Volume 72 | Supliment 4 | 2026

ACTA MARISIENSIS
SERIA MEDICA

OFFICIAL PUBLICATION OF THE
GEORGE EMIL PALADE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY OF TARGU MURES

National Congress of Emergency and Disaster Medicine with International Participation · 3rd edition

3-6 June 2026
Târgu Mureș, România

BOOK OF ABSTRACTS

ISSN: 2668-7755 • Online ISSN: 2668-7763 • www.actamedicamarisiensis.ro

UNIVERSITY PRESS 19 99 TÂRGU-MUREȘ

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The journal publishes high-quality articles on various subjects related to research and medical practice from the all the medical and pharmaceutical fields, ranging from basic to clinical research and corresponding to different article types such as: reviews, original articles, case reports, case series, letter to editor or brief reports. The journal also publishes short information or editorial notes in relation to different aspects of the medical and academic life.

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· SCOPUS

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· National Library of Medicine

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National Congress of Emergency and Disaster Medicine with International Participation · 3rd edition

3-6 June 2026
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THE IMPACT OF DIGITAL TRANSPARENCY ON PATIENT FLOW IN THE EMERGENCY DEPARTMENT OF BRAȘOV

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Background: Waiting times in the emergency department represent a major concern, particularly from the patient perspective. Despite accurate clinical triage, patients commonly lack accessible information regarding their status. This information gap contributes to patient anxiety and repeated inquiries to medical staff, thereby increasing staff workload and lessening operational efficiency.

Objective: This study aimed to evaluate the impact of implementing a digital patient status display system in the emergency department. The primary outcomes assessed were perceived waiting time, total length of stay, frequency of patient–staff interactions, and patient satisfaction.

Material and methods: A retrospective observational comparative study was conducted in the Emergency Department of Brașov over a six-month period, spanning from January to June 2025. Six hundred adult patients who met the inclusion criteria were enrolled consecutively. These patients were allocated into two equal groups of three hundred each: the control group, which received standard care prior to implementation of the digital system, and the intervention group, assessed after the digital system was introduced.

Results: Following the implementation of the following, perceived waiting time decreased from 92 to 64 minutes, representing a 30% reduction. The number of patient inquiries declined from 5.2 to 2.1 per patient, a 60% decrease. The length of stay in the emergency department was reduced from 210 to 178 minutes, representing a 15% improvement. Patient satisfaction scores increased from 2.8 to 4.1, a 46% increase.Patients reported reduced anxiety and enhanced understanding of their clinical pathway as a result of real-time notifications for completed consultations and ongoing investigations.

Conclusions: The hospital got a system that shows patient status in real time. This really helped patients. Made things run smoother. People did not think they were waiting long. They also did not ask many questions. Patients were able to go sooner.. They were happier, with the care they got. The patient status display system made a difference. It improved experience and operational efficiency. The patient status display system is a tool.

Keywords: tranparency,digital,faster triage,modern emergency

MANAGEMENT OF ACUTE SURGICAL ABDOMEN IN A PATIENT WITH RECENT CARDIOVASCULAR SURGERY

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Introduction: Acute abdomen in patients with recent major cardiovascular surgery poses significant diagnostic and therapeutic challenges, particularly in the context of complex vascular pathology and high perioperative risk.

Case Presentation: A 51-year-old patient admitted to the cardiovascular surgery department was referred for general surgery and anesthesia evaluation due to signs of acute surgical abdomen. Abdominal computed tomography revealed massive pneumoperitoneum, indicating the need for emergency surgical intervention. The patient's medical history was significant for complex aortic pathology, including prior endovascular repair with abdominal aortic endograft, and recent emergency surgery for ruptured ascending aorta (Stanford type A) performed five days prior. The acute abdominal event occurred while the patient was being prepared for discharge. Preoperatively, the patient was hemodynamically and respiratory stable. Invasive monitoring was established with arterial and central venous catheterization, and vasoactive support was prepared. Intraoperatively, the patient remained relatively stable, requiring minimal vasopressor support. Postoperatively, the clinical course was rapidly unfavorable, with development of critical lower limb ischemia and acute liver failure. Extracorporeal renal replacement therapy was initiated. The patient developed severe refractory metabolic acidosis with hyperlactatemia and persistent hypotension despite maximal supportive therapy. Death occurred within 24 hours postoperatively.

Discussion: Acute abdomen with a history of recent aortic surgery is a critical condition requiring urgent intervention. In this case, the patient had diverticulitis, which was the cause of the pneumoperitoneum. There was no evidence of a direct causal relationship of it, with the previous aortic surgery. Although the patient was stable preoperatively, the presence of pneumoperitoneum suggested emergency surgery. This case further emphasizes the importance of early imaging in highrisk patients. The rapid progression into refractory shock, hyperlactatemia, and multiorgan failure shows how severe the underlying pathology was, likely related to mesenteric ischemia or perforation, and the narrow therapeutic window. The prognosis remained poor due to the organ dysfunction, despite timely multidisciplinary action and coordination.

Conclusions: This case illustrates the high risk and rapid deterioration associated with acute abdominal pathology in patients with recent major aortic surgery. Despite initial stability, postoperative evolution may be dominated by severe multiorgan failure and refractory shock. **Keywords:** Acute abdomen, Aortic surgery, Pneumoperitoneum, Multiorgan failure

DIFFERENTIAL DIAGNOSIS OF COMA IN PREHOSPITAL SETTINGS

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Introduction: Coma is defined as a state where the patient has reduced alertness and responsiveness and cannot be woken up easily. Common cause of coma include trauma, hypoxia, toxins, metabolic disturbances, status epilepticus and alchohol poisoining.

Case Presentation: A 74-year-old male is found unresponsive in his house, with a bleeding occipital wound. During primary survey we find a patent airway, irregular breathing pattern with normal oxygen saturation, blood pressure of 171/104 mmHg, pulse of 74, GCS 3, blood sugar of 141 and reactive anisocoria. C-spine precautions are taken, bleeding is stopped using compressive bandage, and RSI intubation is decided, suspecting cerebral hemorrhage following head trauma. Intubation is successful, patients is placed on mechanical ventilation and continuous sedation and transported to ED. After laboratory results come back normal, as well as normal head CT, blood alcohol content is measured, coming back at 1.73 ‰. Patient is extubated after sedation is ceased, transferred to internal medicine for observation with a final diagnostic of resolved ethanol-induced coma.

Discussion: There are different scales to categorize the severity of coma, such as the Glasgow Coma Scale and the FOUR Score, meant to guide paramedics and doctors in managing an unresponsive patient. In the prehospital setting, identifying the cause of coma is difficult without access to extensive laboratory testing and imaging, relying mainly on experience and clinical judgment. Before identifying the cause of the coma, it is important to follow the ABCDE approach, maintaining a patent airway, monitoring vitals and doing a brief neurologic exam before administring any central-acting drugs, including those used in RSI. During the primary survey clinicians look for any clues as to why the patient is comatose, such as irregular breathing patterns, hypoglycemia, toxidromes. If any reversible cause is found, it should be treated immediately, before attempting intubation. Although all clinical signs suggested that the coma was the result of a CNS lesion, including external head trauma, anisocoria, profound coma, no alcohol smell on scene, laboratory testing and imaging proved it was in fact ethanolic poisoning

Conclusions: Without acces to prehospital blood alcohol testing, especially when significant signs of TBI are present, appropiate precautions should always be taken, as the consequences of managing a TBI as a ethanolic poisoning are far more dangerous than the other way around.

Keywords: coma, limited imaging, prehospital, TBI

WHEN TWO TRAUMA ALGORITHMS COLLIDE: IMMEDIATE THORACOTOMY FOR FAST-POSITIVE CARDIAC BOX INJURY WITH CONCOMITANT SAMESESSION SSRF

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Introduction: Penetrating injury within the cardiac box associated with hemodynamic instability and a positive focused assessment with sonography for trauma (FAST) requires immediate operative exploration. In contrast, blunt chest trauma with chest wall instability is usually evaluated by a CT scan. The surgical stabilization of rib fractures (SSRF) is then planned according to imaging findings, often within the first 72 hours. We report a case in which both management pathways were simultaneously relevant.

Case Presentation: A 55-year-old man with alcohol influence was transported to our trauma center after falling onto a fence. The fence tip caused a penetrating injury within the cardiac box, while the horizontal bar produced blunt thoracic trauma. On primary survey, the airway was clear. Breathing assessment demonstrated left-sided pneumothorax and a clinically unstable left hemithorax. Oxygen saturation was 98% on supplemental oxygen. Circulatory status was compromised, with heart rate 140/min and blood pressure 80/55 mmHg. Glasgow Coma Scale was 13. Bedside ultrasound demonstrated pericardial fluid. Because the patient was hemodynamically unstable and FAST-positive, he was transferred directly to the operating room without further imaging. Left anterolateral thoracotomy revealed 300 mL hemothorax and an injury of the 8th segment of the lung, which was repaired by suture. Pericardial exploration showed serous fluid without relevant cardiac injury. However, marked chest wall instability persisted on intraoperative assessment. Since the thorax was already open and instability was obvious, SSRF was performed during the same procedure without any further imaging, adding approximately 20 minutes to the operation. Postoperatively, analgesia included an erector spinae plane block. The patient was extubated immediately after surgery, mobilized with a portable suction device, had chest drain removal on postoperative day 3, reported pain scores of NRS 2-3, and was discharged on postoperative day 4.

Discussion: This case highlights a direct conflict between two accepted thoracic trauma algorithms. In the presence of shock and positive FAST after penetrating cardiac box injury, there is no role for CT before exploration. However, clinically obvious severe chest wall instability may justify immediate definitive stabilization when the thorax is already open and the patient can tolerate a short extension of operative time.

Conclusions: In selected patients with combined penetrating and blunt thoracic trauma, SSRF may be considered part of resuscitative care rather than a delayed adjunct. When major chest wall instability is addressed during the index emergency operation, it may contribute to early recovery, facilitate prompt extubation and mobilization, improve pain control, and support early discharge.

Keywords: penetrating, blunt trauma, thoracotomy

MULTIDISCIPLINARY MANAGEMENT OF SEVERE POLYTRAUMA IN A DISASTER MEDICINE CONTEXT: A CASE REPORT

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Introduction: Polytrauma is a major challenge in disaster medicine, requiring coordinated prehospital and hospital management. While immediate stabilization is critical, long-term outcomes depend on preventing complications and addressing psychological sequelae.

Case Presentation: A 38-year-old male was transported by SMURD to the Emergency Department in Târgu Mureș following a high-speed head-on collision. On admission, he was hemodynamically stable but presented with retrograde amnesia and multiple orthopedic injuries. Whole-body imaging revealed a comminuted left femoral shaft fracture, right acetabular transverse fracture, right pilon fracture, and a left Lisfranc injury. Management followed a staged surgical approach consistent with damage control principles. Three operations were performed on November 2, 5, and 15, 2025, including intramedullary nailing and titanium plate osteosynthesis. Perioperative care required transfusion of erythrocyte concentrate and fresh frozen plasma to maintain hemodynamic stability. During hospitalization, the patient developed psychological symptoms, including generalized anxiety, panic attacks, and a depressive episode. Psychiatric evaluation led to treatment with Sertraline and Alprazolam, resulting in gradual improvement.

Discussion: This case illustrates key principles of disaster medicine, including efficient prehospital response, appropriate triage, and coordinated multidisciplinary management. The staged surgical strategy minimized physiological stress while allowing definitive fracture fixation. Preventive measures were essential in reducing complications. Thromboprophylaxis was achieved with Enoxaparin, and gastroprotection was provided using Pantoprazole. Weight-bearing restrictions (left side: 8–10 weeks; right side: 12 weeks) supported staged recovery and fracture consolidation. Additional care included pressure sore prevention and early mobilization. Psychological complications are frequently encountered in severe trauma and disaster contexts. Early identification and management significantly contribute to improved adherence to treatment and overall recovery, highlighting the importance of integrating psychiatric care into trauma protocols.

Conclusions: The management of polytrauma in a disaster medicine setting requires a comprehensive multidisciplinary approach. Successful outcomes depend not only on surgical expertise but also on effective complication prevention and psychological support. Long-term follow-up remains essential to ensure complete functional and mental recovery.

Keywords: road car accident, polytrauma, staged fracture fixation

SYNCHRONOUS FRONTAL MENINGIOMA AND HIGH-GRADE ASTROCYTOMA: A RARE DIAGNOSTIC ENTRAPMENT IN THE EMERGENCY SETTING

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Introduction: Coexisting primary brain tumors of different histopathological types within the same lobe, known as synchronous tumors, are exceptionally rare and pose a major diagnostic dilemma. While anaplastic astrocytoma (grade III) typically manifests with standard signs of intracranial mass effect, its coexistence with another lesion can distort the clinical and radiological picture, leading to misdiagnosis or delayed treatment in acute settings.

Case Presentation: A 74-year-old male was admitted to the Emergency Department exhibiting acute neurological deficits highly suggestive of a vertebro-bazilar stroke, further complicated by elevated Ddimer levels. While the initial non-contrast head CT was unremarkable, a subsequent CT angiography identified a 19 × 14 mm, homogeneously enhancing juxtacortical mass in the right frontotemporal region, initially misdiagnosed as an arteriovenous malformation (AVM). A digital subtraction angiography (DSA) performed the next day revealed blood supply from the middle meningeal artery, shifting the suspicion toward a meningioma. Brain MRI corroborated the meningioma characteristics but additionally unveiled an adjacent, smaller hyperenhancing lesion surrounded by digitiform edema. Following surgical resection, the histopathological report delivered an unexpected dual diagnosis: a synchronous grade III astrocytoma and a meningioma.

Discussion: This case underscores the extreme difficulty of identifying high-grade astrocytomas when they lack classic features like central necrosis and exhibit variable enhancement, especially when masked by a synchronous meningioma in the same anatomical region. Advanced imaging, including proton magnetic resonance spectroscopy (MRS), can provide vital metabolic clues—such as an elevated choline/creatine ratio with relatively preserved NAA and absent lactate—while 2hydroxyglutarate (2HG) detection can noninvasively signal IDH mutations. However, as demonstrated, a striking lesion can easily overshadow a secondary malignancy on standard scans.

Conclusions: Synchronous intracranial tumors can mimic acute vascular events and confound multimodal radiological assessments. Clinicians must maintain a high index of suspicion for dual pathology when clinical symptoms do not perfectly align with a single digital lesion, as histopathology remains the ultimate gold standard for tailored neuro-oncological management.

Keywords: Grade III astrocytoma, Anaplastic astrocytoma, Brain tumor, Atypical presentation

WOODEN MIMIC: ACUTE LARGE VESSEL OCCLUSION FOLLOWING PENETRATING ORBITOCRANIAL TRAUMA

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Introduction: Acute hemiparesis in elderly patients typically mandates rapid stroke protocol initiation. However, 20–40% of suspected strokes are "stroke mimics." Penetrating traumatic brain injury (pTBI) is a significant diagnostic challenge; it can simulate a spontaneous ictus while directly precipitating a large vessel occlusion (LVO). Accurate clinical evaluation is paramount to avoid life-threatening mismanagement.

Case Presentation: A 73-year-old female was admitted to the emergency department following a mechanical fall from standing height. Clinical examination revealed a right periorbital hematoma and witnesses reported a 2–3-minute loss of consciousness. Neurological evaluation demonstrated a Glasgow Coma Scale score of 14, global aphasia and left-sided hemiparesis with 1/5 power in the upper limb and 2/5 in the lower limb on the Medical Research Council scale. Given the acute deficits, an ischemic stroke in the right middle cerebral artery (MCA) territory was suspected and the institutional stroke protocol was activated. Non-contrast computed tomography (NCCT) demonstrated a 6.5 cm linear radiolucent foreign body extending from the right orbit through the superior orbital fissure, with an associated sphenoid wing fracture. Imaging also revealed a 66 × 51 mm right temporal intraparenchymal hematoma, subarachnoid haemorrhage and a 6 mm midline shift. CT angiography (CTA) confirmed a right M1-segment MCA occlusion and partial internal carotid artery thrombosis.. The intracranial haemorrhage strictly contraindicated reperfusion manoeuvres. An emergency multidisciplinary surgical intervention was performed to evacuate the hematoma and extract the foreign body, which was identified intraoperatively as a wooden branch.

Discussion: Penetrating traumatic brain injuries resulting in LVO are rare. Post-traumatic ischemia typically occurs through direct arterial laceration, external mechanical compression or intimal dissection leading to thrombosis. This case illustrates a critical therapeutic dilemma: reperfusion therapies that are gold-standard for primary ischemic stroke become catastrophic in the presence of traumatic haemorrhage. Furthermore, the radiolucent nature of wood on NCCT can lead to its misidentification as pneumocephalus, further complicating the initial diagnosis.

Conclusions: Not all presentations of acute focal neurological deficits are primary vascular events. While the "Time is Brain" mantra emphasizes rapid intervention, this case demonstrates the necessity of high-fidelity clinical and radiological evaluation. Identifying a traumatic ethology and prioritizing advanced vascular imaging, such as CTA, is essential to differentiate pTBI from thromboembolic stroke and to avoid catastrophic iatrogenic outcomes.

Keywords: orbitocranial trauma, large vessel occlusion, stroke mimic, penetrating traumatic brain injury, middle cerebral artery

VA-ECMO AS A RESCUE STRATEGY FOR INTRA-PROCEDURAL CARDIAC ARREST DURING TAVI IN SEVERE AORTIC STENOSIS

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Introduction: Transcatheter aortic valve implantation (TAVI) is frequently used in patients with severe aortic stenosis and high surgical risk; however, acute complications may rapidly progress to hemodynamic collapse. The importance of this case lies in the need for an immediate and coordinated response to intra-procedural cardiac arrest, as well as in the integration of extracorporeal support and multimodal therapy aimed at controlling the inflammatory response and organ dysfunction.

Case Presentation: A 76-year-old patient presented to the Emergency Department in Târgu Mureș with acute pulmonary edema, in the context of severe aortic stenosis and chronic ischemic heart disease. A transcatheter aortic valve implantation (TAVI) procedure was planned. During the intervention, the patient developed cardiogenic shock followed by cardiorespiratory arrest. Cardiopulmonary resuscitation was initiated, and peripheral veno-arterial extracorporeal membrane oxygenation (VA-ECMO) was established emergently. Subsequently, the patient was transferred to the intensive care unit, where the clinical course was complicated by a systemic inflammatory response, as well as renal and hepatic dysfunction. The critical moment was the onset of intra-procedural cardiac arrest in the setting of severely impaired cardiac function. The rapid decision to initiate veno-arterial extracorporeal membrane oxygenation (VA-ECMO) during resuscitation enabled the restoration of tissue perfusion. The subsequent therapeutic strategy included control of the inflammatory response and organ dysfunction through continuous hemodiafiltration combined with cytokine adsorption techniques, as well as myocardial preconditioning with levosimendan prior to ECMO weaning.

Discussion: The use of veno-arterial extracorporeal membrane oxygenation (VA-ECMO) in cardiac arrest associated with TAVI is reported as a rescue option; however, its success depends on the rapidity of initiation and the management of subsequent complications. This case highlights the importance of an integrated approach: early circulatory support, control of the inflammatory response, and optimization of myocardial function prior to decannulation. In very high-risk patients, particularly those with severe cardiac dysfunction or advanced coronary artery disease, consideration of prophylactic ECMO support—depending on available resources and institutional expertise—may represent a strategy to prevent intra-procedural hemodynamic decompensation.

Conclusions: Prompt initiation of veno-arterial extracorporeal membrane oxygenation (VA-ECMO) can be life-saving in intra-procedural cardiac arrest during transcatheter aortic valve implantation (TAVI). In selected high-risk patients, prophylactic use of ECMO may improve procedural safety and postoperative outcomes.

Keywords: VA-ECMO, TAVI, cytokine adsorption

AN ALMOST MISSED SPLENIC INJURY: HOW A WATCHFUL EYE ON LABORATORY VALUES SAVED A PATIENT

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Introduction: Splenic lesions are often due to blunt trauma. Although motor vehicle accidents are the main cause (50-75%), falls and direct impact are a close second. Targu-Mures SCJU receive patients from a diverse ethnic background. Many Hungarian speakers live in this part of Romania.

Case Presentation: 13-year-old girl presented late-night into our emergency department accompanied by her father. Her father reported that she complains of diffuse abdominal pain which first appeared in the epigastrium after a heavy meal accompanied by bloating. She is a Hungarian speaker; her father mediates in Romanian with the treating physician. On examination of the abdomen, tenderness is noted in the right upper quadrant. Laboratory tests were performed, and symptomatic treatment was administered (Pantoprazole, Drotaverine hydrochloride, saline solution 250 ml). The pain persisted. Tests performed at a point-of care device showed normal pH and lactate, Hb 9.8g/dl, Htc 35%. Results from the laboratory revealed leukocytosis with neutrophilia, Hb 9 g/d, Htc 28%, TBI 2,9 mg/dl. An hour later, based on the laboratory results and the not subsiding symptoms, an abdominal ultrasound was ordered due to suspected cholecystitis. At this point, the medical history was reviewed with the patient in Hungarian. Now she reports a fall from standing height, striking her abdomen with a blunt object earlier that day. The ultrasound was negative for trauma and for cholecystitis. Due to persistence of the abdominal pain, two hours later a complete blood count was repeated and showed a Hb of 8.4 g/dl and Htc 26%. An IV contrast CT scan was requested and showed splenic laceration grade III/IV and hemoperitoneum confined to the perisplenic region and pelvis. A surgeon was consulted, and the patient was transferred to the operating for splenectomy, 5 hours after her arrival in ED.

Discussion: In the context of blunt trauma, the absence of obvious external signs does not rule out the presence of internal lacerations. Moreover, ultrasounds of the spleen do not have 100% sensitivity for lesions at first examination, albeit with increasing sensitivity on reexaminations. Some studies quote almost 30% false negatives in FAST ultrasound examinations at 4h.

Conclusions: This report is highlighting vigilance in analysis of patient data and the importance of a thorough medical history taken in the patient's native language. Moreover, the rather small seeming decrease of 0.6 hemoglobin has been proven to be a key indicator. Treating emergency physicians and other healthcare providers should stay involved and watchful.

Keywords: pediatric emergency medicine, spleen lacerations, internal bleeding, multilingual anamnesis

ACUTE STANFORD TYPE A AORTIC DISSECTION PRESENTING AS SEIZURELIKE EPISODE: A DIAGNOSTIC CHALLENGE IN THE EMERGENCY DEPARTMENT

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Introduction: Aortic Dissection is a medico-surgical emergency associated with high mortality if not rapidly diagnosed and treated. While classically presenting with abrupt characteristic chest pain, it may rarely manifest with more peculiar symptoms such as syncope or seizure-like activity, leading to misdiagnosis and delays in treatment. Hence the importance of early suspicion and recognition of these atypical presentations in emergency settings.

Case Presentation: A 63-year-old male with no significant documented medical history was brought to the emergency department from Târgu-Mureș after a sudden episode of loss of consciousness accompanied by seizure-like activity, without any previous symptoms. The event occurred outside the hospital and prompted emergency medical services activation. During the prehospital phase, the episode was interpreted by bystanders as a possible cardiac arrest, and cardiopulmonary resuscitation was initiated. On arrival at the emergency department, the patient was conscious, oriented, and hemodynamically unstable, with severe hypertension (199/124 mmHg), but without significant difference bilaterally and associated atypical chest pain. Neurological examination revealed no focal deficits, and brain computed tomography showed no acute intracranial pathology, excluding the initially suspected neurological etiology. Given the history of resuscitation maneuvers and the presence of chest pain, a thoracic computed tomography was performed to evaluate for potential post-CPR complications. Imaging revealed a small pericardial effusion as well as a left-sided pleural effusion, raising the suspicion of an acute aortic pathology. Subsequent angio-computed tomography confirmed a dissection flap involving the ascending aorta extending to the aortic arch, consistent with acute Stanford Type A aortic dissection. The patient was urgently transferred to cardiovascular surgery for definitive management.

Discussion: This case illustrates an atypical presentation of aortic dissection as seizure-like syncope, likely secondary to transient cerebral hypoperfusion. Although the patient presented with severe hypertension, the absence of focal neurological deficits and typical cardiovascular symptoms contributed to initial diagnostic uncertainty and risk of misdiagnosis. Importantly, the diagnosis was facilitated by thoracic imaging performed for an alternative indication, highlighting the role of incidental findings in emergency medicine when classical signs and symptoms are absent.

Conclusions: Aortic dissection should be included in the differential diagnosis of unexplained syncope or seizure-like events, particularly when associated with chest pain and hypertension. Early recognition of atypical presentations is essential to prevent diagnostic delay and improve patient outcomes.

Keywords: Aortic dissection, Atypical presentation, Diagnostic challenge, Seizure-like episode, Syncope

RENAL ARTERY THROMBOSIS IN A YOUNG PATIENT WITH THROMBOPHILIA, MAXIMAL ANTIPLATELET AND ANTICOAGULANT THERAPY : A DIAGNOSTIC AND THERAPEUTIC IMPASSE IN THE EMERGENCY DEPARTMENT

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Introduction: Acute renal artery thrombosis (ARAT) is a rare vascular emergency with an incidence of less than 0.01% among ED presentations. Its non-specific clinical presentation of flank pain, nausea and vomiting, frequently mimics acute cholecystitis or appendicitis, leading to diagnostic delay. When ARAT occurs in the context of systemic thrombophilia and active oral anticoagulation, it creates a therapeutic paradox with no established management pathway.

Case Presentation: A 43-year-old male with documented thrombophilia, prior ischemic stroke treated with mechanical thrombectomy, left internal carotid artery dissection and stenting, with immediate intrastent thrombosis, left ventricular thrombus, and chronic anticoagulation with Acenocoumarin plus dual antiplatelet therapy, presented with right flank pain, which started 6 hours prior to presentation, nausea, vomiting, after ingestion of cholecystokinetic food, which resolved after symptomatic treatment. Physical examination revealed tenderness in the right flank, with positive Murphy sign, bilateral negative Giordano maneuver and the rapid urine analysis was negative. An initial abdominal ultrasound was performed, which came back negative, excluding the initially suspected diagnosis of acute cholecystitis. Further on a native abdominal CT was ordered which was also negative. With lactate values constantly increasing and persistent symptoms, a contrast-enhanced CT was ordered, which revealed an acute right renal artery thrombosis and renal infarction. Key laboratory findings included 15.510 Leukocytes, 199.000 Thrombocytes, D-Dimer 1707 ng/mL, lactate 4.3 mmol/L, CRP 146mg/L, GOT 47 U/L and INR 2.92. Systemic fibrinolysis was relatively contraindicated due to maximal anticoagulation. Interventional radiology for catheter-directed revascularization was unavailable. The patient was started on a continuous infusion of unfractionated heparin as the sole available intervention and was admitted to Internal Medicine for continuation of anticoagulant therapy and monitoring.

Discussion: This case illustrates three clinically significant challenges converging simultaneously: a challenge in the diagnostic, attributable to the anamnesis of the patient and non-suggestive bloodwork and physical examination results, a pharmacological paradox in which maximal anticoagulation and antiplatelet therapies failed to prevent thrombosis and precluded systemic reperfusion therapy and a deficiency in the medical system, reflected by the inconstant presence of endovascular capacity for vascular emergencies and lack of protocols for the management of acute thrombotic events in patients with complex pathologies.

Conclusions: This case advocates for contrast-enhanced CT as the mandatory imaging modality when ARAT is clinically suspected and other differential diagnosis have been excluded and underscores the urgent need for nationalprotocols addressing both the management of acute thrombotic events in patients suffering from complex pathologies and endovascular strategies availability. **Keywords:** Acute renal artery thrombosis, Emergency diagnostic imaging, Thrombophilia

EMERGENCY MANAGEMENT OF THE GERIATRIC PATIENT WITH INTELLECTUAL DISABILITY: DIAGNOSIS OF POST-ASSAULT CENTRAL CORD SYNDROME

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Introduction: Intellectual disability makes clinical evaluation exceptionally difficult. This case presentation follows the clinical course of an institutionalized patient, lacking legal capacity, who was the victim of a physical assault. The focus is on the clinical suspicion of central cord syndrome, an incomplete spinal cord injury caused by cervical hyperextension. In non-communicative geriatric patients, where pre-existing disability masks symptoms and limits cooperation, this diagnosis is highrisk. Success depends exclusively on the clinical vigilance of the Emergency Department team in identifying sudden signs of this pathology.

Case Presentation: The 78-year-old patient was brought to the Emergency Department under vital function monitoring. Due to moderate intellectual disability, the history was provided by the legal representative, describing a physical assault. Clinical examination identified multiple traumatic injuries: nasal bridge excoriations, cervical spine tenderness, bilateral shoulder sprains, and bilateral radiocarpal contusions. Although the patient was conscious (Glasgow Coma Scale 15) and could move his legs, physicians observed that the inability to use his arms could not be explained by simple contusions, suggesting a deeper neurological impairment. Laboratory analyses confirmed a homeostatic imbalance: hypoxia (pO2 = 43.8{ mmHg}) and mild metabolic acidosis (pH = 7.336, HCO3 = 18.54 mmol/L}). Subsequently, collaboration with neurosurgery led to a cervical magnetic resonance imaging scan, revealing spinal canal stenosis at C3-C4 and a 12 mm area of acute cervical myelopathy (T2 hyperintensity), confirming the injury.

Discussion: The turning point was the rapid communication between the Emergency Department and neurosurgery. Instead of treating only visible wounds, physicians explored the suspicion of central cord syndrome, given the patient's structural vulnerability. This synergy allowed the case to be deciphered beyond communication barriers. The collective decision to prioritize advanced imaging was the element that elucidated the pathology. Central cord syndrome is the most frequent form of incomplete spinal cord injury. This case illustrates the "GCS 15 paradox" in patients with intellectual disabilities, where a maximum score masks the diagnosis and the inability to express symptoms. Critically, while a computed tomography scan may omit severe spinal cord lesions, magnetic resonance imaging is the only instrument capable of identifying this pathology with certainty in vulnerable patients.

Conclusions: The vigilance of the Emergency Department team must be a priority when faced with a Glasgow Coma Scale score of 15 in patients with intellectual disabilities. Any injury mechanism involving cervical hyperextension in a geriatric patient mandates a magnetic resonance imaging investigation, regardless of the initial clinical stability.

Keywords: Central cord syndrome, Geriatric trauma, Glasgow coma scale, Intellectual disability, Magnetic resonance imaging.

THE STAGGERED CARDIO-CEREBRAL INFARCTION: WHO DO WE SAVE FIRST?

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Introduction: Sequential and concomitant cardio-cerebral infarction is a rare emergency, carrying high mortality rates and having no standard protocols. Which of them to treat first is a theme subjected to many discussions within the medical community, for which no "ideal" answer was found.

Case Presentation: A forty-eight-year-old male patient presented to the emergency department with severe chest pain ongoing for four hours. Electrocardiography confirmed an ST segment elevation myocardial infarction. While awaiting cardiac revascularization, he suddenly developed aphasia and right sided hemiparesis. Brain CT angiography confirmed an acute ischemic stroke with a thrombus in the left internal carotid artery. Although both pathologies were within the treatment timeframe, considering the time elapsed from the onset of the myocardial infarction, and the prohibitive risk of fatal ventricular wall rupture, the multidisciplinary team decided not to use systemic fibrinolysis. The decision was made to prioritize the heart, performing coronarography and stent implantation first, to achieve hemodynamic stability, before managing the stroke via endovascular procedures.

Discussion: Current literature often suggests prioritizing the brain for simultaneous infarctions, but staggered onsets dismantle this strategy. This case shows that rigidly following neurological guidelines can be fatal if the structural fragility of the ischemic heart is ignored.

Conclusions: In sequential cardio-cerebral infarctions, the chronologic age of the first infarction strictly dictates subsequent treatments. Patient survival depends entirely on multidisciplinary triage, prioritizing overall physiological stability rather than isolated organ protocols.

Keywords: cardio-cerebral infarction, ischemic stroke, myocardial infarction, thrombolytic therapy

BEAR ATTACK–INDUCED SEVERE MAXILLOFACIAL TRAUMA: AIRWAY MANAGEMENT CHALLENGES

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Introduction: Severe maxillofacial trauma is uncommon but life-threatening due to the risk of hemorrhage, anatomical distortion, and sudden airway obstruction. This case highlights the difficulty of airway management and the importance of timing and environment for intervention.

Case Presentation: A 66-year-old man sustained extensive facial injuries following a bear attack. Onscene assessment showed a conscious, hemodynamically stable patient with severe maxillofacial trauma, mild bleeding, and a patent airway. A "scoop and run" approach was adopted, limiting care to intravenous access and analgesia to expedite transport. At emergency department admission, the patient remained stable (BP 116/80 mmHg, HR 60 bpm, SpO_2 100% on 6 L/min oxygen). Management included analgesia, continuous airway monitoring, and preparation for advanced airway intervention, including surgical airway equipment. Blood samples and urgent CT imaging were obtained. CT revealed massive pneumocephalus, subdural hemorrhage, cerebral edema with mass effect, cranial fractures, and severe facial instability. The patient was transferred to the operating theatre, where a surgical airway was successfully established. Management Turning Point: Despite stable respiration, the major concern was sudden airway compromise from edema and bleeding. Airway management was challenging due to anatomical disruption and a "dirty airway." The key decision involved balancing early airway intervention against delaying until optimal conditions and full preparation were available, given the risk of a "cannot intubate, cannot oxygenate" scenario.

Discussion: Distorted anatomy and active bleeding complicate airway management in severe maxillofacial trauma. Early intervention may occur under suboptimal conditions, while delay risks acute obstruction. Trauma guidelines (ATLS, ETC) recommend avoiding airway manipulation in patients maintaining patency, ensuring proper positioning, analgesia, monitoring, minimal investigations, and rapid transfer to the operating theatre for definitive management in a controlled environment.

Conclusions: Severe maxillofacial trauma requires careful airway strategy. Premature intervention may increase risk if conditions are not optimal. A controlled setting, multidisciplinary team, and full preparation are essential for safe airway management.

Keywords: difficult airway, animal attack, craniofacial trauma

ACUTE CHOLECYSTITIS PRESENTING AS PNEUMONIA IN THE PREHOSPITAL SETTING: A DIAGNOSTIC TRAP IN EMS

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Introduction: In prehospital emergency medicine, clinicians operate with limited diagnostic resources, relying primarily on history-taking and physical examination to establish a working diagnosis. Abdominal pathology can mimic thoracic disease through shared diaphragmatic innervation, creating significant diagnostic pitfalls. This case illustrates how anchoring bias and diagnostic momentum may delay appropriate triage when an abdominal emergency presents with respiratory features.

Case Presentation: A 55-year-old female with an established diagnosis of lower lobe pneumonia was re-evaluated by an EMS crew following failure to improve on antibiotic therapy. She presented with persistent fever, productive cough — consistent with her prior respiratory diagnosis — and right-sided pleuritic chest pain. Initial clinical framing favored a pulmonary etiology. However, detailed historytaking revealed progressive right upper quadrant (RUQ) pain, and physical examination demonstrated marked RUQ tenderness, voluntary guarding, and a positive Murphy's sign — clinical findings inconsistent with an isolated respiratory process and indicative of an underlying systemic inflammatory response. In the absence of point-of-care imaging or laboratory support, the clinical examination was decisive. A working diagnosis of acute cholecystitis was established in the field, recognizing that phrenic nerve irritation secondary to gallbladder inflammation may produce referred pain, cough, and pleuritic-like symptoms that closely simulate pneumonia.

Discussion: This case exemplifies diagnostic momentum — the perpetuation of an initial diagnosis despite inadequate clinical response. In some patients, acute cholecystitis may present atypically, with the diaphragm serving as a critical anatomical interface between abdominal and thoracic symptomatology. Prehospital clinicians must distinguish between a definitive diagnosis, which requires investigation, and a diagnostic suspicion, which is the appropriate goal in the field.

Conclusions: Thorough semiology and targeted physical examination remain the cornerstone of prehospital clinical reasoning. EMS clinicians must maintain vigilance for atypical presentations of common surgical emergencies, actively counteract anchoring bias, and ensure appropriate triage to a surgical facility when abdominal pathology is suspected. Early prehospital recognition is essential for timely and definitive management.

Keywords: acute cholecystitis, referred pain, abdominal emergencies

POLYTRAUMA IN DIFFICULT ENVIRONMENTS – WHEN RESCUE COMES DOWN THE HOIST...

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Introduction: Polytrauma is associated with significant mortality and long-term morbidity, the leading mechanisms worldwide including falls from height and motor vehicle accidents. The complexity of these cases lie in the interaction of several injuries, making early recognition and coordinated management crucial to improve patient outcomes.

Case Presentation: A forty-four-year-old male sustained polytrauma following a 10 meter fall in a remote mountain area, requiring helicopter intervention and hoist rescue due to the difficult environment. At the initial assessment, the patient presented hemodynamic instability, unmeasurable blood pressure, CRT >5 seconds, pale, clammy skin, GCS=14 points, distended and tender abdomen, unstable pelvic fracture, closed thoracic trauma and closed malleolar fracture. An extended focused assessment with sonography in trauma (E-FAST) revealed free fluid in the peri-splenic, perihepatic and retro-vesical spaces, images consisting with splenic lesions and hemoperitoneum and a minimal left sided hemothorax. On-site pre-hospital management included hemostatic measures by application of a pelvic binder, along with administration of tranexamic acid in loading and maintenance dose, opioid analgesics, high flow oxygen, intravenous fluids and O- packed red blood cells (PRBC), followed by a airlift by hoist. After obtaining hemodynamic stability with permissive hypotension (BP=92/55mmHg), the patient was transferred to the Târgu-Mureș Emergency Department. On arrival, the patient was conscious, hemodynamically stable, and a full body contrast-enhanced Computed Tomography was performed, which revealed splenic rupture with moderate hemoperitoneum, unstable thoracic spine fractures, multiple bilateral rib fractures with associated minimal hemothorax and pulmonary contusions and an unstable pelvic fracture. A venous blood gas analysis revealed minimal mixed acidosis (pH 7.31) with slightly elevated lactate levels (2.4 mmol/L) and anemia (hemoglobin 9.6 g/dL) after one unit of PRBC. The patient was then taken to the operating theater and discharged 3 weeks later.

Discussion: This case illustrates the complex management of a patient with high-energy polytrauma, the mechanism (vertical deceleration and impact) being consistent with multisystem injury. The use of permissive hypotension to target a lower BP while hemorrhage control was sought is consistent with damage-control resuscitation principles and without the risk of dislodging early clot in noncompressible hemorrhage. Point-of-care E-FAST provided critical, rapid bedside information, supporting the need for urgent definitive care.

Conclusions: Aero-medical capability with blood product availability and protocolized trauma management were pivotal in this patient's positive outcome, hence the importance of pre-hospital blood product administration protocols. The case reinforces established trauma principles: prioritize hemorrhage control, apply damage-control resuscitation, use targeted imaging when safe, and maintain multidisciplinary coordination.

Keywords: hemorrhagic shock, hoist rescue, polytrauma, remote mountain area

PROLONGED CARDIOPULMONARY RESUSCITATION AND ECMO REWARMING IN A COMPLEX CASE OF SEVERE ACCIDENTAL HYPOTHERMIA

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Introduction: Severe accidental hypothermia remains one of the few reversible causes of cardiac arrest in which prolonged resuscitation may result in survival. This case is relevant not only due to its severity but also because of the complexity of its management, which involved prolonged resuscitation and extracorporeal support. Extracorporeal membrane oxygenation (ECMO) is an established rewarming strategy in this setting. However, its use becomes highly controversial in the presence of intracranial hemorrhage due to the need for systemic anticoagulation, especially when this diagnosis is not initially known. Evidence guiding such complex scenarios is limited.

Case Presentation: A 46-year-old male was found comatose and hypothermic in a prone position at home by paramedics. During initial evaluation and mobilization for transport, he developed ventricular fibrillation. Resuscitation maneuvers were immediately initiated, including external chest compressions and three external electrical shocks (200 J), as the core temperature was <30°C. Return of spontaneous circulation (ROSC) was initially achieved; however, the patient experienced a second cardiac arrest upon arrival in the emergency department. Prolonged resuscitation was continued, including mechanical ventilation and chest compressions. After 28 minutes of ongoing resuscitation, at a core temperature of 24.1°C, veno-arterial ECMO was initiated as a rescue strategy. ROSC was achieved after approximately 45 minutes of extracorporeal support. Laboratory findings revealed severe metabolic acidosis, hypokalemia, and significant coagulopathy. Following rewarming and hemodynamic stabilization, cranial computed tomography was performed, revealing an acute subdural hematoma. This finding introduced a major therapeutic dilemma, as systemic anticoagulation is required for ECMO maintenance. The patient was managed in the intensive care unit using a multidisciplinary approach.

Discussion: Hypothermia reduces the cerebral metabolic rate of oxygen, decreasing brain energy consumption and oxygen requirements, thereby allowing prolonged resuscitation with a potential chance of survival. The use of ECMO in hypothermia-associated cardiac arrest is supported by recent literature, as it facilitates core temperature normalization while maintaining adequate perfusion. The uniqueness of this case lies in the prolonged resuscitation of a severely hypothermic patient with multiple cardiac arrest episodes and the use of ECMO support. This scenario highlights the clinical challenge of initiating life-saving therapy in the absence of complete diagnostic information.

Conclusions: This case highlights the importance of prolonged resuscitation in severe hypothermia and the role of ECMO in achieving rewarming and hemodynamic stability. However, the presence of intracranial pathology introduces significant management challenges, requiring careful risk–benefit assessment. A multidisciplinary approach is essential in managing such complex clinical situations.

Keywords: accidental hypothermia, ECMO, cardiac arrest, subdural hematoma, prolonged resuscitation

RETROPHARYNGEAL ABCESS IN A YOUNG PATIENT: A CASE REPORT

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Introduction: Retropharyngeal abscess is a rare but potentially life-threatening deep neck infection, often requiring prompt diagnosis to prevent complications such as airway obstruction or sepsis. This pathology is rarely seen in patients older than 5 years of age.

Case Presentation: We report the case of a 16-year-old male presenting with three days of odynophagia progressing to severe dysphagia and fever, despite treatment with amoxicillin and ibuprofen prescribed by his general practitioner. Upon arrival at the Emergency Department (ED), he had a high fever (39.3°C), difficulty speaking, halitosis, trismus, and a painful swelling in the left submandibular region. Laboratory tests confirmed an inflammatory syndrome, and contrast-enhanced computed tomography (CT) of the cervical region revealed a left retropharyngeal abscess extending caudally by 75 mm, without a cleavage plane relative to the left submandibular gland, with mass effect on adjacent structures. The infection involved multiple submental, submandibular, ipsilateral, and contralateral carotid-jugular lymph nodes, some of which were confluent, as well as bilateral subcutaneous soft tissue swelling in the perimandibular region. The patient underwent intravenous antibiotic therapy and initial transoral drainage. However, two additional surgeries were required to drain the left peritonsillar abscess and to explore the submandibular and cervical regions, extending into the deep spaces up to the hyoid bone, before achieving full resolution.

Discussion: According to the literature, this pathology most commonly occurs in children younger than 5 years old due to the presence of retropharyngeal lymph nodes, which involute after this age. In adults or older children, it usually develops secondary to trauma that allows bacterial inoculation into this space. In our case, the patient had not experienced any trauma and nevertheless developed the infection, which makes this case particularly interesting.

Conclusions: This pathology must be diagnosed as quickly as possible. Prompt recognition, urgent airway assessment, appropriate imaging, timely treatment with intravenous antibiotics, and surgical drainage when required are critical to preventing life-threatening complications such as airway obstruction, mediastinitis, or sepsis.

Keywords: abscess , infection , emergency

RETROSPECTIVE OF TWO YEARS OF ENDOCAVITARY POCUS IN A SMALL ROMANIAN EMERGENCY DEPARTMENT

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Background: Recent meta-analyses report 86.3% sensitivity and 98.2% specificity for emergency physician-performed endocavitary POCUS (Endocavitary-POCUS) in identifying early intrauterine pregnancy with lowered waiting times, but European data remains scarce despite rising implementation.

Objective: We described our experience in implementing Endocavitary POCUS in a low-resource Romanian emergency department (lrED) and to provide the first European data on emergency physician Endocavitary-POCUS accuracy.

Material and methods: We conducted a retrospective study of Endocavitary-US performed by an emergency physician in a lrED between 24 August 2024 and 9 April 2026, assessing accuracy in cases with subsequent specialist confirmation or refutation

Results: With about 50 presentations per 24 hours, including 10% women of reproductive age with many uro-genital, digestive or pregnancy-related complaints, the estimated need was about one Endocavitary-US per 24-hour shift, supporting implementation in the absence of continuously available specialists. Ninety Endocavitary-US were performed. Indications were mainly pelviabdominal pain (50%), symptoms in confirmed pregnancy (15.5%), and suspected early pregnancy (13.3%). One scan was performed intra-orally for a man with a hematoma in the retro-amygdalian region. Among patients with an unknown pregnancy and a positive pregnancy test (n=10), already confirmed pregnancies (n=21), metrorrhagia with a negative pregnancy test (n=6) and cases with abdominal pain and a negative pregnancy test (n=45), a gynecologic issue was correctly confirmed or excluded by the emergency physician. One important misdiagnosis occurred during the study period: an unruptured ectopic pregnancy in a psychiatric patient with a history of abortion with metrorrhagia, pelvic pain and a positive pregnancy test was diagnosed as complete early pregnancy loss.

Conclusions: In our setting, Endocavitary-US improved confirmation or exclusion of pregnancy, improved pregnancy viability assessment, supported detection of additional pelvic findings. Close collaboration with obstetrics-gynaecology specialists allowed skill development and diagnostic validation. Availability of the endocavitary probe also proved useful beyond gynaecologic indications

Keywords: Endocavitary POCUS, accuracy, Emergency Department

SILENT THREAT IN THE ELDERLY: MULTIVESSEL CORONARY DISEASE MASKED BY PAROXYSMAL ATRIAL FIBRILLATION

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Introduction: Managing acute coronary syndromes in patients over 85 years of age presents a significant clinical dilemma. The presence of multiple comorbidities, such as a history of treated hepatic neoplasm and stage G2 Chronic Kidney Disease (CKD), often complicates the risk-benefit analysis of invasive procedures. This case demonstrates that clinical stability in the Emergency Department (ED) can be deceptive, especially when an underlying arrhythmia masks high-risk coronary anatomy.

Case Presentation: An 85-year-old male with hypertension and stable angina presented to the ED with a sudden onset of palpitations and interscapular chest pain. Although the symptoms had remitted by the time of the initial physical examination, the first electrocardiogram (ECG) revealed Atrial Fibrillation (AF) with a rapid ventricular response of 130 beats per minute (bpm). Laboratory tests confirmed a dynamic elevation of myocardial necrosis markers and a mild inflammatory syndrome. Even though the heart rate subsequently stabilized to a regular rhythm of 55 bpm, the persistence of enzymatic changes suggested that the AF was likely a secondary manifestation of myocardial ischemia rather than a primary electrical disorder. The clinical turning point occurred when the decision was made to proceed with urgent coronary angiography despite the patient's age and oncological history. The procedure identified a "surgical" anatomy with severe triple-vessel disease: a subocclusive lesion of the Right Coronary Artery (RCA) and 70-90% stenosis in both the Left Anterior Descending (LAD) and Circumflex (LCx) arteries. The management strategy shifted from conservative medical therapy to high-risk revascularization, resulting in the successful implantation of three Drug-Eluting Stents (DES) at the level of the RCA.

Discussion: This case highlights the diagnostic pitfalls associated with paroxysmal AF in the elderly, which often acts as a "red herring" distracting from an underlying Non-ST-Elevation Myocardial Infarction (NSTEMI). While the literature often cautions against aggressive intervention in fragile patients due to the bleeding risks of triple antithrombotic therapy, this patient's favorable outcome suggests that chronological age should not be an absolute contraindication. Without identifying the culprit coronary lesions, the risk of a major adverse cardiac event would have remained significantly high.

Conclusions: Asymptomatic intervals in the ED should not lead to a lower clinical suspicion in octogenarian patients. A low threshold for invasive investigation is essential when faced with newonset arrhythmias and fluctuating cardiac enzymes. Percutaneous Coronary Intervention (PCI) is a viable and effective option even in very fragile patients, provided the management plan is tailored to the individual's comorbid profile.

Keywords: NSTEMI, Octogenarian, Triple-vessel disease, Percutaneous Coronary Intervention, Atrial Fibrillation.

THE DIAGNOSTIC CHALLENGE OF ACUTE CORONARY SYNDROME MIMICKING ACUTE PERICARDITIS: THE DECISIVE ROLE OF POINT-OFCARE ULTRASOUND

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Introduction: In emergency medicine, rapidly differentiating acute chest pain is vital due to the symptomatic overlap between acute coronary syndrome and conditions like acute pericarditis. This case illustrates a diagnostic trap where benign-appearing clinical signs masked a life-threatening ischemic event, underscoring the necessity of utilizing point-of-care ultrasound (POCUS) to correlate biological markers with functional imaging.

Case Presentation: A 57-year-old male with a history of hypertension presented to the emergency department following the sudden onset of oppressive retrosternal and epigastric chest pain exacerbated by deep inspiration, mimicking acute pericarditis. Upon arrival, his blood pressure was 150/100 mmHg and heart rate was 110 beats per minute. The initial twelve-lead electrocardiogram (ECG) revealed sinus tachycardia with no acute ST-T segment modifications, significantly complicating early diagnosis. Arterial blood gas analysis demonstrated severe hypoxemia (PaO2 39 mmHg, SaO2 86.2%), requiring immediate high-flow oxygen therapy. Given the clinical triad of pleuritic pain, tachycardia, and severe hypoxemia, a pulmonary embolism was investigated and ruled out via negative D-dimer levels and the absence of right ventricular strain on echocardiography. While the initial cardiac troponin was borderline at 0.07 ng/mL, a point-of-care ultrasound (POCUS) echocardiogram was performed, revealing inferior wall akinesia and a left ventricular ejection fraction of 50%. This confirmed an electrocardiographically silent non-ST-elevation myocardial infarction (NSTEMI). The patient was stabilized with medical therapy, including aspirin and beta-blockers, and referred for elective outpatient coronary angiography.

Discussion: The clinical turning point occurred when the team utilized POCUS to investigate the diagnostic mismatch between the atypical presentation and the non-specific ECG. The visualization of distinct inferior wall akinesia confirmed severe myocardial ischemia, invalidating the pericarditis hypothesis. This highlights the challenges of differential diagnosis when ischemia mimics inflammation through positional pain and electrocardiographically silent tracings. Correlating severe hypoxemia with regional wall motion abnormalities proved lifesaving, allowing the team to bypass a non-diagnostic ECG and safely guide definitive coronary care.

Conclusions: A successful outcome in atypical myocardial infarction relies on rapid risk stratification and recognizing biological red flags behind the mask of benign conditions. No chest pain should be deemed benign until definitively proven otherwise. While standard guidelines reserve the goldstandard designation for ECG and angiography, POCUS serves as a critical adjuvant tool for occult ischemia, significantly reducing mortality by identifying regional wall motion abnormalities that remain silent on initial electrocardiography.

Keywords: acute coronary syndrome, point-of-care ultrasound, myocardial infarction, atypical chest pain, emergency department management

SECONDS MATTER: EARLY BYSTANDER CPR AND SURVIVAL AFTER SUDDEN CARDIAC ARREST

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Introduction: Early bystander cardiopulmonary resuscitation (CPR) is strongly associated with improved survival and favorable neurological outcome following out-of-hospital cardiac arrest, emphasizing the importance of public education and rapid intervention, according to the ERC 2025 guidelines. Sudden cardiac arrest (SCA) in young individuals is uncommon and often unexpected, requiring immediate recognition and intervention. We present a case highlighting the importance of early resuscitation and systematic evaluation following return of spontaneous circulation (ROSC).

Case Presentation: This is a single-patient case report of a previously healthy 22-year-old female found unconscious in a public park in February 2026. Bystanders initiated chest compressions immediately and continued until the arrival of the emergency medical team. The patient was found in cardiorespiratory arrest and received prompt bystander CPR, followed by advanced life support according to ERC 2025 guidelines (first rhythm assessment was pulseless VT, resulting in ROSC). She required airway protection, mechanical ventilation, and intensive care support. Computed tomography revealed bilateral pulmonary consolidations consistent with aspiration occurring during cardiac arrest. Cranial imaging excluded acute intracranial pathology. Microbiological findings did not support a primary infectious etiology. Pulmonary embolism was excluded by computed tomography imaging. Trauma was considered unlikely in the absence of external signs of injury, with imaging demonstrating an epidural hematoma consistent with secondary impact following collapse. Environmental causes were deemed improbable, as bystanders directly witnessed the sudden collapse in a public setting. Metabolic imbalances were excluded based on arterial blood gas analysis. Inherited conditions were considered less likely following collateral history obtained from the patient's family. Potential causes considered included primary arrhythmic events (channelopathies), structural cardiac abnormalities, infectious causes, and toxicological factors.

Discussion: This case highlights the importance of early bystander CPR in achieving ROSC and enabling further diagnostic evaluation. It also illustrates the complexity of identifying the underlying cause of SCA in a young patient, particularly in the presence of secondary findings such as aspiration and minor traumatic lesions. A systematic approach to excluding reversible and life-threatening causes is essential, while maintaining suspicion for primary cardiac etiologies, especially arrhythmic disorders.

Conclusions: Sudden cardiac arrest in young patients requires rapid recognition, immediate bystander intervention, and structured post-resuscitation evaluation. Early initiation of chest compressions significantly contributes to survival, while systematic exclusion of potential causes remains essential for guiding further management. Public awareness and training in basic life support are crucial to improving outcomes.

Keywords: bystander CPR, sudden cardiac arrest, out-of-hospital cardiac arrest

UNUSUAL INTERACTIONS WITH POLICE OFFICERS IN A SMALL EMERGENCY DEPARTMENT: A QUALITATIVE CASE SERIES

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Background: Functional interaction between emergency physicians and police officers is routine in emergency departments (ED), particularly those serving small or predominantly rural communities. These interactions may extend beyond their expected operational role and interfere with clinical autonomy

Objective: To analyze undesirable interactions between police officers and ED staff

Material and methods: We conducted a qualitative case series, based on memorable interactions between police officers and ED staff, in the 2024-2026 interval, in a low resource Emergency Department (lrED). Cases were described from staff recollection and grouped into conflict-generating situations, forms of perceived overreach by police officers, and conflict-resolution strategies. Relevant Romanian legal texts were reviewed to contextualize the interactions.

Results: 1) A patient with motor disability presented with panic related to repeated neighbour harassment. 2) A patient with minor pathology and intellectual disability left after a triage delay, called 112, and returned by ambulance. Police initially declined intervention in these first two cases, but reversed their position after the emergency physician cited the relevant law. 3) A police officer accompanying a child with a minor illness challenged the emergency physician's decision not to request a paediatric consultation and sought evaluation at a higher-level hospital. Staff also described further related episodes of threats of sanctions in the out-of-hospital setting from the involved police officer, perceived as retaliatory or intimidating. 4) A patient with minor pathology and intellectual disability repeatedly used ambulance transport for minor or non-medical purposes, prompting the emergency physician to report abuse of emergency medical services through the 112 service. The police fined the physician for abuse of the 112 service.

Conclusions: These cases illustrate the interference of police authority with emergency physician decision-making as a source of pressure in low-resource emergency departments, which is not sufficiently documented in the specialized literature. Better institutional guidance and clearer interprofessional protocols may help protect clinical autonomy and reduce conflicts.

Keywords: abuse of medical services, conflict, harassment, police authority abuse, police interactions

BALLOON TAMPONADE AS A BRIDGE TO ENDOSCOPY FOR SEVERE VARICEAL HEMORRHAGE: KNOWLEDGE, ATTITUDES AND PRACTICE

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Background: Although balloon tamponade was historically used for uncontrolled variceal hemorrhage, its use declined with vasoactive pharmacotherapy and endoscopic hemostasis. However, endoscopy access remains variable and transfer is often required

Objective: We explored clinicians' knowledge, attitudes, and practice regarding balloon tamponade in delayed endoscopy.

Material and methods: We conducted semi-structured interviews and surveys with emergency physicians, gastroenterologists, and surgeons in the 2025-2026 interval. We used purposeful sampling and continued data collection until thematic saturation. To compare interview results, guideline recommendations and general academic literature on the topic, a scoping review of the literature was performed.

Results: Twenty-eight physicians participated (9 from 4 units with 24/7 endoscopy; 13 from 4 units with limited access; 6 from 2 units without on-site endoscopy). In units with 24/7 endoscopy, 8/9 respondents considered tamponade useful for delayed endoscopy. Among clinicians in lower-resource settings (n=19), 7/19 (36.8%) conceptualized balloon tamponade only as salvage after failed endoscopic hemostasis and did not endorse emergency physician–led use during transfer of severe cases. Three physicians reported current use. Barriers comprised: (1) declining perceived utility and familiarity, with tamponade portrayed as outdated/high-risk and commonly perceived as not recommended pre-endoscopy (2) limited knowledge of technique, indications, and emergency physician–led use; and (3) limited device availability. Our scoping review corroborated this heterogeneity: balloon tamponade as a transfer-bridging strategy was discussed mainly in case reports and transfer-oriented publications and was less prominent in guidelines and other publication types.

Conclusions: Clarifying tamponade's role and supporting emergency physician training and device availability may offer a feasible improvement in endoscopy-limited settings while efforts to expand timely endoscopy and improve adherence to established recommendations remain essential.

Keywords: Blackmore tube, Delayed endoscopy, Emergency Medicine, Qualitative study, Upper Digestive Bleeding

OVERCOMING BARRIERS : FROM QUALITY IMPROVEMENT IN A LOWERRESOURCE EMERGENCY DEPARTMENT TO THE FIRST INTRAVENOUS THROMBOLYSIS FOR STROKE

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Background: Lower-resource emergency departments (lrEDs) serving remote areas may influence both early regional care and referral pressure on higher-level hospitals. However, increasing interventional capacity in a lrED through quality improvement—by implementing new procedures and improving quality and safety—requires overcoming multiple barriers: cultural (established local ways of working), professional (recognition of the scientific need for change), personal (confidence and practical ability), and institutional (organisational support and staff collaboration).

Objective: We aimed to document the barriers to best care and the quality improvement process and outcomes in a lower-resource Emergency Department.

Material and methods: We conducted a descriptive study of the quality improvement process in a lrED over the 2024–2026 period. Areas requiring improvement were identified through system evaluation, statistical analysis of patient records, and professional assessment. Priorities included frequent presentations and foundational processes, such as rigorous triage, before more advanced interventions. We documented the organisational, material, and workforce changes.

Results: Major areas for improvement were infant care, assessment of women of reproductive age with urgent obstetric-gynaecologic complaints, strengthening emergency physician autonomy through multiple uses of POCUS, and, ultimately, acute thrombotic events and gastrointestinal bleeding. These needs were addressed through organisational measures (including streamlining the electronic system, stricter triage, and improved pathways within the hospital and with tertiary units), workforce measures (expansion of the physician team, diversification of medication, training in POCUS, procedural sedation, pain management and infant vascular access) and material improvements (imagistic tools and point-of-care tests). The continuous training and improved inter-specialty collaboration led to major optimisations in the desired improvement areas, such as: specialised tools and trained staff for paediatric care, an institutional protocol for gynecologic consultations in the emergency department, optimised gastrointestinal bleeding transfer protocols, and, to our knowledge, the first reported thrombolysis for acute ischaemic stroke in the County of Hunedoara, despite the existence of higherlevel hospitals.

Conclusions: In our experience, quality improvement was built through multiple incremental, groundup changes, driven not by formalised funding streams or structured projects, but by the initiative and development of the care team, which implemented one small change after another.

Keywords: Thrombolysis, Stroke, Low resources Emergency department, Quality improvement, Barriers

VOCAL CORD PARESIS: FROM ENT CONSULTATION TO CHRONIC BRAIN LESIONS

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Introduction: In the fast-paced environment of the Emergency Department (ED), dysphonia is frequently dismissed as a benign Ear, Nose, and Throat (ENT) pathology. However, vocal cord paralysis often serves as a silent messenger for complex systemic or neurological conditions. This case underscores the necessity of a multidisciplinary approach in the ED, demonstrating how a common symptom can hide a significant neurological history and metabolic complications.

Case Presentation: A 64-year-old male, with a known medical history of Type 1 Diabetes Mellitus (T1DM) and previous surgical amputations, presented to the ED complaining of persistent dysphonia and mild dysphagia for both solids and liquids, with an onset approximately three weeks prior. Upon admission, the patient also reported intermittent dizziness. Clinical examination revealed a cachectic patient with significant weight loss. Vital signs were initially influenced by a profound hypoglycemic episode—characterized by tremors and diaphoresis—which was immediately corrected. The initial ENT fiberoptic examination identified a right vocal cord paresis in an adduction position, with compensatory movement of the left vocal cord, but no visible masses, infections, or macroscopic lesions in the subglottic space. The clinical challenge arose when the ENT evaluation could not identify a local mechanical cause for the paresis. The critical decision point was the indication for a multi-segmental Computed Tomography (CT) scan—covering the head, neck, and thorax—to trace the entire anatomical course of the recurrent laryngeal nerve. The imaging results shifted the diagnostic focus: while the neck and thorax were clear of malignancy, the CT of the head revealed a chronic ischemic lesion in the right external capsule. This finding redirected the diagnosis toward a neurological sequela of a previous cerebrovascular event.

Discussion: This case highlights the diagnostic pitfall of attributing localized symptoms solely to the organ involved. It illustrates how chronic microvascular damage from diabetes and past silent strokes can manifest through late-onset cranial nerve dysfunction. Furthermore, the patient's metabolic instability during the ED stay required simultaneous acute stabilization and a systematic diagnostic workup to exclude life-threatening etiologies.

Conclusions: Vocal cord paresis without an obvious obstructive cause necessitates an exhaustive search for neurological origins. A "negative" ENT exam for masses is a prompt to investigate the Central Nervous System (CNS). Systematic imaging and interdisciplinary communication are vital to ensure that neurological lesions are not overlooked in the ED.

Keywords: Dysphonia, Vocal cord paresis, Ischemic stroke,, Diabetes Mellitus.

MALIGNANT TRITON TUMOR OF THE POSTERIOR MEDIASTINUM INVADING THE AORTIC ARCH: A CASE REPORT

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Introduction: Malignant Peripheral Nerve Sheath Tumors (MPNST) with rhabdomyoblastic differentiation, clinically designated as Malignant Triton Tumors, are highly aggressive and exceptionally rare soft tissue sarcomas. Their occurrence within the posterior mediastinum, compounded by major vascular involvement, presents critical clinical, radiological, and surgical challenges, demanding rapid and decisive management in emergency and thoracic care.

Case Presentation: We report the case of a 63-year-old male patient who presented to the Emergency Department with an acute-on-chronic presentation of severe, deep interscapular back pain, radiating circumferentially to the left hemithorax, accompanied by progressive exertional dyspnea and mild leftsided upper extremity paresthesia. Given the acute, tearing nature of the thoracic back pain and hemodynamic vulnerability in an emergency setting, the primary differential diagnosis initially focused on ruling out acute, life-threatening cardiovascular and thoracic pathologies like Acute Aortic Syndrome or a Mediastinal Schwannoma. Emergency computed tomography (CT) angiography of the chest revealed a large, infiltrative posterior mediastinal mass originating as a paravertebral lesion at the T3 level, showcasing direct encasement of the aortic arch. Due to the impending risk of catastrophic vascular rupture or acute spinal cord compression, emergent surgical intervention was indicated. An initial exploratory thoracoscopy was rapidly converted to an emergent thoracotomy due to the highly infiltrative nature which highlights the unpredictable, infiltrative nature of the tumor, requiring adaptive, rapid decision-making in the OR, allowing for a successful macroscopic tumor resection.

Discussion: Malignant Triton Tumors (MTT) represent a profound clinical rarity, accounting for 5% of all Malignant Peripheral Nerve Sheath Tumors (MPNST), with fewer than 20 cases documented in the mediastinum globally. Histopathologically, this tumor demonstrated a characteristic spindle cell proliferation with a "herringbone" pattern, focal S100 positivity, and heterologous rhabdomyosarcomatous differentiation. The Ki-67 proliferation index was exceptionally elevated at 40–60%, sharply contrasting with the near-zero index of benign schwannomas and the typical 20–40% range of standard MPNSTs. Despite an omnipresent risk of local recurrence and pulmonary metastasis, achieving radical surgical clearance remains the only validated therapeutic intervention capable of bypassing the historical 15% five-year survival barrier.

Conclusions: This case highlights critical strategies for hyper-aggressive thoracic malignancies. For acute interscapular pain, emergency CT angiography is vital to differentiate aortic syndromes from tumor-induced vascular invasion. An elevated Ki-67 index (40–60%) heralds rapid destruction, demanding immediate intervention. Intraoperative conversion to open thoracotomy ensures macroscopic clearance, serving as the definitive cornerstone for vascular protection, neurological preservation, and extended survival.

Keywords: Malignant Triton Tumor, Posterior Mediastinum, Aortic Arch Invasion, Rhabdomyoblastic Differentiation, MPNST

THE LEVEL OF PERIPHERAL ISCHEMIA SIGNS RECOGNITION WITHIN THE GENERAL POPULATION

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Background: The peripheral ischemia represents a major vascular emergency, this being the reason for the extreme importance of early recognition in order to save the affected limb. However, its symptoms are often overlooked by both patient and caregivers, the signs being frequently attributed to other, less severe, conditions.

Objective: The study has evaluated the recognition level of clinical signs regarding the perception of disease severity within the general population, compared to stroke and acute myocardial infarction.

Material and methods: Cross-sectional study, based on questionnaire, including 906 participants with and without first aid training, as well as participants with and without a healthcare background.

Results: The level of alarming symptoms recognition for peripheral ischemia has been lower compared to other pathologies, although the recognition level of stroke symptoms remained suboptimal. A high level of knowledge has been better identified in case of acute myocardial infarction (68.32%), followed by stroke with 48.78%. The lowest score was obtained in the case of peripheral ischemia, 38.85%. Medical background and attending first aid trainings have been associated with better scores, still knowledge gaps have been identified among people affiliated with the healthcare system. The statistical analysis has emphasized significant differences regarding the recognition of emergency signals among responders with medical training, respectively those without medical training, in case of stroke - $\chi2=59.20$, $p<0.001$, in case of acute myocardial infarction – $\chi2=39.72$, $p<0.001$ and in case of peripheral ischemia – $\chi2=77.52$, $p<0.001$. Also, the existence of a first-aid training course has significantly been associated, from a statistical point of view, to a higher level of symptom recognition – for stroke - $\chi2=32.98$, $p<0.001$, for acute myocardial infarction - $\chi2=18.88$, $p<0.001$ and for peripheral ischemia – $\chi2=40.06$, $p<0.001$.

Conclusions: The results underline the necessity of implementing awareness campaigns regarding the peripheral ischemia, as well as continuing those for acute myocardial infarction and, especially, the stroke, together with studying the training with reference to the ischemic diseases during the courses in medical schools and those of the first aid. Also, there is the necessity of periodic refresher courses which are to be attended by the previously trained personnel, regardless the domain to which they belong.

Keywords: ischemia, medical training, early recognition, medical emergencies, prevention

UNILATERAL OPTIC NEURITIS IN A 6-YEAR-OLD: DIAGNOSIS, MANAGEMENT AND PROGNOSIS

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Introduction: Pediatric optic neuritis (ON) is a rare (1-5/100 000 children/year) inflammatory condition that damages the myelin sheath of the optic nerve causing pain, edema and acut vision loss in children, often presenting bilaterally and linked to post-infection or demyelinating causes like multiple sclerosis or myelin oligodendrocyte glycoprotein antibody-associated disease (MOGAD).

Case Presentation: A 6-year-old girl presented to the Emergency Department (ED) with left periocular pain, palpebral edema, photophobia, and blurry vision. The symptoms had begun 4 days prior to presentation. She was initially evaluated on day 2 by an ophthalmologist, and fundoscopy revealed left papillary edema associated with decreased visual acuity (right eye 5/5, left eye 5/9). Treatment with Augmentin was prescribed, and she was referred to a pediatrician and an ENT specialist. Three days later, she presented to the ED because her symptoms persisted. A computed tomography scan was performed, followed by MRI; both demonstrated swelling of the left optic nerve (6 mm) and maxilloethmoidal sinusitis. The patient was admitted to the pediatric ward, and additional laboratory tests were performed to rule out underlying systemic diseases (anti-MOG and anti-aquaporin-4 antibodies, serum angiotensin-converting enzyme, ANA screen, anti-dsDNA, anti-MPO-ANCA, and anti-MPO antibodies) and viral infections. The patient received pulse therapy with Solu-Medrol followed by corticosteroid therapy with prednisone, with gradual dose reduction, combined with intravenous vitamins and antibiotics. Her condition improved, allowing discharge on day 10.

Discussion: Pediatric optic neuritis typically presents with acute vision loss, often bilateral and postinfectious, in contrast to the unilateral demyelinating form more commonly observed in adults. In this case, the symptoms were unilateral yet associated with infection rather than systemic disease. The patient responded rapidly and favorably to corticosteroid therapy. The outcome aligns with the literature, as younger age (<7 years) and a normal brain MRI are predictors of good prognosis, highlighting children's superior neuroplasticity, which compensates for retinal nerve fiber layer loss, unlike adults, among whom only 30–50% achieve full recovery.

Conclusions: This case highlights the importance of early diagnosis of this pathology, especially in pediatric patients, as prompt initiation of corticosteroid treatment can enable rapid and complete recovery.

Keywords: pediatrics, neuritis, infection

THE NECESSITY OF AMPUTATION IN CASE OF DISASTERS: FAILURE OR SALVATION?

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Background: Disasters are events involving a large number of victims that require extensive resources. In most cases, patients are polytraumatized and may present with limbs trapped under rubble. As a result, crush syndrome and reperfusion syndrome (occurring during extrication) develop, potentially leading to systemic complications with severe consequences and risk of death.

Objective: The aim of the present work is to analyze the mechanisms underlying crush syndrome and reperfusion syndrome, and to highlight the role of necessity amputation as a life-saving intervention in the context of disaster-related trauma.

Material and methods: The present work is a literature review based on the analysis of specialized publications, including articles of major relevance to disaster-related injuries and the syndromes associated with them. The focus is placed on the indications for amputation and the timing of this decision.

Results: The reviewed data indicate that the critical moment for disaster victims is the point of extrication from the rubble, when reperfusion of the crushed limb occurs. At this moment, all toxic compounds accumulated in the damaged tissue enter the systemic circulation, leading to serious renal damage, acid-base disturbances, and hydroelectrolyte imbalance, as well as hyperkalemia with a risk of lethal arrhythmias. Conservative treatment is initiated on an emergency basis (airway management and oxygen supplementation, hemorrhage control, fluid resuscitation, hyperkalemia management, pain management and fasciotomy where indicated, but in severe cases where this does not lead to patient condition improvement, amputation becomes the best decision. By eliminating the source of toxins, the general condition of the victim improves significantly. Certain patient groups, such as pregnant women and children, require a tailored approach; however, in all cases, preservation of life remains the primary goal.

Conclusions: In the context of disasters, the decision to amputate differs fundamentally from the same decision made in a hospital during routine care. Amputation becomes an intervention with systemic impact, rather than merely a treatment of local injuries. This is essential for improving prognosis in severe cases. Therefore, the decision to amputate does not represent failure, but rather a conscious choice in favor of life.

Keywords: crush syndrome, disaster medicine, life-saving amputation, reperfusion injury, therapeutic decision

DELAYS IN RECANALIZATION THERAPY FOR PEDIATRIC ISCHEMIC STROKE: A CASE REPORT HIGHLIGHTING CHALLANGES IN ROMANIA

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Introduction: Pediatric stroke presents significant diagnostic and therapeutic challenges compared to adult stroke, as symptoms may be subtle or atypical, often leading to delays in recognition and management. Despite the time-sensitive nature of acute ischemic stroke, pediatric-specific evidence remains limited, and current management strategies are largely extrapolated from adult protocols.

Case Presentation: A 17-year-old female presented to the emergency department via a mobile intensive care unit with acute onset occipital headache, left-sided hemiparesis, and motor aphasia of approximately two hours' duration. She had no known medical history. On arrival, she was triaged as a high-acuity case. Within 19 minutes, laboratory tests and a non-contrast cranial CT scan were performed, yielding no acute findings. Subsequent consultations with an adult neurologist and a pediatric neuropsychiatrist led to the recommendation for CT angiography, which revealed an acute ischemic lesion in the middle cerebral artery territory. Despite confirmation of diagnosis, delays occurred due to the absence of consensus between specialties experienced in pediatric stroke management. Intravenous thrombolysis with alteplase (Actilyse) was initiated approximately three hours after symptom onset, following informed consent. Due to lack of clinical improvement, the patient was referred for magnetic resonance imaging and mechanical thrombectomy, resulting in an additional 45-minute delay in potential reperfusion. At discharge, no significant neurological improvement was observed compared to initial presentation.

Discussion: Recanalization therapies, including thrombolysis and mechanical thrombectomy, may be considered in selected pediatric cases, particularly in adolescents, but are not routinely recommended outside clinical trials due to limited evidence. Current guidelines emphasize individualized, multidisciplinary management in specialized centers. In Romania, pediatric stroke care is further complicated by the division between adult neurology and pediatric neuropsychiatry, the latter having limited experience in acute stroke management. This structural gap contributes to delays in decisionmaking and initiation of time-critical therapies.

Conclusions: The absence of specialized pediatric stroke centers in Romania underscores the need for standardized, pre-established protocols to facilitate rapid multidisciplinary collaboration. Implementing clear clinical pathways involving neurologists, radiologists, interventional specialists, and hematologists may reduce delays and improve outcomes in pediatric stroke patients

Keywords: Pediatric stroke, Delays in Pediatric stroke management, The absence of specialized pediatric stroke centers in Romania.

TOO MUCH PAIN: THE ABSENCE OF ANALGESIA IN BLS UNITS AS A SYSTEMIC GAP IN EMERGENCY CARE

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Background: Effective pain management is a fundamental component of emergency medical care. Despite this, a substantial proportion of patients treated by emergency medical services (EMS) experience inadequate analgesia, particularly in out-of-hospital settings. This discrepancy is especially evident between advanced life support (ALS) and basic life support (BLS) units, where access to analgesic interventions differs significantly.

Objective: To evaluate the availability and implementation of analgesia at the BLS level in international EMS systems and to assess the Romanian system as a case of potential systemic undertreatment.

Material and methods: A structured narrative review and comparative analysis of international EMS protocols and published literature on prehospital pain management were conducted. Available analgesic strategies applicable at the BLS level were identified and compared with current regulatory and clinical practices in Romania.

Results: International evidence demonstrates that safe and effective analgesia can be implemented at the BLS level using non-opioid medications, inhaled agents such as nitrous oxide, and intranasal opioid administration. In contrast, the Romanian EMS system currently operates BLS units without access to any pharmacological analgesia. This limitation is not supported by current evidence and appears to reflect regulatory and systemic barriers rather than clinical constraints. The absence of analgesia may contribute to increased physiological stress responses, including tachycardia and hypertension, and raises concerns regarding patient comfort, trust, and ethical standards of care

Conclusions: The lack of analgesia in BLS-level emergency units represents a correctable deficiency in modern emergency care. Integrating basic, evidence-based analgesic strategies into BLS protocols should be considered essential to improve patient outcomes and ensure equitable and ethically sound emergency medical services.

Keywords: Analgesia, BLS, Pain

USE OF THORACOSTOMY DUE TO SEVERE CHEST INJURIES, WITH PARTICULAR ATTENTION TO TRAFFIC ACCIDENTS

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Background: Pneumothorax is a significant problem in emergency care. Tension pneumothorax, which occurs during chest trauma, requires immediate treatment. Tension pneumothorax can lead to circulatory instability and cardiac arrest due to the collapsed lung and positive pressure in the thoracic cavity. Therefore, it is very important for providers to provide adequate care to the injured, such as thoracostomy.

Objective: Our research aims to show the frequency of thoracostomy use in critically ill patients and traumatic resuscitation in the units of the National Ambulance Service. How many times was thoracostomy required? To explore the effect of thoracostomy on blood pressure and end-tidal carbon dioxide pressure in critically ill patients.

Material and methods: The study is a retrospective descriptive case documentation analysis in the time interval between 2023.01.01.-2024.12.31. (N=353). The study examined needle detensioning and thoracostomy interventions performed at the National Ambulance Service. Statistical analysis of the data was performed using the IBM SPSS program. Mode and cross-tabulation analysis were used to determine significance by revealing age and gender differences. Using the ANOVA test, the BP/EtCO2 values were examined for the relationships of the performed thoracostomy.

Results: In critically ill patients and those injured who underwent resuscitation, the highest number of cases occurred in males (80.2% vs. 19.8% and 79.4% vs. 19.6%). In 74.6% of resuscitations, the population between 26-75 years of age was affected. Traffic accidents were the most common cause of resuscitations. More than 20% of resuscitations were successful, 2.2% were temporarily successful. Bilateral thoracostomy was performed in the largest number of traffic accidents and in 84.9% of all resuscitations. The EtCO2 value after thoracostomy was between 32-40 mmHg. Bilateral thoracostomy plays a significant role in the positive change in blood pressure. However, it is obvious that the examination was performed in non-isolated chest injuries, and fluid therapy and catecholamine administration also occurred in several cases, which affects the results obtained.

Conclusions: Traumatic cardiac arrest and critical injuries occur most frequently in males, and affect the middle-aged population. Bilateral thoracostomy was performed most frequently, which demonstrates protocol adherence. Bilateral thoracostomy also plays a significant role in increasing blood pressure, of course, in addition to other influencing factors. Bilateral thoracostomy is the most reliable method for the most effective elimination of pneumothorax, one of the reversible causes of traumatic resuscitation. That is why theoretical and practical education is important, which contributes to the performance of high-level successful interventions.

Keywords: traffic accidents, thoracostomy, traumatic resuscitation,

INVISIBLE RISKS, MEASURABLE CONTROL: ATP-GUIDED POSTDISINFECTION ASSESSMENT IN EMERGENCY CARE

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Background: Healthcare-associated infections remain a constant risk in emergency and out-of-hospital care, where high patient traffic, time pressure, and confined environments increase the likelihood of surface contamination. In ambulances, frequently touched surfaces act as reservoirs for potential crosscontamination. Despite routine cleaning protocols, monitoring of disinfection effectiveness is often limited, and reliance on visual assessment does not reflect microbiological safety.

Objective: This narrative review critically evaluates the role of adenosine triphosphate (ATP) bioluminescence in post-disinfection surface monitoring, with the aim of clarifying its practical utility, interpretative limitations, and potential contribution to quality assurance in out-of-hospital emergency care.

Material and methods: A structured narrative review was conducted using relevant literature on ATPbased hygiene monitoring, infection control practices, and environmental contamination in emergency care. Emphasis was placed on studies and guidelines addressing real-time surface assessment, operational implementation, and threshold-based interpretation. Key themes were identified through comparative analysis, including performance characteristics, workflow integration, and methodological limitations.

Results: ATP bioluminescence offers a rapid, quantitative assessment of residual organic contaminants, allowing immediate feedback on cleaning effectiveness in high-risk, frequently touched environments. Its operational advantage is its real-time usability and easy integration into routine workflows. However, its non-specific nature limits its direct correlation with infection risk. There is considerable variation in thresholds and sampling strategies across institutions, making standardization and comparability difficult. Furthermore, ATP values can be influenced by disinfectant residues and environmental factors, necessitating context-specific interpretation. Evidence suggests that ATP monitoring is most effective when used as part of a multimodal quality assurance framework rather than as a stand-alone indicator.

Conclusions: ATP-based monitoring is a valuable adjunct to post-disinfection control in prehospital care, particularly for immediate process validation and staff feedback. However, its limitations require careful interpretation and structured integration with complementary methods and standardized protocols. Future efforts should focus on harmonizing threshold criteria and defining evidence-based implementation strategies to maximize its impact on infection prevention and patient safety.

Keywords: ATP bioluminescence, infection control, prehospital emergency care

FROM SCENE TO SURVIVAL: THE ROLE OF PREHOSPITAL CRITICAL CARE IN EARLY HEMODYNAMIC STABILIZATION

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Introduction: Polytrauma resulting from aviation accidents represents a distinct category of major trauma, typically associated with high-impact mechanisms and a complex pattern of injuries. Compared to other types of trauma, these cases often present with simultaneous involvement of several organ systems, leading to rapid clinical deterioration and a high risk of hemodynamic instability. Initial management of polytrauma requires a rapid, algorithm-driven approach focused on early recognition and treatment of life-threatening conditions such as massive hemorrhage, tension pneumothorax, and cardiac tamponade. The CABCDE-based primary survey is integrated with damage control resuscitation to control bleeding and prevent the lethal diamond. Following stabilization, whole-body CT plays a key role in injury assessment and guiding definitive management.

Case Presentation: We report the case of a male patient involved in an aviation accident, admitted to a regional emergency department in critical condition (GCS 6) with hemodynamic instability and hypovolemic shock. Endotracheal intubation and initial stabilization were performed. A HEMS prehospital critical care team was deployed for advanced prehospital care. Reassessment revealed persistent instability and a positive E-FAST suggestive of hemothorax. Tube thoracostomy was performed with immediate improvement. Time-critical interventions were initiated en route, including damage control resuscitation with tranexamic acid, calcium gluconate, and prehospital transfusion of O negative packed red blood cells. The patient was transferred to a Level 1 Trauma Center. Wholebody CT confirmed extensive polytrauma, including craniofacial, thoracic, and complex pelvic injuries with presacral hematoma, without major solid organ injury.

Discussion: Severe trauma following aviation-related incidents is characterized by complex multisystem injuries and a high risk of rapid physiological deterioration. The coexistence of thoracic, pelvic, and craniofacial trauma creates a time-critical scenario requiring immediate prioritization of lifethreatening conditions. Early involvement of a prehospital critical care team enables advanced interventions, including airway control, hemorrhage management, and damage control resuscitation before hospital arrival. Pelvic injuries are a major source of hemorrhagic shock, while thoracic trauma may impair ventilation and oxygenation. These findings emphasize the pivotal role of timely prehospital interventions in achieving physiological stabilization and bridging the gap to definitive care in a Level 1 Trauma Center.

Conclusions: This case highlights the severity and complexity of trauma associated with aviation accidents, where multiple injuries may rapidly lead to life-threatening conditions. Early identification of critical lesions and timely intervention are essential for patient stabilization. An integrated, multidisciplinary approach remains crucial in improving outcomes in such challenging clinical scenarios.

Keywords: Polytrauma, Aviation accident, Hemorrhagic shock, Massive transfusion, Prehospital critical care

NECROTIZING SOFT TISSUE INFECTIONS: EPIDEMIOLOGY, MICROBIOLOGY, AND ANTIMICROBIAL RESISTANCE IN THE EMERGENCY DEPARTMENT

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Background: Necrotizing soft tissue infections (NSTIs) are rare but life-threatening surgical emergencies with global mortality of ~6–33%. Incidence estimates are 1–3 per 100,000 person-years in Western countries and 8.7–10.3 per 100,000 in the United States, depending on case definition. Outcomes are strongly time-dependent, with delayed surgical debridement associated with approximately twofold higher mortality. Polymicrobial infection predominates, though monomicrobial disease accounts for 33–40% of cases. Methicillin-resistant Staphylococcus aureus (MRSA) is frequently identified, reflecting broader shifts in skin and soft tissue infection epidemiology, while extended-spectrum β-lactamase (ESBL)–producing Gram-negative organisms are rising in acute care settings, underscoring the need for empiric broad-spectrum coverage and stewardship.

Objective: This review summarizes NSTI microbiologic classifications, pathogenic mechanisms, and the impact of resistance patterns on emergency department empiric antibiotic selection and early management.

Material and methods: A narrative review of published meta-analyses and observational cohort studies on NSTI epidemiology, microbiology, antimicrobial resistance, and outcomes was conducted using targeted PubMed searches and reference screening, focusing on necrotizing soft tissue infection and necrotizing fasciitis.

Results: Polymicrobial NSTI accounts for about half of cases. Meta-analyses report pooled prevalence of 53% polymicrobial and 37.9% monomicrobial disease globally, confirming Type I predominance with substantial Type II disease. Polymicrobial infection is more common in truncal and perineal (Fournier-type) disease, while monomicrobial infections more often involve extremities. Among monomicrobial cases, Group A Streptococcus and Staphylococcus aureus predominate. Empiric therapy typically includes broad Gram-positive, Gram-negative, and anaerobic coverage, with clindamycin for toxin-mediated disease. Overall mortality has declined modestly over the past two decades, with meta-regression suggesting a gradual reduction. Mortality was 19% when surgery occurred within 6 hours versus 32% when delayed beyond 6 hours; delayed surgical debridement remains strongly associated with worse outcomes in NSTI. In parallel, MRSA is increasingly reported in skin and soft-tissue infections overall, with meta-analyses suggesting MRSA proportions of approximately one-quarter to one-third of Staphylococcus aureus–related SSTIs in many settings, reinforcing the need for empiric broad-spectrum coverage in NSTI, even though NSTI-specific prevalence data remain limited and heterogeneous. Enterobacterales are not leading pathogens overall but are common in neutropenic, abdomino-perineal, and Fournier-type NSTI, where they often drive infection. ESBL-producing Enterobacterales range from <20–30% to 60–70%, influencing empiric therapy. Broader regimens may increase toxicity; retrospective data link vancomycin plus clindamycin to higher acute kidney injury rates compared with linezolid-based therapy.

Conclusions: Early broad-spectrum antibiotics with prompt source control are critical. Empiric therapy should align with local microbiologic and resistance patterns to optimize outcomes while minimizing toxicity.

Keywords: Necrotizing soft tissue infection, Antimicrobial resistance, Emergency management.

A SIMPLE MANEUVER, A SIGNIFICANT IMPACT: MODIFIED VALSALVA IN SUPRAVENTRICULAR TACHYCARDIA

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Introduction: Supraventricular tachycardia (SVT) represents a common cause of emergency department presentation, often requiring rapid, non-invasive management. The Valsalva manoeuvre is widely recommended as a first-line intervention; however, its effectiveness is limited. Recent evidence suggests that a modified postural Valsalva manoeuvre significantly improves cardioversion rates.

Case Presentation: We report the case of a 35-year-old male with no significant past medical history who presented with palpitations of sudden onset, lasting approximately 30 minutes. Clinical evaluation revealed a regular narrow-complex tachycardia exceeding 250 beats per minute. The patient was hemodynamically stable at presentation. A modified Valsalva manoeuvre was performed, involving forced expiration followed by immediate postural change with leg elevation. This intervention successfully restored sinus rhythm without complications. No pharmacological or electrical cardioversion was required.

Discussion: The modified Valsalva manoeuvre has demonstrated superior efficacy compared to the standard technique, as highlighted by the REVERT trial, which reported significantly higher conversion rates to sinus rhythm. The mechanism involves increased vagal tone through augmented venous return and baroreceptor stimulation after postural modification. Although generally safe, clinicians must remain cautious in patients with underlying cardiovascular instability or predisposition to adverse events. This case supports the growing body of evidence favoring the modified technique as a first-line approach in stable SVT patients.

Conclusions: The modified Valsalva manoeuvre is a simple, safe, and effective intervention for terminating SVT in emergency settings. Its implementation can reduce the need for pharmacological therapy and invasive procedures. Emergency physicians should be familiar with this technique and prepared to manage rare complications.

Keywords: supraventricular tachycardia,modified Valsalva manoeuvre,emergency medicine

ACUTE MITRAL REGURGITATION AFTER BLUNT THORACIC TRAUMA: ECMO AS A BRIDGE TO SURGERY AND INTERHOSPITAL TRANSFER

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Introduction: Cardiac injuries after blunt thoracic trauma are rare, but can have severe consequences, especially when they result in acute mitral regurgitation. Diagnosis is difficult, being frequently masked by associated lung injuries. In addition, the management of these patients raises a major problem in emergency medicine: stabilization and safe transport to a cardiac surgery center.

Case Presentation: We present the case of a male patient who is 17 years old and has no medical history, who suffered a thoracic trauma during a football match. The patient presented to the emergency department at the Emergency County Hospital in Miercurea Ciuc with acute respiratory failure. Thoracic CT examination revealed bilateral pulmonary contusions. The clinical evaluation demanded admission in the intensive care unit, with orotracheal intubation and mechanical ventilation. Persistent hypoxemia and clinical instability raised suspicion of an associated cardiac injury.

Discussion: Transesophageal echocardiography revealed severe acute mitral regurgitation due to rupture of mitral chordae tendineae. In the context of severe respiratory failure, it was decided to initiate femoral-jugular veno-venous ECMO support. ECMO allowed patient stabilization and safe interhospital transport to the Cardiovascular and Transplant Emergency Institute of Târgu Mureș for definitive surgical treatment. Rupture of the mitral subvalvular apparatus is a rare and frequently misdiagnosed, especially in the presence of associated pulmonary injuries. Echocardiography, particularly the transesophageal echocardiography, has an essential role in rapid diagnosis and guiding therapeutic decisions. Recent literature has highlighted that ECMO is not just a life support method, but also an essential logistical tool allowing the transport of unstable critical patients which could not otherwise be safely transferred. The use of ECMO in emergency medicine and interhospital transfer provides an important tool for better access to specialized treatment and improved prognosis. The uniqueness of this case lies in the combined use of echocardiography for rapid diagnosis and ECMO as a bridge for transport and definitive treatment.

Conclusions: ECMO must be considered not just a life support method, but also a strategic tool for transporting critically ill patients, facilitating the safe transfer to a specialized center, improving patient prognosis.

Keywords: Acute mitral regurgitation, Blunt thoracic trauma, ECMO, Transesophageal echocardiography

MANAGEMENT OF THE EMERGENCY SITUATIONS – A BRIEF HISTORY OF THE DEVELOPMENT OF MEDICAL TRIAGE

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Background: Medical triage, a concept originally used in military domain, especially during wars is a well-organized system that prioritize medical care based on the injury severity rather than political or social ranking.

Objective: The aim of this presentation is to explore the development of the Emergency Medicine over the years, from the starting point of Modern Triage System, which was implemented by DominiqueJean Larrey in the 1800s, to the evolution of structured triage protocols in contemporary emergency care. The focus is on how triage evolved from battlefield medicine to civilian emergency care, outlining the key stages that shaped current systems. It also highlights how early concepts, including those introduced by Larrey, influenced the development of triage over time and contributed to the principles used in the modern era of emergency medicine and disaster response.

Material and methods: This presentation is based on a review, which shows the historical point of view over development of triage. Key sources were analyzed, focusing on the main contributions in every century and major milestones in the evolution of triage from minimal decisions to a complex emergency response plan for mass casualty incidents.

Results: The literature shows that early triage, developed by Larrey, focused on rapid prioritization of trauma patients based on injury severity in military settings, during wars was way behind than modern triage. The modern face of this concept has evolved into standardized systems used in daily emergency care, with key contributions from authors such as Kevin Mackway-Jones (Manchester Triage System, developed in mid 1990s) and Richard Wuerz (Emergency Severity Index, developed in 1998). Other systems, including START (Simple Triage and Rapid Treatment) triage and CTAS (Canadian Triage and Acuity Scale), further structured emergency assessment protocols. Despite these developments, the core principle of prioritizing patients by urgency remains unchanged.

Conclusions: Over the years, the main and common objective remains focused on the patients' wellbeing, and giving the best care, even in the worst conditions. **Keywords:** triage, emergency medicine, trauma, developement

WHEN THE HEART SWINGS, LIFE STANDS STILL: EMERGENCY PERICARDIOCENTESIS BEYOND THE NORMS

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Introduction: Non-traumatic cardiac tamponade is characterised by the accumulation of pericardial fluid leading to systolic–diastolic right ventricular dysfunction and potentially obstructive cardiac arrest, occurring in approximately 1% of patients. It is most commonly associated with metastatic malignancy(≈40%), while recurrent large pericardial effusions carry a nearly 80% one-year mortality. Hemorrhagic non-traumatic tamponade accounts for about 5% of cases, with direct oral anticoagulants reported as a rare cause(~0.07%).

Case Presentation: We present the case of a 71-year-old male with history of pulmonary malignancy, atrial fibrillation, congestive heart failure and recurrent pericardial effusions, who presented to the Emergency Department with resting dyspnea, chest pain and progressive fatigue over one week. On presentation, the patient was alert GCS=15, with BP=106/72mmHg, HR=94bpm, SpO2=94%(FiO2 0.6), afebrile. Physical examination revealed muffled heart sounds and decreased bibasilar breath sounds. Echocardiography demonstrated a large pericardial effusion measuring 45mm anterior to the RV and 15mm latero-posterior to the LV with right ventricular collapse and an ejection fraction of 45%. Laboratory findings showed leukocytosis with neutrophilia, mild lactic acidosis, liver dysfunction and acute kidney injury. Cardiac biomarkers were unremarkable(apart from an NTproBNP>8000pg/ml). During a Valsalva-like maneuver, the patient developed a witnessed cardiac arrest with pulseless electrical activity(PEA). Advanced life support was initiated, and a point-of-care ultrasound identified cardiac tamponade as the underlying cause. A resuscitative pericardiocentesis was performed by emergency physicians in an unconventional setting, evacuating 300ml of hemorrhagic fluid. Return of spontaneous circulation(ROSC) was achieved after 35 minutes. A second cardiac arrest subsequently occurred due to pulseless-ventricular tachycardia(pulseless-VT). After three stacked-shocks, the rhythm deteriorated to PEA and ROSC was achieved after 25 minutes.

Discussion: In this case, arrest was likely precipitated by impaired venous return during a Valsalva maneuver in an already preload-dependent right ventricle. POCUS plays a pivotal role by enabling immediate bedside diagnosis with high sensitivity(88-96%) and direct visualisation of hemodynamic compromise. Importantly, its use has been associated with significantly shorter time to intervention, reducing median time to pericardiocentesis from 70.2 to 11.3 hours compared on reliance on formal echocardiography. Emergency pericardiocentesis represents the definitive intervention in tamponaderelated arrest and can be successfully performed by trained emergency-physicians. The particularity of the case lies in the atypical setting of the resuscitation, the patient's complex clinical background and the performance of a rarely-encountered procedure by the emergency physician.

Conclusions: This case highlights the critical role of POCUS and the importance of emergency physicians being proficient in pericardiocentesis, even in unconventional settings, to improve patient outcomes.

Keywords: Cardiac tamponade, pericardiocentesis, POCUS, cardiac arrest

OVERCROWDING, AND DELAYS AT OUR EMERGENCY DEPARTMENT FINDINGS AND PLANS TO REDUCE ADVERS EFFECTS

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Background: Patient boarding, defined as the prolonged stay of admitted patients in the emergency department (ED) due to delayed transfer to inpatient beds, has been identified as a major contributor to ED crowding, care delays, and adverse patient outcomes (Howlett et al., 2023). This issue compromises the capacity and efficiency of emergency care services by occupying critical space and resources needed for new incoming emergency cases.

Objective: Identification risks, harms, and planning for a better care.

Material and methods: At Petz Aladár University Teaching Hospital Emergency Department, the patient volume has increased significantly over recent years, with average daily arrivals rising from 179 in 2022 to 221 in 2025—a 23.94% increase. This steady growth in demand has heightened pressure on physical capacity and staff, exacerbating challenges related to patient flow. Monitoring Critical information, using Power BI on daily basis.

Results: Our internal analysis shows that boarding-related crowding correlates strongly with extended wait times and delayed clinical interventions. During peak months such as December and February, the daily patient numbers reach even higher, further intensifying boarding occurrences. This situation leads to resource strain, impacts staff workload, and increases the risk of delayed diagnosis and treatment, echoing the harmful effects described by Howlett et al.

Conclusions: In response, it is critical for the ED to implement targeted strategies to reduce boarding, such as improving inpatient bed turnover, optimizing triage and discharge processes, and enhancing communication between emergency and inpatient units. These measures, combined with continuous monitoring of patient flow and staff training, may mitigate the negative impact of boarding, improve patient outcomes, and maintain the efficiency of urgent and emergency care delivery at the hospital.

Keywords: Overcrowding , delay, prolonged stay

KOUNIS SYNDROME: A DIAGNOSTIC TRAP MASKED BY PRE-EXISTING SPASTIC BRONCHITIS

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Introduction: Kounis syndrome (KS) represents a critical emergency where an acute allergic reaction triggers a coronary event. The pathophysiology involves the release of mast cell mediators, such as histamine and tryptase, which can induce coronary vasospasm or destabilize pre-existing atherosclerotic plaques.

Case Presentation: A 56-year-old male smoker with a medical history of spastic bronchitis and prior stable angina presented to the emergency department following Amoxicillin administration. The patient was in anaphylactic shock, exhibiting a generalized rash and severe hypotension of 60–70 mmHg. He initially sought care strictly for the allergic reaction, dismissing his chest pain as a consequence of his spastic bronchitis. Despite initial stabilization for anaphylaxis with intramuscular epinephrine and fluid resuscitation, the patient's retrosternal pain intensified. The ECG revealed STsegment elevation in the anterior leads, while urgent coronary angiography confirmed Type II Kounis syndrome with acute plaque erosion. Revascularization was successfully achieved via drug-eluting stent (DES) implantation.

Discussion: The management of this case highlights a major therapeutic dilemma: drugs required for anaphylaxis can potentially aggravate myocardial ischemia. Epinephrine, though life-saving for shock, may worsen coronary vasospasm through alpha-adrenergic stimulation. Furthermore, nitroglycerin must be used with caution as it can induce hypotension and reflex tachycardia, potentially complicating the distributive shock state. Standard analgesics like morphine were avoided because they can trigger massive mast cell degranulation; therefore, fentanyl was the preferred choice. Betablockers were also contraindicated, as they can lead to unopposed alpha-adrenergic action, further exaggerating coronary spasm. This delicate balance between treating the immune-mediated insult and protecting the myocardium is the cornerstone of managing Kounis syndrome.

Conclusions: This case emphasizes that Kounis syndrome must be suspected in any patient presenting with concurrent allergy and chest pain, especially when symptoms are masked by pre-existing conditions like spastic bronchitis. Clinicians must navigate a complex pharmacological landscape where standard treatments for one pathology may exacerbate the other, necessitating a high index of suspicion and a tailored multidisciplinary approach.

Keywords: Acute coronary syndrome, Amoxicillin allergy, Anaphylactic shock, Kounis syndrome, Spastic bronchitis

FROM FOLK REMEDY TO LIVER FAILURE: CHELIDONIUM MAJUSASSOCIATED LIVER FAILURE

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Introduction: Chelidonium majus, or Greater celandine, is a European herbaceous plant belonging to the Papaveraceae family. Easily recognizable by its yellow flowers and bright orange latex, it has traditionally been used in folk medicine to treat liver and gallbladder disorders. Despite its widespread use, studies have highlighted significant toxicity related to isoquinoline alkaloids, which can cause serious cellular damage, especially to the liver.

Case Presentation: A 52-year-old man presented with a two-week history of asthenia, nausea, constipation, and severe abdominal pain after daily consumption of tea containing Greater celandine (Chelidonium majus) for one month. On admission, he was tachycardic and jaundiced. Laboratory findings showed leukocytosis (34.65 $\times 10^3/\mu L$), thrombocytopenia (81 $\times 10^3/\mu L$), elevated direct bilirubin (33.34 mg/dL), AST (124 U/L), GGT (419 U/L), alkaline phosphatase (509 U/L), creatinine (12.98 mg/dL), CRP (118.3 mg/dL), INR (3.87), and PT (43.3 s), with metabolic acidosis and hyperkalemia. The clinical picture was consistent with acute liver failure complicated by acute kidney injury, pancreatitis, and suspected sepsis. The patient was admitted to the intensive care unit, underwent hemofiltration, and received supportive treatment together with empirical Meropenem therapy. Despite intensive management, his condition progressively deteriorated, leading to irreversible cardiac arrest one week after admission.

Discussion: Treatment focused on discontinuing the tea containing Greater celandine (Chelidonium majus) and providing supportive care. Management included intravenous fluids, electrolyte correction, bicarbonate therapy for metabolic acidosis, renal perfusion support, and close monitoring of renal function and hyperkalemia. Due to severe renal impairment, the patient underwent hemofiltration. Empirical Meropenem therapy was initiated because of suspected sepsis. Continuous monitoring of hepatic, renal, and coagulation parameters was essential given the risk of multiorgan failure. Early recognition of herbal intoxication is important, as prompt withdrawal of the causative agent and supportive treatment can improve outcomes.

Conclusions: This case shows that herbal products used in folk medicine, like Greater celandine, can cause severe toxicity leading to acute liver and kidney failure with systemic complications. Early diagnosis, immediate withdrawal of the causative agent, and prompt supportive treatment are essential to prevent multiorgan dysfunction. Multidisciplinary management is key to improving outcomes in severe cases

Keywords: acute hepatic insufficiency, greater celandine, intoxication, popular medicine

RECURRENT GASTROINTESTINAL BLEEDING WITH SUBTLE CLINICAL PRESENTATION IN A PATIENT WITH A MECHANICAL HEART VALVE: ASSOCIATION WITH SEVERE MICROCYTIC ANEMIA. A CASE REPORT

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Introduction: Recurrent gastrointestinal bleeding may present with subtle and nonspecific clinical manifestations, leading to delayed diagnosis, particularly in patients with multiple comorbidities and chronic anticoagulant therapy. In such cases, severe anemia may represent the first evident sign, while digestive symptoms can be overlooked or underestimated. Early identification is essential, especially in patients with high cardiovascular risk, such as those with mechanical heart valve prostheses requiring vitamin K antagonist (VKA) therapy.

Case Presentation: A 78-year-old female patient presented to the Emergency Department with altered general condition, marked asthenia, abdominal pain, and melena. His medical history was significant for mechanical aortic valve replacement requiring chronic anticoagulant therapy with VKA. On admission, the patient was pale, dehydrated, and hemodynamically borderline unstable, with blood pressure approximately 98/60 mmHg and pulse around 98 bpm. Laboratory investigations revealed severe microcytic anemia with hemoglobin of approximately 5.8 g/dL, metabolic acidosis (pH 7.32 with decreased bicarbonate), hyperkalemia (K^+ 5.5 mmol/L), and elevated creatinine, suggesting functional renal impairment secondary to hypovolemia. Admission INR was (INSERT INR VALUE), consistent with anticoagulant therapy. In the Emergency Department, anticoagulation reversal was initiated using (Vitamin K / PCC / FFP), specify according to the case. Initial management included intravenous crystalloid fluid resuscitation, proton pump inhibitor therapy, symptomatic treatment with metoclopramide and drotaverine, continuous monitoring, correction of electrolyte disturbances, and red blood cell transfusion. Upper gastrointestinal endoscopy identified gastric ulcer, duodenal ulcer, angiodysplasia, erosive gastritis, as the source of bleeding.

Discussion: This case illustrates that recurrent gastrointestinal bleeding may have a subtle clinical presentation, particularly in patients with cardiovascular comorbidities receiving anticoagulant therapy. Severe microcytic anemia may represent the principal diagnostic clue in the absence of overt gastrointestinal manifestations. In patients with mechanical heart valves, assessment of INR values and rapid implementation of anticoagulation reversal strategies are essential to reduce ongoing hemorrhagic risk while balancing thromboembolic complications. Laboratory investigations, including blood gas analysis and biochemical profiling, are valuable for identifying associated metabolic disturbances such as acidosis, electrolyte imbalance, and renal dysfunction. Early recognition and multidisciplinary management are crucial for improving outcomes in high-risk patients.

Conclusions: Recurrent gastrointestinal bleeding can present atypically, with severe anemia as the primary manifestation. In patients with mechanical valve prostheses receiving anticoagulant therapy, prompt evaluation of coagulation status and timely reversal of anticoagulation are essential. Early diagnosis, identification of the bleeding source through endoscopy, and rapid therapeutic intervention are critical for patient stabilization and prevention of severe complications.

Keywords: Gastrointestinal bleeding, Hypovolemia, Microcytic anemia, Anticoagulant therapy

PHARMACOLOGICAL CONVERSION OF AN INTRAVENTRICULAR REENTRANT TACHYCARDIA IN EMERGENCY: IMPORTANCE OF RAPID INTERVENTION

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Introduction: Paroxysmal tachycardias are a common reason for emergency department visits and may significantly affect the patient's general condition. Clinical presentation can be nonspecific, making rapid recognition of the arrhythmia type and appropriate treatment essential to prevent hemodynamic and metabolic complications.

Case Presentation: A patient presented with sudden onset palpitations, accompanied by altered general condition, discomfort, and possible weakness. Clinical evaluation revealed tachycardia without clear signs of severe instability, but with sufficient clinical impact to require monitoring. Continuous ECG and oxygen saturation monitoring were initiated. Blood gas analysis showed relatively preserved acidbase balance (pH 7.38), along with mild hyponatremia, hyperkalemia, and hypocalcemia. Lactate levels were slightly elevated, suggesting metabolic stress associated with the acute tachycardia episode. The diagnosis of intraventricular reentrant tachycardia was established. Intravenous antiarrhythmic therapy was initiated, and administration of adenosine as an IV bolus resulted in rapid conversion to sinus rhythm with resolution of symptoms. The patient had a favorable evolution, without the need for electrical cardioversion. Intravenous fluids were also administered, and close monitoring continued.

Discussion: This case highlights the importance of rapid identification and treatment of paroxysmal tachycardia in emergency settings. Even in the absence of severe instability, arrhythmias can produce significant metabolic changes, as reflected by electrolyte disturbances and elevated lactate. Pharmacological cardioversion with adenosine is highly effective in reentrant tachycardias and can prevent the need for invasive procedures such as electrical cardioversion. Comprehensive evaluation, including ECG monitoring and laboratory tests, is essential for safe and effective management.

Conclusions: Prompt recognition and appropriate pharmacological treatment of paroxysmal tachycardia can lead to rapid rhythm conversion and patient stabilization. Early intervention reduces the need for invasive procedures and improves outcomes, while thorough evaluation ensures optimal patient management.

Keywords: Adenosine, Arrhythmia, Paroxysmal tachycardia, Pharmacological cardioversion

A RARE NEUROLOGICAL EMERGENCY: CEREBRAL VENOUS SINUS THROMBOSIS WITH HEMORRHAGIC TRANSFORMATION

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Introduction: Cerebral venous sinus thrombosis (CVST) is a rare neurological emergency that may mimic acute ischemic stroke. Should be suspected in young patients with headache, focal neurological deficits, or seizures. Rapid imaging diagnosis and early treatment initiation are essential to prevent complications.

Case Presentation: A 49-year-old female patient, with no significant past medical history, presented with repeated episodes of vomiting and language comprehension and expression difficulties upon admission to the Neurology Department I of the County Emergency Clinical Hospital in Târgu Mureș. Neurological examination at admission revealed right central facial palsy, right hemiparesis grade 4, mixed aphasia predominantly motor, and a National Institutes of Health Stroke Scale (NIHSS) score of 6 points. An immediate non-contrast brain CT was performed, revealing a left temporoparietal intraparenchymal hematoma measuring approximately 47 × 23 × 17 mm, associated perilesional edema, and minimal mass effect on the ipsilateral lateral ventricle, without signs of cerebellar tonsillar herniation. CT angiography of the brain revealed thrombosis of the transverse sinus, sigmoid sinus, and internal jugular vein (IJV) on the left side, without aneurysmal dilatations or arteriovenous malformations of the cranial and cerebral vascular structures. Low-molecular-weight heparin (LMWH) treatment was immediately initiated. MRI confirmed a venous cerebral infarction with hemorrhagic transformation localized in the left temporal lobe and a midline shift to the right of approximately 1.5 mm. Paraclinical investigations revealed heterozygous Factor II G20210A mutation, moderate hypochromic microcytic anemia, vitamin B12 and folic acid deficiency explained by confirmed atrophic gastritis, as well as MTHFR A1298C and MTHFR C677T mutations, along with systemic inflammation. The patient was discharged with a recommendation to continue treatment with a direct oral anticoagulant (Apixaban) and to be readmitted in 2 weeks for neurological and cerebral imaging reassessment. CT angiography clarified that the hemorrhage was secondary to a venous cerebral infarction caused by CVST, at which point treatment with low-molecular-weight heparin (LMWH) was initiated and subsequently continued with a direct oral anticoagulant.

Discussion: This case highlights the therapeutic paradox of cerebral venous sinus thrombosis, where anticoagulation with LMWH remains the standard of care despite the presence of intracerebral hemorrhage secondary to venous infarction. Early recognition of the venous etiology prevented delayed treatment initiation and contributed to a favorable neurological outcome.

Conclusions: Early recognition of cerebrovascular disease is important for the implementation of appropriate therapeutic management.

Keywords: Cerebral venous sinus thrombosis, Hemorrhagic venous infarction, Neurological emergency, Genetic thrombophilia, Anticoagulation

THE PERSISTENCE OF HYPNOZOITES: A CASE OF LATE-RELAPSING PLASMODIUM VIVAX MALARIA

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Introduction: Plasmodium vivax is a major global health challenge due to its unique ability to form dormant liver stages called hypnozoites. These forms can trigger clinical relapses months or years post-infection, complicating management in non-endemic regions where clinical suspicion is often low.

Case Presentation: A 42-year-old male presented to the Emergency Department in April 2026 with high-grade fever (38.6°C), intense headache, diaphoresis, and malaise. The patient had a one-year occupational exposure in Angola ending in December 2024. This current episode marks a late relapse, approximately 16 months after the initial diagnosis in the endemic area. Laboratory investigations revealed normocytic anemia, mild thrombocytopenia (124,000/mm^3), and moderate splenomegaly. Diagnosis was confirmed via Giemsa-stained peripheral blood smear, which identified enlarged erythrocytes with Schüffner's dots and amoeboid trophozoites, pathognomonic for P. vivax. Moderate parasitemia was noted. Following initial stabilization, the patient's G6PD enzymatic activity was assessed and confirmed to be within the physiological range. Subsequently, a comprehensive therapeutic regimen was initiated, comprising a fixed-dose combination of atovaquone/proguanil hydrochloride (250 mg/100 mg) and doxycycline. This protocol was selected to achieve rapid parasitic clearance of erythrocytic stages and to inhibit primary hepatic schizogony via the disruption of mitochondrial electron transport and protein synthesis, ensuring clinical resolution while maintaining a favorable safety profile regarding hematological stability.

Discussion: This case underscores that in tropical medicine, anamnesis is the cornerstone of diagnosis. The 16-month latency demonstrates that clinicians must inquire about travel history spanning years, not just weeks. Failing to link systemic symptoms with remote geographical exposure results in incomplete treatment. A "radical cure" targeting both erythrocytic and hepatic stages is mandatory to interrupt the cycle of recurrence.

Conclusions: Plasmodium vivax malaria is not "benign" if the hepatic stage remains untreated. A radical cure, guided by microscopic diagnosis and G6PD screening, is essential to interrupt the cycle of recurrence and ensure complete recovery.

Keywords: Hypnozoites , Imported malaria , Radical cure , Relapsing malaria , Plasmodium Vivax .

SEVERE HIGH-ENERGY POLYTRAUMA AFTER A MOTORCYCLE ACCIDENT: THE ROLE OF DAMAGE CONTROL ORTHOPEDICS IN EMERGENCY MANAGEMENT

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Introduction: Polytrauma is defined as multiple injuries that involve multiple organs or systems. The most frequent cause of polytrauma worldwide is represented by road traffic accidents. High-energy trauma, such as motorcycle crashes, involves multiple severe fractures and massive life-threatening injuries that require intervention at the accident site, followed by a complete multidisciplinary approach in the hospital. In the management of fractures in such patients, damage control orthopedics (DCO) may be an appropriate approach, avoiding the "second hit" effect. DCO consists of temporary stabilization of severe fractures, hemorrhage control, and reduction of contamination in the unstable polytrauma patient.

Case Presentation: A 45-year-old patient was presented in emergency conditions to the UPU-SMURD department with severe polytrauma following a motorcycle accident, with a GCS score of 15 points, conscious and cooperative. CT imaging revealed traumatic brain injury (TBI) with minimal right supratentorial subarachnoid hemorrhage, blunt thoracic trauma with sternal and bilateral rib fractures (III–IV), pulmonary contusions, and retrosternal hematoma. In addition, fractures of the pelvic and sacral ring were identified, together with multiple long-bone fractures of the upper and lower extremities, including open fractures of the right tibia and distal radius (Gustilo-Anderson type I–II) and a femoral shaft fracture. Therefore, the first emergency surgery was performed, consisting of wound debridement and temporary stabilization with external fixators at the level of the tibia, femur, and radius. Subsequently, the patient developed secondary anemia and thrombocytopenia, requiring intensive care management and multiple transfusions of packed red blood cells and plasma, as well as placement of a central venous catheter. After hemodynamic stabilization, surgical intervention was performed for plate osteosynthesis of the humerus and intramedullary nail osteosynthesis of the tibia and femur. The patient showed a favorable postoperative evolution, with repeated transfusions required due to secondary anemia. The patient was discharged with specialist recommendations.

Discussion: The injury pattern observed in this patient, including thoracic, pelvic, and long-bone fractures with an increased risk of hemorrhage and systemic complications, corresponds to highenergy trauma described in the literature. Early whole-body computed tomography allowed rapid identification of injuries and appropriate prioritization of treatment. The staged orthopedic approach, using temporary external fixation followed by definitive osteosynthesis, reflects the principles of DCO, recommended to reduce physiological stress and avoid the "second hit" phenomenon.

Conclusions: This case highlights the importance of early imaging, multidisciplinary coordination, and staged management in severe trauma.

Keywords: Polytrauma, High-energy trauma, Emergency management, Damage control orthopedics, Road traffic accidents

THE GREAT MASQUERADER: CHRONIC SUBDURAL HEMATOMA MASKED BY SEVERE DIABETIC KETOACIDOSIS

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Introduction: In geriatric clinical practice, the diagnosis of acute surgical emergencies is frequently comlicated by co-existing metabolic derangements. Chronic subdural hematoma (SDH) and diabetic ketoacidosis (DKA) often present with overlapping clinical features—such as somnolence and confusion, leading to a misguiding clinical overlap. This case report analyzes a critical midline shift masked by a profound metabolic imbalance and the subsequent multidisciplinary therapeutic dilemma

Case Presentation: We present the case of an 80-year-old male known with insulin-dependent type 2 diabetes and arterial hypertension who was transported by a prehospital team to the Emergency Department following recurrent falls and progressive neurological decline. Initial evaluation revealed a Glasgow Coma Scale (GCS) of 14/15, global areflexia, and significant postural instability. Laboratory investigations confirmed severe DKA, characterized by a pH of 7.13, blood glucose of 543 mg/dL, and significant ketonuria (150 mg/dL), alongside hyponatremia (131 mmol/L) and hepatic cytolysis (AST: 174 U/L). Initial management focused on aggressive fluid resuscitation and insulin infusion for metabolic stabilization

Discussion: Despite the severity of the metabolic crisis, the history of trauma required mandatory cranial computed tomography (CT). Imaging revealed a massive chronic SDH in the left frontotemporo-parietal region (maximum thickness 3.2 cm), causing a 14 mm midline shift and ventricular compression. A complex multidisciplinary dilemma was raised: the neurosurgical team identified a mandatory indication for evacuation but recommended preoperative metabolic rebalancing to mitigate surgical risk. Simultaneously, the cardiology team assessed the patient with a very high perioperative risk due to cardiovascular instability and acidemia; however, they did not formally contraindicate the procedure, acknowledging the life-threatening nature of the neurological lesion.The defining feature of this case is the clinical-radiological mismatch. While standard neurosurgical paradigms correlate a 14 mm midline shift with profound coma, age-related cerebral atrophy in this patient provided a compensatory space, delaying brainstem herniation. A vicious cycle occurred: the chronic SDHinduced falls triggered physiological stress, precipitating DKA, which subsequently masked the underlying neurological urgency. The management required a delicate titration of metabolic correction while monitoring for imminent neurological collapse.

Conclusions: This case demonstrates that a high GCS in elderly patients can be profoundly unreliable in the presence of cerebral atrophy. In the geriatric population, metabolic emergencies like DKA should never delay urgent neuroimaging following trauma. Optimal management depends on a multidisciplinary approach where surgical necessity is balanced against high-risk medical stabilization, ensuring that metabolic derangements do not indefinitely hold up the treatment of critical structural lesions.

Keywords: DKA, clinical masquerader, subdural haematoma

EMERGENCY MANAGEMENT OF POST-TRAUMATIC HEMORRHAGIC SHOCK IN THE PREHOSPITAL SETTING

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Background: Post-traumatic hemorrhagic shock is a major cause of mortality that can be avoided by rapid prehospital intervention by emergency personnel. Rapid management, administration of therapy, and patient transport significantly influence survival.

Objective: Study of the effectiveness of prehospital hemorrhagic shock management on patient mortality.

Material and methods: Retrospective study conducted in 2025 on a group of 40 patients (3 children and 37 adults) with post-traumatic hemorrhagic shock in the prehospital setting: 30 patients from the Mobile Intensive Care Ambulance and 10 patients transported by helicopter. The traumatic mechanisms, vital parameters, interventions performed, medication administered, packed red blood cell transfusion and patient outcome, including mortality, were analyzed.

Results: Tranexamic acid administration and packed red blood cell transfusion were performed in the first hour's post-trauma. Mortality was 25%, with a rate of 20% on patients transported by mobile intensive care ambulance and 40% on patients transported by helicopter. The odds of death were lower in the transfused group; however, the difference was not statistically significant. The median pH value was lower in the tranexamic acid plus transfusion group compared to the tranexamic acid without transfusion group. A statistically significant difference was found between the groups in the distribution of shock index categories. The differing distribution of shock index suggests that patients in the transfusion group were generally more hemodynamically unstable compared to those without transfusion. The median length of stay in the Emergency Department was similar between the groups, 89 minutes vs 97.5 minutes in the tranexamic acid without transfusion group. No statistically significant difference was found between the groups in terms of hemoglobin. Mean values were similar between groups, with a mean difference of -0.47.

Conclusions: Early management of post-traumatic hemorrhagic shock in the prehospital setting is vital for survival. Although the odds of death were lower in the transfused group, this difference was not statistically significant, suggesting not clear survival benefit associated with transfusion in this cohort. Patients receiving transfusion demonstrated significantly greater hemodynamic instability, as indicated by the distribution of shock index categories. No significant differences were observed between groups in terms of hemoglobin levels, lactate values, pH, or length of stay in the Emergency Department, indicating comparable biochemical profiles and clinical course despite differences in initial hemodynamic status. Overall, the findings, suggest that while transfused patients were more critically ill at baseline, transfusion was not independently associated with improved mortality or major clinical outcome differences in this study population.

Keywords: blood transfusion, prehospital care, post-traumatic hemorrhagic shock

MANAGEMENT OF PEDIATRIC FACIAL BURN INJURY FOLLOWING EXPLOSION: A CASE REPORT

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Introduction: Early and appropriate management of severe burn injuries is essential in ensuring optimal healing and prevention of complications. Such cases represent medical emergencies that require rapid evaluation and a multidisciplinary approach.

Case Presentation: We present the case of a 12-year-old boy, from a rural area in Mureș County, who was admitted to the emergency department following burn injuries caused by contact with gasoline. At presentation, burns were noted on the right hemifacial and auricular regions (grade IIB–III), the right cervical area, the anterior thorax (IIA–B), as well as limited areas of both upper limbs (I–IIA). The total body surface area affected was estimated at approximately 5%, since the burns on the upper limbs were limited to proximal volar regions and did not involve the entire surface of the extremities. Upper airway involvement was also suspected, alongside signs of hydroelectrolytic imbalance. An otolaryngology consultation was requested to assess possible airway injury. Examination revealed hyperemic nasal mucosa without secretions, while oral cavity and oropharyngeal findings were unremarkable. Complete laryngeal evaluation could not be performed due to the lack of fiberoptic endoscopy. Oxygen saturation at the time of examination was 90%. Under adequate analgesia, wound care was initiated, including cleaning, both excisional and non-excisional debridement, and the application of sterile dressings. Escharectomy was performed, followed by coverage of the defect with a split-thickness skin graft harvested from the right thigh and dressing application. Postoperative recovery was favorable. The patient maintained a good general condition, remained afebrile, and showed stable respiratory and hemodynamic parameters. Healing progressed well, with good graft take and satisfactory function and appearance.

Discussion: Effective burn management, particularly in pediatric patients with complex injuries, often requires transfer to specialized burn centers. These facilities provide advanced wound care and access to multidisciplinary teams, both of which are known to improve patient outcomes. In this case, transfer to specialized burn centers in Bucharest and Iași was requested but could not be arranged because of institutional and logistical limitations, and the patient therefore received treatment locally.

Conclusions: Early intervention, along with close postoperative follow-up, was important in supporting successful graft integration and the patient's overall recovery. This case highlights how a well-structured management approach can improve healing outcomes and help reduce the risk of complications.

Keywords: pediatric burns, skin grafting, burn management

HUGE BURN TRAUMA, COMPLICATED WITH INFECTION, IN PEDIATRIC PATIENT – A CASE REPORT

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Introduction: Second and third degree burns in children less than 2 years old represent a medical emergency, mainly due to the particularities of the skin and the increased risk of hydro-electrolitcal imbalance and infections. The most frequent cause is hot liquids, and prompt assessment of burn depth and lesion extent is crucial for setting up a therapeutic plan. The management includes vital function stabilization, adequate local treatment (such as skin graft or flaps extraction) and blood volume restoration.

Case Presentation: We present the case of a 1-year and 7-months old boy, brought to the Emergency Room of a municipal hospital by his parents. The clinical exam revealed 2nd and 3rd degree burns on 30% of the body surface, caused by scald injury (boiling water), on the anterior part of the neck, both upper limbs, torso and anterior abdomen. The treatment was quickly initiated with morphine (1,4 mg), Cefort (1 g IV), Oxymed spray, and Ringer-lactate IV. After patient stabilization, he was supposed to be transfered to the county clinical hospital, but was refused, so he ended up being transported, by helicopter, to „Grigore Alexandrescu" children hospital in Bucharest. After hospitalization, despite precocious antibiotherapy, the wounds became infected, which led to sepsis. After the remission of the infection, a skin graft was taken, and used for covering the integumentary defects. The patient was discharged after one month.

Discussion: Third-degree burns carry a high risk of infection, because of the complete destruction of the epydermis and dermis, leading to full exposure of the subcutaneous tissue. These profound, open lesions promote bacterial contamination and fast colonization of the tissues. Infections can evolve to severe, systemic, potentially lethal complications, and represent a major cause of morbidity and mortality in burned patients.

Conclusions: Early and correct assessment of burn patient has a decisive role in establishing the therapeutic protocol, guiding between outpatient treatment and the need for hospitalization in a specialized unit. Third-degree burns management constitutes a medical emergency, which need prompt intervention. According to European Burns Association (EBA) guidelines, transfer to a specialized centre is indicated to patients with superficial burns, depending on the age (>5% burn surface in children, >20% burn surface in adults, >10% burn surface in elders).

Keywords: burn trauma, infection, emergency

THE PRE-HOSPITAL CATALYST: ASSESSING THE IMPACT OF INTEGRATED MOBILE INTENSIVE CARE UNIT EXPOSURE ON THE CLINICAL PROFICIENCY OF MEDICAL STUDENT VOLUNTEERS

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Background: Medical education is fundamentally enhanced by early clinical immersion and structured hands-on experience. In Târgu Mureș, a well-established integrated emergency volunteering framework provides a unique platform for professional development. This program serves as a defining formative experience, allowing medical students to complement their academic training through active involvement in both the Emergency Department (ED) and Mobile Intensive Care Units (MICU/TIM).

Objective: The primary objective of this study was to evaluate the "Pre-hospital Catalyst Effect," comparing the professional readiness and algorithmic confidence of volunteers with exclusive ED experience versus those who integrated both ED and pre-hospital (MICU/TIM) activity.

Material and methods: A cross-sectional study was conducted on a cohort of 350 participants (medical students and residents). We compared two groups: volunteers with exclusive ED experience (n=55) and those with integrated ED and MICU/TIM experience (n=294). Statistical analysis was performed using Chi-square tests ($p < 0.05$) to correlate the environment of activity with the understanding of clinical protocols, Basic Life Support (BLS) proficiency, and the capacity to assist in advanced medical interventions.

Results: The data revealed a highly significant correlation between integrated exposure and professional self-efficacy ($p<0.001$), as integrated exposure was strongly associated with a superior grasp of clinical sequences and volunteers demonstrated a high capacity to anticipate and assist the medical team during advanced maneuvers such as airway management and ALS, showing a deep understanding of therapeutic algorithms. Furthermore, volunteers with pre-hospital experience reported a significantly higher readiness to recognize out-of-hospital cardiac arrest and initiate highquality BLS protocols, demonstrating preparedness even outside the clinical setting, while 95.2% of high-volume integrated volunteers reported maximum confidence in following acute care protocols, suggesting that this environment acts as a mental simulation for future autonomy that allows students to internalize decision-making patterns essential for their future careers as physicians.

Conclusions: Integrated emergency volunteering, particularly the pre-hospital component, acts as a powerful catalyst for clinical maturity. It enhances the student's ability to function as a proficient assistant within a medical team and to accurately anticipate critical interventions. By mastering algorithms and life-saving protocols early, volunteers are significantly better prepared for the demands and autonomy of their future medical careers.

Keywords: Emergency Medicine, Pre-hospital Care, Clinical Readiness, Medical Volunteering, Mobile Intensive Care Unit.

IN AN ERA OF TERRORISM AND CONFLICT, THE NEED FOR HEALTHCARE TO EVOLVE IN ORDER TO FACE THE FUTURE

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Background: Healthcare facilities, long considered safe havens, have become targets for terrorist attacks and cyberattacks. Geopolitical developments, including in Europe, suggest that the occurrence of large-scale, coordinated physical attacks, is only a matter of time. Nevertheless, certain departments still exhibit a degree of denial regarding this security trend, which is unintentional and intrinsic to the culture of care, rooted in an innocence inherited from its history associated with the philosophy of care.

Objective: The healthcare community is now confronted with actors operating in the criminal sphere. Public health can now be considered a "battlefield" in civilian areas, forcing healthcare providers to incorporate dimensions previously outside the culture of care, such as the analysis of threats, adversaries, and the vulnerability of healthcare facilities. Contemporary terrorist attacks and armed conflicts generate mass casualty incidents (MCIs) of unprecedented violence, overwhelming the capacity of emergency care systems in a very short time. The threat is now hybrid: explosives, firearms (including 3D-printed), CBRN, drones, offensive AI, which can be combined, confronting medical teams with complex injury patterns and unstable operational contexts.

Material and methods: Hospital departments must incorporate these risks into their preparedness. The concept of "hospital hardening," derived from counter-terrorism medicine offers an integrated framework for strengthening the physical, organizational, and digital security of healthcare facilities, provided it is adapted to the specific characteristics of each facility and maintains a balance between security and the humanity of care. This mitigation strategy falls notably within the field of counterterrorism medicine, at the intersection of medical intelligence and disaster medicine. The focus could be incorporated into initial training in the form of a comprehensive course, combining theory and practice, based on the principles of medical preparedness in the face of threats validated scientific guidelines, as well as international lessons learned, with potential support from specialized National Security services.

Results: This approach would benefit from being extended to the field to maintain skills, test them against operational reality, and enrich the feedback loop back to training institutions. Supervision by SAMU and CUMP could be considered.This training would be the first step in raising awareness of disinformation, now recognized as a tool of cognitive warfare.

Conclusions: Training healthcare workers on these issues remains the most underdeveloped link in the preparedness chain. Research must support these developments by generating data on the effectiveness of security measures and training programs, in order to build an evidence-based hospital security policy that respects the hospital's fundamental mission: to provide care.

Keywords: counter-terrorism medicine, crisis, cyberattack, hospital security, terrorism

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