. A retrospective and prospective study conducted during 2005-2009 in the Department of Neurosurgery Iasi, reported a prevalence of CSI of 4 cases per 100,000 inhabitants in the region Moldova.

The total social cost in society incurs for treatment and rehabilitation of patients with spinal injuries is enormous, as is the emotional and psychological impact on both victims and their families.

Assessment and immediate treatment of the child with suspicious CSI is a challenge for emergency medicine. Overzealously or fear of being wrong may lead to unnecessary examinations and prolonged immobilization, often associated with side effects such as: pain, sores lesions, airway obstruction, ventilation disorders, exposure to ionizing radiations.

Finally, these recommendations are but one option that can be considered. Deciding whether to apply them or not depends ultimately on every physician's applied judgment.

TRANSFERRING THE CRITICALLY ILL CHILD- DIFFICULTIES AND RISKS

DANIELA MITROFAN[1], CRISTIAN BOERIU[2], SEBASTIAN TRANCĂ[3], CRISTIAN URSU[4], AUREL CRIȘAN[5], SIMONA ȘERBAN[6]

[1]Emergency Unit, Emergency Clinical Hospital for Children Cluj Napoca
[2]Emergency Unit, Emergency Clinical County Hospital Târgu Mureș
[3]Anestesiology and Intensive Care, Clinical County Hospital Cluj
[4]Emergency Unit, Clinical County Hospital Cluj
[5]Emergency Unit, Spitalul Județean de Urgență Alba
[6]County Ambulance Service Cluj
*****Corresponding author**:** *Daniela Mitrofan, e-mail: danamitro@yahoo.com*

The objective of this workshop is to identify the main difficulties and risks that may occur during the transfer of a critically ill child into a higher hospital level. Once acknowledged, the task will then be to propose solutions based on the experience and needs of healthcare professionals working in hospital and pre-hospital emergency services.

The workshop centres on the debates regarding the difficulties one has, when transporting a critically ill child, especially during transfer to a level 1 hospital, with supportive care.

Problems encountered are multiple, both before and during transport. Anticipating a patient's degradation is a key element in organizing the transfer of critically ill child, taking into account pathologies coupled with the occasionally troublesome management issues.

An essential component when talking about transferring a critically ill patient is knowledge of the current legislation but a national guideline for transferring the critically ill child will be mandatory.

EMERGENCY MANAGEMENT OF HEMORRHAGIC STROKE. A ROMANIAN PERSPECTIVE ON POSSIBLE FUTURE IMPROVEMENTS

EUGENIA – MARIA MUREȘAN[1,2], ALEXANDRA GĂVRE[1], SORIN MIHAI LĂCAN[2,3], LĂCRĂMIOARA PERJU-DUMBRAVĂ[1,4], ADELA GOLEA[1,2]

[1] Emergency Clinical County Hospital Cluj-Napoca
[2]Department of Emergency Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca
[3] Emergency Clinical Children's Hospital Cluj-Napoca
[4]Department of Neurology, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca

Introduction. Hemorrhagic stroke continues to be a challenge for any physician treating critical patients, as very few interventions have been validated to significantly improve the outcomes of these patients. Intracerebral hemorrhage (ICH) is a subtype that accounts for 10% to 15% of all strokes, with its incidence not having changed between 1980 and 2006[1], yet expected to double by 2050[1]. Nontraumatic subarachnoid hemorrhage (SAH) is another type of hemorrhagic stroke, mainly produced by the rupture of a cerebral aneurysm.

One focus during the latest decades regarding ICH has been a better understanding of the condition's risk factors, not only for etiologic insights, but also for identifying the modifiable ones that can be used for prevention and treatment strategies[1]. The major risk factors mentioned by the literature[1,3,4]are male gender, increasing age, arterial hypertension, excessive alcohol consumption, smoking, diabetes mellitus, poor diet, obesity, antithrombotic drugs.

The latest guidelineson the topic of ICH[3,4] underline the need of a combative initial management, as further neurologic alterations develop during the first hours after the onset of the parenchymal bleeding and long-term outcome remains poor. General measures include rapid neuroimaging, intensive lowering of systolic blood pressure (SBP), appropriate coagulopathy treatment and prevention of venous thromboembolism, close monitoring of glucose and temperature, treatment of clinical seizures, surgical removal of the bleeding when indicated and multidisciplinary rehabilitation.

In spite of all these, the 1-month case fatality is of 30 – 48% in low-/middle-income countries[5] and ICH's additional costs are estimated at 30 – 45.000 EUR/survivor every year[6].Only one in five survivors of spontaneous ICH will be functionally independent at 1 year[7]. The progression of the primary hemorrhagic stroke has been shown to occur more often than in the ischaemic ones[8], the early deterioration leading to a poorer outcome[9].

The literature is rather scarce on the Romanian particularities of hemorrhagic stroke and ICH, with 20 relevant titles, abstracts and articles being found on asearch on the largest databases. Encouraging enough, one university hospital has been involved in a prospective study on assessing the significance of biomarkers in hematoma growth in ICH[10], 3 other centres have been part of ENOS trial1[1,12] and a neurosurgery centre has been part of STICH II trial[13]. Risk factors have been assessed in a multicentre prospective study[14].The ICH guideline endorsed by the Romanian Society of Neurology dates from 2009[15].

The aim of our retrospective study was to gather data on whether the Romanian hemorrhagic stroke and ICH patients diagnosed in our Emergency Department (ED)from Cluj-Napoca have any distinct particularities and to which extent the latest international guidelines are being followed by the emergency physicians. It is mutually desired by the local emergency and neuroscience communities that prospective studies would be outset in order to improve the acute management and risk stratification of this burdensome condition.

Methods. Our study is a retrospective descriptive one investigating the management of hemorrhagic stroke in the prehospital setting and the ED of Cluj-Napoca, Romania during a 12 months' time frame, from May 1st 2015 to April 30st, 2016. We have run a literature search on 5 electronic databases (PubMed, Scopus, Springer, Science Direct and Web of Science) by the terms of "h(a)emorrhagic stroke", "intracerebral hemorrhage", "Romania" in order to have a better understanding of the local situation. We had access to open access articles or institutional access via Enformation platform.

With the help of the ED registrar, diagnosis reports have been generated for each month with the use of internal software Atlas med® (designed by GAMA IT). By using the Romanian search terms of "AVC hemoragic", "accident vascular hemoragic" and excluding trauma patients with subsequent ICH and SAH, 99 charts have been identified as having an ED diagnosis of hemorrhagic stroke. The research team had then gathered information from the ED and prehospital medical charts regarding demographics, the onset of the condition (time and symptoms), medical history of the patient and risk factors, vital signs and their evolution, physical examination in the ED, paraclinic parameters, treatments, imagistics and the department of referral. Prehospital charts were considered as first medical contact (FMC) when patients arrived by

ambulance in the ED and data extracted registered as initial vital signs due to the fact that the Romanian prehospital system dispatches physicians and nurses on a regular base to 112 medical alerts.

As the statistics needed for this study are mainly descriptive, a Microsoft Excel database was created and further statistical analyses were made with this software. Comparisons of our findings have been made with the general knowledge on the analysed issues and conclusions have been drawn on the prehospital and ED management of hemorrhagic stroke patients in the setting of Cluj-Napoca Emergency County Clinical Hospital, a multiple locations hospital (ED, CT scan, neurology and neurosurgery departments all function in distinct building, with 2.2 km by ambulance between the ED and Neurology/ Neurosurgery Clinics).

No specific informed consent was obtained from the patients included in the study, as the medical information was collected anonymously and the aim is merely observational and analytical. Upon arrival in the ED, patients are required to sign an informed consent for investigations, medical procedures and intravenous treatment given, along with assuming full responsibility of the truthfulness of personal medical history they are providing.

Results. Hemorrhagic stroke represents 0.17% of the ED presentations in the time period investigated, with 3.33% of the acute hemorrhagic strokes being SAH. The baseline characteristics of the patients included in the study show us that most of the patients have more than 65 years old and are also associated with several comorbidities, such as hypertension, diabetes and cardiac disease (Table 1).

TABLE 1. BASELINE CHARACTERISTICS OF THE STUDY POPULATION

NUMBER OF PATIENTS	99
AGE (INTERVALS %)	
• 18 – 30	0
• 31 – 45	1 (1.01)
• 46 – 65	32 (32.32)
• > 65	66 (66.67)
SEX (MALE %)	50 (50.51)
URBAN/ RURAL BACKGROUND (URBAN %)	53 (53.54)
SYSTOLIC BLOOD PRESSURE ON FMC (MM HG)	172.66 (37.3)
GLASGOW COMA SCALE ON FMC (/15)	12.42 (3.53)
HISTORY OF PREVIOUS STROKE	
• ISCHEMIC (%)	13 (14.77)
• HEMORRHAGIC (%)	10 (11.4)
• TIA (%)	2 (2.3)
HISTORY OF HYPERTENSION (%)	67 (77.01)
HYPERTENSION TREATMENT (%)	
• 1 ANTIHYPERTENSIVE (%)	25 (32.5)
• 2 ANTIHYPERTENSIVES (%)	12 (15.6)
• 3 OR MORE (%)	3 (3.9)
• NO COMPLIANCE TO TREATMENT (%)	8 (9.2)
HISTORY OF IHD (%)	11 (12.5)
HISTORY OF PAD (%)	10 (11.36)
HISTORY OF AF (%)	15 (17.05)
HISTORY OF DIABETES MELLITUS (%)	18 (20.45)
HISTORY OF HYPERLIPIDAEMIA (%)	5 (5.7)
HISTORY OF OBESITY (%)	14 (15.91)
HISTORY OF ANTICOAGULANT USE (%)	13 (14.94)
HISTORY OF PREVIOUS ANTIPLATELET USE (%)	16 (18.4)
HISTORY OF RENAL INSUFFICIENCY (%)	3 (3.41)
HISTORY OF LIVER DISEASE (%)	3 (3.41)
CANCER (%)	5 (5.7)
SINUS RHYTHM ON ECG (%)	56 (73.68)
ATRIAL FIBRILLATION ON ECG (%)	20 (26.32)
SMOKING, CURRENT (%)	5 (5.7)
ALCOHOL CONSUME (%)	3 (3.41)

Abbreviations: AF, atrial fibrillation, ECG, electrocardiogram, IHD, ischemic heart disease, PAD, peripheral artery disease, TIA, transient ischemic attack, FMC, first medical contact. Data are number (%) or mean (SD)

TABLE 2. PROPORTION OF MISSING DATA IN MEDICAL RECORDS

ITEM	PROPORTION OF MISSING DATA	
MEDICAL HISTORY AND RISK FACTORS (%)	11.11	
ONSET TIME AND SYMPTOMS (%)	2.02	
TIME OF ONSET (%)	38.4	
VITAL SIGNS ON FMC/ FOLLOW-UP AT 1H		
• GCS (%)	14.14	90.9
• SBP AND DBP (%)	4.04	38.4
• HR (%)	21.21	40.4
• SPO2 (%)	21.21	44.44
• T°C (%)	77.8	97.97
FINDINGS ON CLINICAL EXAMINATION (%)	2.02	
LAB TESTS (%)	15.15	
TREATMENTS OR MEDICAL PROCEDURES (%)	3.03	
DEPARTMENT OF REFERRAL (%)	3.03	

Multiple charts contained incomplete information on various items (Table 2); adjustments have been made when calculating proportions. Two patients had been referred from other emergency departments and were sedated upon arrival in our ED, making physical examination irrelevant.

The mean time from onset of the symptoms until the FMC was 10.43 h (SD 16.7 h). One patient had presented the neurological alterations for 2 weeks, thus considered as missing information on time of onset. The study shows that in more than 50% of patients, the time interval from the onset of the condition until FMC could not be documented (Fig. 1).

The most frequent onset symptoms have been hemiparesis (46.39%), altered mental status (45.83%, with 16 patients having a GCS ≤ 8), mixed aphasia (34.02%), dysarthria (28.87%) and headache (19.6%). One female patient aged 53 accused thunder clap headache with sudden unset 2h previously to the ED presentation; her mental status altered during the first hour in the ED; she had a family history of cerebral aneurysms and was diagnosed herself with SAH due to a ruptured basilar aneurysm. In the ED, the physical examination confirmed the most frequent alterations as being altered mental status (47), hemiparesis (43), mixed aphasia (40) and dysarthria (26).

On FMC, 38 patients had a SBP ≥ 180 mmHg, 12 of them having a SBP ≥ 220 mmHg; 17.72% were tahycardic (HR > 100bpm), 10.13% were bradycardic (HR < 60bpm) and 16.6% had peripheral saturations of oxygen < 94%; 2 patients had fever.

Blood samples were drawn from 83 patients for various lab tests. The results on complete blood count, creatinine, glucose, GOT, coagulogram are incompleted, referring only to the patients who had a confirmed imagistic diagnosis of hemorrhagic stroke (Tabel 3). Out of the 83 patients investigated, 37 (44.58%) had the blood samples collected within the first 6h from the onset of the condition, with 18 more (21.69%)in the time frame of 72h.

FIG 1. DISTRIBUTION OF PATIENTS ON TIME INTERVALS FROM ONSET UNTIL FMC

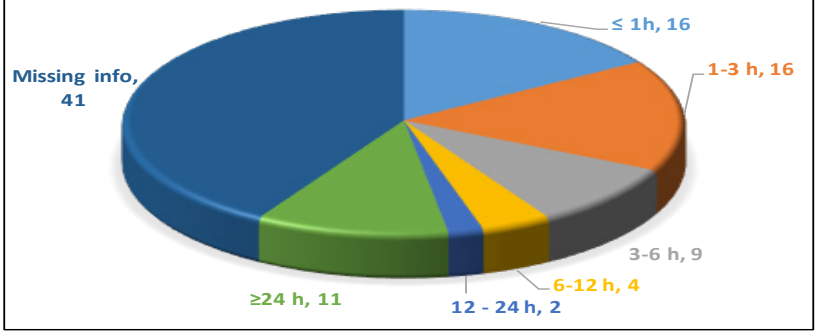


TABLE 3. LAB RESULTS OF HEMORRHAGIC STROKE PATIENTS

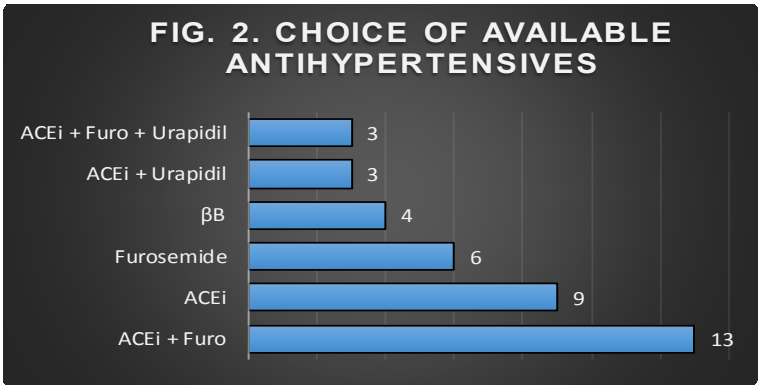
	MEAN VALUE	SD	% OF PATIENTS WITH VALUES OUTSIDE THE LABORATORY REFERENCE INTERVALS	
			↓	↑
GLUCOSE (MG/DL)	153.01	48.7	0	94.44
CREATININE (MG/DL)	0.97	0.35	16.66	25
GOT (U/L)	34.29	32.55	-	11.77
LEUKOCYTES (/ML)	9958.38	4370.9	2.7	45.95
PLATELETS (*10⁹/L)	228.29	82.5	1.35	1.35
INR	1.41	1.14	0	30.44
APTT (SEC)	29.07	8.81	60.32	7.94
PT (SEC)	15.56	8.49	35.29	35.29

Cholesterol profile (total, LDL) and fibrinogen were not performed on any of these patients. Troponin (cTnT) was performed on 7 patients for investigating a cardiac event (8.43% of investigated patients, mean 0.205 and 42.86% of values larger then 0.02). C reactive protein (hsCRP) was performed on 4 patients (4.82%) with

hemorrhagic stroke, with 2 values > 10 mg/L. D-dimer was performed in only one patient.

CT scans were performed on all 99 patients, with the results including 13 diagnoses of non-hemorrhagic stroke diagnosis. 78 patients presented 100 ICH bleeding locations, 42 of the sites involving deep structures locations; 8 bleeding sites involved the brainstem.A total of 17 patients had SAH, 12 in association with ICH and 1 in association with a subdural hematoma; 6 more diagnoses of subdural hematoma were made, 3 patients presented isolated subdural hematomas and 3 more in conjunction with ICH. Two diagnosis of cerebral aneurysms have been made, both in female patients aged 46 to 65 years old. Only 33 of the scans had 3-dimensions measurements of the bleedings and no number calculation of the volume was expressed on any scan. Mass effect was described in 46 patients, perilesional oedema in 63 and intraventricular hemorrhage in 32 patients (41.03%).

Out of the 73 hypertensive patients on FMC (SBP > 140 mmHg), 61.64% received BP lowering medication. The most frequently used antihypertensive therapy in our department is the combination of furosemide and angiotensin-converting-enzyme inhibitor (ACEi) (Fig. 2). Consequently, the mean SBP after 1h was 156.78 mm Hg (SD 34.76), a 9.2% overall reduction, with yet 44 patients still having SBP > 140 mmHg (60.27% of all hypertensive patients). Osmotherapy (mannitol) was given to 27 patients (30.68%) and in terms of coagulopathy correction, only 2 patients received Vitamin K.



In terms of referral, all patients had benefited from a neuro(surgery) consult. From the 99 patients included in our analysis, 22 were admitted on the neurosurgery ward, 3 more on an ICU ward and 46 on the neurology ward from our hospital; 1 patient, considered out of resources, remained in the ED and20 patients were referred to other hospitals after the specialty consults.

Discussion. This study is the first attempt to audit the acute management of hemorrhagic stroke in our department in order to identify areas that could undergo improvement and compensate the difficulties of a multiple locations hospital, with emergency CT scans occasionallyoutsourced to other institutions when having maintenance problems. Also, it would of interest to determine is our patients would be suitable candidates for prospective or interventional studies in order to better their outcomes.

The most regrettable limitation of our study is the lack of information on risk factors and medical history of the patients; furthermore, patients' vital signs are not constantly documented, making it difficult to assess the effect of the given treatments. The setting of our ED is a particular one, as previously mentioned, thus making it difficult to extrapolate our results to other Romanian emergency departments, who have easier access to CT scans and neurology and neurosurgery consults for diagnosisand follow-up of the patients.

Compared to the latest guidelines[3,16], our study population presented the same risk factors: hypertension, stroke and diabetes being the most frequent ones, whilst the total of anticoagulants and antiagreggants users would place them on the second position.The male predominance was lower than in other studies17and the aneurysmal SAH occurred in females aged 46-65; the sample study is considerably small and no generalisations can be made on these topics.An interesting future consideration for our department would be on whether the incidence of ICH varies in the Rroma minority, a supposed Indian originating population, as ICH is known to have ethnical variations and higher incidence in Asian and Indian populations[1,18]. There is no practice of assessing the severity of the neurological event by National Institute of Health Stroke Scale or something similar, GCS being the only one deployed by the emergency caregivers.

Early imagistics can occasionally be a challenge in our department and acute neurological patients need to be transferred by ambulance to other CT scans locations with the ED diagnosis of a suspicion of hemorrhagic stroke. More thorough interpretations are needed, as the volume of the ICH is needed for imagistic follow-up and hematoma expansion is also independently associated with a poor outcome[8]. Intraventricular hemorrhage is another independent factor associated with poor outcome[3] and its incidence in our study population is similar to the one listed by AHA/ASA guidelines, 41.03% versus approximately 45%. The predominance of deep structures bleeding sites can be correlated with hypertension.

In terms of compliance to the latest international guidelines, antihypertensive medication has been given to more than 60% of the hypertensive patients, yet almost 2/3 failed to achieve SBP lower than 140 mmHg after the first hour spent in the ED, even though aggressivereduction of BP is considered to impose a lower risk on hematoma expansion[2]. Also, the

mean value of SBP on FMC in our population has a 3.82% increase than other ICH study populations[18], raising the question of population's awareness on the risks and consequences of untreated hypertension. ACEi alone or in various combinations have been the antihypertensive of choice, bearing in mind that our department does not have oral/ iv nimodipine/ calcium channel blockers and that metoprolol is the only available iv βB. Hypoglycaemic medication was not used on any patient, although 94% of the ICH patients had elevated glucose levels; in our multi locations hospital, it is difficult to avoid hypoglycaemia during transportation of the patient, the main concern being the prevention of hypoglycaemia. Recommendations such as DVT prophylaxis by intermittent pneumatic compression are not part of the standard care in our ED and the only available reversal agent for coagulopathy is Vitamin K. Transfusion of blood products is only indicated in trauma patients or those with acute severe anaemic syndrome.

Tranexamic acid (TA), an antifibrinolytic agent first used in the 60s[19] is presently used in our department only in trauma patients, based on the results of CRASH-2 study[20], yet several randomized controlled trials on its effect on the outcomes of ICH and SAH patients are taking place[17, 21, 22]. If we were to consider just the inclusion criteria of time for TICH study, 47 patients would have been candidates for such a prospective study.

Addressing the issue of biomarkers in stroke patients, severalof them are already mentioned bythe literature as being of use for the prognosis of ICH patients: C-reactive protein, troponin, D-dimers, complete leukocytes count, fibrinogen, LDL and total colesterol[18,10,23]. Nonetheless, our ED does not use them specifically for assessing the prognosis of ICH patients, as previously mentioned, although the majority of hemorrhagic stroke patients presented within the proper time frame for the measurement of these biomarkers and our ED has access to point-of-care analysers.

Conclusions. Hemorrhagic stroke remains a severely debilitating condition that requires diligent management in the ED, with considerable attention from the whole ED staff. A better risk stratification would allow a more focused care and novel treatment strategies are tremendously needed for improving the neurological outcomes of these patients.

Tranexamic acid is a drug that has made a revival during the last decade and a considerable perspective for the treatment of ICH patients. Our ED is interested in implementing a prospective randomized controlled trial of TA on ICH patients and the results of our current survey entitles us to believe that the patients cared for in the ED of Cluj-Napoca would benefit from such a therapeutically intervention.

RESUSCITATION MARATHON - THE IMPORTANCE OF BLS KNOWLEDGE IN THE GENERAL POPULATION IN CASE OF OHCA SURVIVAL RATES

MIHAI OPREA[1], CRISTIAN URSU[2]

[1]Faculty of Medicine, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]Emergency Medicine Consultant, UPU-SMURD, SCJU, Cluj-Napoca, Romania
*Corresponding author: *Mihai Oprea, e-mail: m.oprea18@yahoo.com*

It is well known that sudden cardiac arrest is a leading cause of death. According to a 2013 publication of the American Heart Association (AHA), more than 50% of cardiac arrests occur as out-of-hospital cardiac arrests (OHCAs). The rate of survival depends on several factors: where the arrest takes place, whether bystanders witness the arrest, the bystander's ability to recognize the arrest, how soon the emergency medical services are called, and most importantly the ability of the bystanders to perform cardiopulmonary resuscitation (CPR). Studies confirm that the victims of OHCAs who receive any form of bystander CPR have double the survival rate in comparison to those who don't. Even though the potential benefit of bystander CPR, a simple intervention, is clear, very few victims receive this crucial life-saving help.

The best possible outcome in case of OHCA can be achieved by respecting a series of steps described by the AHA in the Chain of Survival. Meant to reduce mortality associated with cardiac arrest, the Chain of Survival consists of a series of actions crucial to the patient's survival, every step being equally important: Immediate recognition of cardiac arrest and activation of the emergency response system; Early CPR with an emphasis on chest compressions; Rapid defibrillation: Effective advanced life support; Integrated post-cardiac arrest care.

The most probable explanation of the low rates of bystander CPR in case of OHCAs is the lacking knowledge in the overall population of the importance of early CPR and the lack of instruction of how to perform it. The Resuscitation Marathon is a project of medics and volunteer paramedics from the emergency service SMURD Cluj, with the aim to meet the needs of educating the general population, in accordance with the recommendation of the European Resuscitation Council's (ERC) guidelines that state that all citizens should be thought CPR. It consists of day-long available volunteers, medics and paramedics, who provide free of charge Basic Life Support (BLS) courses to all who wish to learn. Focusing on the steps from the Chain of Survival the participants learn and simulate on manikins how to recognize cardiac arrest, when and how to call the emergency services and how to perform CPR until the advanced care team arrives.

Knowledge of BLS in the general population is essential for survival rates in case of OHCAs therefore assuming a role in educating the population is of great importance.

NATIONAL GUIDELINE: PULMONARY EMBOLISM (PE) – EMERGENCY DIAGNOSIS AND MANAGEMENT

ADELA GOLEA[1], MIHAELA PASC[2], MIHAI BUCUR[2], SIMONA BURZO[2], PAUL EPURE[2], FLORIN PINTEA[2], PETRE POPESCU[2], DAN KOZMA[2], ZIANA MOTORA[2], COSMIN URSAN[2], BIANCA VELE[2]

[1]Iuliu-Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, UPU – SMURD, SCJU Cluj, Romania
[2]UPU – SMURD, SCJU Cluj, Cluj-Napoca, Romania
*Corresponding author: *Mihaela Pasc, e-mail: miha.pasc@yahoo.com*

Introduction. Medical practice within emergency medical services requires introduction of quality standards based on scientific and analytical evidence like clinical audit or trials. Clinical presentation of PE patients may be equivocal or uncharacteristic, therefore are necessary algorithms for identifying high risk cases or patients that require admission and further investigation for diagnosis.

Methodology. Pulmonary embolism Guideline was developed after consulting medical literature type guidelines, clinical pathways, policies, reviews, trials and international consensus from Europe, USA, Australia of the past 6 years (2010-2015). We used clinical practice guidelines, pathways and policies, reviewed and updated, evidence based, developed and supported by international medical societies and organizations; also we've taken into account article reviews, comparative evaluations, consensus reports or series, in the absence of other data with higher evidence power.

Results. This guideline focuses on the emergency evaluation and management of adult patients with suspected PE, following 6 areas of interest/ questions:

1) In patients with suspected PE, objective criteria provide improved risk stratification over clinical assessment?

2) What is the utility of the Pulmonary Embolism Rule-out Criteria (PERC) and quantitative D-dimer testing to rule out PE?

3) What is the role of the CT pulmonary angiogram for exclusion of PE?

4) What is the role of venous ultrasound in the evaluation of pts with suspected PE?

5) What are the indications for parenteral anticoagulation in pts with PE?

6) What are the indications for thrombolytic therapy in pts with PE?

Potential benefits. Correct clinical assessment of suspected PE patients (including risk stratification); Ruling out PE using PERC and D-dimer in selected patients (without imaging tests, irradiating and expensive); Confirmation of PE using lower extremity venous ultrasound in selected patients; Recommendation for thrombolytic therapy in hemodynamically unstable patients with confirmed PE.

Clinical guideline and algorithms **should NEVER** be relied on as substitute for proper assessment and medical judgement. These guideline and management algorithms will not completely rule out diagnosis or treatment errors but collecting and analysing evidence may lead to further optimization of algorithms.

METHANOL AND AMANITA POISONING

VLAD POP[1], CLAUDIA BURZ[2]

[1]Iuliu Hatieganu University of Medicine and Pharmacy, General Medicine, Cluj-Napoca, Romania
[2]The Oncology Institute "Prof. Dr. Ion Chiricuta", Medical Oncology-Chemotherapy, Cluj-Napoca, Iuliu Hatieganu University of Medicine and Pharmacy, Allergy and Clinical Immunology Department, Cluj-Napoca, Romania
*Corresponding author: *Vlad Pop, e-mail: popvlad92@gmail.com*

Ascribed to their ease of finding, methanol and amanita represent a frequent cause of poisoning, with low profile initial symptoms, but serious severity to human body.

Methanol, an organic compound contained in many industrial solvents and poorly adulterated alcoholic beverages, remains a common health issue due to its neurological and ophthalmological toxicity caused by un/intentionally ingestion.

The alcohol is rapidly absorbed, distributed among circulation and metabolized in the liver by alcohol dehydrogenase and aldehyde dehydrogenase to formaldehyde and formic acid, the compounds responsible for the toxicity. The toxicants cause metabolic acidosis, central nervous system depression and optic nerve injury, which explains the main symptoms: neurological: headache, vertigo, ophthalmological: blurry vision, photophobia, cardiovascular: tachycardia, hypotension and gastrointestinal: nausea, abdominal pain. Diagnosis can be obtained by measuring methanol serum levels, arterial blood gas analysis, high osmolar and anion gap,>50;>15. Treatment involves acidosis correction with intravenous sodium bicarbonate, alcohol dehydrogenase inhibition with formepizole or ethanol, hemodialysis for severe patients and vitamin therapy to clear the toxic metabolites.

Amanita, known as one of the most poisoning mushrooms, on account of its amatoxins, is responsible for the majority of human fatal cases of fungal poisoning worldwide, by mistaken them with edible species. Importantly, the toxins are not annihilated when cooking since they are heat stable, insoluble in water and not destroyed by drying. In addition, this type of poisoning lacks in an antidote, hence further investigations are necessaries.

Pathophysiologically, amatoxins are selective inhibitors of RNA polymerase II, which is implicated in synthesis of proteins. Consequently, it affects tissues with high rates of protein synthesis: liver, kidneys, brain, pancreas, and testes. Moreover, they are excreted into the bile, therefore the liver is more exposed to higher concentrations. Intoxication symptoms may appear in three stages: latent: colicky abdominal pain, nausea, vomiting; gastrointestinal phase: liver injury, hepatic encephalopathy, hepatic and renal injury: fulminant liver failure, severe coagulopathy, kidney failure, death. Rapidly diagnosis must be made through medical history, time of ingestion, mushroom type, electrolytes, blood urea nitrogen, creatinine measures, investigation of liver function, coagulation tests and volume status. Treatment consist in supportive measures, Airways-Breathing-Circulation, IV hydration, hemodialysis, gastric decontamination within 1 hour, pharmacologic therapy with intravenous silibilin, penicillin G, N-acetylcysteine, vitamin K, and in severe cases liver transplantation.

Methanol and amanita poisoning remain a challenge for emergency rooms, due to the pathophysiologic pathways involved, unspecific symptoms and high toxicity. Therefore prompt diagnosis and treatment are vitally important.

THERAPEUTIC APPROACH OF INTRACEREBRAL HEMORRHAGE IN EMERGENCY SETTINGS

MONICA SCUTARIU

Neurosurgical ICU
Emergency Clinical Hospital Cluj – Napoca

Intracerebral Hemorrhage (ICH) has been the stroke subtype that has carried the highest rate of mortality; at the same time, only one third of the survivors are independent at 6-12 months. The outcome depends mainly on the severity of lesion (reflected on GCS score), the area involved and the size of the hemorrhage; until now, all clinical research failed to find a specific, effective therapy. The lecture will be focused on medical approach that makes the difference in the acute phase of ICH. Based on the latest European Stroke Organisation (ESO) and American Heart/ Stroke Associations (AHA/ ASA) Guidelines, we will discuss about the initial monitoring and management of ICH with emphasis on hematoma growth limitation (blood pressure control, early hemostatic therapy, surgery), control of increased intracranial pressure, non-specific support therapy (secure airway, mechanical ventilation, fluid management) and management of extracranial complications.

POLYTRAUMA VICTIM AFTER UNUSUAL CAR ACCIDENT – CASE REPORT

SIMON ROBERT[1], DAN CURTA[2]

[1]Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2]Emergency Medicine, UPU-SMURD Cluj-Napoca, Romania
*Corresponding author: *Simion Robert, e-mail: simon.robert08@gmail.com*

Introduction. Traumatisms are the most frequent cause of death before the age of 45. Traumatism can occur during work accidents, home accidents but the most frequent cases are those of car accidents and some of them happen in unusual circumstances.

This following report presents a case of 50 years old patient victim of car accident that happened in an unfortunate circumstance.

Case presentation. 50 years old male patient was hit by a projected tree after a car hit it. At the arrival of the ambulance patient was found with a GCS of 8, patient was presenting shortness of breath, rapid breathing, O2 sat. of 89% without oxygen, tachycardia, bilateral reactive dilated pupils, arterial blood pressure was normal.

During the primary evaluation the patient presented signs and symptoms of respiratory failure, bilateral pleural effusion and chest flail. Bilateral chest drainage tubes were placed, after that the patient was sedated, intubated and ventilated. Before sedation and oro-tracheal intubation an instability in the hip bones was observed this rising the concern regarding a hip fracture, thus the pelvis was immobilized using a pelvic belt and in the same time tranexamic acid was administered for possible internal bleeding.

The patient was immobilized using a vacuum mattress and rushed to the Emergency Department.

At the ED blood samples were taken from the patient and a whole body CT was performed. The least showed multiple bilateral cerebral bleedings with a maximum dimension of 1.2 cm. Thin subarachnoid bilateral bleeding and bleeding in the lateral ventricles. Skull fractures at the level of the parietal and temporal bone. Thoracic traumatism with multiple rib fracture, accentuated on the left side, bilateral flail chest. Bilateral pulmonary lesions at the posterior segments and bilateral hemo-pneumothorax. Multiple hip fractures with an aspect of active bleeding in the pelvis.

During he's stay at the ER the patient developed bradycardia followed by cardiac arrest with non shockble rhythm and resuscitation protocol was applied. Return of spontaneous circulation occurred after 10 minutes of resuscitation. The cause for the cardiac arrest was probably the hypovolemia caused by the bleeding in the pelvis. Blood products were ordered for an emergency blood transfusion.

The patient was transferred to the ICU where the neurological and general evolution was favorable.

Conclusion. This case shows that fast identification, assessment and treatment of the reversible causes of a cardiac arrest in the case of a traumatized patient leads to a good outcome and a better recovery.

Particularities. We report a case of a polytraumatised patient, victim of an unusual car accident, that has survived with favorable neurological and general evolution despite the multiple life threatening lesions and a cardiac arrest that followed his arrival at the emergency department.

TRANEXAMIC ACID USE IN THE EMERGENCY DEPARTMENT FROM THE CLINICAL COUNTY HOSPITAL CLUJ-NAPOCA AND IN THE PREHOSPITAL SETTING

ANDREI - CONSTANTIN STĂRICĂ, IULIA ARDELEAN, CRISTIAN URSU

Emergency Clinical County Hospital Cluj-Napoca, Emergency Department, Cluj-Napoca, Romania
*Corresponding author: *Andrei - Constantin Stărică, e-mail: andrei.starica@yahoo.com*

Introduction. Tranexamic acid is an antifibrinolytic drug included in the WHOs list of essential medicines. It is used to diminish blood loss in a variety of clinical situations, from massive trauma and patients requiring different kinds of elective surgery to patients with hereditary bleeding disorders, menorrhagia, parturition or nose bleeds. Current literature estimates that worldwide there are approximately 400.000 in-hospital trauma deaths due to bleeding. The aim of our study was to evaluate the clinical situations in which tranexamic acid was used in the prehospital setting and in the emergency department from our clinical county hospital during a one-year period and to which extent the latest international guidelines are being followed by the emergency physicians. Secondary outcomes were represented by 6 hour, 24 hour and 30 days all cause mortality rate and survival to discharge.

Methods. Our study is a retrospective descriptive one and investigates the use of tranexamic acid in patients with or at risk of severe blood loss, during a 12 months period, from May 1st 2015 to April 30st 2016. We evaluated the charts of 26 adult patients who received tranexamic acid. We used the internal software Atlas med® for the patients treated in the emergency department and we manually searched the charts of the patients who received the drug in the prehospital setting. A Microsoft Excel database was created and further statistical analyses were made using this software.

Results. 69% of the patients presented with massive trauma. 77% of the patients received tranexamic acid in the emergency department, while the other 23% in the prehospital setting. 58% of the patients presented hipovolemic shock and 31% presented cardio-respiratory arrest with response to resuscitative maneuvres. Tranexamic acid was administered 3 hours after the incident in 31% of the patients. 46% of the patients survived to discharge and 1 patient was still under treatment at the moment of collection of data. From the patients who did not survive to discharge, 5 died in the first 6 hours, 4 in the first day and 3 in the first month.

Conclussions. Emergency physicians in our hospital confidently use tranexamic acid especially in massive trauma, but also in other clinical situations, both in the emergency department and in the prehospital setting. The accumulation of experience in tranexamic acid administration will lead in time to better survival rates, in accordance with current literature.

ARTERIAL ULTRASONOGRAPHY IN EMERGENCY

MIRELA STOIA

Department of internal medicine, Cardiology and Gastroenterology, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca
SCJU, Cardiology I, Cluj-Napoca

Ultrasonography (echography, ultrasound exam) is an objective noninvasive imaging technique exploration, accessible, reproducible, repeatable, long used and considered to be the prolongation and the completion of the clinical examination. Is an examination based on qualitative (indicative) and quantitative (precise) criteria that allows immediate obtaining of the information with high specificity and sensitivity, very useful for medical practice which constitute characteristic elements of positive and differential diagnosis. Like other imaging investigations, performs ultrasound make it useful, but in the same time, it also has some limitations. Applicability of emergency ultrasound examination in emergency refers to the quickly and accurately diagnosis of arterial lesions and pathologies, that is the motivation of patient presentation. Referring to the most frequent arterial pathologies in emergency, we talk about lesions in the aortic abdominal arterial system (in particular aorta, superior mesenteric, renal and iliac arteries) and in the peripheral arterial system of the lower limbs, uncommonly, of the superior limbs.

The most common arterial lesions responsible for emergency pathology are: acute occlusion (thrombotic or embolic), dissecting aneurysm, arterial dissection, pseudo-aneurysm. arteriovenous fistula. In patients who have undergone invasive or surgical interventions, we can have acute lesions in the stented artery or in the arterial graft associated with lesions in the run-on and/or run-off arterial territories. In emergency arterial ultrasound is important to make lesion diagnosis as accurately and concisely, by using direct and indirect ultrasound elements. Direct diagnosis elements are echostructural (revealing the occlusive arterial cause, with the possibility of differentiating atherothrombotic or embolic aspects, both in native or prosthetic (stented or by-passed) arteries, highlighting intimal arterial dissection, abnormal arterial anatomy elements, like pseudo-aneurysm or arteriovenous fistula communication, etc. The indirect diagnosis parameters are hemodynamic and are represented by doppler arterial occlusion, stenosis, dissection and fistula pathology features, etc. The most common differential diagnosis must be made between acute peripheral arterial ischemia (usually by embolic cause) and critical leg ischemia (atherothrombotic) leading to different therapeutic management in emergency. Besides arterial lesions and associated pathologies mentioned, in emergency we could find situations of acute arterial ischemia in case of cardiogenic shock, the states of sanguine hyperviscozity (arterial ultrasound results in such cases are negative) accidental or iatrogenic trauma (non-standard and difficult ultrasound images), extravascular compression formations (eg. tumor mass or lymphadenopathy, hematoma, popliteal cyst). Abdominal aortic branch occlusions which causes visceral infarcts are also difficult to see by ultrasound exam.

NATIONAL ALGORITHM: ACUTE RESPIRATORY FAILURE – ASTHMA EXACERBATION, EMERGENCY DIAGNOSIS AND TREATMENT

ADELA GOLEA[1], RALUCA TAT[2], RAREȘ CÂMPAN[3], EDINA MATE[3], OANA BRANGA[3], ȘTEFAN ONIGA[3], IOANA RUS[3], PAUL ROTARU[3]

[1]ED University County Hospital Cluj – Napoca, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj – Napoca, Romania
[2]ED University County Hospital Cluj – Napoca, collaborator of University of Medicine and Pharmacy „ Iuliu Hatieganu"- Cluj – Napoca, Romania
[3]ED Physician University County Hospital Cluj – Napoca, Romania
*Corresponding author: *Raluca Tat, e-mail: tatralu@yahoo.com*

Introduction. Asthma is a heterogeneous, chronic inflammatory disease of the airways with variable expressivity. Due to its variable expressivity, asthma exacerbations are sometimes difficult to predict. Medical practice within emergency medical services requires introduction of quality standards based on scientific and analytical evidence.

Methodology. This algorithm for management of patients with Asthma , was made after analyzing, translating and adapting guidelines and pathways of countries with a tradition of international research in recent years.

Results. This algorithm focuses on the emergency evaluation and management of adult patients with acute respiratory failure from Asthma exacerbation, following the most important questions:

1. Which are the clinical signs in the acute phase?
2. Which other disorders may mimic or coexist with asthma?
3. What are the evaluation criterias for the acute exacerbation?
4. What are the clinical manifestations and the severity levels?
5. What is the therapeutic aproach?
6. What are the addmision and discharge criterias?

Potential Benefits. The development of clinical practice guidelines should not supersede clinical judgment based on direct assessment of asthma patients with application of clinical acumen and the sound principles of individualization of therapy. Rather, clinical practice guidelines are designed to improve both the quality of care and asthma outcomes. The amount of inhaled β-agonist self-administered during the exacerbation is a good marker of the severity of the acute attack and risk of a poor outcome. Specialist physicians need to be more proactive in their implementation of such guidelines through the use of locally derived protocols and assessment sheets, reinforced by audit.

NATIONAL ALGORITHM: ACUTE RESPIRATORY FAILURE - COPD EXACERBATION, EMERGENCY DIAGNOSIS AND TREATMENT

ADELA GOLEA[1], RALUCA TAT[2], ANAMARIA MARIESAN[3], RARES CAMPAN[3], BOGDAN GHEORGHE[3], ALEXANDRA GAVRE[3]

[1]ED University County Hospital Cluj – Napoca, University of Medicine and Pharmacy „ Iuliu Hatieganu"- Cluj – Napoca, Romania
[2]ED University County Hospital Cluj – Napoca, collaborator of University of Medicine and Pharmacy „ Iuliu Hatieganu"- Cluj – Napoca, Romania
[3]ED University County Hospital Cluj – Napoca, Romania
*Corresponding author: *Raluca Tat, e-mail: tatralu@yahoo.com*

Introduction. COPD is a complex pathology, with pulmonary and extrapulmonary manifestations, plus significant comorbidities that may increase the severity of events and even raise their frequency.

Therefore, prompt and accurate recognition of an exacerbation of COPD simultaneously with rapid therapeutic intervention may be the only actions to prevent respiratory failure frank with unwanted consequences.

Frequent presentation in the ED of these patients, the negative impact on prognosis and quality of life, the immediate risk of death, led to the development national project of protocols work diagnosis and immediate treatment.

The main objective in making this algorithm for diagnosis and treatment of COPD, is a uniform approach to the diagnosis, staging and proper application of optimal treatment in the ED.

Methodology. This algorithm for management of patients with COPD, was made after analyzing, translating and adapting guidelines and pathways of countries with a tradition of international research in recent years.

Results. This algorithm focuses on the emergency evaluation and management of adult patients with acute respiratory failure from COPD exacerbation, following the most important questions:

1. Who are the patients with acute respiratory failure which may be included in the diagnostic algorithm of COPD and which are the diseases with similar signs/ symptoms of COPD exacerbation?
2. Patients considered eligible of COPD diagnosis, shows signs/ symptoms of an exacerbation and what are the criteria for assessing the severity of COPD exacerbations ?
3. Patients with acute respiratory failure secondary to COPD exacerbation require immediate intubation and invasive mechanical ventilation or non-invasive ventilation ?
4. What is the pharmacological therapy that can be administered to patients with COPD exacerbated in order to effectively improve the symptoms?
5. What are the criteria for admission in the intensive care unit/ or non - intensive care unit for a patient with exacerbated COPD?
6. Which are the safely discharge criterias after remission of symptoms ?

Potential Benefits. Correct clinical assessment of patients with COPD exacerbation and uniform approach should reduce the death/morbidity rate. Clinical algorithms should never be relied on as substitute for proper assessment and medical judgement.

EXTERNAL BLEEDING MANAGEMENT

VLAD EDUARD ȚÂMPU[1], ALEXANDRU ZLIBUȚ[1], RADU SEICEAN[2]

[1]Faculty of Medicine, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania
[2]1st Surgical Clinic, SCJU, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
*Corresponding author: *Vlad Eduard Țâmpu, e-mail: vlad_edi@yahoo.com*

Bleeding or hemorrhaging represents the outgo of blood from the circulatory system and the external bleeding is either through a wound or through a natural opening. The WHO categorizes the bleeding into 4 grades: 1=petechial bleeding; 2=mild blood loss; 3=gross blood loss, requiers transfusion;4=fatal debilitating blood loss. The wound is a injury in which the skin is torn, cut or punctured. Open wounds can be categorized as: incision, laceration , abrasion, avulsion, puncture, penetration wounds and amputations. In closed wounds, the blood remains in the body: hematoma and crush injury.

Another classification of external bleedings is by the type of vessel that is damaged: arterial (red, it spurts and the loss is high), venous (blackish, flows in steady manner) and capillary (small amount). The key principles of wound management are: elevation (recent studies failed to find any effectiveness of it and it has been removed from the PHTLS guidelines), direct pressure, pressure points, tourniquet and hemostatic agents.

Direct pressure presumes placing pressure directly on the wound with beare hands or with some foreign objects protruding from the wound. It is recomended that between the pressure supplier and the wound to be used an sterile, low adherent gauze to reduce the chance of infection. Also, the use of latex or nitrile medical gloves is suggested.

If direct pressure is unefficient, it can be appealed to the use of pressure points to constrict the major artery that supplies the wound, e.g. femoral artery. The maximum time of constriction is 10 minutes due to high risk of distal necrosis. Particullary, the carotid artery constriction is dangerous due to high senzitivity of the brain to hypoxia and to the risk of vagal stimulation.

Tourniquets are cuff-like devices designed to stop severe traumatic bleeding before or during transport to a care facility. They are wrapped around the limb, proximal to the site of trauma, and tightened until all blood vessels are occluded. Possible risks of complications related to tourniquet use include amputation, myonecrosis, acut renal failure etc.

Hemostatic agents can be either externally applied as a powder/gel or as intravenous injections. These may be particularly useful in situations where the wound is not clotting – huge size of wound, or haemophilia.

FOCUSED ASSESSMENT WITH SONOGRAPHY FOR TRAUMA

LAURA CRISTINA ZAHARIE[1], MIHAELA PASC[2]

[1]Faculty of Medicine, Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca, Romania
[2]UPU-SMURD Cluj-Napoca, Romania

Focused Assessment with Sonography for Trauma (FAST) is a rapid bedside ultrasound examination performed by surgeons, emergency physicians and paramedics. It is a diagnostic imaging technique and its main principle is to identify the free fluid based on its disposal in latch recesses. Despite that it is difficult to determine the source of bleeding and it may not be always blood, it enables rapid diagnosis of hemoperitoneum and detection of pericardial collections.

FAST is indicated for closed or penetrating torso trauma, young women with abdominal pain and hypotension, in pregnancy and children and it is included in user guides for CPR, hypotension, triage in disaster. The operator uses a convex or sectorial 3.5 Mhz transductor and does minimum 4 scans in pericardium, right upper quadrant (Morrison's pouch), left upper quadrant and a pelvic examination.

This technique's sensibility is risen by the number of scans and series of examination and the Trendelenburg position of the patient. The blood is anechogen at first, but the emergence of its coagulation determines the formation of heterogeneous collections whit echogenic aspect, fibrillary elements and wavy type.

The advantages of FAST are the following: less invasive than diagnostic peritoneal lavage, there is no exposure to radiation, it makes emergency department care better and faster, it is the most useful examination in trauma patients who are hemodynamically unstable and it is cheaper compared to computer tomography. Numerous previous studies have demonstrated that FAST is useful in evaluating trauma patients.

As any other technique, FAST has its own limits. First of all, it is a method of reduced value in the diagnosis of some pathologies such as injuries of parenchymal organs (40% sensitivity), of hollow organs (57% sensitivity) or retroperitoneal injuries (<60% sensitivity). What is more, the examination is operator dependent, influencing the interpretation based on the level of knowledge and operator's experience in FAST.

The results of a FAST can be either positive or negative. The appearance of a dark strip in the dependent areas of peritoneum is considered a positive interpretation. In case of negative results, a search for extra-abdominal sources of bleeding may still need to be performed.

In conclusion, FAST is a very useful technique for identifying free fluids, especially in emergency units (ER). Being operator dependent as a downfall, I find it of much importance to be known at least by all medical staff from an ER.

PULMONARY EMBOLISM EMERGENCY DIAGNOSIS ALGORITHM

ALEXANDRU ZLIBUȚ[1], MIHAELA PASC[2]

[1]Faculty of Medicine, Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca, Romania
[2]UPU-SMURD Cluj-Napoca, România
*Corresponding author: *Alexandru Zlibuţ, e-mail: alex.zlibut@yahoo.com*

Pulmonary embolism (PE) is a major public health problem because of high morbidity and mortality. The necessity of a rapid and accurate diagnosis algorithm is absolutely imperative. Pathophysiological represents the blockage of a pulmonary artery by an embolus.The most common cause is the migration of a thrombus from the leg veins in patients with deep vein thrombosis (DVT). The signs and symptoms of PE are often nonspecific, therefore the necessity of a rapid and accurate diagnosis algorithm.

This algorithm was created using recent American and European studies, publications and guidelines and includes the main steps to an accurate diagnosis of PE. The algorithm starts with calculation of Wells or Geneva score and stratifying the pretest probability of PE into 3 levels: low, medium and high. The next step is PE rule-out criteria for selected patients that may rule out PE without further testing. The following investigations depend on pretest probability: low and medium risk presumes quantitative D-Dimers dosing and if positive, consider imaging exams; if negative consider ruling out PE (D-Dimers have a high negative predictive value); high pretest risk presumes emergency imaging. Pulmonary CT Angiography is the imaging gold standard and results may show complete or partial arterial occlusion. Other useful imaging is lower limb venous ultrasound identifying proximal DVT and bedside echocardiography showing right ventricle distention or dyskinesia.

The objective (and almost mathematical nature) of PE algorithm is given by the quantification of clinical data into pretest probability levels. Based on this probability, the next steps in diagnosing PE (D-Dimers, pulmonary CT Angiography/ other imaging test) follow a clear pathway and are quite reliable.

Pulmonary embolism represents a major health problem and requires early positive diagnosis and treatment; for this reasons, the implementation of an emergency diagnosis algorithm is very useful and necessary. This algorithm may improve early and accurate diagnosis of PE using a pathway with clear steps, depending on pretest clinical probability but should never be relied on as substitute for proper assessment and medical judgement.

POSTER SESSION

MANAGEMENT OF THE DIFFICULT AIRWAY IN EMERGENCY DEPARTMENT

CARMEN BALOG, RALUCA TAT

Clinical Emergency County Hospital Cluj-Napoca

Objective. The purpose of this presentation is to facilitate the management of the difficult airway and to reduce the likelihood of adverse outcomes: death, brain injury, cardiopulmonary arrest, unnecessary surgical airway, airway trauma, and damage to the teeth. A standard definition of the difficult airway cannot be identified in the available literature. A difficult airway is defined as the clinical situation in which a trained physician experiences difficulty with facemask ventilation of the upper airway, difficulty with tracheal intubation, or both.

Material and method. The difficult airway represents a complex interaction between patient factors, the clinical setting, and the skills of the practitioner. Analysis of this interaction requires precise collection and communication of data. There are described some methods that can help the practitioner to anticipate a difficult airway intubation: BONE method, 4D method. LEMON method-mentioning that M(allampati) observation loose his value in patients needing emergency intubaion. Nowadays there exists on the marked multiple choices of devices for supraglotic and subglotic airway protection. If none of these hepls, the phiscian can procede to the surgical management of the difficult airway: cricothyroidotomy, retrograd intubation, jet ventilation.

Results. Un anticipated difficult intubation will continue to occur. A new approach is needed to ensure optimal management of infrequent airway problems. Guidelines have been developed by consensus and are based on experience and evidence. The principles applied are maintenance of oxygenation and prevention of trauma. Maintenance of oxygenation is achieved primarily by using mask and baloon ventilation. Prevention of trauma is achieved by limiting the number of attempts at intubation as a dedicated airway to allow oxygenation, while tracheal intubation is achieved under vision with the fibrescope.

Conclusions. To sum up, the main advice from all the guideline physicions read is that the best method of managing a difficult airway is the one that is the most familiar with and has the appropiate equipment to practice it.

PATIENTS' AND FAMILY MEMBERS' PERCEPTIONS ON THE CARE QUALITY RECEIVED IN THE EMERGENCY DEPARTMENT

CLAUDIA VIORICA BARBUL[1], LUCIA RATIU[2]

[1]Emergency Department, "Constantin Opriș" County Hospital, Baia Mare, Romania
[2]Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania
*Corresponding author: *Claudia Viorica Barbul, e-mail: claudiavioricabarbul@yahoo.com*

Internationally, emergency departments (ED) are under pressure to meet not only increasing patient demands with limited resources, but also those of family members. Patient satisfaction with their ED experience has been associated with different predictor variables related to patient demographics and visit characteristics. Several studies in healthcare took into consideration the decrease of the waiting time, the detection of the patient's condition deterioration and the improvement of communication. However, the literature does not pay attention to the role the family members accompanying the patients in the ED has. The aim of the study is to explore the patients' and family members' perceptions on the healthcare provided in ED. A descriptive survey design was adopted and the data collection took place in Baia Mare ED, between March and April 2015. The participants - 140 patients and 221 family members - were informed about the aim of the study and were asked to fill in a questionnaire reporting the positive and negative aspects they experienced in ED and the expectations regarding the care quality. The data were analysed qualitatively using content analysis and quantitatively using nonparametric test (Mann U Whitney test) run by SPSS.20. The study revealed that three major themes were perceived as the most important for the patients and their families alike: healthcare personnel, technical and material facilities and perceived waiting time. These themes are partially supported by other studies reporting on the most important underlying determinants of ED patient satisfaction: information provision, interpersonal interactions, and perceived waiting time, according to Trout et al. and Boudreaux. The most frequent perceptions were related to healthcare personnel and referred to amiability, professionalism, organization capacity and care quality. The patients and family members ranked positive the material and technical facilities of ED, but mostly negative the waiting time. The two categories had significantly different views of healthcare personnel ($U=12641.500$, $p< .002$) and of the waiting time ($U= 13347.000$, $p <.003$). The present study provides important clues regarding the importance of the support offered to the patient by his family members while being taken care of in ED. Beyond the medical services, more emphasis should be placed on identifying the factors that could increase the patient satisfaction and the treatment adherence in ED. These findings may facilitate changed attitudes and working routines among the health personnel, which are needed to deliver effective care and to improve patients' perceptions on care quality at ED.

THE USE OF CORTICOSTEROIDS IN THE ACUTE MEDICINE – WHY DO WE NEED TO BE UPDATED!

MIHAI BOTEA[1,2], IOAN MAGYAR[3,2]

[1]Surgery Department, Faculty of Medicine & Pharmacy, University of Oradea
[2]Emergency Department, Oradea County Clinic Emergency Hospital
[3]Pharmacology Department, Faculty of Medicine & Pharmacy, University of Oradea
*Corresponding author: e-mail: drmob78@yahoo.com

The corticosteroids (CS) are synthetic drugs with o structure similar to those hormones release by the adrenal glands. The CS effects are well known as anti-inflammatory and immunosuppressive, being the main reasons for his wide medical uses. But these drugs are also having serious side effects. Basically there is no organ or system not being affected by their use, especially on long term.

From the author's current practice and point of view, at the moment there is a broad miss use of this class of drugs.

The paper presents an update on the corticosteroids. The corticosteroids dosing varies extremely largely in different pathologies but mainly from individual to individual. Sometimes the use of CS poses lifesaving of prolonging it problems, when high doses are accepted to be administered, situation in which the therapy complications are overtaken by the benefits. When the CS therapy on long term is used in chronic pathology, the adverse effects of the treatment may by highly considerable then the disease disabilities. For minimalizing the secondary effects, must to be identified the smallest efficient dose.

In comparing the relative potency of CS in what regarding there anti-inflammatory effects we should know that an intense GC activity is not valuable if is not joined by a limited mineralocorticoid activity. The presentation is showing up the most important class representants characteristics in what concerning these features.

The second part of the presentation is showing-up various meta-analyzes on CS indications and side-effects, including Cochrane studies and the most recent guidelines, like NICE guideline on COPD exacerbation and asthmatic crisis. The presentation is also stating the use of CS in anaphylactic shock, septic shock, brain metastasis, bacterial, tuberculosis and parasitic meningitis. On the other side the presentation is bringing the last studies on CS band, like in brain injuries and traumatic spinal cord section. At the end the presentation is promoting an up to date strategy on managing cutting down and tapering CS doses. One of the many take home messages being that in patients with no longer than 3 weeks CS treatment, there is no need to put on regressive dose reduction for treatment cessation.

THE HYPERTENSIVE EMERGENCIES AND STROKE IN POPULATION OF THE REPUBLIC OF MOLDOVA

NATALIA CATANOI[1,2,3], NATALIA SCURTOV[1,2,3], RABOVILA ALA[2,3]

[1]National Centre of Prehospital Emergency Medicine, Chisinau, Moldova
[2]State Medical and Pharmaceutical University „Nicolae Testemitanu", Chisinau, Moldova
[3]PHCI Institute of Emergency Medicine, Chisinau, Moldova

Introduction. Hypertension is a multifaceted disease that affects the populations in massive proportion. A major complication of hypertensive emergencies is a stroke. Each year in the Republic of Moldova about 10 443 people suffer a new or repeated stroke. About 1 in 6.8 deaths in the RM is due to stroke. Early recognition of acute ischemic stroke is very important because IV fibrinolytic treatment must be provided within 3 hours of on set of symptoms. Community and emergency personals is essential and it has been successful in increasing the proportion of eligible stroke victims treated with fibrinolytics.

Materials and methods. The data presented here are collected from records of emergency care, through National Centre of Prehospital Emergency Medicine, Chisinau, between years 2014-2015.

The analysis provides information on the prevalence and incidence of cerebral vascular diseases associated with hypertension.

Results: The pre-hospital emergency medical assistence served, over year 2015 of the 153 826 patiens with various forms of arterial hypertension. Amongst which, 66 639 (43.32%) were served with common hypertension emergencies and 69 599 (43.82%) patients with essential hypertension and hypertensive leaps and 17 588 (11.43%) – patients with extreme hypertensive emergencies. The share of hypertensive emergencies in cardiovascular emergencies accounted for 68.82%, amongst which – 42% in the structure of major cardiovascular emergencies, and 83.58% - of cardiovascular emergencies of II degree. Additionally, pre-hospital emergency medical assistence served, over year 2015, 9896 patients with stroke, among which 4131(41.7%) – from the urban area and 5 765 (58.25%) from the rural area. Out of the total number of stroke, 6402 ischemic stroke were registered, out of which 5570 patients (87%) were hospitalized. 1883 patients with ischemic stroke were hospitalized within the therapeutic period (56.82%) and 347 patients underwent thrombolytic treatment, their share accounting for 18.4% by contrast with 14.2% over year 2014.

Conclusion. The arterial hypertension with its complications is both a healthcare and social problem, important for the health system, substantially influencing morbidity, disability and mortality indicators. Hence, educating the population and health professionals involved in the treatment of patients with hypertensive emergencies and stroke, aims at increasing the share of patients for thrombolytic therapy and reducing disability and death by acute stroke among population.

PERCEPTION AND RESULTS OF NURSING IN RELATION NURSE-PATIENT-HOSPITAL

COCA-STELA CRIȘMARU[1], ADELA GOLEA[2]

[1]Botosani County Hospital „ Mavromati ,' ER , pediatrics,
[2]Cluj, Emergency County Hospital - UMF Cluj

Objectives. In Romania nurse provides health care to patients. It is an important link in the health system and is directly related to health service. The relationship nurse-patient hospital has many meanings. The study conducted aims to analyze the perception of the quality and outcomes of nursing applied by nurses in Botoșani County hospitals, through the elements making up this relationship.

Material and method. Transversal descriptive study was conducted in 4 hospitals in Botosani County in the period 1 May to 30 June 2015. The Ethics Commission each hospital included in the research endorsed the conduct of the study. The research method was applied quantitative survey. Research tools are the questionnaires that were distributed to nurses and patients. Were used factual questions, answer closed questions with pre-coded and open questions to which participants were able to add free answers. The sample includes a total of 638 participants: 353 nurses and 285 patients. Study data were statistically analyzed using Microsoft Excel 97-2003.

Results. The nurse who work in clinical wards of a hospital has a fundamental role in health care for hospitalized patients. Congruence between theoretical and clinical nurse experience leads to a result that shows a very good quality of nursing. Perceptible to patient care by nurses presented in the questionnaire applied, demonstrates that the nurse is able to offer a quality nursing.

The time allotted healthcare is perceived by patients as reduced time to value expressed between 5 minutes and 6 hours. Patients received counseling, mental and physical preparation prior to application of nursing techniques. They believe that the nurse provided medical techniques needles, had a calm attitude, understanding and professional. Patients perceive as important contibution nurse work in solving health problems during an episode of hospitalization.

Perception of nursing through the nurse in the temporal dimension show a deficiency of time nurse- patient relationship. The average time for completing medical documents is 4.49 hours and the allotted communication, networking patient is 5.16 hours.

The social dimension of the relationship with the patient, the nurse during his profession had moments of conflict situations and complaints of patients or their relatives, moments in which he was assaulted verbally or physically, but also positive moments in which he was praised for quality of services. Perception role in the medical team shows that nurse is an active member not only execute delegated tasks. Continuing professional education is perceived as necessary to provide a quality nursing. It is considered a resource used to induce positive changes in the behavior of nurses to meet the goals and objectives of nursing.

Conclusions. Supervision and care of large numbers of patients give rise to conflict situations, complaints of patients and/or caregivers. Filling is done responsibly medical documents during a trip service. The time allotted for completing decreases patient care documents. The care plan is specific nurse who is an active member of the medical team and not only has a role delegated. Calm and professional attitude of nurses contribute to solving health of the patient hospitalized.

CASE REPORT: HELLP SYNDROME – A RARE PRESENTATION OF THE OBSTETRICAL PATIENT IN LOCAL EMERGENCY DEPARTMENT

GABRIELA GAGU, ANAMARIA MARIESAN

Emergency Medicine, County Emergency Hospital Cluj-Napoca, Romania
*Corresponding author: *Gabriela Gagu, e-mail: gabriela.gagu@yahoo.com*

Introduction. HELLP syndrome (H=hemolysis, EL=elevated liver enzymes, LP=low platelets) is a form of preeclampsia and affects 0.6% of pregnant women. However, in up to 15-20% of diagnosed cases, nor hypertension or proteinuria were present. The majority of cases (up to 70%) occur during the late second or third trimester, the remainder occur postpartum (1). The diagnosis of HELLP syndrome requires the presence of hemolysis based on examination of the peripheral smear (schistocytes), elevated indirect bilirubin levels, or low serum haptoglobin levels in association with significant elevation in liver enzymes (AST > 70 U/L) and a platelet count bellow 100.000/mm3. The presence of this syndrome is associated with increased risk of adverse outcome for both mother and fetus(2).

Case report. A 26-year-old primipara in the 37th week of gestation presented in the ED with chief complaints of abdominal pain (epigastralgia), nausea and emesis (severe digestive intolerance, vomiting after each feeding attempt) since 2 days. Patient history reveals recent admission in the Gynecology and Obstetric Clinic with similar symptoms, patient had been discharged 3 days ago. The patient was hemodynamically stable upon evaluation (blood pressure was 125/80 mmHg, 88b/min, SpO2 of 98% in room air, afebrile). Despite treatment (Ranitidine - H2-receptor antagonist, 50 mg, Granisetron - serotonin 5-HT3 receptor antagonist, 3 mg and mild rehydration with Ringer iv solution) patient continued to be symptomatic. Biological findings revealed mild anemia (Hb = 11.8 g/dl, Hct = 34.1 %), severe thrombocytopenia (48.000/mm3), elevated liver enzymes (ALT = 119 UI/L, AST = 176 UI/L) with normal bilirubin levels and moderate proteinuria. Previous laboratory workup during recent hospitalization showed mild anemia (Hb = 10.6 g/dl, Hct = 32.1%), mild thrombocytopenia (137.000/mm3), and normal liver enzyme levels (AST = 30.1 UI/L, ALT = 24.5 UI/L). Taking under consideration, patient symptoms and laboratory results, the diagnosis was high suspicion of HELLP syndrome. The patient was transferred to the Gynecology and Obstetric Clinic where the pregnancy had been monitored. She was transfused with 2 units of FFP, and 4 units of Platelets and afterwards a caesarean section was performed, delivering a male gender newborn, 2830g, Apgar 8/9. After 4 days both the patient and the newborn were safely discharged from the hospital, with a follow-up appointment.

Discussions. Early detection of HELLP syndrome encounters a major problem with its clinical presentation, non-specific symptoms or subtile signs of preeclampsia. Hipertension may be absent in 12-18% of cases(2). Our local ED counts few obstetric/gynecological patients, considering the different location of each clinic, therefore making it challenging to diagnose a rare enough defined disorder.

ONE WAY OF LOOKING AT EMS EFFICIENCY IN THE FRENCH-SPEAKING REGION OF BELGIUM DURING 2011

I. GUILLAUME, R. LEACH

Department of Emergency Medicine/ SMUR
Clinique St-Jean Brussels, Belgium
*Corresponding author: *e-mail: isa42guillaume@hotmail.com*

Introduction. This retrospective study of 10.670 pre-hospital emergency calls representing an urban, a rural and a semi-rural population in the French-speaking region of Belgium during the calendar year 2011, was set up to analyze EMS efficiency by comparing pre-hospital patient care between the medical (SMUR) and nursing (PIT) teams. The idea was to analyse the extent of the pre-hospital patient care that was administered (reflecting patient severity) compared to the pre-hospital vector sent out.

Methods & Materials. This study retrospectively reviewed the activity during 2011 of 3 Belgian EMS call centers, providing medical (SMUR) and nursing (PIT) pre-hospital care. The SMUR is staffed with an E.D. physician and an E.D. specialized nurse whereas the PIT is staffed only with an E.D. specialized nurse. These centers were selected to represent the variety in the Belgian demographic landscape; an urban (Brussels), a rural (Libramont) and a semi-rural (Namur) setting in the French-speaking region of the country. The entire French-speaking region's EMS functioning could thus be estimated via these three centers.

The data has been provided by the Belgian Health Ministry, who mandates that every pre-hospital call must be registered via their official software (Smureg, Pitreg) by the team that was called out. This software uses essentially binary codes in order to facilitate data collection. The software did allow the possibility to indicate the type of perfusion (peripheral, central etc), however, for this analysis the different types of IV lines were considered together. Concerning the administration of IV drugs, here there was simply a binary yes or no possibility. A space further on in the dossier allowed to indicate which specific drug was used.

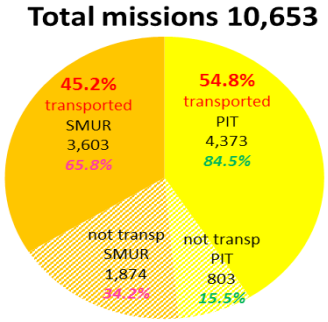
There was a total of 10.670 pre-hospital calls in the 3 centers during 2011. 17 of these missions were excluded because of evident data encoding errors (such as doubles, incomplete dossiers, improbable ages >125 etc). Thus 10.653 missions were analyzed.

This group was further divided into two groups; patients that were transported to hospital, 7.976 (75%), and those not transported (prank calls, calls where transport or hospital care was not necessary, pt refusal and those declared dead) representing the remaining 2.677 patients (25%). There were 223 patients, amongst the 2.677 patients who were not transported to hospital, but that were perfused. These patients represented 8.3% of all the not transported patients. They were, excluded from the statistical analysis (the vast majority of them were unsuccessful reanimation cases), but not completely excluded from consideration.

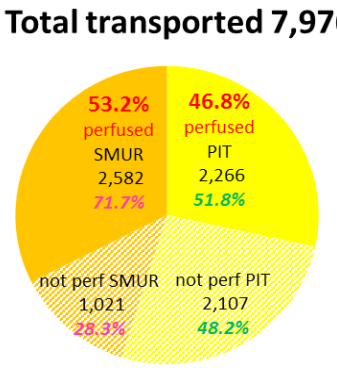
The studied population therefore includes 7.976 missions where the patient was transported to hospital; 3.603 were SMUR missions (45.2%) and 4.373 were PIT missions (54.8%).

Results. A total of 10.653 pre-hospital care missions were studied. 75% or 7.976 of all EMS calls finished by transporting the patient to hospital whereas 25% or 2.677 calls did not result in patient transportation.

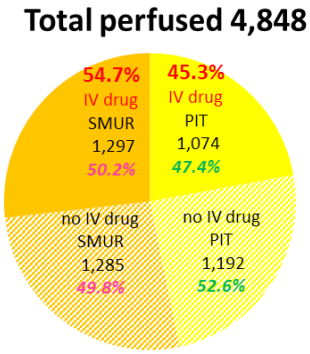
The distribution between SMUR and PIT was:



The SMUR transported 3.603 patients (65.8%) of all SMUR missions (5.477 SMUR calls) or 45.2% of all EMS calls that resulted in transportation of the patient (7.976 EMS calls). The PIT transported 4.373 patients (84.5%) of all PIT missions (5.176 PIT calls) or 54.8% of all EMS calls that resulted in transportation of the patient to hospital (7.976 EMS calls).



The SMUR perfused 2.582 patients 71.7% of all SMUR missions ending in patient transportation to hospital (3.603 patients) or 53.2% of all transported perfused EMS missions (4,848 patients). The PIT perfused 2.266 patients 51.8% of all PIT missions ending in patient transportation to hospital (4.373 patients) or 46.8% of all transported perfused EMS missions.



Among the EMS calls perfusing the patients and transporting them to hospital 4.848 patients were identified. The SMUR administered IV medication to 1.297 patients representing 50.2% of all SMUR missions with transported and perfused patients (2.582 patients) or 26.7% of all EMS calls finishing with patients perfused and transported. The PIT administered IV medication to 1.074 patients representing 47.4% of all PIT missions with transported and perfused patients (2.266 patients) or 22.1% of all EMS calls ending with patients being transported to hospital and perfused.

Discussion. It should be emphasized that in general, the more severe EMS calls are always addressed to the SMUR. The EMS call centers all have severity scores to aid them in their decision making. The doctors working on the SMUR have the capacity to decide whether or not the patients require transport or whether they could be treated on site and referred to their G.P. for follow-up. The PIT nurses must follow their 29 procedure protocols established by E.D physicians, often the very same doctors that are active on the SMUR. PIT nurses can not so freely decide not to transport a patient.

- 75% of all the EMS calls resulted in the transport of a patient. 65.8% of SMUR patients were transported to hospital compared to the PIT who transported 84.5% of their missions. This would confirm that when the PIT goes out, they will more often transport to hospital since their options are more limited than those of the SMUR. If the SMUR cases tend to be more severe, their transport numbers should be higher, however one must take into consideration patient death (unsuccessful reanimation) as well as the ability the doctors in less severe cases to treat the patients on site and then decide not to transport. Both of these two factors would add to a higher non-transport value thus a lower transport value.

- 60.8% of all transported patients were perfused. Why were 39.2% of patients that were identified in the pre-hospital setting as requiring hospital care not perfused? How many were simply administered medication orally? Here are some directions for further investigation. We were also unable to mesure the number of perfusions that were wished but technically unsuccessfully placed. The authors do not believe this to be a significant number since there are alternative

options available. The SMUR perfused 71.7% of their transported patients compared to only 51.8% for the PIT. Again, this would seem to confirm that the more severe patients (those requiring a perfusion) were oriented to the SMUR.

- 48.9% of all transported and perfused patients received intra-venous medication. The SMUR medicated 50.2% of their patients and the PIT medicated 47.4%. Since it is difficult to understand the reason to perfuse a patient and then to administer him oral medication one can only conclude that 51.1% of perfused and transported patients didn't receive any medication before arriving at hospital. A partial explanation for the PIT values is that they must follow pre-established protocols (OP) and there are 9 out of the 29 protocols that do indicate perfusion without IV medication.

It would appear logical, that because of the severity factors impacting the selection by the EMS call taker to choose a SMUR vs PIT, that the SMUR values should be different from those of the PIT, reflecting patient severity. Thus one would expect to see higher perfusion and IV medication values. The differences were not a significant as expected. They were surely influenced by the larger liberty that the SMUR doctor has in deciding the necessity or not to transport a patient, an option the PIT nurses do not have. The SMUR doctors had also the liberty to withhold medication until hospital arrival whereas the nurses were to follow through the protocol and not stop "half-way". An overestimation of the severity of the patient's condition by the call taker, thereby sending a SMUR instead of a PIT would have an impact on these values also.

Conclusion. -75% of all EMS calls result in bringing a patient to the hospital. That would tend to plead that the resources (PIT/SMUR) are properly implemented, keeping in mind that 8.3% of the non-transported patients did require a perfusion thus required skilled medical attention. These 223 patients represent only 2.1% of all the EMS calls. So one could conclude that at least 77.1% of all EMS calls were answered adequately.

-Concerning the patients that were transported, 60.8% of them received an IV line. Here the difference between the SMUR 71.7% and the PIT 51.8% is significant most probably representing the severity of the patients' condition. Seeming to again confirm the efficiency of the call takers.

-Slightly less than half of all perfused patients, did not receive IV medication. The SMUR again administered more often IV medication than the PIT.

The EMS system in the French-speaking region of Belgium appears to be efficient. Since the SMUR perfused and medicated more often their missions than the PIT and provided that good medical practice was exercised, this would mean that these means were necessary and thus the patients were more severe than those who were taken care of by the PIT.

A follow-up study analysis of pre-hospital treatment vs pre-hospital diagnosis would be an interesting second step to compare patient benefit vs cost in relation especially to less severe diagnosis.

A STUDY REGARDING DRUG INTOXICATION EMERGENCIES IN CHILDREN

SVETLANA GAITUR, ZINAIDA LAZARI

PMSI National Centre for Pre-hospital Emergency Assistance, Republic of Moldova

Introduction. The phenomenon of acute intoxication constitutes a serious problem, both nation-wide and international, of the public health system. According to the latest data presented by the World Health Organization, there are recorded over 346 000 deaths from accidental intoxications annually.

Data and methods. The data was gathered from the medical records of the Emergency Medical Assistance Service of Chisinau municipality in 2015. A number of 1116 children were diagnosed with acute intoxications, out of which the drug intoxications represent 24.64% (275 cases).

Results. General data analysis of the total lot of acute intoxications outlined obvious results related to age, gender and the etiology of the toxic agent. The percentage of children under 1 year of age was 3.76%, with 42 cases, 41.45% for children between 1 and 5 years old, with 114 cases, and 43.27% for children between 5 and 18 years old.

The study also revealed that the male children have had a higher rate of intoxications in the age category of 1-5 years old, with 72.51%, while the rate of female children was 27.49%. In the age category of 5-18 years old, things turn around, with the female percentage being 62.32%, while the male percentage of intoxications was 37.68%.

The results of our research revealed that drug intoxication was the most frequent cause of intoxication in children, followed by intoxications with psychedelics, alcohol etc. The cases of medium severity represent 43.34% of the total cases; 39.23% were cases with little to no danger and 17.43% were comas. There have been no deaths in children as a result of drug intoxication.

Conclusions. Analysis of these data shows the importance of studying the occurrence of acute intoxication in both children and adults, because it is a significant problem of public health in our country.

Strategies for the medical assistance at the stage of pre-hospital emergency assistance for patients with acute intoxications must be improved continuously, to ensure people's access to quality care.

ATIPYCAL PRESENTATION OF INTESTINAL INFARCTION – CASE STUDY

HANAH- SUZANA JANKUS, MIHAELA SAVA, CRISTIAN BOERIU

Emergency Department, Mures Country Hospital, Targu-Mures
Corresponding author: Hanah - Suzana Jankus, e-mail: jankushanah@yahoo.com*

Introduction. Acute intestinal infarction (AMI) occurs by brutal, abrupt discontinuance of mesenteric circulation. We should differentiate this condition from chronic mesenteric ischemia (intestinal angina) because one requires emergency treatment and the other doesn't. We should keep in mind that AMI can occur in patient with chronic mesenteric ischemia as well. AMI accounts for 0.1% of admissions. In this presentation we wish to show that AMI can occur in patients with no apparent etiology and an atypical presentation in the emergency department.

Case report. We bring to your attention the case of a 67 years old male, brought to the emergency department for dyspnea which began one day before. Until this day he was diagnosed only with hypertension and he had a skin blister eruption on his left thigh. After conducting blood tests and a thoraco-abdominal CT we came to the conclusion that he had an AMI.

Conclusion. The particularity of this case is the patient's clinical presentation and the lack of significant medical history.

MYOCARDIAL INFARCTION - MAJOR EMERGENCY IN ACTIVITY OF PERSONS FROM EMERGENCY

ION LĂCEANU

„LĂCEANU ION" NP
TÎRGU-JIU, ROMANIA
* Corresponding author: *Ion Lăceanu, e-mail: lăceanugheorgheion@yahoo.com*

Introduction. For the personnel that are not currently working in the emergency, meeting with a situation of this type is "***the moment of truth***" where the life experience and the orientation for the moment may be tested. For the professionals of this specialty, emergency work is a second nature, the family environment in which they develop the activity, the stress of each action, the emotions each case, the moments of external tension for the critical situations, risks, sometimes numerous, to which they are exposed to save a life and not least the indescribable joy to any success, to every patient brought back to life.

Objectives. Aim. Heart diseases and acute coronary syndrome in particular, hold the 1st place for a long, as the cause of death in all world statistics. The paper's purpose is to persuade, to demonstrate the importance of giving first aid, and organizing rapidly the transport (preferably by shockproof ambulance with pre-hospital thrombolysis possibilities) and equipped with monitoring, defibrillation and resuscitation equipment accompanied by a doctor and medical personnel - the so-called "coronary mobile units" for the patient to arrive in the shortest time in a specialized service (UTIC Emergency Hospital with interventional treatment possibilities), keeping under control the pain in this period.

Materials and methods. In order to achieve these objectives, in my opinion, the entire population must be educated to recognize the main signs of myocardial infarction, to call the rescue preferably by 112, to grant first aid, we, the health professionals through the health education program having an important role. In some countries by accident it is provided by law that before employment everyone has the obligation to follow a course in first aid. Today, the attitude is no longer that of "looking and waiting" in the myocardial infarction and it must be insisted on the time element and the fight to decrease the time lapsed until reaching the hospital, because unfortunately, for various reasons, even today too many patients arrive late in the emergency room.

Results. By achieving the objectives stated in the cardiovascular emergencies, lives are saved from certain death, major disabilities are prevented, family dramas are avoided and why not, we can talk about the quality of life with myocardial infarction.

Conclusions. In the accident drama, life offers not only the role of spectator but also that of actor. Be ready at any time to do your role (personal opinion).

ACUTE INTOXICATION IN CHILDREN

ZINAIDA LAZARI, SVETLANA GAITUR

National Centre for Pre-hospital Emergency Assistance, Republic of Moldova, Chisinau

Introduction. In Chisinau municipality of Republic of Moldova, intoxication in children as cause of infant mortality represented 0.85% of death cases during the first quarter of 2016.

Data and methods. The data was gathered by analyzing the medical records of the Emergency Medical Assistance Service of Chisinau municipality, comprising the activity of the Service between January and March 2016.

Results. The total number of intoxication cases was broken down thus: drug intoxications cases – 48 (33.33%), followed by pesticide intoxication – 20 (13.88%), carbon monoxide intoxication – 18 (12.5%). Intoxication with alcohol and psychedelics accounted for 10.42%.

According to the results obtained, 87.21% of the cases were registered in children from urban areas.

The study also revealed that causes of drug intoxications in the age category of 0-10 years were are caused by accidental ingestion (82.71%) and voluntary ingestion (17.29%). In the age category of 11-18 years, acute drug intoxication is caused by voluntary ingestion, with suicide purposes, at a rate of 92.35%.

Conclusions. Research results show that the majority of acute intoxications in children of early age is caused by the carelessness of the parents, while the acute intoxications in adolescents are most often caused by voluntary ingestion. We consider that this situation requires the implementation of information systems, aimed at parents and teachers of preschool and school institutions, on the supervision of children and emergency calls in case an ambulance is needed.

THE KOUNIS SYNDROME – DIAGNOSIS AND TREATMENT TRAPS

REMUS MITRE

Emergency Medicine board certified physician
The Emergency Care Facility – the Mobile Service for Emergency, Intensive Care and Extrication
Maramures County

Emergency care patients presenting atypical clinical arrays are, unfortunately, not a rare issue in our daily practice and because of this I will not agree with those who maintain that there are situations in which, in order to increase Emergency patient flow, a simple injection can solve a medical case, without requesting other investigations.

I will present a clinical case in which a patient brought to the Emergency Care Facility for an allergic reaction is taken to the Cardiac Catheterization Laboratory in less than 30 minutes to undergo heart reperfusion. The lack of pain complaints from the patient being all the more surprising, the EKG has turned out to be indispensable.

The Kounis syndrome, relatively seldom met in current practice and whose physiopathology is not completely understood, represents an acute coronary syndrome consequent to an allergic reaction.

ASSESSING THE CAPACITIES OF EMERGENCY CARE AND OPTIMIZING THE MANAGEMENT OF CARDIOVASCULAR EMERGENCIES

SERGHEI MOȘNEGUȚU

IMSP National Centre for Prehospital Emergency Health Care
„North" Emergency Health Care Station
Bălți, Republic of Moldova
*Corresponding author: *Serghei Moșneguțu, e-mail: mosnegutu78@gmail.com*

Objective of the study. Assessment of capacities of the emergency services and optimization of the management of cardiovascular emergencies. Define, based on the study, the rationale for new organizational strategy and therapeutic management of cardiovascular emergencies.

The cardiovascular diseases are the main cause of the mortality, morbidity and invalidity, and highly contribute to the price escalation for medical care. The primary, secondary and tertiary preventive measures are capable of decreasing the mortality, morbidity and invalidity by cardiovascular diseases, especially in high – risk objects.

Materials and methods. This study on the epidemiology of cardiovascular emergencies used the following methods: historical, analytical, descriptive, statistical, epidemiological and mathematical. In order to ensure the registration in the population of the cardiovascular emergencies we conducted a longitudinal retrospective study.

For this purpose, the incidence of the cardiovascular emergencies in the general structure of population morbidity and mortality by the cardiovascular emergencies was studied. This allowed highlighting the existing condition and the evolution tendencies in health indicators, identifying alarming aspects that require extended interventions from the emergency department, developing new efficient techniques, which would positively influence the health condition of population.

Results. The cardiovascular emergencies register an increasing dynamics in the structure of morbidity and of mortality, dominated mainly by ischemic heart disease, hypertension, strokes with predominance of young age and an increase in their incidence in women and in rural areas. Of the 372 hypertensive patients 76.0±2.21% were women and 24.0 ± 2.21% men ($t = 16.6053$, $p < 0.001$), 83.0 ± 1.95% of them live in urban areas and 17.0 ± 1.95% in rural areas ($t = 23.9628$, $p < 0.001$). 56.0 ± 2.57% of the interviewed patients had suffered complications of hypertension and 44.0 ± 2.57% did not suffer complications ($t=3.2969$, $p < 0.001$), of 207 patients with complications - 35% have angina pectoris, 31% cardiac dysrhythmia, 14% suffered a CVA, 14% myocardial infarction and 4% CVA, Dysrhythmia.

Conclusions. The high cardiovascular morbidity in the Republic of Moldova is associated with reduced addressability for medical care at early stages of the disease, which leads to late detection, loss of ability to work and the frequent occurrence of life- threatening complications. The incidence and the prevalence of registered cardiovascular pathologies is low. This implies low population addressability to the family doctor for primary medical care. Enhancing the quality of emergency medical care for people with cardiovascular disease requires, necessarily, widespread implementation of modern methods and technologies for diagnosis and treatment.

VICTIM SURVIVES CARDIAC ARREST FOLLOWING SEVERE HYPOTHERMIA– CASE REPORT

ZIANA MOTORA, CRISTIAN URSU

Emergency Medicine, UPU-SMURD Cluj, Romania
* Corresponding author: *Ziana Motura, e-mail: zianamotora@yahoo.com*

Introduction. Accidental hypothermia is defined as an involuntary drop of the body core temperature < 35˚C.

It is proved that hypothermia is exerting a protective effect on the brain and heart, and intact neurological recovery may be posible even after prolonged cardiac arrest if deep hypothermia develops before asphyxia.

Also it is very important that rewarming tehniques to be started as soon as posible, using a combination of pasive (wool blankets, aluminium foil), active external (forced worm air) and active internal (worm infusions, forced peritoneal lavage) tehniques.

This following report presents a case of a male adult with cardiac arrest after severe hypothermia, because he was falling asleep outside his house in winter, after using a large dose of alcohol.

Case presentation. A 63 years old male was found, by his family, outside his house, in winter, unconscious, with his clothes wet.

At the primary evaluation the patient presents obstructed airway (abundant salivary secretions), gasping, no central puls, ventricular fibrillation on the monitor, and the central temperature = 24.7 °C.

In the given circumstances, the shockable rythm standard protocol was initiated, with the administration of a three consecutive shocks (200J), followed by chest compressions. The airway was cleared, the cervical spine was protected, followed by endotracheal intubation with mecanical ventilation and peripheral vascular access together with worm intravenous fluids. On reevaluation, after the administration of the three shocks, still ventricular fibrillation was detected, but still in severe hypothermia, switching to non-shockable rythm protocol, but without administrating Adrenalin intravenous.

At the emergency departament the rewarming tehniques were started imediatly including pasive, active external or active internal tehniques. In all this time the chest compressions and mechanical ventilation were performed continuosly.

After 5 hours of continous resuscitation and rewarming the central body temperature arrived at 30°C, and on reevaluation still ventricular fibrillation was detected, resuming to shockable rythm standard protocol (two shocks administrated in total).

After almost 6 hours of resuscitation and rewarming the patient present ROSC, sinus rythm, with a ventricular frequency of 73 b/min, blood pressure of 159/85 mmHg, GCS = 3 points.

In the emergecy departament monitorization, treatment, mechanical ventilation and rewarming were continued. Blood tests were in normal rangs. A CT scan for skull, cervical spine and thorax was performed, showing no significant changes.

The patient was transferred to an ICU unit where there was a favorable neurological outcome. The patient was extubated after 3 days and discharged without any neurological damages.

Conclusion. This case shows that in victims of cardiac arrest following severe hypothermia there are higher chances of succes, with long-term survival, if the resuscitation is initiated imediatly together with the rewarming techniques.

Particularities. We report a case of a patient that has survived a cardiac arrest, without any neurological damages, following severe hypothermia, despite the fact that he was in critical condition going through a prolonged resuscitation.

ABDOMINAL PAIN IN CHILDREN - CLINICAL EXPERIENCE

ANA OGLINDA[1], NATALIA CATANOI[2], CRISTINA OGLINDA[3], LUDMILA HADÎRCĂ[2]

[1]IM&C, Chisinau, Republic of Moldova
[2]State University of Medicine „N. Testemitanu", Chisinau, Republic of Moldova
[3]student, State University of Medicine „N. Testemitanu, Chisinau, Republic of Moldova
*Corresponding author: *Ana Oglinda, e-mail: oglinda.ana@mail.ru*

Introduction. Abdominal pain in children is usual for various diseases, but there are situations where these pains are a symptom of a surgical disease, which can put the child's life in danger.

Objectives. The aim of this study comes out of the need to fill the knowledge of a clinician in the examination of a child with abdominal pain before hospitalization and emergency reception.

Materials and methods. There have been retrospectively studied the medical records of children with abdominal pain transported to IM&C within the period 26.IX.2015-26.XII.2015. The medical records were divided into 2 groups: surgical pathology was confirmed in the I group of 96 children with abdominal pain, and non-surgical diseases or conditions were confirmed in the II group of 190 children who have undergone a treatment in somatic unit or have been managed in the emergency reception unit. To assess the pain intensity there have been used the pain rating scales. All children received routine examination of a child with abdominal pain.

Results and discussion. Following the study, we've noted the following: 96.5% of children were transported by ambulance and 3.4% were transported by parents or guardianship. Children age: 1 month to 18 years. During transportation there was assessed the overall condition of the child, there were applied the known pain scales and there was initiated a pain treatment. The causative factors of abdominal pain: 81 cases were in gastrointestinal diseases, 51 cases of intestinal colic, 45 acute appendicitis; 35 had bronchopulmonary disease, 18 cases of duodenal ulcer; 14 children with nephrotoxic urination; tumors, intestinal obstruction 7 cases; abdominal pain in diabetic ketoacidosis was confirmed in 8 cases etc. 63 children of the II group were managed within SPU with discharge from hospital. 88 children of the I group children who have been hospitalized in the surgery unit were subject to a surgery and 8 children were subject to therapeutic treatment. During the expected period the pain management was performed with non-opioid analgesic preparations in 156 cases, non-steroidal anti-inflammatory in 78 cases, Palier analgesics I or II in 23 cases. It to note that the need for the administration of opioids was in 14 children who experienced abdominal pain according to numerical scale over 7. The management of a child with abdominal pain was complex in association to analgesics of spasmolytics, symptomatic therapy and infusion.

Conclusions.

1. Abdominal pain in children is a symptom quite frequently encountered in children, which represents 7.1%, data that correspond to the reports of the specialty literature.
2. Children with abdominal pain requiring emergent surgery is about 30%.
3. The cure of children with abdominal pain is complex, and the need for administration of analgesics Palier I or II was 8 percent.

PULMONARY EMBOLISM (PE) IN EARLY PREGNANCY – CASE REPORT

MARIA PETRESCU[1], ALEXANDRU BORODI[1], MIHAELA PASC[2], MIHAI OBER[3]

[1]Cluj University Center, Romania
[2]UPU-SMURD, SCJU Cluj, Romania
[3]cardiology, SCJU Cluj, Romania
*Coressponding author: *Maria Petrescu, e-mail: mariapetrescu87@gmail.com*

Introduction. Pulmonary embolism is a primary cause of death for pregnant women in developed countries. The coexistence of pregnancy makes management more difficult: there are two patients at risk, the usual imaging modalities become more complicated during pregnancy, overdiagnosis may lead to unnecessary treatments that jeopardize two patients. This case particularity lies in diagnosis of high-risk PE to a pregnant woman without known history of deep vein thrombosis or hematologic disorders and the need to evaluate the benefit-risk ratio for thrombolitic therapy.

Material and method. 31 years old, 8 weeks pregnant, with no significant medical history, except previous early pregnancy miscarriage, is brought in UPU for two episodes of syncope, severe dyspnea, anterior chest pain and epigastric pain. On presentation: significant hypoxia, partially corrected by supplemental oxygen, tachycardia and slightly raised blood pressure but with shock index present. 12 leads ECG reveals the typical appearance of S1-Q3 and lab results show severe hypoxemia and elevated D-Dimers. Emergency bedside echocardiography demonstrates right ventricle distension and hypokinesia, paradoxical movement of interventricular septum and moderate pulmonary hypertension. Following cardiologic and gynecological consult, thrombolytic therapy with Alteplase was initiated in UPU, continued later in USTACC.

Results and discussions. Serial clinical evaluations, ECGs and echocardiography show the remission of previous changes and gynecological exam reveals no fetal complications. High risk PE diagnosis was based only on clinical symptoms, ECG and echocardiography without CTPA. Thrombolytic therapy was effective with no side effects until now.

Conclusion. Pregnancy is an example of Virchow's triade: hypercoagulability, vein flow stasis, vascular damage, factors that lead to an increased incidence of PE. Preventing deaths from PE in pregnancy requires high index of clinical suspicion and accurate diagnostic approach so that appropriate treatment with anticoagulation and thrombolysis can be initiated in timely fashion. Thereby, increases the interest in thorough research to identify risk populations and commence appropriate prevention.

URAPIDIL IN PREHOSPITAL EMERGENCY TREATMENT FOR HYPERTENSION

GABRIELA PURA[1,2], MIHAELA TANASIE[2], DORU IRIMIA[2], HORIA SIMU[2], ONIGA OVIDIU[1], LIVIU ROBA[2], DANA CĂLIN[2], ENIKO DARVAY[2], POMPILIA CONSTANTINIDI[2], FLORENTIN GHIȚĂ[2], SANDA CHIȚA[2], ANGELA DOMOKOȘ[2], ADRIANA COLDEA[2], LUMINIȚA COVRIG[2], LEONARD DIACONU[2], ZOLTAN HORVATH[2], GHEORGHE ȘTEȚCO[2], MARCEL DONICI[2], JUSTIN DODANE[2]

[1]Dept. of Pharmaceutical Chemistry, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca
[2]Dep. of Ambulance Service, Cluj-Napoca, Romania
*Coressponding author: *Gabriela Pura, e-mail: gabrielapura@gmail.com*

Background. Hypertension is a major public health problem, being the most common cardiovascular disease in the adult population [1]. Antihypertensive drugs are many and varied, both structurally and in terms of mechanism of action. In extreme situations, when the pressure values sharply increase and major complications may occur, injectable drugs are used to achieve a rapid and intense effect [1,2]. Urapidil was introduced in the Romanian pharmaceutical market several years ago. It is an alpha-1 postsynaptic adrenergic receptor bloker and an alpha-2 presynaptic adrenergic receptor agonist [3,4]. Urapidil is used to treat severe high blood pressure, in emergency cases, with organ damage, which threatens imminent life [4,5].

Aim. This study evaluate the results and the safety of using Urapidil i.v. in the pre-hospital service, in comparison to some conventional antihypertensive drugs used for the same indication.

Matherial and methods. 80 hypertensive patients were surveilled (190 / 100-220 / 125 mmHg): they were treated with Enalapril i.v., Furosemid i.v., and Urapidil i.v., from the Ambulance Service in Cluj emergency kit.

Results. It was found that blood pressure fell to a safe considered limit in dissimilar times, for the patients treated with Urapidil, the fall was achieved on average in 3 minutes after administration, contrasting to the other two antihypertensive drugs whose administration produced a favorable response after 30-35 minutes.

The study concluded. The advantages of using Urapidil in emergency treatment are rapid and easy to monitor effect, absence of reflex tachycardia and the excellent safety profile.

HEMOSORPTION IN ACUTE INTOXICATION IN CHILDREN

TATIANA COVALSCHI[1], SERGIU POSTOLACHI[2], SECU VITALIE[3]

[1]Head of the IC Unit, Municipal Clinical Hospital "V. Ignatenco", Chisinau, R. Moldova
[2]Head of Hemodialysis Section, Institute of Mother and Child Care, Chisinau, R. Moldova
[3]Interim of the Department of Emergency Care, Municipal Clinical Hospital "V. Ignatenco", Chisinau, R. Moldova
* Corresponding author**:** *Secu Vitalie, e-mail: secuvitalie@rambler.ru*

Objective. To elucidate the efficacy of the method as one of the basic methods.

Method of detoxification and correction of humoral homeostasis, hemosorption is the most effective and maximum in the treatment of acute mushroom poisoning in children.

Hemosorption (HS) is a method of detoxification of the body through which the internal environment – the blood comes in direct contact with sorbent surface, which is able to extract the most toxic substances of different origin.

Hemosorption was carried out as a special operation of detoxification. In the Section on Surgical IC, Toxicology and Hemodialysis, there were 19 children under supervision, to whom the extracorporeal method was applied - hemosorption. It is a method for detoxification of the body in order to extract toxins and prophylaxis of liver disease and was used in the first two days of intoxication. The children were divided into groups depending on age and the seriousness.

Thus, up to 52.63% were children with the most serious form, 31.56% - serious form and 15.78% and with average gravity.

Poisoning with mushrooms harvested from the spontaneous flora is caused by the failure to identify the correct types of mushrooms and also, by the phenomenon of crossing spores between edible and poisonous mushrooms. After the HS biochemical indexes improved and the level of intoxication was reduced. In nine patients after HS a decrease in hepato-cerebral failure was observed. Patients came out from inhibition state, were more active and had a better sense of orientation. Five patients in coma and sopor, showed improvement of reflexes.

Conclusion. When conducting HS in patients in the early stages, positive dynamics is observed after the procedure, and the next day the same; content of toxic metabolites have a tendency to decrease. Figure 1 shows the trends in total protein when conducting HS and infusion therapy.

Conducting HS in acute poisoning with mushrooms should be reviewed as a method to eliminate uremic metabolites and that, our research shows that HS in acute mushroom poisoning in children has proved to be a basic pathogenic method of treatment in pathological conditions.

THE IMPACT OF PRE-HOSPITAL ARTERIAL HYPO-AND HYPERTENSION ON CLINICAL SEVERITY AND PROGNOSIS OF PATIENTS WITH TRAUMATIC BRAIN INJURY

NATALIA SCURTOV[1,2,3], NATALIA CATANOI[1,2,3]

[1]Department of Medical Emergencies, Nicolae Testemitanu State University of Medicine and Pharmacy; Republic of Moldova
[2]National Center of Prehospital Emergency Medicine; Republic of Moldova
[3]PHCI Institute of Emergency Medicine, Republic of Moldova

Introduction. Hemodynamic instability is common in patients with severe traumatic brain injury (TBI). Studies from the Traumatic Coma Data Bank documented that hypotension is a major determinant and an independent predictor of outcome of severe TBI. Hypotension is significantly associated with increased mortality following TBI. A variety of trauma scores use systolic blood pressure (SBP) and GCS score as independent factors for severity grading and prognosis. A variety of trauma score scales use a systolic blood pressure (SBP) score and Glasgow coma score (GCS) as independent factors for the prognosis and severity grading.

Materials and methods. This study estimates: 1) the level of dependence of these two variables by means of a case control study of 172 patients with traumatic brain injury (TBI), 2) the level of the dependence of GCS at the moment of admission to the hospital at the presence of pre-hospital hypotension (SBP < 110 mm Hg) or hypertension (SBP > 140 mm Hg), and 3) a cause-effect relationship between the presence of pre-hospital hypotension and a lower admission GCS (aGCS), using Hill's criteria.

Results. The study has revealed that the pre-hospital hypotension has been 3.8 times as much common in severe and moderate TBI in comparison with minor injuries, p = 0.016; 95% CI [1.2, 12.29]. GCS has been lower in the pre-hospital hypotensive group (n = 13) (11.8 GCS) in comparison with the normotensive one (n = 111) (13.8 GCS), p = 0.001. Categorical regression has identified aGCS moderately correlated (r = 0.636) with the pre-hospital hypotension and weakly correlated (r = 0.285) with the pre-hospital hypertension, the regression model being a good fit for the data. The causal inference has been sustained by 5 of 9 criteria proposed by Bradford Hill, which are considered essential and have been sufficient in other studies to prove some weak associations. aGCS has been found to depend on prehospital SBP, when it is lower than 110 mm Hg, the association being lost in a wider range of pre-hospital SPB (90÷240 mm Hg).

Conclusion. Therefore, pre-hospital hypotension influences the prognosis of TBI patients also by means of GCS alteration, not just independently on it.

FEVER - OLD SYMPTOM - NEW DIAGNOSTIC PERSPECTIVE CASE CHALLENGE

CARMEN BALOG[1], RALUCA TAT[1], DAN DIRZU[2]

[1]Department of Emergency, Clinical Emergency County Hospital Cluj-Napoca
[2]Department of anaesthesia and intensive care, Clinical Emergency County Hospital Cluj-Napoca

Objective. The purpose of this presentation is to show how an old symptom like fever can be a border line in many differential diagnosis when talking about a middle-age, female patient who was admitted in the Emergency Department (ED) after she was founded at home with fever suddenly appeared, apparently in full health condition.

Material and method. A 54- years old female, with a chronic pathology of Parkinson stage IV disease with medication, hyper blood pressure, multinodular thyroid, and depression was admitted in the ED after a tonic-clonic seizure at home. At presentation her mental status was alterated and core temperature was 41°C. In ED was immediately started internal and external cooling methods, antipyretic medication in high doze and after 1 hour fever was 40,5°C. Patients mental status was still deteriorated, she presented myoclonic mouvements. She was intubated and mechanical ventilated to prevent aspiration pneumonia. Antiseizure medication was stared with continuous cooling method. Cerebral CT scan performed, revealed no cerebral ischemia or other injuries that could explain the symptoms. She was admitted in Intensive Care Unit (ICU).

3 months how stationed in ICU multiple blood tests, neurologic and endocrinologic consults were performed. During admition the patient had almost every day refractory high fever. Lumbar puncture showed Herpes simplex virus infection. Four plasmapheresis sessions were performed after a high suspicion of acute polyradiculoneuritis syndrome with poorly clinical improvement.

Results. Antiparkinson medication combined with Tramadol- that she was taking for pain relief (made known afther a thorough medical history), clinical appearance and multiple blood tests performed were highly suitable for neuroleptic malign or serotoninergic syndrome. Both are induced by certain neuroleptic drugs or combination between antipsychotic and antidepresive drugs.

Conclusions. Final diagnosis was sever hyperpyrexia, Parkinson disease, symmetric sensory axonal polyneuropathy and Guillain-Barre Syndrome in observation. Malign neuroleptic or Serotoninergic syndrome remain a high suspicion in this case. Furture based evidence data needs to be found in order to decide benefits and disadvantages when taking in consideration administration of Bromcriptine or Dantrolene in this case in ED room.