Hosted and organised by

Great Health Science

X[th] World Academic Congress of Emergency Medicine

WACEM 2024 ITALY

Landmarks in Emergency Medicine focusing on Geriatrics, Longevity, Living and Healthy Aging

6[th] to 8[th] November 2024
Complesso del Seraphicum
Rome, Italy

ISSN 2149-5807 • EISSN 2149-6048

Volume: 23
Issue: Supplement 1
www.eajem.com

ABSTRACT BOOK

November 2024

UNDER THE PATRONAGE OF

www.wacem.org

COMMITTEES

WACEM24 SECRETARY GENERAL
Salvatore Di Somma, Italy

WACEM24 CHIEF ACADEMIC OFFICER
Sagar Galwankar, USA

WACEM24 SCIENTIFIC COMMITTEE
Maria Pia Ruggieri, Italy
Pasquale Pignatelli, Italy
Francesco Franceschi, Italy
Giovanni Ricevuti, Italy

WACEM24 INTERNATIONAL ADVISORS
Hassan Al-Thani, Qatar
Lisa Moreno-Walton, USA
Antoine Amin Kazzi, Lebanon
Fatimah Lateef, Singapore
Lukasz Szarpak, Poland
Md Alwi Rehman, Malaysia
Robert Frolichstein, USA
Prabath Nanayakkara, The Netherlands
Sanjeev Bhoi, India
Basar Cander, Turkey
Indrani Sardesai, England
Ayman El-Menyar, Qatar

WACEM24 LOCAL YOUNG RESEARCH COMMITTEE
Luca Crisanti, Francesca De Marco, Gabriele Valli
Rome, Italy

WACEM24 SCIENTIFIC SECRETARIAT
Valeria Albini *valeria.albini@greathealthscience.com*

WACEM24 ORGANIZING SECRETARIAT
Full Day S.r.l. • Via La Spezia 67 • 00182 Rome, Italy • Ph +39 06 7028181
www.fullday.com • *fullday@fullday.com* • *wacem24@fullday.com*

Organized by

Great Health Science

Dear Colleagues,

It is with great excitement that we welcome you to the **Xth World Academic Congress of Emergency Medicine (WACEM 24)**, together with **GREAT Network Italy**, in the City of Rome, Italy. Hosted and organized by **GREAT Health Science** and supported by various Institutions and Organizations across the world, WACEM24 guarantees an academic feast second to none.

WACEM2024 represents a global partnership focused on advancing patient-centred medical education, research and care across the world.

The main objective of The World Academic Congress of Emergency Medicine 2024 is to advance emergency medicine, acute care, critical interventions and preventive medicine skills by supporting EM pioneers and leaders around the globe, by endorsing proper standards, providing training and education, as well as promoting proper access and services for all our emergency patients anywhere in the world.

The Theme for WACEM24 is based on 5 innovative pillars 1) Longevity/Geriatric Emergency Medicine 2) Biomarkers 3) Telemedicine, Artificial Intelligence Technology 4) Patient-centred Healthcare system and 5) Transformational Innovative Models In Education & Research

The partnership of WACEM with GREAT Italy Network and Great Health Science aims to standardize the clinical and organizational system approach in acute disease management all over the world and to encourage young physicians to do research on acute conditions through the concept of "Translational Medicine" and the conduction of multi-centre clinical trials. Thanks to this strong research activity, since its inception a significant number of scientific articles by WACEM leaders have been published in very important international journals. Our joint effort will add innovation and special flavour to WACEM24 and will provide exceptional momentum and value to our speakers and participants also providing the opportunity to publish their selected contributions to the congress in international journals.

Confirming the value of this scientific strategy WACEM 2024 congress has received more than 270 contributions as abstracts from all the parts of the globe both for oral or poster presentations.

It is a pleasure for me, as President of WACEM 2024 and Great Health Science organization, to publish the accepted scientific abstracts of the congress in this special issue of Eurasian Journal of Emergency Medicine where I have the privilege to serve as Editor in Chief.

Prof. Salvatore Di Somma

EPAT
Emergency Physicians Association of Turkey

WACEM

ATUDER
Acil Tıp Uzmanları Derneği

17-20 APRIL 2025
STARLIGHT RESORT HOTEL, MANAVGAT / ANTALYA

12TH INTERCONTINENTAL EMERGENCY MEDICINE CONGRESS
&
12TH INTERNATIONAL CRITICAL CARE AND EMERGENCY MEDICINE CONGRESS

IN CONJUNCTION WITH

21TH NATIONAL EMERGENCY MEDICINE CONGRESS
&
2025 WACEM SUMMER LEADERSHIP SUMMIT

www.icem25.com

EAJEM
Eurasian Journal of Emergency Medicine
Citation abbreviation: Eurasian J Emerg Med

OWNER AND RESPONSIBLE MANAGER ON BEHALF OF THE EMERGENCY PHYSICIANS ASSOCIATION OF TURKEY

Başar Cander
Department of Emergency Medicine, Bezmialem Vakıf University Faculty of Medicine, İstanbul, Turkey
basarcander@yahoo.com
ORCID ID: 0000-0003-1035-1907

EDITORIAL BOARD

Editors in Chief

Editorial Board

Publisher Contact
Address: Molla Gürani Mah. Kaçamak Sk. No: 21/1 34093 İstanbul, Turkey **Phone:** +90 (530) 177 30 97
E-mail: info@galenos.com.tr/yayin@galenos.com.tr **Web:** www.galenos.com.tr **Publisher Certificate Number:** 14521
Printing at: Son Sürat Daktilo Dijital Baskı San. Tic. Ltd. Şti.
Gayrettepe Mah. Yıldızposta Cad. Evren Sitesi A Blok No: 32 D: 1-3 34349 Beşiktaş, İstanbul, Turkey **Phone:** +90 (212) 288 45 75
Printing Date: November 2024 **ISSN:** 2149-5807 **E-ISSN:** 2149-6048
International scientific journal published quarterly.

EAJEM
Eurasian Journal of Emergency Medicine
Citation abbreviation: Eurasian J Emerg Med

Scientific Advisory Board

EAJEM
Eurasian Journal of Emergency Medicine
Citation abbreviation: Eurasian J Emerg Med

Yunsur Çevik
Clinic of Emergency Medicine, Ankara Atatürk Sanatorium Training and Research Hospital, University of Health Sciences Turkey, Ankara, Turkey

Past Editors

Erden Erol Ünlüer
Clinic of Emergency Medicine, Bozyaka Training and Research Hospital, University of Health Sciences Turkey, İzmir, Turkey
erolerdenun@yahoo.com
ORCID ID: 0000-0003-0334-7440

İsa Kılıçaslan
Department of Emergency Medicine Gazi University School of Medicine, Ankara, Turkey
isakilicaslan@hotmail.com
ORCID ID: orcid.org/0000-0002-0330-2595

EAJEM
Eurasian Journal of Emergency Medicine
Citation abbreviation: Eurasian J Emerg Med

Please refer to the journal's webpage (**https://eajem.com/**) for "Aims and Scope", "Instructions to Authors" and "Ethical Policy".

The editorial and publication process of the Eurasian Journal of Emergency Medicine are shaped in accordance with the guidelines of ICMJE, WAME, CSE, COPE, EASE, and NISO. The journal is in conformity with the Principles of Transparency and Best Practice in Scholarly Publishing.

Eurasian Journal of Emergency Medicine is indexed in **Web of Science-Emerging Sources Citation Index, TUBITAK ULAKBIM TR Index, British Library, EBSCO, Gale, Embase, CABI, Directory of Research Journals Indexing, J-Gate, Türk Medline, Türkiye Atıf Dizini, DOAJ, Hinari, GOALI, ARDI, OARE, AGORA,** and **ProQuest**.

The journal is printed on an acid-free paper and published online.

Owner: Emergency Medicine Physicians Association of Türkiye

Responsible Manager(s): Başar Cander, Salvatore Di Somma, Sagar Galwankar

Xth World Academic Congress of Emergency Medicine

WACEM 2024 ITALY

ORAL PRESENTATIONS

November 6, 2024-November 9, 2024

Eurasian J Emerg Med. 2024;23(Supplement 1): 1-73

http://dx.doi.org/10.4274/eajem.galenos.supplement.1

[OP-502]

Ultrasonography to Confirm Endotracheal Tube Placement in the Emergency Department

Nirmal Peter Abraham, Renjith Thrikkazhippurath Parameswaran

Iqraa International Hospital and Research Centre, Calicut, Kerala, India

Aim: Endotracheal intubation is a routine procedure in Emergency departments. The gold standard for confirming endotracheal tube (ETT) placement includes 5-point auscultation and continuous waveform capnography, with post-intubation chest radiography serving as gold standard for secondary confirmation. This study evaluates the diagnostic accuracy of point of care ultrasonography (POCUS) in verifying ETT placement as compared to these gold standard methods.

Materials and Methods: In this single-centre, descriptive diagnostic test evaluation study conducted over one year, 134 patients were consecutively recruited. After intubation, ETT placement was first confirmed by the treating physician using the gold standard methods. Simultaneously, the investigator assessed ETT placement using ultrasonography of the neck and lungs, followed by a chest X-ray. Diagnostic metrics such as sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and overall accuracy were calculated.

Results and Conclusion: The study included 134 patients. Ultrasonography of the neck and lungs both demonstrated a diagnostic accuracy of 100%, correctly identifying all cases of tracheal and esophageal intubation. The sensitivity, specificity, PPV and NPV was 100%. Ultrasonography (USG) lung was able to identify all cases of tracheal intubations with ETT position above carina and right bronchus correctly thus having a diagnostic accuracy of 100%. The sensitivity, specificity, PPV and NPV is 100%. The study concluded that POCUS utilizing USG neck and USG lung can be used with 100% diagnostic accuracy in confirming proper placement of ETT.

Keywords: ETT, POCUS, position

[OP-303]

MRI Changes in Patients Presenting to the Emergency Department with Synthetic Cannabinoid Use

Demet Acar, Emin Fatih Vişneci

University of Health Science Turkey, Konya City Hospital, Clinic of Emergency Medicine, Konya, Turkey

Aim: Our study aims to compare magnetic resonance imaging (MRI) obtained during the evaluation of underlying pathologies in patients presenting to the Emergency department with altered consciousness due to the use of psychostimulant agents, with the results of multi-drug tests.

Materials and Methods: In a retrospective analysis, data from patients who presented to the Emergency department over 6 months with altered consciousness due to psychostimulant agent use were reviewed. However, MRI was performed on only 10 of these patients to investigate and further delineate the underlying pathology in addition to the multi-drug and other laboratory tests.

Results: All 10 patients included in the study had at least one positive parameter on their multi-drug tests. MRI scans revealed notable changes in 5 of these patients, specifically in the form of T2 signal alterations in the basal ganglia and thalamic regions. A common characteristic among the 5 patients with signal changes on MRI was the presence of a positive synthetic cannabinoid (THC) result in their multi-drug tests. Additionally, it was also noted that this was their first use of THC.

Conclusion: MRI, in particular, may reveal T2 signal increases in the basal ganglia and thalamus, which can be associated with various pathologies (eg; Wilson disease, carbon monoxide toxicity, methanol toxicity, autoimmune encephalitis). However, it is noteworthy that such signal changes are observed even after the first dose of psychostimulant agents, especially in patients testing positive for THC. This finding highlights the need for further studies and an increased sample size to understand these associations better.

ORAL PRESENTATIONS

[OP-322]

Effect of Intravenous Iron on Readmission Rates of Patients with Acute Decompensated Heart Failure to Emergency Department - A Randomized Controlled Trial

Praveen Aggarwal[1], Mukesh Kumar Jha[2]

[1]ESIC Medical College and Hospital, Department of Emergency Medicine, Haryana, India

[2]All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: Patients with heart failure (HF) often present to the Emergency department with worsening of symptoms despite optimum therapy, thereby increasing the burden for the emergency physicians. A few studies have shown that intravenous iron therapy in such patients having iron deficiency reduces hospitalizations for worsening of HF.

Materials and Methods: A placebo-controlled, randomized trial was conducted on patients who presented to Emergency department in acute decompensated HF and detected to have iron deficiency. They were randomized into two groups: Intravenous ferrous carboxymaltose and placebo groups. Patients were followed up for one month for rehospitalization due to HF, improvement in symptoms and mortality.

Results and Conclusion: A total of 100 subjects were recruited: 50 in iron therapy and 50 in placebo arms. During one month of follow-up, 7/37 patients in iron therapy and 2/40 patients in placebo arms were rehospitalized (p=0.058). The symptomatic improvement at one month was also not significantly different in the two groups. 13/50 (26%) patients in iron arm and 10/50 (20%) patients in placebo arm had died (p=0.123). It was concluded that compared to placebo, intravenous infusion of ferrous carboxymaltose had no significant effect on the rate of rehospitalization, clinical improvement, or mortality at one month in patients presenting to the Emergency department with acute decompensated HF who had iron deficiency.

Keywords: Heart failure, intravenous iron, iron deficiency

[OP-264]

Mad Honey Poisoning

Ehab Said Aki

Hamad Medical Corporation, Doha, Qatar

Mad honey poisoning is clinical condition characterized by acute onset of dizziness headache and vomiting after consumption of the mad honey, physical finding include bradycardia and hypotension. There is multiple case reported especially in Turkey, China, Republic of Korea, Nepal and Philippines. Mad honey is type of honey different from commercial natural honey that is contaminated with grayanotoxin; found in Nepal and Turkey, itis used as an alternative medicine for hypertension, diabetes, gastrointestinal disorders, arthritis, and erectile dysfunction. The majority of cases are seen in middle-aged males who use the honey for sexual enhancement intoxication with mad honey happen as a result of honey contamination by grayanotoxin which act on sodium ion channels by interfering in the action potential transmission and blocking the sodium channels. The presentation focuses on the clinical picture, pathophysiology and management options.

ORAL PRESENTATIONS

[OP-506]

Neuroimaging Results of the Non-Traumatic Outpatients with Headaches Admitted to the Emergency Department

Behçet Al, Tuğba Buzluk, Eltaf Torun

İstanbul Medeniyet University Faculty of Medicine, Göztepe Prof. Dr. Süleyman Yalçın City Hospital, İstanbul, Turkey

The objective is to analyze the demographic findings and results of neuroimaging situations of the individuals admitted to the Emergency department with non-traumatic headaches.

From June 2022 to June 2023, study was carried out on individuals who visited the outpatient clinic of Prof. Dr. Süleyman Yalçın City Hospital emergency medicine clinic due to headache. The patients' demographic profiles, brain scans, and detected medical conditions were analyzed.

Of 4.908 participants, 38.33% males and 61.67% were females. The average age is 42.34, and the deviation from this average is 16.13. 75.28% of the patients had no other complaints other than headache. Out of the total complaints, 302 (6.15%) were associated with flu-like symptoms, and 311 (6.34%) were linked to feelings of nausea. Out of all patients, 77.71% (equivalent to 3814 people) did not ask for any tests, while 22.25% (n=1092) requested a non-contrast computed tomography (CT), and a mere 0.04% wanted a contrast CT. Among 1,154 cases, the distribution of pathology results is as follows: 1,032 cases displayed normal findings (89.35%), 2 cases exhibited edema (0.17%), 7 cases presented with hemorrhage (0.61%), 3 cases showed ischemic infarct (0.26%), 19 cases had mass (1.65%), 91 cases were diagnosed with sinusitis (7.88%), and one case had hydrocephalus.

Although the majority of non-traumatic headaches seen in Emergency department outpatient clinics do not present with immediate signs of underlying issues, utilizing frequent neuroimaging for a cost-efficient diagnostic and treatment strategy is impractical. As individuals get older, the need for neuroimaging increases, yet no noteworthy results have been identified.

[OP-161]

Emergency Department Disaster Preparedness in the Face of Missile Attacks: Lessons Learned From Israel on October 7, 2023

Evan Avraham Alpert[1,4,5], Baruch Berzon[2,3], Debra West[4], Eliana Jacobs[5], Maximilian Nerlander[6,7], Shaden Salemeh[5,6]

[1]Hadassah University Hospital, Department of Emergency Medicine, Jerusalem, Israel

[2]Shamir Medical Center, Be'er Yaakov, Israel

[3]Magen David Adom, Tel Aviv, Israel

[4]Samson Assuta Ashdod University Hospital, Ashdod, Israel

[5]Hebrew University Faculty of Medicine Faculty of Medicine, Jerusalem, Israel

[7]Linköping University, National Center for Disaster Medicine and Traumatology, Sweden

Aim: On October 7, 2023, 2500 Hamas terrorists infiltrated from Gaza into Israel, killing 1200 while taking 239 hostages, resulting in the largest mass casualty event (MCE) in the country's history. Emergency departments (EDs) throughout the country were alerted and called in entire staff. Unlike many previous MCEs caused by terrorism, this one was ongoing and accompanied by continuous rocket attacks. In Israel, the Ministry of Health mandates that all hospitals have strict disaster preparedness protocols and annual training exercises. The objective of this article is to describe comprehensive lessons learned from the response of the EDs to the October MCE.

Materials and Methods: This is a descriptive after-action review by emergency physicians who are leaders on their hospital's disaster preparedness teams.

Results and Conclusion: The EDs were able to quickly call in staff although some in cities under direct missile attack had difficulty arriving at the hospital. Annual training exercises which can have over 100 simulated victims were very helpful. Some hospitals found that additional ad-hoc training was also essential. Due to the mass number of casualties, many unstable victims were treated outside designated trauma bays. Standardized paper charting is used in MCE's, however, documentation was lacking. Designated scribes should be trained and available. Some of the hospitals close to the MCE were overwhelmed with patients and may have benefitted from additional secondary transports. Although the EDs on October 7 were able to quickly organize their staff, improvement was needed in terms of documentation and more implementation of secondary transfers.

ORAL PRESENTATIONS

[OP-218]

Injuries Following Warning Sirens

Evan Avraham Alpert[1,2], Sharon Alter[1], Ruchama Pliner[1], Ahmad Nama[1,2], Jacob Assaf[1,2], Eli Jaffe[3,4],

[1]Hadassah University Hospital- Ein Kerem, Department of Emergency Medicine, Jerusalem, Israel

[2]Hebrew University Faculty of Medicine, Jerusalem, Israel

[3]Magen David Adom, Community Division, Or Yehuda, Israel

[4]Ben-Gurion University of the Negev Faculty of Health Sciences, Department of Emergency Medicine, Be'er Sheva, Israel

Aim: For over 10 years Israel has experienced periods where it has been attacked by missile fire from terrorists in Gaza resulting in civilian deaths and injuries. Fortunately, Israel has a well-developed warning system that allows civilians time to seek shelter. However, the sirens can result in physical injuries and emotional distress as civilians run to seek shelter. The objective of this study is to analyze the epidemiology of the prehospital response to injuries, whether physical or emotional, that are associated with warning sirens.

Materials and Methods: This is a retrospective comparative study, which evaluated the data of calls received by Magen David Adom (MDA- Israel's National Emergency Prehospital Response Organization) during the occurrence of a siren between January 1, 2020, and October 31, 2023. All data was obtained from the MDA administrative database.

Results: There was a total of 1,391 calls received by MDA during or following a siren during the study period. The main categories were for "anxiety" (644) and "physical injuries" (745) with two unknown. More calls were for women (936) than men (436). The age group with the highest overall number of calls was 21-40 while the least was the 86+. Most calls were received at the start of a conflict.

Conclusion: Warning sirens in Israel are extremely important in reducing civilian casualties from rocket fire, however, they can cause significant injury and emotional distress as civilians try to seek shelter. It is important to educate the public in injury prevention during the activation of warning sirens.

[OP-368]

Artificial Intelligence to Augment Point-of-Care Ultrasound in the Emergency Department

Evan Avraham Alpert[1,2], Ziv Dadon[2,3]

[1]Hadassah University Hospital, Department of Emergency Medicine, Jerusalem, Israel

[2]Hebrew University School of Medicine, Faculty of Medicine, Jerusalem, Israel

[3]Jesselson Integrated Heart Center, Eisenberg R&D Authority, Shaare Zedek Medical Center, Jerusalem, Israel

Aim: Point-of-care ultrasound (POCUS) is now standard in emergency medicine (EM) training throughout the world. Artificial intelligence (AI) is rapidly becoming integrated into all fields of medicine. The objective of this presentation is to review the authors' published work in the interface between AI and POCUS and discuss future research opportunities.

Materials and Methods: This is a descriptive review of published work including: 1. AI powered automatic measurement of bladder volume using two-dimensional ultrasound, 2. AI as a didactic tool to improve ejection fraction (EF) assessment in the Emergency department, 3. A study of the accuracy of medical student use of AI to evaluate point-of-care left ventricular (EF).

Results and Conclusion: Study 1 showed a very strong correlation between the manual bladder volume measurements and the AI-based module with r=0.97 (95% confidence interval: 0.96-0.98). Study 2 demonstrated that in the normal-abnormal EF category in comparison to baseline accuracy the intervention group (with AI) had an improvement in accuracy on 50 clips compared to a decline in the control group (0.10 vs. -0.12; p=0.038). For significantly reduced EF, the intervention group showed less decline in accuracy compared to the control (-0.03 vs. -0.12; p=0.050). Study 3 showed that medical students' visual evaluation and students + AI vs. cardiologists revealed a correlation of 0.51 and 0.83, respectively. AI can be successfully integrated into POCUS applications by clinical staff in the ED, including medical students, nurses, physicians' assistants, and EM specialists to improve diagnostic accuracy. Further research should be conducted using AI for more complex POCUS.

ORAL PRESENTATIONS

[OP-132]

Quality of Sleep and Sleep Disorders in Patients with Parkinson's Disease: A Case-Control Study in Uzbekistan

Shakhzoda Aripkhodjaeva[1], Fuzuliddin Aripkhodjaev[2], Khasan Fayzullakhodjaev[3]

[1]Central Asian University, Tashkent, Uzbekistan

[2]Akfa Medline University Hospital, Tashkent, Uzbekistan;

[3]Akfa Medline University Hospital, Clinic of Pain Treatment Center, Tashkent, Uzbekistan

Aim: Parkinson's disease is a progressive neurological disorder that causes both motor and non-motor symptoms. Many non-motor symptoms of Parkinson's disease, such as sleep disturbance, are more common and have a substantial impact on patients' daily activities and quality of life. The primary goal of this study was to examine sleep quality in Parkinson's disease patients.

Materials and Methods: This case-control research was conducted on Parkinson's disease patients who were admitted to the Akfa Medline University Clinic in 2024. This study included 23 people with Parkinson's patients and 23 individuals in good health as controls. The Parkinson's disease sleep scale (PDSS) questionnaire was used to evaluate the sleep quality of both patients and controls.

Results and Conclusion: The independent samples t-test results [t (22)=7.17, $p<0.0001$] indicate that there is a statistically significant difference in the mean total sleep disturbance scores between patients with Parkinson's disease [M=16.39, standard deviation (SD)=10.77] and the control group (M=0.26, SD=0.54). The chi-square test results [$\chi^2(1)=211.66$, $p<0.00001$] indicate that there is a statistically significant association between having Parkinson's disease and experiencing sleep disturbances. The Pearson correlation analysis reveals a strong, positive, and statistically significant relationship between the presence of Parkinson's disease and higher PDSS-2 scores. The PDSS-2 is a crucial clinical tool for understanding sleep issues in Parkinson's disease, enabling personalized treatment plans and improved treatment.

Keywords: Parkinson's disease, sleep disturbances, quality of life

[OP-507]

A Randomized Trial of Modified Valsalva Versus Standard Valsalva Maneuver for Cardioversion in Patients with Supraventricular Tachycardia in Emergency Department

Sheena Arora[1], Praveen Agarwal[2]

[1]All India Institute of Medical Sciences, New Delhi, India

[2]Employees' State Insurance Corporation Medical College and Hospital, Faridabad, India

Aim: Vagal maneuvers, such as the Valsalva maneuver (VM), are recommended for emergency treatment of supraventricular tachycardia. The modified VM, where the patient's posture is altered and legs are raised, is a non-invasive method that increases vagal tone and reduces heart rate. The study aimed to evaluate the safety, simplicity, and cost-effectiveness of modifying the standard VM for terminating supraventricular tachycardias. Primary objective was rate of conversion to sinus rhythm after one minute of application of modified VM or standard VM.

Metarials and Method: We did a randomised controlled, parallel-group trial at Emergency department in a tertiary care hospital. We randomly allocated adults presenting with paroxysmal supraventricular tachycardia in a 1:1 ratio to undergo a modified VM (done semi-recumbent with supine repositioning and passive leg raise immediately after the Valsalva strain), or a standard semi-recumbent VM. A 40 mm Hg pressure, 15 s standardised strain was used in both groups. Block randomisation technique was used and allocation was done with serially numbered, opaque, sealed, envelops. Patients and treating clinicians were not masked to allocation. This study is registered with Clinical Trial Registry of India.

Results and Conclusion: We enrolled 75 participants (37 in standard arm and 38 in modified arm) between January 2021 to October 2022. Ten out of 38 patients (26.3%) reverted to normal sinus rhythm after attempting modified VM whereas 6 out of 37 (16.2%) patients reverted to normal sinus rhythm in the standard Valsalva group (odds ratio 0.542 95% CI.)

ORAL PRESENTATIONS

[OP-296]

Acute Appendicitis in Pregnant Women, Its Management and Complications

Kamila S. Asqarova[1], Shakhnoz K. Mamadjanova[2]

[1]Central Asian University Faculty of Medicine, Andijan, Uzbekistan
[2]Central Asian University Faculty of Medicine, Department of Obstetrics and Gynaecology, Prenatal Center, Andijan, Uzbekistan

Aim: Acute appendicitis is the most common non-obstetric surgical emergency in pregnant women. The anatomical and physiological changes during pregnancy, including abdominal discomfort and physiological leukocytosis, can obscure the diagnosis of appendicitis. Timely detection and investigation is essential to reduce the risks of complications such as sepsis, preterm labor, and fetal loss. This research aims to assess the clinical presentation, management, and outcomes of the patients who underwent appendectomy during pregnancy.

Materials and Methods: A review of 45 case records from March 2021 to December 2023 revealed an incidence of appendicitis at 1 in 467 births, with a preoperative diagnosis accuracy of 85%. Notably, abdominal pain migrating to the lower quadrant was significantly more common in patients diagnosed with appendicitis compared to those who had a normal appendix after diagnostic laparotomy.

Results and Conclusion: Pregnancy outcomes following appendectomy were significant: Three out of 10 (30%) patients in the first trimester experienced spontaneous abortion, while 2 out of 23 (9%) patients in the second trimester had preterm labor and birth. In contrast, patients who underwent surgery in the third trimester did not show any specific complications related to their condition, and no increase in complications was noted for perforated appendicitis.

Appendicitis remains a critical surgical emergency in pregnant women. The physiological changes during pregnancy complicate the diagnosis, leading to fetal loss in the first trimester and premature birth in the second. No increase in complications of appendectomy in the third trimester was noted.

Keywords: Acute appendicitis, pregnancy, fetal loss

[OP-394]

Breve Dulce Bene

Amil Badoolah

NYU Grossman Long Island School of Medicine, Department of Emergency Medicine, New York, USA

Short and Sweet Ways to Increase Wellness: Burnout is a problem. Emergency physicians are particularly vulnerable to burnout due to unique stressors in emergency medicine. The high cognitive load in a shift can lead to medical errors, litigation, and poor outcomes. We are on the frontlines of pandemic medicine and overcrowding. The professional consequences include decreased quality of care, patient satisfaction, productivity, and high physician turnover. The personal consequences include broken relationships, substance abuse, depression, and unfortunately suicide. There are evidence-based interventions for burnout. Start with establishing wellness as a meaningful indicator. Next, select interventions to improve our wellness like restorative breaks. The 5 categories of restorative breaks are: micro, moving, nature, social, and gear-shifting. Microbreaks are brief interventions designed to reset one's thought process. Moving breaks are designed to add movement to breaks. Nature breaks take advantage of the replenishing effects of the outdoors. Social breaks utilize our human need for interaction with people (different from patients). Gear-shifting breaks break the monotony of an Emergency department shift.

These are quick and easy interventions that do not need a lot of investment; it just needs us. We will review better break strategies that can be achieved in five minutes or less. These techniques can serve as a resource for the busy emergency physician and contribute to overall wellness and hopefully prevent burnout.

Objective 1: Perform a restorative break.

Objective 2: Integrate restorative breaks into their practice.

Objective 3: Influence wellness initiatives at their home institution.

[OP-396]

Academification Through Great Outstanding Academic Teaching Case of the Week

Amil Badoolah

NYU Grossman Long Island School of Medicine, Department of Emergency Medicine, New York, USA

What is GOAT COW? It's our Great Outstanding Academic Teaching Case of the Week. As part of developing a new Residency Program, we needed to rapidly ramp up our academic profile and faculty experience. We already had Journal Club and Grand Rounds, but we were looking for a weekly variety of practical clinical topics. Our faculty needed opportunities to design and present educational content. The GOAT COW is designed to be an interactive case presentation in a non-judgmental arena drawing from the knowledge and experience of the group engaged in discussion all packed within 30 minutes. We adhered to the principles of adult learning theory. We involved our learners in the planning. We learned through didactic methods, but also leaned heavily on experience. We used real cases seen by our faculty in our Emergency department. We reviewed topics that allowed for immediate clinical relevance and impact. By providing a case-based format, we focused on problem-centered instead of content-oriented learning.

Objective 1: Identify evidence-based methods for developing an academic session.

Objective 2: Design a faculty development program that includes didactic learning, case-based learning, and practices content delivery.

Objective 3: Describe four principles of Adult Learning Theory.

[OP-095]

A Prospective Study: Does Concurrent Use of Oral Anticoagulants and Non steroidal Antinflammatory Drugs Increase the Risk of Bleeding?

Elif Betül Balcı, Başar Cander, Bahadır Taşlıdere, Abdullah Yaser Güney

Bezmialem Vakıf University Hospital, Department of Emergency Medicine, İstanbul, Turkey

Aim: Warfarin and direct oral anticoagulants such as dabigatran, rivaroxaban, epixaban and edoxaban are highly effective anticoagulants and their use is limited due to fear of excessive bleeding. This study aims to find an interaction in patients who are on anticoagulants and having an international normalized ratio (INR) >5 and have used non-steroidal anti-inflammatory drugs (NSAIDs) last one week. We also aim to investigate whether they are symptomatic in patients with INR >5 who use NSAIDs and in patients with INR >5 who do not use NSAIDs.

Materials and Methods: This study is planned to be conducted prospectively in Emergency Medicine department in Bezmialem Vakıf University Hospital, Turkey. In the emergency medicine department, symptomatic and asymptomatic patients with INR >5 and on oral anticoagulants will be questioned about NSAIDs use in the last week, the frequency of use and which oral anticoagulant they have used.

Results and Conclusion: Many drugs and foods interact with warfarin and, in a lesser effect, other direct oral anticoagulants. We are expecting to see their interaction with NSAIDs use in last one week with patients who have INR >5. We are awaiting to see that patients who have used NSAIDs in last one week have worse prognosis and symptoms such as having active hematuria, epistaxis or gastrointestinal bleeding. We also are anticipating to see a better bleeding prognosis or being asymptomatic, in fact, getting an INR >5 result incidentally in patients who have not used NSAIDs in last one week.

Keywords: Warfarin, direct oral anticoagulants, non-steroidal anti-inflammatory drugs

ORAL PRESENTATIONS

[OP-173]

Taking My Breath Away-an Interesting Case of Pericardial Effusion in the Emergency Department

Mohamed Fouad Barakat, Shuheda Shah, Dalip Kumar, Michael Acidri, Ionut Negrea, Claire Willis, Mohammed Tanvir Shah, Ajay Suri

Southend University Hospital, Department of Emergency Medicine, Essex, UK

Aim: A 51-year-old man with no relevant medical history presented to hospital after noticing that he was becoming increasingly short of breath with mild exertion for the past week. He denied any chest pain. His blood test showed a CRP of 126 and a WBC of 14.6 and his ECG showed no significant changes. The chest X-ray showed a "water bottle" shaped heart.

Materials and Methods: The emergency bedside echo revealed a pericardial effusion with collapse of the right ventricle. The effusion was successfully drained. Following procedure, further CT scan was organized for the patient to further investigate the possible causes of the effusion. Cardiac tamponade is the potentially fatal consequence of pericardial effusion. The key is the timing of the procedure, because the longer the delay, the worse the outcome. In this case, the patient was able to undergo pericardiocentesis within 24 hours of admission to hospital as the pericardial effusion was recognized early thanks to non-invasive imaging at the point of care.

Results and Conclusion: This case is consistent with the literature emphasizing the importance of point-of-care imaging in investigating and detecting pericardial effusion and improving outcomes. Although ECHO imaging is useful in the detection of pericardial effusions, care must be taken with the technique used as false positive results can sometimes occur. With a rational approach, we were able to make a quick diagnosis and alleviate the symptoms in the Emergency department. The patient was discharged shortly after the pericardiocentesis procedure while he underwent further investigations as outpatients.

Keywords: Cardiac tamponade, ECHO, pericardiocentesis

[OP-043]

Effect of Simulation-based Emergency Airway Management Education on the Knowledge, Skills and Perceived Confidence of Medical Interns

Samjhana Basnet, Sailesh Prasad Shrestha, Roshana Shrestha, Anmol Purna Shrestha, Anmol Purna Shrestha, Ashish Shrestha, Sandeep Sahu, Bhavana Mhatre, Prabhat Silwal

Dhulikhel Hospital, Kathmandu University Hospital, Nepal

Aim: An effective airway management education program is a crucial part of the undergraduate medical education curriculum. Theoretical instructions and practical demonstrations are the major modalities of medical education in Nepal. Simulation-based education (SBE) programs have not yet been implemented effectively. We aimed to determine the effects of an SBE program on the knowledge, skills, and perceived confidence of medical interns regarding emergency airway management.

Materials and Methods: This mixed methods study comprised both quantitative and qualitative components. The study participants were 47 medical interns who had participated in the SBE program.

Results: The mean age of the 47 participants was 24.74 years. There were 33 (70.21%) male and 14 (29.79%) female participants. The knowledge, skills, and perceived confidence scores of the participants for airway management preparation, basic airway management, endotracheal intubation, and laryngeal mask airway insertion improved significantly following the SBE program ($p<0.001$). Analysis of the participants' feedback indicated that they largely approved of the SBE program. The majority of students and faculty expressed a willingness to include similar programs in the undergraduate medical education curriculum.

Conclusion: This study demonstrated through quantitative and qualitative metrics that SBE can enhance the knowledge, skills, and perceived confidence in performing emergency airway management among medical interns. We recommend measures to include and effectively implement SBE in the undergraduate medical education curriculum of Nepal.

ORAL PRESENTATIONS

[OP-058]

Improving Knowledge, Skill and Attitude Towards Use of Ultrasound among Undergraduate Medical Students and Teachers in Low to Middle Income Countries

Issani Bhoi[1], Sanjeev Bhoi[2]

[1]Dr. KNS Memorial Institute of Medical Sciences, Barabanki, India
[2]AIIMS Jai Prakash Narayan Apex Trauma Center, New Delhi, India

Aim: Point of care ultrasound has become visual stethoscope of clinical disciplines, however use of ultrasound in undergraduate medical education is limited in low to middle income countries. Hence development of educational models using ultrasound is key.

Materials and Methods: It will be a prospective observational study with a primary objective to assess knowledge, skill and attitude towards use of ultrasound among undergraduate medical students and teachers of three medical school. Secondary objective will be to assess the learning curve among students of each semester, teachers and create instructors among the teachers. Incorporation of ultrasound in undergraduate medical curriculum among medical school will be used as impact assessment at 2 years. The content of training module will be tailored according to the semester by radiologist/emergency physicians. It will be based on recorded lectures, hands on skills, pre and post-test of theory and skills. Assessment of module will done by the learners on Likert scale (1 to 5) on content, presentation skills and skill stations. Refresher course and assessment will be done at 3 months. The findings of the course will be shared with the dean and the concerned departments of the medical school for incorporating it in their curriculum.

Results and Conclusion: The findings of the study will be helpful to incorporate ultrasound in undergraduate medical education in low to middle income countries.

[OP-033]

Pattern of Peripheral Blood Mesenchymal Stromal Cells, Hematopoietic Progenitor, Stem Cells and Its Correlation with Clinical Outcomes in Trauma Haemorrhagic Shock Patients

Sanjeev Bhoi, Indrani Priyadarshini

All India Institute of Medical Sciences, Clinic of Emergency Medicine, New Delhi, India

Aim: Trauma haemorrhagic shock is a life-threatening condition that significantly contributes to morbidity and mortality in trauma patients. We present interim analysis on "patterns of peripheral blood mesenchymal stromal cells (MSCs) and hematopoietic progenitor stem cells (HPSCs) and its correlations with clinical outcomes, cytokine levels, and gender differences".

Materials and Methods: A cohort of 57 trauma patients was recruited, including 25 with minor injuries, 25 without haemorrhagic shock, and 7 with haemorrhagic shock. HPSCs (CD45, CD34, CD38, CD123) and MSCs (CD14, CD20, CD73, CD105, CD90) were evaluated at 0, 3, 7, and 14 days post-trauma using flow cytometry. Serum cytokine levels (SDF 1-alpha, VEGF, EGF, GM-CSF, G-CSF, Gro-α, Gro-β) were quantified using ELISA. Correlations of stem cell levels and cytokine profiles with clinical outcomes were studied.

Results: Patients with haemorrhagic shock exhibited significantly higher mobilization of HPSCs and MSCs compared to control groups. Enhanced stem cell mobilization was noted across all time points in the haemorrhagic shock group. Moderate up-regulation of SDF 1-alpha, Gro-α, Gro-β, G-CSF, GM-CSF, EGF, and VEGF were noted. Notably, a surviving female patient with haemorrhagic shock had slightly higher HPSC and MSC mobilization than the male patients, suggesting possible gender differences in stem cell response.

Conclusion: The study highlights significant mobilization of HPSCs and MSCs in response to haemorrhagic shock and underscores the potential role of specific cytokines in this process. The observed gender differences in stem cell mobilization and their impact on clinical outcomes warrant further investigation.

ORAL PRESENTATIONS

[OP-381]

SATYAM-Student Augmented Training Youth Amplification Program to Empower Student's Community to Manage Time Sensitive Emergencies by Imparting Them Knowledge, Skills and Confidence at Jaipur, Rajasthan, India

Neha Bisht[1], Tej Prakash Sinha[1], Sanjeev Bhoi[2], Neha Bisht[2], Roopa Rawat[2], Shanvi Yadav[2], Kanishka[2], Bilkees Javed[2], Kalpana[2], Himanshi[2]

[1]AIIMS Jai Prakash Narayan Apex Trauma Center, Clinic of Emergency Medicine, New Delhi, India

[2]WHO Collaborating Centre for Emergency and Trauma Care, JPNATC AIIMS New Delhi, India

Aim: Time sensitive emergencies impose a major global burden. In India, Rajasthan stand among top 10 states in RTIs and fatalities. Delays in pre-hospital care is major cause of preventable deaths and disabilities. Empowering communities to manage time sensitive emergencies can reduce this delay and improve outcomes. Students' are structured community and eager-to-learn. Therefore, SATYAM program was designed for them.

Materials and Methods: Prospective interventional study conducted among college students of 20 colleges at Jaipur, during September 2023 to June 2024. A structured program designed focused on knowledge and hands-on skills on how to manage RTIs, cardiac arrest, stroke, psychological part behind the delay in help and over speeding etc. Pre-post assessment and feedback was done and assessed. To train the large number and minimize burden on healthcare professionals. The teachers were trained as ToT first, and then they impart training to students under the direct supervision of master trainers I,e trained healthcare professionals.

Result: Total 252 ToT and 1369 students were trained. Improvement in knowledge among teachers and students were 25%. The p value of confidence change on skills were significant (pre-test and post-test) among teachers as follows; "not confident" p=0.03; "somewhat confident" p=0.07; "very confident" p=0.003. Similarly for student's "not confident" p=0.03; "somewhat p=0.03; "very confident" p=0.001. The lateral benefit of this program was 5 colleges develop the Basic Life Support labs and started training sessions on regular basis.

Conclusion: Training program showed 25% increment in knowledge and statistical significant increment in skills part.

[OP-389]

Does Pre-hospital Emergency Care Training Improve the Knowledge and Confidence among Healthcare Personnels in India?

Neha Bisht[1], Shanvi Yadav[2], Bilkees Javeed[2], Tej Prakash Sinha[3], Pradeep Khasnobis[4], Sanjeev Bhoi[3]

[1]National Emergency Life Support Course for Paramedics, Department of Emergency Medicine, JPNATC AIIMS New Delhi, India

[2]WHO Collaborating Centre for Emergency and Trauma Care, JPNATC AIIMS New Delhi, India

[3]Emergency Medicine, JPNATC, AIIMS, New Delhi, India

[4]DDG, Disaster Management Cell, Ministry of Health and Family Welfare, Government of India

Aim: Pre-hospital emergency care in India is still underdeveloped. Lack of standardized training for paramedics that is tailored to the Indian context is one of the major reasons. Existing pre-hospital training is limited in scope, addressing only few emergencies without considering the specific needs and priorities of Indian population. To address this gap, Government of India and the Department of Emergency Medicine at JPNATC AIIMS, New Delhi, developed and executed the National Emergency Life Support Course (NELS) for Paramedics. To measure the impact of the NELS course on knowledge, confidence, skills related to pre-hospital emergency care among healthcare personnels.

Materials and Methods: Prospective study conducted over a period of six months in four states (Arunachal Pradesh, Uttar Pradesh, Madhya Pradesh, Ladakh). Target groups were doctors and nurses from different healthcare settings. This 3-day course includes lectures and hands on sessions on Basic Life Support, management of medical and trauma emergencies, triage and special scenarios. Pre-post course assessment (knowledge, skills, confidence) was taken along with feedback.

Results: Total 87 healthcare professionals (40 doctors and 47 nurses) were trained. The overall knowledge increase was 39.7%. However, knowledge increase among the doctors was 32.65% whereas among nurses, it is 47.1%. After the training, confidence level of 73% participants shifted from "Not Confident" to "Confident" in terms of their emergency care skills, equipment handling, emergency recognition. These participants were then trained as instructors.

Conclusion: NELS Course can improve knowledge, confidence and skills related to pre-hospital emergency care among healthcare personnels.

ORAL PRESENTATIONS

[OP-155]

Stroke AI-based Detection in Emergencies: Developing a Virtual Assistant Based on AI Tools for Acute Stroke

Alessandro Bufi, Virgina Cancelloni, Valeria Caso

University of Perugia Faculty of Mediciene, Department of Emergency Medicine, Perugia, Italy

Aim: In medical AI, stroke diagnosis and management are increasingly important. Quick and accurate diagnosis is key to effective treatment. Stroke care demands a coordinated, protocol-driven process from a skilled multidisciplinary team. Patient care is routed through HUB and SPOKE centers within a structured network, determined by case complexity and treatment needs. The emergency physician is crucial in initial stroke management, working with neurologists to follow established diagnostic and treatment pathways. This study aims to create a virtual assistant (VA) with software capable of recognizing ischemic stroke patients. The VA will undergo a learning process based on data collection and analysis to improve its accuracy in stroke patients in the emergency setting.

Materials and Methods: A prospective, longitudinal, interventional, non-profit, single-center study will be conducted. The study will last from 01.02.24 to 28.02.2025 and consists of five phases, from creating VA to validating SPOKE centers. Patient recruitment will span 12 months, beginning 01.03.2024, and will include consecutive patients presenting to the Emergency department of the Perugia Hospital with suspected ischemic stroke. The VA utilizes advanced deep learning techniques through Tensorflow to analyze stroke-related symptoms specifically. It employs convolutional neural networks for detecting changes in facial symmetry and vocal patterns indicative of stroke events, enhancing classification accuracy with metadata.

Results: The preliminary results were shown at ESOC 2024 in Basel.

Conclusion: The VA may be a new tool to support emergency physicians in recognizing and treating stroke more swiftly, improving patient outcomes.

[OP-353]

Safety of Intravenous Treatment in Nursing Homes After Discharge from the Emergency Department: A Mortality-based Evaluation

Viridiana Cabrera Romero[1], Francesca Argentina[1,2], María A. Castillo Delgado[1], Viridiana Cabrera Romero[1], Ana Merello De Miguel[1,2], Montserrat Barcons Marqués[1], Begoña Reche Martínez[3], Rocío Menéndez Colino[1,2]

[1]University Hospital La Paz of Madrid, Department of Geriatrics, Madrid, Spain

[2]IdiPAZ. Research Institute of the University Hospital La Paz, Madrid, Spain

[3]University Hospital La Paz, Department of Emergency, Madrid, Spain

Aim: Institutionalized patients referred to the Emergency department (ED) have a higher risk of adverse events, considering alternatives to hospitalization is essential to minimizing these risks. This study aims to assess the mortality rate among nursing home (NH) patients referred to the ED of a tertiary hospital, comparing those who receive intravenous (IV) treatment in the NH with those who do not.

Materials and Methods: A retrospective cohort study of NH patients admitted to the ED between January 2021 and December 2022. Patients were selected by a geriatrician for IV treatment at their NH based on clinical criteria, available healthcare options in NH and the possibility of performing a telephone follow-up until the acute condition was resolved. Furthermore, a 30 days and 3 months follow-up was performed to evaluate mortality.

Results and Conclusion: A total of 902 patients were included, mean age was 89±6.7 years (71% women), 75% required hospital admission and 25% were discharged to NH, of those, 88 patients (39%) received IV treatment in NH. Most frequent diagnoses were: respiratory infections (28%) and heart failure (16%). Among patients discharged with IV treatment: 7% died within 30 days, and 18% within 3 months. In contrast, patients who required hospital admission or were discharged from ED without IV treatment:15% died within 30 days, and 28% within 3 months. The data suggest that IV treatments in NH with a follow-up by a geriatrician do not increase mortality compared to those who do not.

Keywords: Geriatric emergency medicine, intravenous treatment, mortality

ORAL PRESENTATIONS

[OP-280]

Evaluating the Combined Use of MEDS and MEWS Scores for Predicting Outcomes in Sepsis Patients in the Emergency Department

Şeyma Nur Çalışır, Alaa Saad Ahmed Aldujailil, Onur Bozdağ, Başar Cander

Bezmialem Vakif University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: To assess whether the combined use of the Mortality in Emergency Department Sepsis (MEDS) score and the Modified Early Warning Score (MEWS) improves the prediction of adverse outcomes in sepsis patients in the Emergency department (ED) compared to using either score alone. Sepsis is a leading cause of morbidity and mortality in EDs, requiring prompt identification and treatment. While the MEDS score is specifically designed to predict mortality in sepsis patients, the MEWS score is a broader tool used to identify deteriorating patients based on physiological parameters. There is potential that using both scores together could enhance the accuracy of early risk stratification in sepsis.

Materials and Methods: Retrospective cohort study will be conducted on a specific population of adult patients diagnosed with sepsis in the Emergency department over the past 5-year, although data collection of the patients in MEDS and MEWS scores will be calculated based on the initial clinical and laboratory data. Outcomes of interest include in-hospital mortality, need of ICU admission, and length of stay. For the analysis part must compare the predictive accuracy of the MEDS score alone, MEWS score alone and the combination of both scores using receiver operating characteristic curves and other relevant statistical tests.

Results and Conclusion: The study is expected to determine whether the combined use of MEDS and MEWS scores provides a more reliable prediction of sepsis outcomes in the Emergency department, potentially leading to better triage and management strategies.

Keywords: Sepsis, emergency, scores

[OP-170]

Circulating Proteome Profiles Associated with Sarcopenia: A Pilot Study

Valerio Caputo[1], Silvano Junior Santini[1,2], Giovanna Fracassi[1], Giovanni Brienza[1], Gaia Sinatti[1], Clara Balsano[1,2,3]

[1]University of L'Aquila Faculty of Emergency-Urgency Medicine, Department of Life, Health and Environmental Sciences-MESVA, L'Aquila, Italy

[2]Fondazione Francesco Balsano, Rome, Italy

[3]University of L'Aquila Health and Environmental Sciences, Department of Life, Geriatric Unit, L'Aquila, Italy

Aim: Sarcopenia represents the loss of muscle mass, causing weakness and risk of falls. Its occurrence in patients with complex chronic diseases can worsen the clinical outcomes. Since in 2050 16% of worldwide population will be elderly, sarcopenia will dramatically impact the quality of life. Its assessment remains difficult due to lack of consensus among different guidelines. In this scenario, novel biomarkers to be used in non-invasive analyses in hospital settings are needed. We aimed at performing a pilot study on twelve dysmetabolic patients'sera to explore sarcopenia-associated circulating proteome profiles.

Materials and Methods: Sarcopenia was assessed through clinical evaluation (functional tests, ultrasonography/CTscan). Sera from six non/mild-sarcopenic subjects (60.5y.o.±10.0) and six patients with sarcopenia (62.3y.o.±4.8) were subjected to Somascan-7k system (Somalogic) to obtain proteome data, that were analyzed by biostatistical tests. Results were considered significant achieving fold change (FC)=1 and $p<0.05$. Afterwards, bioinformatic predictive analyses were performed to study their interaction into biological processes.

Results: Downregulated proteins in sarcopenic group were involved in protein metabolic process (GO: 0019538, p=0.005), organonitrogen compound metabolic process (GO: 1901564, p=0.02), forebrain neuron development (GO: 0021884, p=0.04). Upregulated proteins were enriched in immune/inflammatory-related processes (including immune effector process, GO: 0002252, p=0.0026; immune system process, GO: 0002376, p=0.009), cell adhesion (GO: 0007155, p=7.66*10-5), locomotion (GO: 0040011, p=2.7*10-5), stress response (GO: 0006950, p=2.5*10-5).

Conclusion: Our results highlight sarcopenia-associated circulating signatures reflecting dysregulation of biomolecular pathways in line with current knowledge. Notably, specific identified factors may be prioritized for mechanistic studies and, importantly, for a more rapid non-invasive monitoring of sarcopenia, especially in elderly and hospitalized subjects.

ORAL PRESENTATIONS

[OP-354]

Effectiveness of Individualized Fluid Therapy in Sepsis-related Hypoperfusion and Septic Shock with Non-invasive Monitoring for Fluid Responsiveness Evaluation: Preliminary Data

Ersilia Castaldo, Enrico Mirante, Direttore, Dr.ssa Daria Rigamonti, Dirigente Medico, Dr.ssa Julia Tola

Dirigente Medico-UOC Medicina D'urgenza e Pronto Soccorso, Ospedale San Filippo Neri, Rome, Italy

Fluid resuscitation plays a pivotal role in septic shock but signs of fluid responsiveness are difficult to recognize in spontaneous breathing patients. Dynamic assessment methods, such as stroke volume (SV) measurement after a fluid bolus of 250 cc of lactate ringer or passive leg raise (PLR), are employed to gauge the effectiveness of fluid administration. Objectives were to evaluate the impact of a non-invasive hemodynamic monitoring tool on fluid management and patient outcomes in septic shock. Patients identified by a SOFA score of ≥2,were included.We used bioreactance technology for non invasive monitoring. Patients who showed an increase in SV above 10% after fluid bolus or PLR were classified as "fluid responders". Subjects were randomly assigned into two groups: the study included 41 patients: 20 receiving non-invasive monitoring (cases) and the other 21 without dynamic assessment (controls). Primary endpoints: total fluid volume administered and length of stay in the High Dependency Unit. Secondary endpoints: use of vasopressors,incidence of acute renal failure (AKI) and overall fluid balance.

- 70% of cases were fluid responders.

- Cases received a greater total volume of lactate ringer.

- The fluid balance was significantly more positive in the fluid responder group. (p=0.0052; Med 2125-3000 (IQR 1200-1500).

- Patients in the cases group had longer hospital stays, but this correlated with improved outcomes.

- Incidence of AKI was lower in the cases group (p=0.005; Med 24.5/50 (IQR 20.5-46).

- Fluid management reduced the requirements for vasopressors and diuretics

Conclusion: Use of non-invasive hemodynamic monitoring allows for more individualized fluid management in this patients, leading to better outcomes.

[OP-414]

Risk Factors for Delirium in Very Old Patients with Traumatic Brain Injury Referred from Nursing Homes to the Emergency Department: A Retrospective Cohort Study

Maria Auxiliadora Castillo Delgado[1], Viridiana Cabrera Romero[1], Montserrat Barcons Marqués[1], Ana Merello De Miguel[1,2], Rocío Menéndez Colino[1,2], Begoña Reche[3], Francesca Argentina[1,2]

[1]University Hospital La Paz, Department of Geriatrics, Madrid, Spain

[2]IdiPAZ. Research Institute of the University Hospital La Paz, Madrid, Spain

[3]University Hospital La Paz, Department of Emergency Medicine, Madrid, Spain

Aim: Older patients are vulnerable to complications from traumatic brain injuries (TBI), including delirium. The aim was to describe the delirium prevalence and associated risk factors in older patients with TBI referred from nursing homes (NH) to the Emergency department (ED) of a tertiary hospital.

Materials and Methods: This retrospective cohort study analyzed NH older patients diagnosed with TBI in the ED from June 2020, to March 2023. A comprehensive geriatric assessment recorded polypharmacy (≥5 drugs), Barthel Index (BI), Functional Ambulation Category (FAC), Global Deterioration Scale (GDS), treatment with drugs that increase the risk of intracranial hemorrhage (RICH), and the presence of intracranial hemorrhage (ICH), delirium diagnosis was included in the discharge emergency form. New ED visits and mortality were registered during a 1-year follow-up.

Results: Overall, 175 patients (69% females) were included, mean age was 87±9.4 years. Polypharmacy was present in 90.2% (9.7±3.7 drugs), and 77.7% were treated with RICH drugs. Delirium was diagnosed in 40.6%, and 17% had ICH. Mean values were: BI 50±30.9, FAC 2±1.7, GDS 4±1.9. During the 1-year follow-up, 74% had new ED visits, and 31% died. Patients with polypharmacy were more frequently diagnosed with delirium [OR 10 (1.27-7.82)], those with delirium had more new ED visits [OR 2 (1.02-4.30)] but was not mortality related [OR 1 (0.63-2.29)].

Conclusion: On TBI patients referred from NH to the ED, polypharmacy was significantly associated with delirium diagnosis, and those patients were linked to new ED visits but no with mortality risk increase.

Keywords: Geriatric emergency medicine, traumatic brain injury, delirium

ORAL PRESENTATIONS

[OP-315]

Effectiveness of Modified Early Warning Score on Patient's Outcome and Barriers Related to Its Use by Nursing Officers in Medicine Ward, AIIMS, New Delhi

Akriti Chaudhary, Milan Tirwa, Ajesh Kumar T.K., Ved Prakash Meena

All India Institute of Medical Science, Department of Medicine, New Delhi, India

Aim: Modified Early Warning Score (MEWS) is composed of bedside measurements of heart rate, respiratory rate, systolic blood pressure, temperature, level of consciousness, urine output and oxygen saturation. To assess the effectiveness of MEWS on patient's outcome and barriers related to its use by nursing officers.

Materials and Methods: Quasi experimental study was conducted with 400 patients and 52 nursing officers in both the experimental and control groups. In experimental group along with routine vital signs monitoring implementation of MEWS was done while in control group, standard routine vital sign monitoring was done by the nursing officers. Receiver operating curve was generated to predict cut off of MEWS for patient's outcome and outcome as unexpected intubation, shock, cardiac arrest, acute kidney injury (AKI), length of stay and death were assessed and compared in both groups.

Results: The cut off MEWS to predict unexpected intubation is 5, shock, cardiac arrest and AKI is 4, and death is 5. In the experimental group 8% of the patients underwent unexpected intubation, 6.5% went in shock, 2.5% had cardiac cardiac arrest, AKI affected 5% and 5.5% of patients died whereas in the control group unexpected intubation occurred in 16%, shock in 12%, cardiac arrest in 5%, acute kidney injury affected 11% and 14% of patients died. Work overload, lack of resources, shortage of time and lack of training and protocol reported as barriers in implementation of MEWS.

Conclusion: A significant reduction was found in the incidence of adverse patient's outcome after implementation of MEWS.

Keywords: MEWS, patient's outcome, barriers

[OP-287]

Gender Disparities and Burnout Amongst Emergency Physicians

Suman Chauhan[1], Sagar Galwankar[2], Vivek Chauhan[3], Lisa Moreno[4]

[1]All India Institute of Medical Sciences, Department of Dermatology and Venereology, New Delhi, India

[2]Director for Research in Emergency Medicine Florida State University, Florida, USA

[3]Indira Gandhi Medical College, Department of General Medicine, Shimla, India

[4]Louisiana State University Health Sciences Center, Department of Emergency Medicine, New Orleans, USA

Aim: The female leadership academy for medical excellence, members of the world academic council of emergency medicine conducted this systematic review, that explores gender disparities in burnout among emergency physicians (EPs) using the Maslach burnout inventory-human services survey (MBI-HSS). Burnout is a critical issue in healthcare, particularly in emergency medicine where high stress and demanding work environments prevail.

Materials and Methods: Following PRISMA guidelines, PubMed and Epistemonikos were searched for studies using MBI-HSS to measure burnout in EPs. Inclusion criteria encompassed peer-reviewed, English-language articles reporting burnout by gender. Data extraction focused on proportions of burnout and its subcomponents, mean scores, and odds ratios, with quality assessed using Joanna Briggs Institute criteria.

Results: Eighteen studies spanning 26,939 EPs from 10 countries were included. While overall burnout rates did not significantly differ between genders, proportion of female EPs with high emotional exhaustion (EE) 69% and low personal accomplishment (PA) 45% were significantly higher compared to males with high EE in 57% and low PA in 29%, respectively ($p<0.001$ for both). Proportion with high depersonalization (DP) score was 44% in both genders. Mean scores revealed females experiencing higher mean EE (26.8±15.7) scores versus males (25.4±15.9) $p=0.0001$. Males had mean DP scores (8.6±8.0) and mean PA scores (26.6±12.7) compared to females with lower mean DP scores (7.4±7.2) and higher PA scores (27.7±11.9), respectively $p=0.0001$ for both. Odds ratios indicated varying risks, predominantly higher EE odds among females varying from 0.72 to 2.3.

Conclusion: This review underscores gender-specific manifestations of burnout among EPs, with females more susceptible to EE and lower personal accomplishment. Standardized reporting methods are crucial for future meta-analyses to refine gender-specific interventions combating burnout in emergency medicine. Targeted strategies addressing distinct manifestations of burnout are imperative to support the well-being and retention of EPs, fostering sustainable healthcare delivery.

ORAL PRESENTATIONS

[OP-288]

Increase in Ambient Temperature Increases the Incidents of Violence: A Systematic Review

Vivek Chauhan[1], Sagar Galwankar[2], Suman Chauhan[3]

[1]Indira Gandhi Medical College, Department of General Medicine, Shimla, India

[2]Director for Research in Emergency Medicine Florida State University, Florida, USA

[3]All India Institute of Medical Sciences, Department of Dermatology and Venereology, New Delhi, India

Aim: The relationship between ambient temperature and violence has been a subject of interest due to the potential public health implications. This systematic review aims to assess whether there is an association between temperature and violence, encompassing various forms of violent behavior such as assaults, murders, rapes, and suicides.

Materials and Methods: A systematic review was conducted following PRISMA guidelines. Searches were carried out in PubMed and Epistemonikos databases for peer-reviewed articles on violence and temperature. The Joanna Briggs Institute's critical appraisal checklist was used to evaluate the quality of analytical cross-sectional studies. Articles were included if they were original research published in English and excluded if they were reviews or did not address the effect of temperature on violence. Data extraction was performed independently by two investigators.

Results: The initial search yielded 269 articles, of which 37 met the inclusion criteria after screening. These studies spanned 11 countries, with various types of violence analyzed, including interpersonal assaults, suicides, and firearm violence. A significant association between rising ambient temperatures and an increase in violent incidents was found across all studies.

Conclusion: The review demonstrates a consistent correlation between higher ambient temperatures and increased incidents of violence. This finding underscores the importance of considering temperature as a factor in violence prevention strategies and public health policies.

[OP-208]

Novel Technique in Performing Ocular Ultrasound in Trauma

Hannah Joyke Chawang, Sanjeev Bhoi, Anmol Chanda, Anand Kumar Das

All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: Ocular ultrasound is highly effective for diagnosing traumatic eye injuries, such as retinal detachment, vitreous hemorrhage, foreign bodies, and retrobulbar hematomas. However, it is contraindicated in cases of suspected globe rupture, as applying external pressure to the eye could cause further damage. When globe injury is clinically suspected, a computed tomography scan is typically used to confirm the diagnosis. However, delays can occur if other life-threatening injuries require immediate attention or due to long wait times. We propose a new method for performing ocular ultrasound in such cases, called the modified water bath technique, which allows for the diagnosis of globe rupture upon the patient's arrival in the Emergency department.

Materials and Methods: A glove partially filled with saline is prepared and gently placed on the affected eye while the patient lies supine. A small amount of jelly is applied to a high-frequency linear probe, which is then positioned transversely on the glove. An ocular scan is then conducted in dual-mode to compare both eyes.

Results and Conclusion: This method not only produces clear and well-defined images but also offers the advantage of being performed bedside immediately. This eliminates diagnostic delays and allows for prompt initiation of treatment. Additionally, the high-quality images provided by this technique can be used to diagnose other eye emergencies through ultrasound.

ORAL PRESENTATIONS

[OP-461]

Applying "GRACE" to the Emergent Assessment and Management of the Acute Dizzy Patient

Christopher Markus Colbert

University of Illinois, Department of Emergency Medicine Physician Illinois, United States of America

The 2023 GRACE 3 guidelines provide a structured approach for diagnosing and managing dizziness in the emergency setting. Dizziness, a common but complex complaint, presents significant diagnostic challenges due to its diverse etiologies, ranging from benign to life-threatening conditions. Understanding and applying GRACE 3 guidelines allows emergency medicine physicians to systematically assess dizzy patients, differentiating between peripheral and central causes, which is crucial for timely intervention. By integrating GRACE 3 guidelines into clinical practice physicians can enhance diagnostic accuracy, reduce unnecessary imaging and admissions, and improve patient outcomes, particularly in high-stakes cases or rapid decision-making is essential. This presentation will Introduce a "new way" for the physician to define dizziness offering and enhanced understanding of physiology ultimately resulting in better patient outcome.

[OP-463]

"Bending" the Rules. A Brief Overview of Orthopedic Nuances/Guidelines as It Pertains to Joint Dislocations

Christopher Markus Colbert

University of Illinois, Department of Emergency Medicine Physician Illinois, United States of America

This presentation will delve into the nuances of joint dislocations introductions, focusing on the complexities that physicians encounter in managing these injuries. Attendees will explore the anatomy and biomechanics of common joint dislocations and very to identify subtle signs that distinguish simple dislocations from those complicated by fractures or neurovascular compromise. This presentation will cover advanced reduction techniques, pain management strategies, and postproduction care, emphasizing the importance of timely and accurate intervention to prevent long-term complications. Through case studies and hands-on demonstrations, disciplines will enhance their skills in performing joint reductions in confidence and precision.

ORAL PRESENTATIONS

[OP-464]

R.O.P.E. / the Return on education's Potential Through Academic Exchange

Christopher Markus Colbert

University of Illinois, Department of Emergency Medicine Physician Illinois, USA

This presentation will highlight a panel discussion series that brings together specialists from diverse medical fields to explore common pathologies through a collaborative lens. Each session will focus on the specific medical condition, and examine it from the perspective of interdisciplinary medicine. By sharing insights and approaches from their respective fields, panelists will highlight how interdisciplinary collaboration can lead to more comprehensive patient care, improved diagnostic accuracy, and optimized treatment strategies. The series will underscore the benefit of integrating diverse medical experts, not only in enhancing patient outcome but also in fostering stronger professional relationships among physicians. This collaborative approach encourages a deeper understanding of complex cases, promotes continuous learning, and supports a more cohesive healthcare system, ultimately benefiting both patients and providers.

[OP-232]

Large Vessel Occlusion Interfacility Transfer: Equitable Outcomes Irrespective of Modality of EMS Transport

Nicholas Cozzi, Kristen Fisher, Laurel Cherian, Stephan Munich

Rush University Medical Center, FACEP-EMS and Disaster Medicine Medical Director Chicago, USA

Aim: Stroke care centers identify of patients with suspected or confirmed large vessel occlusion. Reperfusion therapy in the form of pharmacological or neuro-interventional modalities are leading to long-term clinical improvement with associated decreases in morbidity. Rush University Medical Center is a tertiary, urban academic center that serves as a comprehensive stroke center in Chicago. As a hub and spoke model of stroke care, regional hospital transfer times vary depending upon weather and urban traffic in the nation's third largest city. To retrospectively analyze patients arriving at Rush University Medical Center, via interfacility transport from Northwest Indiana community Emergency departments, and identify outcomes based on modality of EMS transport: helicopter EMS (HEMS) vs. ground EMS.

Materials and Methods: During a thirty six month period from August 2021 to August 2024, Rush University Medical Center received thirty nine inter-facility transports from Emergency departments in Northwest Indiana with an average distance of thirty two miles. Fifty one percent of patients were male with an average age of 68 years old. Pre and post intervention NIHSS scores were obtained as well as computed tomography scans of all patients along with discharge disposition.

Results and Conclusion: In terms of modality of transport, 66.7% were transported via HEMS with pre transport NIHSS of 16.8. In terms of endovascular therapy, 71.9% of patients underwent mechanical thrombectomy with 44.8% of patients achieving a TICI score of 3. Post acute care placement in the form of skilled nursing facility occurred in 56.4% of patients with 20.5% of patients being discharged to home.

ORAL PRESENTATIONS

[OP-243]

Risk Stratification of AHF Patients with a Multiple Biomarker Approach: Differences Between Reduced (HFrEF) and Preserved (HFpEF) LVEF

Luca Crisanti[1,2], Riead Engy Khaled Mohamed[1,3], Gabriele Valli[3], Francesca De Marco[3], Michele Ruscitto[1], Ferdinando Terlizzi[1], Maria Pia Ruggieri[3], Salvatore Di Somma[2]

[1]Sapienza University of Rome, Postgraduate School of Emergency Medicine, Roma, Italy

[2]Great Network, Rome, Italy

[3]Azienda Ospedaliera San Giovanni Addolorata, Rome, Italy

Aim: Risk stratification in patients with acute heart failure (AHF) is one of the major challenges faced by emergency physicians. Our goal is to investigate the association of left ventricular ejection fraction and major acute cardiovascular events (MACE) within 30 days of Emergency department (ED) presentation.

Materials and Methods: Patients presenting to the ED with acute HF were prospectively enrolled in a multicenter prognostic study. Biomarker concentrations were measured upon ED presentation and an echocardiogram was performed. Follow-up were performed at 30 days. Patients presenting with cardiogenic shock, acute coronary syndrome as a trigger of AHF, or with a history of end-stage kidney disease were excluded from the study. MACE was defined as the combination of cardiovascular mortality, acute myocardial infarction, stroke, and HF rehospitalization.

Results and Conclusion: A total of 351 patients with AHF were enrolled. The median age was 84 (77.0-88.0) and 49.3% were male. HFrEF (<40%) was found in 123 (34.6%) patients. These patients were more frequently male, had a history of myocardial infarction and chronic heart failure, lower systolic blood pressure, higher creatinine and natriuretic peptides concentrations. During the 30-days follow-up patients with HFrEF were at higher risk of experiencing a MACE with an OR of 2.19 (1.22-3.90) at the univariate logistic regression. Therefore, an echocardiogram performed in the ED could be a useful tool to further stratify the risk in patients with AHF.

[OP-215]

Impact of Integration of Point-of-care Ultrasound in Triaging Patients in the Emergency Department

Anand Kumar Das, Sanjeev Bhoi, Tej Prakash Sinha, Akshya Kumar, Ankit Kumar Sahu, Golak Prasad Patra, Sreedevi Aravindan, Mohini Singh, Debasis Pal

All India Institute of Medical Sciences New Delhi, Department of Emergency Medicine, New Delhi, India

Aim: The AIIMS triage protocol (ATP) is a widely adopted three-tiered system in India for Emergency department (ED) patients, categorizing them into ATP red (immediate), yellow (moderate illness), green (minor issues). ATP yellow patients often experience lengthy waits before seeing an ED physician, which can lead to adverse events. This study aimed to evaluate the effectiveness of point-of-care ultrasound (POCUS) in re-stratifying ATP yellow patients.

Materials and Methods: Single-center observational study included 308 adult patients. Within 15 minutes of their initial ATP triage, yellow category patients were assessed using POCUS by trained emergency physicians. The POCUS examination, following the ACLO protocol (abdomen, cardiac, lungs, limbs, optic nerve), was brief (<5 minutes) and re-stratified patients into POCUS red or POCUS yellow based on signs of critical conditions. The study aimed to determine the proportion of ATP yellow patients re-triaged by POCUS, monitor their critical ED management at 6, 12 hours, and assess the impact on ED disposition.

Results: Out of 308 patients, 228 were initially classified as yellow. Of these, 21.5% were re-triaged as POCUS red. Within 15 minutes of re-triage, 39% of POCUS red patients received immediate interventions. At 6 hours, 89.8% of POCUS red patients remained in critical need, whereas 98.3% of POCUS Yellow patients stayed in their initial category. At 12 hours, 38.8% of POCUS red patients were admitted, significantly higher than the 16.8% of POCUS yellow patients ($p<0.001$).

Conclusion: Integrating POCUS into the triage process for ATP yellow patients significantly enhances patient care by enabling early identification of serious conditions and improving ED disposition.

ORAL PRESENTATIONS

[OP-340]

A Case of Mercury Poisoning Manifesting with Pulmonary Complications and Remarkable Dermatological Lesions

Osman L. Demirci, Emin F. Vişneci, Fatih C. Tekin

University of Health Sciences Turkey, Konya City Hospital, Clinic of Emergency Medicine Specialist, Konya, Turkey

Aim: We wanted to publish this case report with spectacular skin and severe lung involvement in order to inform people about the rarer mercury toxicity due to precautions taken, as well as to evaluate the medical conditions and treatment options that may be available.

Materials and Methods: A 37-year-old male patient, one week ago, after touching the mercury with his bare hands for an extended period of time, spilled mercury on his bed. The mercury levels in the blood were tested at 172 µg/L (the reference value is 0-10 µg/L), and the mercury levels in the urine were detected at 406 µg/L (the reference value is 0-5 µg/L). Dimercaprol was obtained, and treatment was initiated. In the follow-up, shortness of breath persisted, thus a thorax computed tomography was performed. It was discovered that there were mercury-related involvements in the thorax computed tomography. Due to the development of redness and an abscess-like structure on the skin of the leg during the follow-up, a puncture was performed. Mercury-containing material was discovered to be present in the puncture. It was remarkable that despite the long period of time, urine and blood mercury levels did not return to normal (mercury level in blood: 52.4 g/L, urine: 297 g/L).

Results and Conclusions: Mercury exposure or intoxication can affect a variety of organs and systems, including the neurological, gastrointestinal, and dermatological systems, and can manifest in various ways. It should not be forgotten that comprehensive anamnesis is essential for detecting such uncommon intoxications.

[OP-092]

The Burden and Predictive Factors of Out-of-Pocket Expenditure for Emergency Healthcare Service in St. Paul's Hospital Millennium Medical College: Cross-sectional Study in Addis Ababa, Ethiopia

Woldesenbet W. Dode,

St. Paul's Hospital Millennium Medical College, Department of Emergency Medicine and President of Ethiopian Society of Emergency and Critical Care Professionals Addis Ababa, Ethiopia

Aim: High burden of out-of-pocket health care expenditure is a known factor that affects universal access to health care, in general, and acute care more specifically. This study aims to assess the burden and predictive factors of out-of-pocket payment in acutely ill patients in Emergency departments.

Materials and Methods: A cross-sectional study was conducted by reviewing patient records that visited the hospital during the study period. Data were analyzed using SPSS version 25. descriptive and analytical statistics were used to summarize the findings. Binary and multivariate logistic regression analyses were used to determine the relationship between predictor variables and out-of-pocket payment. To determine the significant factors, p-values of ≤0.05 and artificial optical radiation with confidence interval % were applied.

Results: There was a total of 22,982 clients visited, 388 eligible charts reviewed. Of the specified payment methods the most common was out-of-pocket payment (35.8%) is followed by community-based health insurance (15.5%) and fee waived by government (13.7%). Clients referred from Addis Ababa, Oromia, Amhara, SNNPR, Benishangul Gumz, Dire Dawa, Somali and Tigray regions as well as principal working diagnosis being cardiovascular diseases, malignancy and sepsis were negative predictive of out-of-pocket payment.

Conclusion: Out-of-pocket payment mechanism was the most common method. Patient referred from Addis Ababa, Oromia, Amhara, SNNPR, Benishangul Gumz, Dire Dawa, Somali, and Tigray, and with principal working diagnosis being cardiovascular diseases, malignancy, and sepsis were negative predictive but there was no positive predictive factor for out-of-pocket payment.

ORAL PRESENTATIONS

[OP-093]

Quality Improvement Project on Improving ICU Stricture Rate at Aabet Hospital, Affiliates of St. Paul's Hospital Millennium Medical College

Woldesenbet W. Dode

St. Paul's Hospital Millennium Medical College, Department of Emergency Medicine and President of Ethiopian Society of Emergency and Critical Care Professionals Addis Ababa, Ethiopia

Aim: Joint strictures, arising from prolonged immobility in critically ill patients, significantly impair recovery and functional outcomes post-intensive care unit (ICU). This project aims to reduce the stricture rate in the ICU at AaBET Hospital, where recent data indicated an alarming 80% prevalence among patients staying over two weeks.

Materials and Methods: A quality improvement initiative was implemented utilizing the Plan-Do-Study-Act cycle. Key strategies included enhancing physiotherapy integration, assigning dedicated physiotherapy staff, and developing assessment protocols. Regular training sessions for ICU staff on the importance of early physiotherapy were conducted.

Results: Over a 12-week period, 16 patients who stayed more than two weeks participated in the project. Remarkably, no patients were discharged with strictures, resulting in a 0% stricture rate. This marked a significant improvement from the baseline data.

Conclusion: The project demonstrates that early and consistent physiotherapy can effectively prevent joint strictures in ICU patients. Ongoing physiotherapy should be prioritized to maintain these outcomes. Future recommendations include assigning adequate physiotherapy staff and ensuring comprehensive training for all ICU personnel to sustain these improvements.

[OP-078]

ECMO Assisted CPR (ECPR) in the Emergency Department: A 6-years' Experience

Avi Epstein, Harel Efrata, Kogan Alexander, Blaier Orly, Cirulnic David RN Ironi Avinoah

Sheba Medical Centre, Clinic of Emergency Medicine, Ramat Gan, Israel

Aim: Extracorporeal cardiopulmonary resuscitation (ECPR) might improve survival and neurological outcomes. The ELSO Interim Guideline Consensus Statement, supports the use of ECPR in patients with cardiac arrest refractory to standard advanced cardiac life support (ACLS). In the present study, we analyzed cases of ECPR in the Emergency department and catheterization lab during the years 2018 to 2024. The primary objective was to find whether there is a correlation between, survival with good neurological outcomes, and strict patient selection, according to the ELSO guidelines for ECPR.

Materials and Methods: We analyzed retrospectively ECPR cases in that period initiated in the Emergency department, or catheterization lab. We described the outcomes in two groups: patients who were eligible to ELSO ECPR criteria versus patients who are not. Neurological outcome was determined according to the cerebral performance category score (CPC).

Results: We found 46 ECPR cases, Seven patients survived (15%). Out of them 6 patients (13%) survived with good CPC. Only 14 patients (30%) met the ESLO inclusion criteria and out of them 5 survived (35%). In the other 2 survivors the only ESLO exclusion criterion was asystole as the first rhythm. The average survival for patients who met the ESLO criteria was 13.1 days versus 2.6 for patients who did not met the criteria.

Conclusions: Overall survival rate in our research is similar to the literature. Strict patients selection according to the ELSO guidelines and early connection to ECMO during CPR will increase the rate of survival with favorable neurological outcome.

ORAL PRESENTATIONS

[OP-410]

High Acuity Time Sensitive Resuscitation Training

Daniel Eraso

University of Florida College of Medicine Jacksonville Department of Emergency Medicine, Florida, USA

The practice of emergency medicine (EM) is one of peaks and valleys: acuity, severity of disease, emotional, mental, etc. In regards to the mental processing power required, certain disease states require more or less vigilance for early intervention. Most of EM allows ample time to research pertinent pathophysiology, diagnoses, and management. There exists a small subset of presentations that are so critical in their management that even a small delay in management can lead to significant morbidity and mortality. Clinicians may not have time to review videos on airway management, undifferentiated shock, or precipitous delivery, etc. Our EM has acuity based pods, and training residents rotate through our resuscitation unit for 2 blocks during residency. We developed a high acuity time sensitive curriculum to address these time sensitive presentations. The Model of the Clinical Practice of EM was reviewed for a specific focus on time sensitive presentations that could likely result in immediate clinical deterioration if not treated appropriately. These presentations are grouped into the following categories: signs, symptoms, and presentations, abdominal and gastrointestinal disorders, cardiovascular disorders, endocrine disorders, environmental disorders, HEENT disorders, immune system disorders, systemic infectious disorders, neurological disorders, obstetrics and gynecologic disorders, thoracic-respiratory disorders, traumatic disorders, procedures and skills, and interpersonal and communication skills. Residents are being evaluated through oral board cases with critical action checklists, simulation cases graded via Global rating scales, and pre and post curriculum tests to evaluate depth of medical knowledge.

[OP-206]

Improving Disaster Preparedness Among Healthcare Professionals: A Comprehensive Approach

Esra Ersöz Genç, İdris Genç

Menderes State Hospital, Clinic of Emergency Medicine, İzmir, Turkey

Aim: Effective disaster preparedness among healthcare professionals is crucial for efficient emergency response. This study aims to evaluate the disaster preparedness levels of healthcare professionals and identify factors influencing their readiness.

Materials and Methods: A cross-sectional survey was conducted among 90 healthcare professionals, assessing demographics, professional experience, and disaster preparedness training. Data were analyzed using descriptive statistics, chi-square tests, and Mann-Whitney U tests.

Results: The majority of respondents (65.6%) reported not having received disaster preparedness training. Confidence in disaster response was generally moderate, with significant correlations found between training and higher confidence ($p<0.05$). Equipment handling skills, teamwork ability, stress management, and decision-making abilities also showed positive correlations with training.

Conclusion: The findings highlight the need for enhanced disaster preparedness training programs. Regular simulation drills, interdisciplinary collaboration, and mental health support are essential for improving readiness and response capabilities among healthcare professionals.

Keywords: Disaster preparedness, healthcare professionals, emergency response, interdisciplinary training, simulation drills

ORAL PRESENTATIONS

[OP-245]

The Role of DPP3 in Risk Stratification of Critical Patients in the Emergency Department: An Observational Study

Giacomo Fidelio[1,2], Ilaria Dafne Papasidero[3], Silvia Casalboni[3], Luca Crisanti[1,2], Gabriele Valli[3], Francesca De Marco[3], Maria Pia Ruggieri[3], Salvatore Di Somma[2]

[1]Sapienza University of Rome, Postgraduate Faculty of Emergency Medicine, Rome, Italy

[2]Great Network, Rome, Italy

[3]Azienda Ospedaliera San Giovanni Addolorata, Rome, Italy

Aim: Dipetyl peptidase 3 (DPP3) is a protease involved in the degradation of Angiotensin II and appears to have a central role in the evolution of shock. Elevated DPP3 levels were associated with increased mortality in patients admitted to the intensive care unit. As the potential role of DPP3 has not been evaluated, our aim is to investigate its role as an early predictor of fatal outcome.

Materials and Methods: Patients presenting to the ED with life-threatening conditions (level 1, resuscitation) or with MEWS ≥3, qSOFA ≥2, shock index ≥0.8 were prospectively enrolled in a monocentric prognostic study. Circulating DPP3 was measured in EDTA plasma samples during the first evaluation in the emergency room using the point-of-care Nexus IB10 analyzer. Treating physicians were blinded to the results. Follow-up was performed at 30 days. The 30-day mortality after ED admission was used as the main outcome variable.

Results and Conclusion: A total of 262 patients were enrolled, 166 (63.4%) were males, median age was 76.0 (61.2, 85.0). Fourty-five (17%) patients died in the following 30 days. DPP3 values were significantly higher in the non-survivor group [44.8 (32.0, 89.3) vs. 36.5 (23.2, 62.7), p<0.03]. The ROC analysis identified the cut-off value of 43 for DPP3 as a predictor of 30-day mortality (area under the curve 0.60+/-0.05, Se 0.57, Sp 0.64). Patients with DPP3 values greater than 43 had a higher risk of death in the following 30 days (log-rank p=0.011).

Keywords: DPP3, mortality, Emergency department

[OP-102]

Automatic Device for Smart Detection of Tumours

Valentina Gallo[1], Cesare Aragno[2], Fabio Biscotti[2], Armida Sodo[1], Fabio Capellini[1], Cristiana Citton[3], Giovanni Antonini[1,3]

[1]University Roma Tre Faculty of Medicine, Department of Sciences, Rome, Italy

[2]KELL srl, Rome, Italy

[3]Interuniversity Consortium INBB - Biostructures and Biosystems National Institute, Rome, Italy

Aim: Cancer prevention constitutes one of the most important challenges of contemporary society and the growing development of diagnostic technologies, combined with developments in bioinformatics, is making an ever-increasing contribution to medical research in dealing with this issue.

Materials and Methods: In this context, the detection of tumour biomarkers in complex biological matrices (e.g., blood, body fluids, tissues) is currently one of the main tools to support early diagnosis, prognosis and monitoring of therapeutic response in oncology. Although identifying tumour markers in asymptomatic patients is crucial for early diagnosis, its application is still limited by the relatively low sensitivity and the complexity of the existing methods (i.e., ELISA, mass spectrometry). Recently, we developed an innovative surface-enhanced Raman scattering-based system, for detecting and quantitating biomarkers in complex biological fluids (i.e., serum), based on the development of antibody-functionalized nanostructured gold surfaces. The detection system was effective for the ultrasensitive detection of the LGALS3BP (90K) protein in serum samples from breast cancer patients, which we used as a model of tumour marker. The advantages that this method offers include simplicity of use, fast analysis, ultra-sensitivity and low or no invasiveness.

Results: The results obtained in this work will be the starting point for the development of an in vitro diagnostics (IVD) automatic medical device for point-of-care-testing, with the highest predictive power when compared with the methods currently used in cancer diagnostics. Importantly, this device, allowing a non-invasive diagnosis at the patient's bedside, could open the way toward an effective and accessible proximity medicine.

ORAL PRESENTATIONS

[OP-112]

Comparison Between Arterial and Venous Blood Gas Analysis in Patients Presenting with Acute Onset Dyspnea: An Emergency Department Based Cross Sectional Study

Anand Gangdev, Bharat B. Bhardwaj, Naman Agrawal

All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: ABG and VBG assessments are essential for evaluating ventilation, acid-base status in patients with acute onset dyspnea. VBG sampling, done while establishing an intravenous line, saves time, reduces patient discomfort, and minimizes complications. Many previous studies have focused on specific patient groups. We have studied correlation and agreement between venous and arterial blood gas analysis regardless of disease state and also among hypotensive and normotensive group.

Materials and Methods: The study was conducted at the Emergency department of a tertiary healthcare centre in Northern India. Patients with acute onset dyspnea above 18 years who satisfied the inclusion criteria were clinically evaluated. ABG was collected from the radial artery. VBG was obtained from the cubital vein. Both samples were collected within 5 min and were analysed. The patient was then treated and disposed of according to institutional protocol.

Result and Conclusion: Out of the total 255 patients enrolled, 57.3% were male. Mean age was 54.05±15.26 years. Common diagnoses included lower respiratory tract infection (43.2%), acute heart failure (39.1%), chronic obstructive pulmonary disease exacerbation (22%), acute respiratory distress syndrome (10.2%). We found strong correlation and agreement for ABG and VBG pH, pCO_2, HCO_3 and lactate. The correlation was just as robust between the normotensive and hypotensive patients. Using the regression formulas derived, corresponding ABG value can be calculated from VBG sample. Peripheral VBG-based diagnosis showed high sensitivity and specificity for detecting acid-base disturbances. Hence, peripheral VBG analysis is a viable alternative to ABG analysis for identifying acid-base disorders.

[OP-054]

Mortality in the Hospital in Terminally Ill Elderly Patients

Maria Cristina Gori, Giulia Moroni, Gabriella Guerriero

Colleferro Hospital, Clinic of Emergency Medicine, Rome, Italy

Aim: The visits in hospital are often considered inappropriate in iterminally ill elderly patients. The aim of this work is to evaluate the appropriateness of access to the emergency room of Collfererro in terminally ill patients.

Materials and Methods: All patients who died in the hospital over the age of 80 were considered retrospectively. with respect to the sending facility (home or healthcare residence for the elderly), the cause of death, the time interval between access to the emergency room and death.

Results: Twenty-eight elderly people died from January 1, 2024 to June 15, 2024. Of these, 12 came from home and 16 from nursing homes. The average time from triage to death was 17 hours for those coming from home and 9 hours for those coming from a nursing home. A preliminary analysis shows that the mortality of patients coming from home is mainly associated with cancer, while the mortality of patients coming from nursing homes is mainly due to sepsis.

Conclusion: The data show the difficulty to allow the death of elderly patients within the sending structures which could instead guarantee adequate assistance together with their loved caregivers. The access in the hospital appears inappropriate to guarantee an environment worthy of the end of life in patients in whom pre-terminal conditions are evident.

ORAL PRESENTATIONS

[OP-242]

Waiting Room Overcrowding Risks and Safety Threats: An Interprofessional In Situ Simulation Quality Improvement Exercise

Annette Grajny, Tim Palmieri

Associate Professor of Emergency Medicine, Albany, NY, USA

Aim: The changing landscape of US Emergency department (ED) has led to higher acuity patients spending prolonged periods of time in overcrowded waiting rooms (WR). These patients are at risk of a rapid deterioration in clinical status, presenting significant challenges for the ED triage team. We developed a pilot in situ simulation quality improvement program aimed at identifying latent safety threats (LSTs) for WR patients.

Materials and Methods: Unannounced ISS's utilizing on-duty personnel were conducted in the WR of an urban tertiary center ED. A needs assessment was conducted via a survey of ED physicians, nurses, and technicians, exploring presumed unsafe aspects of caring for WR patients. An ISS case of an unresponsive, post-ictal WR patient was subsequently developed and implemented using two SP's. Effective management of the case was outlined via a critical actions checklist and included necessary tasks such as vital signs, IV access, etc. ED staff were pre-briefed on the possibility of an unannounced ISS via email and at morning rounds.

Results: Four ISS's were conducted over an eight week period, involving 16 ED staff members. A total of 3 categories of LSTs were identified, categorized as structure-related, knowledge-based, and communication-based. Actionable items were presented to ED leadership, such as introduction of a "code blue" button.

Conclusion: To our knowledge, this is the first application of ISS to address systems issues relating to the care of waiting room patients. ISS proved to be an effective means of identifying and addressing LSTs to the effective management of WR patients.

[OP-241]

Comparison Between Capillary and Serum Lactate Levels in Predicting Short-term Mortality of Septic Patients at the Emergency Department

Matteo Guarino[1], Benedetta Perna[2]

[1]St. Anna University-Hospital Ferrara, Department of Emergency Medicine, Ferrara, Italy

[2]Alice Eleonora Cesaro, Michele Domenico Spampinato, Rita Previati, Anna Costanzini, Martina Maritati, Carlo Contini, Roberto De Giorgio

Sepsis is a time-dependent and life-threating condition related to macro- and micro- circulatory impairment leading to anaerobic metabolism and lactate increase. We assessed the prognostic accuracy of capillary lactates (CLs) vs. serum ones (SLs) on 48-h and 7-day mortal- ity in patients with suspected sepsis. This observational, prospective, single-centre study was conducted between October 2021 and May 2022. Inclusion criteria were: (i) suspect of infection; (ii) qSOFA ≥2; (iii) age ≥18 years; (iv) signed informed consent. CLs were assessed with LactateProTM2®. Two hundred-three patients were included: 19 (9.3%) died within 48h from admission to the Emergency department, while 28 (13.8%) within 7 days. Patients deceased within 48h (vs. survived) had higher CLs (19.3 vs. 5 mmol/L, $p<0.001$) and SLs (6.5 vs. 1.1 mmol/L, $p=0.001$). The best CLs predictive cut-off for 48h mortality was 16.8 mmol/L (72.22% sensitivity, 94.02% specificity). Patients within 7 days had higher CLs (11.5 vs. 5 mmol/L, $p=0.020$) than SLs (2.75 vs. 1.1 mmol/L, $p<0.001$). The multivariate analysis confirmed CLs and SLs as independent predictors of 48 h and 7-day mortality. CLs can be a reliable tool for their inexpensiveness, rapidity and reliability in identifying septic patients at high risk of short-term mortality.

ORAL PRESENTATIONS

[OP-050]

Comparison of Incidence of Acute Kidney Injury in Patients of Acute Pancreatitis Managed with or Without Thoracic Epidural Analgesia: A Prospective Randomized Control Study

Bikram Kumar Gupta[1], Soumya Ambli[2]

[1]Hindu University Institute of Medical Sciences, Department of Anaesthesiology, Uttar Pradesh, India
[2]Banaras Hindu University Institute of Medical Sciences, Department of Anaesthesiology, Varanasi, India

Aim: This study investigates the impact of thoracic epidural analgesia (TEA) versus standard intravenous (IV) analgesia on the incidence of acute kidney injury (AKI) in patients with acute pancreatitis (AP). Acute pancreatitis (AP) is marked by inflammation that can lead to severe complications, including AKI, which significantly increases morbidity and mortality. TEA has been suggested to improve splanchnic and renal perfusion, potentially lowering AKI risk.

Materials and Methods: In a prospective, randomized, double-blinded study conducted between January 2020 and June 2021, 80 adult AP patients were randomized to receive either TEA (Group 1) or IV fentanyl analgesia (Group 2). Baseline and post-treatment renal function and inflammatory markers were monitored. AKI was assessed using KDIGO criteria. Statistical significance was set at $p \leq 0.05$.

Results: Group 1 (TEA) showed significantly higher urine output ($p=0.034$) and lower serum urea levels ($p=0.016$) post-treatment compared to Group 2. Inflammatory markers also improved considerably in the TEA group, with less negative base excess ($p=0.033$), higher bicarbonate levels ($p=0.026$), and lower lactate levels ($p=0.011$). Although the TEA group had a lower incidence of AKI (7 patients) than the IV group (12 patients), this difference was not statistically significant ($p=0.14$). However, AKI severity was notably less in the TEA group.

Conclusion: TEA was associated with improved renal function and reduced inflammation in AP patients, suggesting it could lower the incidence and severity of AKI. These results support further research into TEA as an adjunctive treatment in AP management to integrate it into early intervention protocols potentially.

[OP-293]

Comparison of Early Warning Scores in the Emergency Department Outpatient Versus Brought Via Emergency Health Services

Julide Gurbuz, Ömer Faruk Çakıroğlu, Bahadır Taşlıdere, Başar Cander

Bezmialem University Hospital, Department of Emergency Medicine, İstanbul, Turkey

Early warning scores serve as a guideline employed by medical services to rapidly assess the severity of a patient's condition. These scores are based on vital signs, including respiratory rate, oxygen saturation, temperature, blood pressure, pulse/heart rate, and AVPU response. The rapid emergency medicine score, evaluated in this study, predicts in-hospital mortality in non-surgical adult patients presenting to the Emergency department. It takes into account variables such as the patient's age, mean arterial pressure, pulse, respiratory rate, peripheral oxygen saturation, and Glasgow Coma scale score. Another score considered in this study, the modified early warning score, assesses the severity of the patient's condition and includes systolic blood pressure, pulse, respiratory rate, temperature, and AVPU score. This study aims to evaluate the Early Warning Scores of patients who arrive at the Bezmialem Vakıf University Central Hospital Emergency Department via outpatient services and 112 emergency medical services. It investigates whether the severity of illness (morbidity) is a determining factor in the manner of Emergency department presentation and the in-hospital mortality rates of these patients.

ORAL PRESENTATIONS

[OP-281]

Understanding ART: Emergencies in Assisted Reproductive Technologies

Christina Hajucharalambous

Hackensack Meridian Faculty of Medicine, Hackensack University Medical Center, Department of Emergency Medicine, New Jersey, USA

The use of assisted reproductive technologies (ART) has been growing rapidly since its introduction in the 1970s. As the prevalence of ART increases globally so does our duty as emergency physicians to care for this patient population. This session will discuss the common emergent presentations, diagnostic approaches and treatment modalities associated with ART.

[OP-253]

Exploring Factors Contributing to the Risk of Falls in Community-Dwelling Older Adults: A Literature Review

Ola Hassan Hamato, Jessie Johnson, Hajer Arbabi, Daniel Forgrave, Sumayya Ansar

Primary Health Care Corporation, Doha, Palestine

Aim: Falling is a big threat to community-dwelling older adults' independence. The chance of falling increases as people become older, which increases morbidity and mortality. The outcomes related to falls impact families, communities, and healthcare systems. As a result, the primary health care corporation (PHCC) seeks to decrease the number of falls for community-dwelling older adults in Qatar. To explore the risk factors for falls in community-dwelling older adults. To inform the education of PHCC nurses so that they might begin to look at prevention strategies.

Materials and Methods: Cronin et al. (2008) framework guided this integrative literature review. CINAHL, Academic Search Complete, Embase, and PubMed databases were utilized to search for relevant articles. The search process returned 20 articles that met the inclusion requirements.

Results: Various intrinsic and extrinsic factors lead to falls in community-dwelling older adults. The intrinsic factors include socio-demographic factors, physical health factors, physiological factors, sensory factors, psychological factors, and social factors. Environmental factors were the sole extrinsic factor.

Conclusion: The findings of this literature review can be used to inform the creation of an educational program to improve home care nurses' understanding of and attitudes toward the causes of falls in community-dwelling older adults. Through this program, nurses may begin to predict factors that lead to falls and, therefore, find strategies that help to reduce them.

ORAL PRESENTATIONS

[OP-347]

The Role of Redox System in Successful Aging

Eugenio L. Iorio[1], Clarissa Aires de Oliveira[2], Vincenzo Pizza[3]

[1]International Observatory of Oxidative Stress, Salerno, Italy, Greece, Japan, Brasil

[2]Clinica Conceito Saude, Minas Gerais, Brasil

[3]Department of Emergency and Time-Dependent Network, Neurology Unit, San Luca Hospital, Salerno, Italy

Aim: Starting from the first conceptualization of Harman (1956), growing evidence suggests connections between oxidative stress and aging, where (1) "oxidative stress" is often depicted as the break of the balance between (increased) oxidants and (decreased) antioxidants and (2) "aging" is universally accepted as the inexorable loose of performances.

Materials and Methods: This was a narrative review. The findings were commented on the bases of the Authors expertise (published papers, clinical experience) in the topics.

Results: Despite the "free radicals theory of aging" and the growing market of "antioxidants", choosing "aging" as main keyword, roughly, an average of only 20,000 articles were apparently related to "oxidative stress", with a few hundreds of them associated to "redox system".

Conclusion: There is still confusion on the herein topics. In our more realistic and updated vision, the redox system is an highly evolutionary conserved ubiquitous biochemical system. Its main function is the managing of oxidative stress, i.e., an adaptative physiological response to endogenous/exogenous challenges where the exchange of single equivalent reducing units among reactive oxidant species, redox-sensitive biological targets and reducing/antioxidant chemical species is exploited to modulated metabolic, signaling, defense and detoxification pathways. The impairment of redox system (oxidative di-stress) is a risk factor for unsuccessfully aging. Based on the integrated approach of REDOXOMICS, keeping the redox system well trained through healthy lifestyles may slow down the loss of functions but, above all, may help develop other functions typical of old age, such as wisdom and resilience.

[OP-160]

Prognostic Utility of Peripheral Perfusion Index For 24-Hour All-Cause Mortality in Hypotensive Trauma Patients Presenting to the Emergency Department: An Ongoing Study

Arihant Jain[1], Anandhi D[1], Balamurugan N[1], Harichandrakumar KT[2]

[1]Department of Emergency Medicine and Trauma, Jipmer, Puducherry, India

[2]Department of Biostatistics, Jipmer, Puducherry

Aim: Hemorrhagic shock accounts for 90% of early trauma deaths, often involving peripheral vasoconstriction. This study explores the prognostic significance of the peripheral perfusion index (PPI) and its potential as a therapeutic guide in hemorrhagic shock resuscitation.

Materials and Methods: This prospective cohort study, ongoing, includes trauma patients aged 18-65 with hypotension (SBP <90 mmHg). Managed according to ATLS guidelines, we recorded clinical data, interventions, and outcomes. PPI was measured at intervals, with follow-up for survivors.

Results: Analysis of our ongoing study (n=60 of 90 patients) reveals that the median baseline PPI for 24-hour survivors was 0.3 (0.2, 0.5) ($p<0.05$), while for non-survivors, it was 0.15 (0.1, 0.3) ($p<0.05$). The mean delta PPI from 6 hours to baseline was 3.69 ± 1.05 for survivors and -0.12 ± 0.17 for non-survivors ($p<0.05$). Delta PPI correlated with delta lactate (-0.441, $p<0.05$), delta pH (0.329, $p<0.05$), and delta base deficit (-0.377, $p<0.05$). Delta PPI predicted 24-hour mortality with an AUC of 1 (95% CI), achieving 100% sensitivity and specificity at a cutoff of 0.7.

Conclusion: PPI and delta PPI are predictive of 24-hour mortality in critically ill trauma patients. Delta PPI correlates with invasive measures like delta lactate and delta base deficit and perfectly predicts 24-hour mortality (AUC 1). Larger studies are needed to validate PPI as a prognostic tool in clinical practice.

Keywords: PPI (peripheral perfusion index), hemorrhagic shock, hypotensive trauma

ORAL PRESENTATIONS

[OP-117]

Enhancing Patient-Centered Care with Federal Benefits: The Impact of the Link Health Program on Economic Burdens and Public Health

Pischa T. Jettakun[1], Naomi Rajput[2], Timothy D. Scheinert[3]

[1]Regulatory Coordinator and Program Administrator, Center for Neurotechnology and Neurorecovery, Massachusetts General Hospital, Boston, Massachusetts, USA

[2]Student, Northeastern University, Boston, Massachusetts, USA

[3]Research Project Manager, Link Health, Boston, Massachusetts, USA

Aim: Link Health connects individuals with low-incomes to federal benefit programs, which can reduce their expenses by more than $20.000 annually, offsetting living costs and improving health. An example program is the Supplemental Nutrition Assistance Program which assists with paying for nutrition and has been shown to reduce medical care costs by 25% less per year than for low-income non-participants. Transitional Aid to Families with Dependent Children (TAFDC) can provide over $400 monthly to families needing cash assistance. This analysis examines Link Health's impact on patient access to assistance programs.

Materials and Methods: Link Health screens patients for eligibility at health centers in Massachusetts and Texas. Team members then submit applications on-site, or they are completed digitally by a remote team.

Results: In 2024, 1.367 patients were enrolled, saving approximately $448.479. Top programs contributing to savings were ACP (8.5%), Lifeline (4.5%), TAFDC (3.5%), and Kinderwait (3.2%). 64% signed-up in-person, and 34% online. 58% of enrollees were Hispanic, 20% African American, 1% Asian, 17% White, and 4% other. Additionally, 80% were under 65 years old, and 14% were over 65. There was no significant difference between total in-person and online sign-ups (2.306> t-value).

Conclusion: Link Health helps diverse populations in low-income neighborhoods save on everyday expenses, thereby improving community wellbeing. This program may serve as a learning model for mitigating the burdens of poverty faced by a large number of Americans and in closing the health-wealth gap nationwide.

Keywords: Inequality, federal benefit, public health

[OP-504]

Evaluating Frequent Paediatric Psychiatric Attendances at Emergency Department: Identifying Systemic Barriers, Perception Differences, and Strategies for Improvement

Na Young Jin[1], Idura Hisham[2]

[1]Foundation Year Doctor, Paediatric Liaison Service, King's College Hospital, London, UK

[2]CT2 Psychiatry Doctor, Paediatric Liaison Service, King's College Hospital, London, UK

Aim: Frequent attendances by paediatric psychiatric patients at the Emergency department (ED) pose significant challenges, particularly within the South London and Maudsley NHS Foundation Trust (SLaM).

Materials and Methods: This study aims to evaluate the factors contributing to frequent paediatric psychiatric attendances at ED, explore the differing perceptions between ED and psychiatric teams, and propose strategies to improve care and reduce repeat visits. A mixed-methods approach was employed, incorporating data set analysis, surveys, and interviews with various healthcare professionals within SLaM. Data were analysed to identify systemic barriers, patient characteristics, differences in perception between ED and psychiatric teams, and the impact of frequent ED visits.

Results: Findings indicate significant differences in perception between ED and psychiatric teams regarding the management of frequent attenders. ED staff often feel ill equipped to handle frequent attenders, leading to frustration and a desire for alternative care settings. In contrast, psychiatric teams emphasize the importance of structured care plans and multidisciplinary collaboration to manage these patients effectively. Additionally, frequent attenders often experience significant social challenges coupled with emotional dysregulation.

Conclusion: Addressing the care needs of paediatric psychiatric frequent attenders requires a multifaceted approach that considers the distinct perspectives of ED and psychiatric teams. Recommendations include standardizing the definition of "frequent attenders," enhancing out-of-hours services, implementing proactive management plans, and fostering collaborative approaches involving community mental health services. Bridging the perception gap between the ED and psychiatric teams is crucial for developing cohesive care strategies that align with NHS goals of improving mental health care for young people.

ORAL PRESENTATIONS

[OP-158]

ED Workflow Automation and Patient Experience Enhancement Utilizing Real Time Location System Technologies

Derick David Jones, Caroline A. Teasdale

University of Rochester Medical Center, Department of Emergency Medicine; Mayo Clinic Rochester, Rochester, USA

Aim: With increasing constraints on nursing and provider resources in Emergency department (ED) operations, there is a pressing need to increase automation to reduce clerical burden for ED care teams. Objective: Assess feasibility of automating location-based ED workflows using Real Time Location Services (RTLS) technologies.

Materials and Methods: Automation for capture of first provider time, treatment team assignment, staff arrival toast notifications to patients and automated discharge are analyzed in 4 fully location-aware academic and community ED in Minnesota, Wisconsin, Florida and Arizona. All patients and staff carry personally commissioned active blue-tooth low-energy emitting beacons that communicate with receivers in the ED rooms and workspaces. EHR integrations with RTLS location engines provide location visibility at all times as well as automated time stamps and discharge functionality. Patient wristband discharge boxes with embedded location sensors are deployed to activate the automatic discharge workflow. Bedside patient experience monitors display staff arrival pop-up toast notification to patients upon staff entry into the patient room.

Results and Conclusion: An average of 211,650 live patient location updates monthly are integrated into the electronic medical record. An average of 1.660 first provider time stamps are recorded monthly, 80 RTLS treatment team assignments monthly are made for trauma and resuscitation teams, and 390 automated discharges monthly for eligible patients. Additionally, 181,150 treatment team arrival toast notifications are provided to the bedside patient experience monitor to enhance patient experience.

[OP-192]

Unsupervised Machine Learning Approach to Determining Hierarchical Clustering of Geriatric Patients with Seventy Two Hour Return Visits Resulting in Hospital Admission

Derick David Jones, James E Colletti, Neha P. Raukar, Brendan M. Carr, Jessica A. Stanich, Laura E. Walker

Mayo Clinic Rochester, Clinic of Emergency Medicine Physician, Rochester, USA

Aim: The aging population in the USA has resulted in larger numbers of geriatric patients with risk of returning to the Emergency department (ED). The aim of this study is to utilize unsupervised machine learning (ML) to analyze geriatric patient (>65 years) characteristics that contribute to an elevated risk of return visits within 72-hours.

Materials and Methods: Geriatric patients who were discharged on the index visit and returned within 72 hours (bounceback) were identified. An unsupervised hierarchical agglomerative clustering model was trained to identify groups of patients with similar demographic, arrival and care-team composition characteristics. A supervised gradient-boosted classifier was fit on each cluster to understand the key features contributing to each.

Results and Conclusion: A total of 130,255 encounters were included with 1.19% found to have a concerning 72-hour return visit. Six similar groups were identified: Group 1 (188) had advanced practice providers (APPs) and resident involvement, and lower rates of primary care providers (PCP) enrollment. Group 2 (354) were not seen by APPs or residents and were seen by an attending physician alone. Group 3 (115) had higher first-year resident involvement, and lower rates of hospitalization within 30 days. Group 4 (155) did not have a PCP and were less likely to have a top 10 diagnosis. Group 5 (81) had higher rates of ED visits in the prior 72 hours. Group 6 (684) were seen by residents plus an attending and did not have an APP involved in their care. ML models highlight key differences in geriatric patients at risk for return visits.

ORAL PRESENTATIONS

[OP-193]

Emergency Department Workflow Automation and Patient Experience Enhancement Utilizing Real Time Location System Technologies

Derick David Jones[1], Caroline A. Teasdale[2], Heather A. Heaton[1]

[1]Mayo Clinic Rochester, Clinic of Emergency Medicine Physician,Rochester, USA

[2]Mayo Clinic Rochester, Information Technology, Rochester, USA

Aim: Assess feasibility of automating location-based ED workflows using Real Time Location Services (RTLS) technologies.

Materials and Methods: Automation for capture of first provider time, treatment team assignment, staff arrival toast notifications to patients and automated discharge are analyzed in 4 fully location-aware academic and community Emergency department in Minnesota, Wisconsin, Florida and Arizona. All patients and staff carry personally commissioned active blue-tooth low-energy emitting beacons that communicate with receivers in the ED rooms and workspaces. EHR integrations with RTLS location engines provide location visibility at all times as well as automated time stamps and discharge functionality. Patient wristband discharge boxes with embedded location sensors are deployed to activate the automatic discharge workflow. Bedside patient experience monitors display staff arrival pop-up toast notification to patients upon staff entry into the patient room.

Results and Conclusion: An average of 211,650 live patient location updates monthly are integrated into the electronic medical record. An average of 1,660 first provider time stamps are recorded monthly, 80 RTLS treatment team assignments monthly are made for trauma and resuscitation teams, and 390 automated discharges monthly for eligible patients. Additionally, 181,150 treatment team arrival toast notifications are provided to the bedside patient experience monitor to enhance patient experience.

[OP-999]

Is Southern Thailand a Model for Healthy Aging? Findings From the Thailand Healthy Aging Initiative Study

Kalyarat Sukruang

Member of NBI International, Bangkok, Thailand

Aim: Global life expectancy is increasing, yet many individuals experience extended periods of poor health in their later years. However, certain regions demonstrate exceptional longevity and well-being. This study, a preliminary phase of the Thailand Healthy Aging Initiative study, aims to (1) evaluate Thailand's suitability as a research site for healthy aging and (2) identify specific regions within Thailand with high concentrations of healthy, long-lived populations.

Materials and Methods: A composite index, the Golden-Zone Wellness Index, was developed to measure longevity, health, and happiness among the elderly. International comparisons were conducted using data from various sources to address the study's first objective. To identify regions with high concentrations of healthy, long-lived populations within Thailand, civil registration and census data were analysed. This involved calculating a life expectancy index, identifying clusters of centenarians, non-agenarians, and octogenarians, and ranking districts based on the composite index.

Results and Conclusion: Thailand ranked third in the Golden-Zone Wellness Index. The central southern region emerged as a potential longevity region due to its high concentration of long-lived individuals across age groups. Hua Sai district in Nakhon Si Thammarat province exhibited the highest scores on the longevity-healthiness-happiness composite index.

Keywords: Healthy aging, longevity-healthiness-happiness indices, Thailand

ORAL PRESENTATIONS

[OP-671]

Global Health Telemedicine

Sonila Kalemi[1], [2]Carlo Racani

[1]Registered Nurse-First Aid International Airport "Leonardo da Vinci" Fiumicino, Rome, Italy
[2]Cardiologist Head of First Aid International Airport "Leonardo da Vinci" Fiumicino, Rome, Italy

Global Health Telemedicine (GHT) is the result of over 15 years of experience in telemedicine, in collaboration with the DREAM program of the Community of Sant'Egidio. GHT builds bridges between the north and south of the world through the web, offering diagnostic and therapeutic consultations approximately 40850 of teleconsultations from healthcare centers in the most disadvantaged areas of the planet. This represents a new form of international cooperation, highly impactful and cost-effective. The GHT web platform, developed by Ttre Informatica, also works offline, crucial for centers with limited internet access. Each teleconsultation is automatically sorted based on language, urgency, and required specialty. The responses can be accessed online through any device. Initially focused on cardiovascular diseases, GHT has expanded to other specialties, involving around 120 volunteer doctors. Local doctors or nurse can describe clinical cases and upload any relevant attachments in order to help consultant doctors in other countries.

Aeroporti di Roma and Telemedicine: The creation of a Telemedicine station at the first Aid Center of Aeroporti di Roma (ADR), operational 24/7 with specialist doctors, was launched on 05/25/2018 by Dr. Carlo Racani, Nadia Monari, and Sonila Kalemi, along with Dr. Michelangelo Bartolo, head of the Telemedicine service at San Giovanni Addolorata Hospital in Rome and of the GHT Project. This station monitors requests from requesting centers in Africa, managed by qualified nurses who act as moderators and a supervisor who also receives SMS notifications. The consulting doctors at ADR, according to their specialty, can thus provide the free consultation service.

[OP-657]

Leonardo da Vinci Airport in Fiumicino Airport: A Cardioprotected City

Sonila Kalemi[1], Carlo Racani[2]

[1]Registered Nurse-First Aid International Airport "Leonardo da Vinci" Fiumicino, Rome, Italy
[2]Cardiologist and Head of First Aid International Airport "Leonardo da Vinci" Fiumicino, Rome, Italy

Leonardo da Vinci Airport in Fiumicino is a "CardioProtected" city, equipped with strategically distributed semi-automatic defibrillators throughout the airport. This project was implemented to ensure the safety of passengers and employees, with a total of 54 defibrillators, 43 of which are installed in terminals and common areas.

The airport has made a significant investment in this initiative, placing the defibrillators in easily accessible cases for the public 24/7, clearly signposted. Aeroporti di Roma first aid service continuously organizes training courses to instruct both staff and laypersons on the timely use of defibrillators, which automatically analyze heart rhythms and determine if defibrillation is necessary.

The defibrillators are located in both the "land-side" and "air-side" areas, covering the busiest areas such as departures, arrivals, cargo city, management offices, the control tower, and dining areas. Each device is monitored via the "Avia" platform, which checks the temperature, battery status, and electrode expiration, ensuring that the defibrillators remain operational and ready for use. The platform also allows remote monitoring and voice communication with emergency services.

Healthcare personnel conduct daily and weekly checks and tests to verify the proper functioning of the devices. This initiative demonstrates how a community can work together to create a safe environment and prevent cardiac arrests through the use of advanced technology and proper training. Leonardo da Vinci-Fiumicino Airport has become a model, showing how prioritizing cardiac safety can save lives and inspire other organizations to follow suit.

ORAL PRESENTATIONS

[OP-272]

Utilizing Hs-Troponin I and NT-proBNP to Predict 90-Day Major Adverse Cardiovascular Events in Patients with Acute Heart Failure without Acute Coronary Syndrome: A Prospective Observational Study from Yogyakarta, Indonesia

Bernadhet D. Kenconosari[1], Raditya W Ananto[1], Dyah S Mayasari[1,2], Ira Puspitawati[3], Riswan H Kusuma[2], Salvatore Di Somma[4], Anggoro B Hartopo[1,5]

[1]Universitas Gadjah Mada Faculty of Medicine, Public Health, and Nursing, Department of Cardiology and Vascular Medicine, Yogyakarta, Indonesia
[2]Universitas Gadjah Mada Academic Hospital, Yogyakarta, Indonesia
[3]Universitas Gadjah Mada Faculty of Medicine, Department of Clinic of Pathology and Laboratory Medicine, Yogyakarta, Indonesia
[4]Great Network, Global Research on Acute Conditions Team, Rome, Italy
[5]Dr. Sardjito Hospital, Yogyakarta, Indonesia

Aim: This study explores the association and utility of High-sensitivity Troponin I (Hs-Trop I) and N-terminal pro B-type Natriuretic Peptide (NT-proBNP) levels towards 90-day major adverse cardiovascular events (MACE) incidence in patients with acute heart failure (AHF) without acute coronary syndrome (ACS).

Materials and Methods: This prospective observational study enrolled patients >18 years old with AHF without ACS at the Emergency departments of two referral hospitals in Yogyakarta, Indonesia. Biomarker levels were measured upon admission. Standard care was applied during hospitalization, and follow-up continued for 90 days to assess MACE. Optimal cut-off points from two biomarkers were determined using Youden's J index. Multivariate logistic regression assessed the association between biomarkers and 90-day MACE, adjusted for relevant variables. Receiver operating characteristic curve analysis assessed the biomarkers' discriminative performance.

Results and Conclusion: In total, 134 patients were included. Hs-Trop I levels >13,775 ng/L had significantly higher odds of experiencing 90-day MACE [(adjusted odds ratio)/AOR: 2.77, 95% (confidence interval) CI: 1.02-7.48, p14.881 pg/mL had significantly higher odds of 90-day MACE AOR: 2.56, 95% CI: 1.20-6.73, p<0.05)]. The AUC for NT-proBNP was 0.63, sensitivity of 57.14%, specificity of 69.57%, PPV of 46.15%, and NPV of 78.05%.

Thus, Hs-Trop I and NT-proBNP are potential predictors of an increased risk of 90-day MACE, and may be useful for ruling out AHF patients at risk.

[OP-260]

Phenobarbital and Home: Updates in the Emergency Department Management of Alcohol Withdrawal Syndrome

Joseph Michael Kennedy

University of Vermont Faculty of Emergency Physician and Medical Toxicologist, Burlington, USA

The management of alcohol withdrawal syndrome (AWS) has evolved significantly in the last decade, and the scope of observation and home- and community based services offered by emergency physicians continues to expand. This session will explore strategies to administer phenobarbital and adjunctive medical therapies coupled with social strategies to facilitate safe discharge of patients with AWS. Participants will gain exposure to the literature supporting the use of phenobarbital in patients ultimately discharged with AWS, and be able to advocate for implementation in their own Emergency departments.

ORAL PRESENTATIONS

[OP-439]

Emergent Cases Among Diabetes Mellitus Type 2 Patients with Varying Medication Adherence in Uzbekistan: A Follow-Up Study Proposal

Mukhammadbektosh Khaydarov[1], Khikmat Anvarov[2], Nguyen Tien Huy[3]

1Central Asian University Department of Medicine, Tashkent, Uzbekistan
[2]Republican Research Centre Clinic of Emergency Medicine, Tashkent, Uzbekistan
[3]Graduate School of Tropical Medicine and Global Health; Nagasaki University, Nagasaki, Japan

Aim: Building on previous research that assessed medication adherence among 242 diabetes mellitus type 2 (DM2) patients in Uzbekistan using the Morisky Medication Adherence Scale, this study proposes a follow-up investigation. Our findings showed that 53% of patients had low adherence, 30% medium, and 17% high adherence, with significant comorbidities including hypertension (74%) and heart diseases (33%). This study aims to track emergent cases such as Acute coronary syndrome (ACS), Acute renal injury (AKI), stroke, hypoglycemia, and diabetic foot ulcers among these patients over 12 months.

Materials and Methods: We will monitor 242 DM2 patients, grouped by adherence levels: high (42), medium (72), and low (128). The incidence of emergent conditions-ACS, AKI, stroke, hypoglycemia, and diabetic foot ulcers and infections-will be tracked over 12 months using hospital records and patient follow-ups. Emergency events will be recorded and analyzed using Chi-square tests and logistic regression to assess the correlation between adherence and emergent conditions, considering comorbidities.

Results: We expect a higher incidence of emergencies, particularly ACS, AKI, and diabetic foot ulcers and infections, in the low adherence group, especially among those with multiple chronic conditions. Statistical analyses will quantify the impact of adherence on the likelihood of these events.

Conclusion: This study will provide evidence linking low adherence and chronic conditions to increased emergency cases among DM2 patients, guiding interventions to improve adherence and reduce emergency occurrences in Uzbekistan.

Keywords: Diabetes mellitus type 2, medication adherence, emergency medicine, Uzbekistan

[OP-165]

Distinct Features of Acute Acetic Acid Poisoning in the Elderly

Darya Khristovski[1], Amir A. Stopnitskiy[2,3]

[1]Central Asian University, Tashkent, Uzbekistan
[2]Republican Research Center, Clinic of Emergency Medicine, Tashkent, Uzbekistan
[3]Center for the Development of Professional Qualifications of Medical Workers, Tashkent, Uzbekistan

Aim: In comparison to the youngsters, elderly experience chemical poisoning differently. Study is aimed at analyzing the course of acetic acid (AA) poisoning in elderly patients.

Materials and Methods: The course of aa poisoning was studied among patients admitted to the toxicological department of Republican Research Centre of Emergency Medicine in 2008-2023 in two age-groups: Group 1; 18-30 years old, n=668 patients and Group 2; 60-75 years old-n=155. The comparison was made by gender, mortality, frequency of complications, length of hospital stay.

Results and Conclusion: In Group 1; -497 patients (74.4%) were women and 171 (25.6%) were men. The hemolysis level was 9.7±2.2 g/L. Seventy-five patients (11.2%) died, 69 of them (10.3%) in the first 3 days from shock and acute renal failure (ARF), 6 (0.89%) later. Complications: ARF, pneumonia, late esophageal bleeding, strictures of the esophagus and stomach developed in 194 (29%). The length of hospital stay was 19.3±3.4 bed days. In Group 2, 75 (48.3%) were women and 80 (52.7%) were men. Hemolysis was 5.3±1.7 g/L. 49 (31.6%) died, which is 2.8 times more than in Group 1. 31 (20%) died in the first 3 days and 18 (11.6%) later, is by 1.9 and 13 times higher than in Group 1 respectively. 98 (63.2%) people experienced complications in Group 2, which is 2.1 more than in Group 1. The average duration of hospital treatment was 28.7±5.3 bed days, which is 1.48 times more than in Group 1. The course of acetic acid poisoning in elderly is highlighted by high mortality rate, frequent complications and longer stay in the hospital.

Keywords: Elderly, acetic acid poisoning, complications

ORAL PRESENTATIONS

[OP-379]

Distinct Features of Acute Acetic Acid Poisoning in the Elderly

Darya Khristovski[1], Amir A. Stopnitskiy[2]

[1]Student Central Asian University, Tashkent, Uzbekistan
[2]Republican Research Center of the Emergency Medicine, Center for the Development of Professional Qualifications of Medical Workers

Aim: In comparison to the youngsters, elderly experience chemical poisoning differently. Aim of study. To analyze the course of acute acetic acid (AA) poisoning in elderly and young patients.

Materials and Methods: The course of AA poisoning was studied among patients admitted to the toxicological department of RRCEM in 2008-2023 in two age groups: Group 1 -18-30 years old, n=668 patients and Group 2 -60-75 years old n=155. The comparison was made by gender, mortality, frequency of early and late complications, length of hospital stay.

Results: In Group 1 -497 patients (74.4%) were women and 171 (25.6%) were men. The hemolysis level was 9.7±2.2 g/L. 75 patients (11.2%) died, 69 of them (10.3%) in the first 3 days from shock and acute renal failure (ARF), 6 (0.89%) later. Complications: ARF, pneumonia, late esophageal bleeding, strictures of the esophagus and stomach developed in 194 (29%). The length of hospital stay was 19.3±3.4 bed days. In Group 2, 75 (48.3%) were women and 80 (52.7%) were men. Hemolysis was 5.3±1.7 g/L. 49 (31.6%) died, which is 2.8 times more than in Group 1. 31 (20%) died in the first 3 days and 18(11.6%) later, is by 1.9 and 13 times higher than in Group 1 respectively. 98 (63.2%) people experienced complications in Group 2, which is 2.1 more than in Group 1. The average duration of hospital treatment was 28.7±5.3 bed days, which is 1.48 times more than in Group 1.

Conclusion: The course of AA poisoning in elderly is highlighted by high mortality rate, frequent complications and longer stay.

[OP-392]

Comparison of Commonly Used Biochemical Markers in the Emergency Department for Acute Myocardial Infarction with Single or Multiple Vessel Involvement

Ahmet Atsız[1], Asım Enhoş[2], Sarah Sabbagh Sharif[1], Başar Cander[1], Bahadır Taşlıdere[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey
[2]İstanbul Medipol University Faculty of Medicine, Department of Cardiology, İstanbul, Turkey

Aim: Acute myocardial infarction (AMI) is a leading cause of death across the globe, making it a critical focus of medical research and healthcare initiatives. Assessing the relationship between AMI and the number of affected vessels is important for understanding the prevalence of the disease and developing treatment strategies. This study aims to evaluate and compare the effectiveness of biochemical markers in AMI patients with different numbers of affected vessels to enhance the assessment of clinical outcomes.

Materials and Methods: The study involved a retrospective analysis of 171 patients aged 18 and over, diagnosed with AMI between January 2022 and December 2022. All patients underwent coronary angiography, which revealed stenosis of 50% or more in one or more coronary arteries. These patients were categorized into two groups based on whether their AMI was associated with single or multiple vessels, and the data from these groups were compared.

Results: The study included 171 AMI-diagnosed patients who underwent coronary angiography, revealing 50% or more stenosis in at least one coronary artery. The average age was 60.4±12 years, with 73.1% males and 26.9% females. Chronic disease analysis showed 29.2% had none, 6.4% had diabetes, 21.6% had hypertension, and 39.2% had multiple diseases.

Conclusion: Coronary angiography results revealed various occlusions: Right coronary artery, left anterior descending artery, circumflex artery, and left main coronary artery, with 55.6% having single-vessel and 44.4% multi-vessel occlusions. A significant difference was noted in low-density lipoprotein/high density lipoprotein ratios (LDL/HDL) (p=0.025) among vessel groups, but no significant differences were found in other factors. High LDL/HDL was linked to multi-vessel AMI.

ORAL PRESENTATIONS

[OP-224]

Sympathetic Crashing Acute Pulmonary Edema Presenting to the Emergency Department - A Journey of Evidence

Akshay Kumar, Naazia Siddiqua, Jyothiswaroop Bhaskararayuni, Ankit Sahu, Roshan Mathew, Nayer Jamshed

All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: Sympathetic crashing acute pulmonary edema (SCAPE) is a life-threatening severe, and acute form of hypertensive heart failure. Role of high dose nitroglycerin (NTG) is not well established in SCAPE. Over the last 4 years we conducted 2 large observational studies with over 75 patients and a randomised clinical trial testing low dose NTG versus high dose NTG and developed a SCAPE Treatment Protocol.

Materials and Methods: Two observational studies one was conducted in 2019 and another in 2021. The randomised trial was conducted in 2022. Adults (>18 years of age) presenting to the Emergency department (ED) with SCAPE (defined as acute onset shortness of breath of less than 6 hours, a blood pressure of more than 160/100 mmHg, a respiratory rate of more than 30 per minute, bilateral crepitations in all pulmonary fields, and oxygen saturation of less than 90% on room air) were included in the study. The clinical outcomes of patients at 3, 6, and 12 hours.

Results: Eighty six patients were recruited. Forty-three percent of patients were aged between 40-59 years, and 57.3% (35) were males. The mean intravenous NTG bolus dose was 830 mcg. The mean infusion dose was 80 (±44) mcg. Around 46 (75%) patients received intravenous furosemide with a mean dose of 49±20 mg. Only one patient developed hypotension after NTG bolus and infusion. The mean ED length of stay was 14 hours.

Conclusion: From our study, it is evident that high-dose NTG, was more effective in managing SCAPE resulting in rapid improvement.

[OP-225]

Improving Cardiac Arrest Care in the Resuscitation Area of a High-Volume Emergency Medicine Department-A Quality Improvement Study

Akshay Kumar, Neha Mohan, Sheena Arora, Radhika Sabnis

All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: Cardiac arrest is the most serious emergency. Immediate organised intervention by a trained team can potentially reverse this condition. We are conducting a quality improvement study over three years, funded by the Indian Council of Medical Research. In this abstract we are presenting the interim analysis of the first phase of our study. The purpose of the study is to improve survival of patients presenting with cardiac arrest to the Emergency department.

Materials and Methods: The objectives of our study is to establish data collection system, improve the chest compression rate and depth, reduce time to defibrillation in shockable rhythms and to improve communication within team. The study follows four steps; establishing data collection system; analysing data using specific tools; test and implement change ideas and sustain improvements.

Results: Out of 78 patients who underwent cardiopulmonary resuscitation (CPR), 51.28% were in-hospital cardiac arrests. 37.33% had adequate chest compression depth and 38.67% had adequate chest compression rate. Close-loop communication was inadequate in 23.68% and 97.4% of cases lacked team debriefing post-CPR. ROSC was achieved in 53.25% (41/78) of cases. A 7-day follow-up showed 3 out of 41 patient achieved ROSC and survived.

Conclusion: This is an initial analysis of our ongoing project on cardiac arrest. Live data collection and developing a data collection template was challenging. Few of the striking observations include delay in analysing the first arrest rhythm, paucity of communication within team hampering adequacy of rate and ventilation ratio and negligible post arrest de- briefing.

ORAL PRESENTATIONS

[OP-497]

Point of Care Quality Improvement-A Novel Scientific Methodology for Improving Emergency Care Delivery

Akshay Kumar, Bharath Gopinath, Charu Malhotra, Radhika Sabnis, Dheeneshbabu Lakshminarayanan

All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, India

Aim: Point of care quality improvement (POCQI) is a novel quality improvement methodology which is a 4-step process to improve processes of care. We were the first Emergency department (ED) in the country to advance acute care delivery using the POCQI methodology. In this abstract we present our journey using this method as a tool in improving various aspects of emergency care delivery.

Materials and Methods: The 4-step methodology included; step 1 - identifying a problem, forming a team, writing an aim statement and collecting baseline data; step 2 - analysis of data using quality improvement tools like fish bone analysis and establishing measurement indicators; step 3 - testing and implementing change ideas and step 4 - sustaining improvement.

Results: Triage improvement study led to reduction in time to first medical contact and implementation of the triage protocol. The sepsis improvement study led to the reduction in door to antibiotic time and implementation of a novel sepsis screening tool. The airway study resulted in improving first pass success rates and reduction in peri-intubation adverse events. Project on ST elevation myocardial infarction showed improvement in door to reperfusion time and highlighted barriers to acute care delivery.

Conclusion: POCQI is an effective methodology in ED which has the potential to make effective sustained improvements in processes of acute care delivery and has an immediate impact on patient outcomes. Training in quality improvement methodology is imperative for emergency medicine physicians to learn the science of improvement.

[OP-491]

Multiplex Polymerase Chain Reaction Syndromic Testing vs. Conventional Standard-of-Care: A Prospective Study to Assess the Clinical Response

Sanjeev Kumar, Ritu Singh, Bhawesh Upreti

Indira Gandhi Institute of Medical Sciences, Department of Critical Care Medicine, Patna, India

Aim: Prompt and appropriate antibiotic improves patient outcomes in sepsis. Multiplex polymerase chain reaction (PCR) syndromic testing gives results in 1 hour but is expensive, so there must be a clinical benefit to justify its routine use.

Materials and Methods: This prospective study is being conducted in the Department of Critical Care Medicine at Indira Gandhi Institute of Medical Sciences, Patna from October 2022 to September 2024. Patients aged ≥18 and ≤65 years with suspected bloodstream or lower respiratory tract infections admitted to the intensive care unit (ICU) are included in this study.

Patients with comparable Sequential Organ Failure Assessment (SOFA) scores and demographics are divided into cases & controls (based on informed consent). Cases undergo multiplex PCR whereas controls undergo standard-of-care testing, based on which antibiotics are modified. Our objective is to see the patient's clinical response to timely antibiotic modification, by a change in SOFA score at the end of 1 week, total ICU days, and mortality at day 7 & day 30.

Results: Based on interim analysis of 88 patients which include 43 cases & 45 controls, mean age was 49.41 ± 49.82 years, mean SOFA at admission was 10.25 ± 9.53, mean change in SOFA at day 7 was -1.14 ± +1.02 (p=0.017), mean ICU days were 12.06 ± 15.95, mortality (7 day) was 8 ± 10, mortality (30 day) was 26 ± 25, respectively.

Conclusion: Early antibiotic therapy based on multiplex PCR syndromic testing results leads to clinical benefits in the form of improved SOFA scores & decreased ICU stay. It may decrease.

Keywords: Sepsis, multiplex PCR, antibiotic

ORAL PRESENTATIONS

[OP-035]

Chatbots are Not Yet Safe for Emergency Care Patient Use: Deficiencies of AI Responses to Clinical Questions

Mark I. Langdorf, Jonathan Yau, Soheil Saadat, Edmund Hsu, Linda S Murphy, Jennifer S Roh, Jeffrey Suchard, Antonio Tapia, Warren Wiechmann

University of California, Department of Emergency Medicine, Irvine, California, USA

Aim: Recent surveys indicate that 58% of consumers actively use generative artificial intelligence (AI) for health-related inquiries. Despite widespread adoption and potential to improve healthcare access, scant research examines the performance of AI chatbot responses regarding emergency care advice. We assessed the quality of AI chatbot responses to common emergency care questions. We sought to determine qualitative differences in responses from four free-access AI chatbots, for ten different serious and benign emergency conditions.

Materials and Methods: We created 10 emergency care questions that we fed into the free-access versions of ChatGPT 3.5, Google Bard, Bing AI Chat, and Claude AI on November 26, 2023. Each response was graded by five board-certified emergency medicine (EM) faculty for eight domains of percentage accuracy, presence of dangerous information, factual accuracy, clarity, completeness, understandability, source reliability, and source relevancy. We determined the correct, complete response to the 10 questions from reputable and scholarly emergency medical references. These were compiled by an EM resident physician. For readability of the chatbot responses, we used the Fleischer-Kincaid Grade Level of each response from readability statistics embedded in Microsoft Word. Differences between chatbots were determined by chi-square test.

Results and Conclusion: Each of the four chatbots' responses to the 10 clinical questions were scored across eight domains by five EM Faculty, for 400 assessments for each chatbot. Together, the four chatbots had the best performance in clarity and understandability (both, 85%), intermediate performance in accuracy and completeness (both, 50%), and poor performance (10%) for source relevance and reliability (mostly unreported). Chatbots.

[OP-036]

Injury Characteristics, Outcomes and Health Care Services Use Associated with Non-fatal Injuries Sustained in Mass Shootings in the US, 2012-2019

Mark I. Langdorf, Matthew P. Czaja, Chadd K. Kraus, Patrick Olivieri, Dalier R. Mederos, Ivan Puente, Salman Mohammed, Ross P. Berkeley, David Slattery, Thomas H. Gildea, Claire Hardman, Brandi Palmer, Melissa L. Whitmill, Una Aluyen, Jeffery M. Pinnow, Amanda Young, Carly D. Eastin, Nurani M. Kester, Kaitlyn R. Works, Andrew N. Pfeffer, Aleksander W. Keller, Adam Tobias, Benjamin Li, Brian Yorkgitis, Soheil Saadat

University of California, Department of Emergency Medicine, Irvine, California, USA

Aim: To describe injury characteristics, outcomes, and health care burden associated with non-fatal injuries sustained during CPMSs and to better understand the consequences to patients, hospitals, and society at large.

Materials and Methods: This retrospective case series of non-fatal injuries from 13 consecutive CPMSs from 31 hospitals in the US from July 20, 2012, to August 31, 2019.

Results: Among the 403 individuals included in the study, the median age was 33.0 [interquartile range (IQR), 24.5-48.0 (range, 1 to >89)] years, and 209 (51.9%) were women. Injuries included 252 gunshot wounds (62.5%) and 112 other injuries (27.8%), and 39 patients (9.7%) had no physical injuries. Of 494 body regions injured "mean standard deviation (SD), 1.35 (0.68) per patient", most common included an extremity [282 (57.1%)], abdomen and/or pelvis [66 (13.4%)], head and/or neck [65 (13.2%)], and chest [50 (10.1%)]. Overall, 147 individuals (36.5%) were admitted to a hospital, 95 (23.6%) underwent 1 surgical procedure, and 42 (10.4%) underwent multiple procedures (1.82 per patient). In the Emergency department, 148 of 364 injured individuals (40.7%) had 199 procedures (1.34 per patient). Median hospital length of stay was 4.0 (IQR, 2.0-7.5) days; for 50 patients in the intensive care unit, 3.0 (IQR, 2.0-8.0) days. Among 364 injured patients, 160 (44.0%) had functional disability at discharge. The mean (SD) charges per patient were $64 976 ($160 083).

Conclusion: Civilian public mass shootings cause substantial morbidity. For every death, 5.8 individuals are injured. Including non-fatal injuries in the overall burden of CPMSs will inform public policy.

ORAL PRESENTATIONS

[OP-238]

Developing the Ideal Healthy Aging Intervention: Older Adults' Preferences and Expectations

Gaia Leuzzi[1,2], Gianluca Bertoni[1,3,4], Prof. Aldo Scafoglieri[2], Prof. Marco Testa[1]

[1]University of Genova, Department of Neurosciences, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, Genova, Italy
[2]Vrije Universiteit of Brussel, Department of Physical Education and Rehabilitation, Brussels, Belgium
[3]University of Brescia, Department of Clinical and Experimental Sciences, Brescia, Italy
[4]Training Unit, Azienda Socio-Sociosanitaria Territoriale di Cremona, Cremona, Italy

Aim: Italy, particularly the Liguria region, has the oldest population in Europe. Considering the European aging trend, it is necessary to propose effective healthy aging interventions to help the population age healthily. This study aimed to gather preferences and expectations for an effective multidisciplinary healthy ageing intervention for older adults, focusing on physical activity, diet, and mental health, with the adoption of wearables.

Materials and Methods: Online semi-structured interviews were conducted with Ligurian older adults (60+ years). A detailed description of a multidimensional health intervention for healthy aging was provided to participants, followed by targeted questions. Data analysis adopted the Reflexive Thematic Analysis approach.

Results and Conclusion: Twenty people participated (mean age ± standard deviation: 71.2±5.3 years; men/women: 6/14) and from their transcriptions 4 themes were created. 1. "Empower to Flourish: Senior-Defined Key Focus Areas for Healthy Ageing Programs" proposed that effective healthy aging programs for our sample should address physical activity, diet, sleep, mental health, socio-cultural opportunities, while cooperating with local institutions. 2. "Silver Expectations: Revealing the Needs and Desires of Seniors for Healthy Ageing" and 3. "Optimal Setup: Best Practices for Designing and Implementing Senior Healthy Ageing Programs" highlighted that objective and periodic comprehensive evaluations are crucial to personalise practical recommendations. Participants recommended starting with scientific educational sessions, focusing on prevention, before moving to practical activities. They preferred in-person activities for better engagement, but also accepted online sessions for convenience. 4. "Tech-Enabled Ageing: Wearables Impact on Senior Health" revealed that using wearables could enhance the healthy ageing program's effectiveness.

[OP-168]

Percutaneous Mechanical Trombectomy of Massive Pulmonary Arterial Bifurcation Thrombosis in a Case of Intermediate-High Risk Pulmonary Embolism Refractory to Medical Therapy

Francesco Lo Iudice, Alma Grossi, Francesco Vigorito, Giuseppe Iuliano, Stefano Romei, Amelia Ravera

San Giovanni di Dio e Ruggi d'Aragona Hospital of Salerno, Department of Cardiology, Salerno, Italy

Percutaneous mechanical thrombectomy is indicated for the treatment of high-risk pulmonary embolism (PE) with absolute contraindications to thrombolysis. Recently, the FLARE study showed efficacy and safety of mechanical thrombus aspiration in intermediate-risk PE. A 64-year-old woman with metastatic breast cancer was admitted to the hospital due to sudden development of dyspnoea at rest. Blood pressure was 90/60 mmHg, oxygen saturation was 85% in room air, serum D-dimer and I-troponin were increased. Computed tomography angiography documented massive PE with involvement of pulmonary arterial bifurcation. Echocardiogram showed dilated right ventricle (basal diameter 45 mm) with preserved systolic function [tricuspid annulus systolic plane excursion (TAPSE) 23 mm; RVs' 13 cm/s], severe tricuspid regurgitation and severe pulmonary hypertension with an estimated systolic pressure (sPAP) of 60 mmHg. A gross thrombus across pulmonary artery bifurcation was evident. Intravenous unfractionated heparin was started. Nevertheless, after 48 hours echocardiographic and clinical picture was unchanged and the thrombus was unmodified. Therefore, percutaneous mechanical thrombectomy was planned. Through right femoral vein, under angiographic guidance, aspiration of a large amount of thrombotic material from pulmonary arteries was performed. After the procedure, echocardiography showed absence of pulmonary arterial bifurcation thrombosis and reduction of both right ventricular diameter (42 mm) and sPAP (45 mmHg). Clinical conditions improved, as well, allowing discharge of the patient 4 days after the procedure. Percutaneous mechanical thrombus aspiration allowed to promptly and safely resolve massive thrombosis of pulmonary arterial bifurcation, refractory to medical therapy with unfractionated heparin, in a patient with intermediate-high risk PE.

ORAL PRESENTATIONS

[OP-270]

Cardiogenic Shock in a Patient with Severe Aortic and Mitral Regurgitation Treated by a Totally Percutaneous Approach

Francesco Lo Iudice, Amelia Ravera, Alfonso Campanile, Stefano Romei, Alma Grossi, Cesare Baldi, Francesco Vigorito

San Giovanni di Dio e Ruggi d'Aragona Hospital of Salerno, Department of Cardiology, Salerno, Italy

Combined severe aortic regurgitation (AR) and mitral regurgitation (MR) is a condition associated with high mortality, where evidence about proper management is still scarce. An 86-year-old female with severe AR and severe functional MR was admitted for acute pulmonary oedema, rapidly deteriorating in cardiogenic shock with multi-organ failure, refractory to medical treatment. Hemodynamics was stabilized thanks to trans-femoral implantation of Impella CP. Considering the prohibitive surgical risk, MR was treated with transcatheter edge-to-edge repair (MitraClip), allowing to wean the patient from Impella; subsequently, transcatheter aotic valve implantation (TAVI) was performed. The patient's clinical status improved of a such a way that a successful transfer to a rehabilitation center was achieved. Left ventricular (LV) unloading using Impella was crucial for hemodynamics stabilization and a successful TEER, a procedure which is gaining more evidence in acute clinical conditions. TAVI, although still off-label in pure AR, has been shown to be safe and feasible in high-risk patients. Impella CP is an effective treatment to stabilize the patient in cardiogenic shock due to left-sided valve regurgitation, even in the presence of severe AR, thanks to the benefits of LV unloading. A totally percutaneous approach using TEER and TAVI is feasible in high-risk patients with severe AR and MR.

[OP-194]

Rapid Evaluation and Electronic Linkage to Treatment for Opioid Use Disorder

Joshua Lynch

University at Buffalo, Departments of Emergency & Addiction Medicine, New York, USA

Aim: The Medication for Addiction Treatment and Electronic Referrals (MATTERS) network, a comprehensive statewide initiative in New York state, seamlessly links patients from diverse settings-Emergency departments, telemedicine visits, correctional facilities, and community outreach programs-to medication for opioid use disorder treatment at their preferred clinic. The need for a patient-centric network, independent of hospital affiliations, has surged during the span of the opioid epidemic.

Materials and Methods: The MATTERS network in New York state showcases a replicable model for the United States and beyond. Its adaptability is evident in addressing the diverse needs of both urban and rural areas, bridging socioeconomic gaps. Patients dealing with substance use and mental health issues often face formidable barriers, complicating their retention within the program.

Results: The onboarding process was highly successful, with over 100 hospitals enrolled in the MATTERS program. Additionally, we have integrated nearly 250 distinct treatment organizations into our network, each specifying the available daily "appointment slots" for referrals. Collectively, these sites offer over 2,300 weekly slots, promoting accessibility and flexibility. We diligently follow-up with every referred patient, offering additional resources and support to ensure comprehensive care.

Conclusion: The MATTERS network showcases a replicable model for the United States and beyond. Its adaptability is evident in addressing the diverse needs of both urban and rural areas, bridging socioeconomic gaps. This success has attracted attention, leading to expansion into other states for inter and intra-state referrals. Overcoming these hurdles is vital to ensuring MATTERS' long-term effectiveness.

ORAL PRESENTATIONS

[OP-373]

Cardiac Function as a Predictor of Outcome in Patients with Septic Shock Presenting to Emergency Department

Jabir Majeed, Renjith T.P.

Emergency Medicine Resident, IQRAA International Hospital and Research Centre, Calicut Kerala India, Department of Emergency Medicine entre, Kozhikode, Kerala, India

Aim: Sepsis-induced myocardial dysfunction is a critical concern, resulting from intricate interactions among genetic, molecular, metabolic, and structural changes. While systolic dysfunction in sepsis has been widely recognized, the role of diastolic dysfunction remains controversial, despite recent studies identifying diastolic and right ventricular (RV) dysfunction as independent predictors of mortality. To assess the prognostic value of echocardiography in patients with septic shock presenting to the Emergency department of a tertiary care hospital.

Materials and Methods: Its a prospective study over 1.5 years, 50 patients were enrolled based on specific inclusion criteria. Detailed demographic data, clinical examination findings, and vital signs were recorded. Routine blood investigations, including complete blood count, serum creatinine, capillary blood glucose, lactate levels, and necessary culture samples, were collected for microbial analysis. Radiological investigations, including chest radiographs and ultrasounds, were performed as needed.

Results: Transthoracic echocardiography was utilized to evaluate cardiac function. Patients were categorized based on RV dysfunction, defined as a fractional area change less than 35% or tricuspid annulus systolic plane excursion less than 1.6 cm. Left ventricular (LV) systolic dysfunction was defined as an ejection fraction less than 45%. The study's outcomes, including survival and mortality, were documented.

Conclusion: It revealed that over half of the patients with septic shock exhibited myocardial dysfunctions. LV systolic dysfunction was prevalent, but RV dysfunction was notably associated with a higher 30-day in-hospital mortality rate, underscoring the importance of echocardiographic assessment in the prognosis of septic shock.

[OP-319]

The Prognostic Role of Ubiquitin Carboxy-terminal Hydrolase L1 and Glial Fibrillary Acidic Protein in Mild and Moderate Head Trauma: An Observational Study

Dario Marin, Mattia Cosenza, Rebecca Nicolò, Luca Crisanti, Gabriele Valli, Francesca De Marco, Ettore Domenico Capoluongo, Maria Pia Ruggieri and Salvatore Di Somma

Sapienza University of Rome, Postgraduate School of Emergency Medicine, Rome, Italy

Aim: Ubiquitin carboxy-terminal hydrolase L1 (UCH-L1) and glial fibrillary acidic protein (GFAP) are two new-generation biomarkers with a very high negative predictive value for traumatic intracranial injury (TII). Our aim is to investigate their role in predicting acute and delayed TII after mild traumatic brain injury in patients presenting to the Emergency department (ED).

Materials and Methods: Patients presenting to the ED after a mild head trauma [Glasgow Coma Scale (GCS) 15-14] were enrolled. Clinical data, chronic therapy and vital signs were recorded at the enrollment (t0). UCH-L1 and GFAP were measured in serum samples at t0. Each patient underwent to a computed tomography (CT) scan to detect subclinical TII, at t0 and after 12 hours (t12).

Results: Forty-two patients were enrolled. The median age was 82 [75-86, interquartile range (IQR)], GCS 15, creatinine 0.8 mg/dL (0.7-1.1, IQR), platelets 184 (154-246, IQR). In 52% of cases, patients were taking antiplatelet therapy, in 24% direct anticoagulant. CT scan was positive in 7.1% of cases at t0 and 13.5% of cases at t12. Receiver operating characteristic analysis identify a cutoff for TII at t12 respectively of 360 pg/mL [Se: 0.99; Sp: 0.53; area under the curve (AUC): 0.73±0.09] for UCH-L1 and of 154 pg/mL (Se: 0.80; Sp: 0.91; AUC: 0.79±0.17) for GFAP.

Conclusion: In this preliminary analysis, a significant percentage of patient developed a brain injury 12 hours after first medical evaluation. UCH-L1 and GFAP may allow an early identification of patients that could benefit of a longer clinical observation.

ORAL PRESENTATIONS

[OP-240]

Variations in Capillary and Serum Lactates Levels Based on Different Etiologies of Septic Patients in the Emergency Department

Giacomo Maroncelli, Benedetta Perna, Giacomo Maroncelli, Paolo Baldin, Chiara Donati, Francesco Luppi, Chiara Pesci, Anna Costanzini, Martina Maritati, Carlo Contini, Roberto De Giorgio, Michele D. Spampinato

University Hospital St. Anna (Ferrara), Department of Emergency Medicine, Ferrara, Italy

Aim: Sepsis is a life-threating and time-depending condition. We assessed whether capillary (CLs) and serum lactates (SLs), neutrophil-to-lymphocyte ratio (NLR), and diastolic shock index (DSI) differ according to etiology.

Materials and Methods: This study, conducted between 2021 and 2022 at the Emergency department of Ferrara, included the following criteria: 1) clinical suspect of infectious disease; 2) qSOFA ≥2; 3) age ≥18 years; 4) signed informed consent. Etiologies were: 1) Negative cultures (NC); 2) Gram-positive (GP); 3) Gram-negative (GN); 4) fungal infections (FI).

Results: Among the 200 included patients, 104 (52.0%) had NC, 36 (18.0%) Gram-positive, 53 (26.5%) GN and 7 (3.5%) FI. CLs ($p=0.006$) and SLs ($p<0.001$) were different according to etiology being higher in Gram-positive infections. NLR ($p=0.035$) was higher in Gram-negative infections, while DSI ($p=0.008$) increased in fungal infections. Mortality was not influenced by the etiology.

Conclusion: All parameters differed according to sepsis etiology, thus improving empirical antimicrobial treatment. Sepsis is a life-threating and time-depending condition. We assessed whether CLs and SLs, NLR, and DSI differ according to etiology.

[OP-308]

A Single Center Review of Cases to Understand the Indian Polyvalent Antivenom Use in Hump-nosed Pit Viper Bites in South India

Deo Mathew, Siju V. Abraham, Mohammed Rafi, Sarah Paul, Appu Suseel

Jubilee Mission Medical College, Clinic of Emergency Medicine, Thrissur, India

Aim: India, with nearly 60 venomous snake species, has just one commercially available antivenom, the Indian polyvalent antivenom (IPAV). The hump-nosed pit viper (Hypnale hypnale), an indigenous venomous snake, causes considerable morbidity and at times mortality for which we have no commercially available antivenom. However, most clinicians rely purely on the clinical syndromes, and end up using the available IPAV for H. hypnale envenomation.

Materials and Methods: Between April 2017 and December 2022, we reviewed 41 cases of H. hypnale envenomation, comparing clinical and laboratory profiles of patients who received IPAV with those who did not.

Results: Local signs of envenomation were seen in 39 (95.12%) cases, with the most common being edema or swelling at the bite site. Eight patients (19.5%) developed coagulopathy, and two developed renal failure during their hospital stay. Among the 39 envenomated individuals, 13 received polyvalent snake antivenom. Over half of those receiving antivenom had hypersensitivity reactions. Patients who received adaptive support ventilation (ASV) had increased intensive care unit stay, duration of hospitalization, and hospital expenses as compared to patients who did not. There was one death amongst the patients who received antivenom.

Conclusion: H. hypnale viper envenomation is associated with local and systemic signs of envenomation, with coagulopathy being a common complication. Administering the current polyvalent antivenom to victims of H. hypnale bites did not reduce the morbidities or prevent mortality, instead it exposes them to additional risks associated with ASV administration.

Keywords: Snakebite, hump-nosed pit viper, antivenom, morbidity, mortality

ORAL PRESENTATIONS

[OP-309]

Shared Decision-making and Cultural Competence in Emergency Medicine: Balancing Patient Preferences and Clinical Judgement

Deo Mathew[1], Siju V. Abraham[1], Aravind Sreekumar[1], Minu Rose Thomas[2]

[1]Jubilee Mission Medical College, Clinic of Emergency Medicine, Thrissur, India

[2]Amala Medical College, Clinic of Critical Care, Kerala, India

Aim: In emergency medicine, high-stakes decisions are traditionally clinician-driven, but integrating patient preferences and cultural competence is increasingly recognized as essential for enhancing care quality. To explore methods for integrating patient preferences into emergency decision-making and emphasize culturally competent care.

Materials and Methods: A literature review was conducted, encompassing randomized controlled trials, observational studies, qualitative research, and case studies from Emergency departments. The review focused on shared decision-making (SDM) and cultural competence.

Results: Key findings include; effective communication: clear and concise communication strategies are crucial for rapidly conveying risks, benefits, and alternatives. Decision aids: visual aids and decision-making tools enhance patient understanding and involvement under pressure. Training and education: continuous provider training in empathetic communication, patient engagement, and cultural competence is essential. Cultural competence: addressing cultural and linguistic factors through targeted training improves decision-making and patient engagement. System support: institutional policies and protocols that support SDM and culturally competent care are vital for maintaining efficiency in emergency settings.

Conclusion: Integrating patient preferences and cultural competence into emergency decision-making is feasible and beneficial. Effective communication, decision aids, ongoing provider training, and supportive systems can improve patient-centered care while maintaining clinical efficacy. Future research should focus on developing and testing specific tools and protocols to enhance SDM and cultural competence in emergency contexts.

Keywords: Shared decision-making, emergency medicine, patient-centered care, communication strategies, decision aids, cultural competence

[OP-324]

Integrating Hematological Parameters, Albumin and Procalcitonin in Sepsis Outcome Prediction: A Heatmap-based Analysis

Dearikha Karina Mayashinta, Agustin Iskandar

Universitas Brawijaya Faculty of Medicine, Dr. Saiful Anwar General Hospital, Department of Clinical Pathology, Malang, Indonesia

Aim: Sepsis is a global health challenge characterized by an excessive immune response to infection, resulting in organ failure. Despite many proposed biomarkers, none have shown enough specificity and sensitivity for routine use. Hematological parameters, and other routinely laboratory parameters such as procalcitonin and albumin are commonly performed on suspected sepsis patients. This study evaluates the role of these tests in predicting sepsis outcomes.

Materials and Methods: A survival cohort study was conducted involving 66 adult sepsis patients, diagnosed using SEPSIS-3 criteria. The parameters analyzed included leucocyte count, absolute neutrophil count, absolute lymphocyte count, neutrophil-to-lymphocyte ratio, immature granulocytes, platelet count, procalcitonin, and albumin. Hematology parameters were measured using the Sysmex XN-3000 analyzer, procalcitonin using the ECLIA method, and albumin using the colorimetry method. Multivariate analysis was conducted to visualize the correlation matrix between variables in the dataset using heatmap analysis as a machine learning tool.

Results: Of the 66 patients, 25 (31.8%) survived, and 41 (68.2%) did not. Significant differences were observed in age ($p=0.008$) and procalcitonin levels ($p=0.008$) between the two groups. However, a more complex pattern can be observed when analyzing the correlation patterns between variables using a heatmap. Several hematological parameters show significant correlations with each other, indicating complex interactions involving multiple pathways that impact the overall outcomes of sepsis patients.

Conclusion: Routinely measured hematological parameters in patients suspected of sepsis can serve as early indicators for predicting patient outcomes.

Keywords: Hematological parameters, procalcitonin, albumin, heatmap analysis, sepsis outcome

ORAL PRESENTATIONS

[OP-149]

Use of Brain Electrical Activity Biomarkers in Assessing COVID-19 Patients

Edward A. Michelson, Erik Nordquist, Sarah Watkins, Sue Watts

Texas Tech University Health Sciences Center, Paul Foster School of Medicine, Department of Emergency Medicine, El Paso, USA

Supported by the Center for Clinical and Translational Sciences, NIH/ NCATS 1UL1-TR-003167-01. Material support from BrainScope, Inc.

Aim: Fatigue/cognitive dysfunction ("brain fog") attributed to "long-COVID" mirror symptoms of concussion; hence, electroencephalogram (EEG) may be potential tool for assessment/management. Study aim: investigate whether concussion index (CI) output and concussion symptom inventory (CSI) from Food and Drug Administration-cleared BrainScope neurotechnology platform can objectively assess brain function impairment in coronavirus disease-2019 (COVID-19) patients at initial timepoint, detect differences between COVID-19 patients with/without "brain fog" symptoms, and show change over time.

Materials and Methods: Eligibility: COVID-19 positive adults, able to complete EEG/neurocognitive tests, Glasgow Coma scale 14-15. Comparison groups: symptomatic (SYM): COVID-positive, with "brain fog" symptoms; asymptomatic (ASYM)-COVID-positive, no "brain fog". Testing (initial, 45-90 day follow-up): BrainScope EEG/neurocognitive testing (CI) and CSI. Data analysis: compare CI's and CSI's of SYM vs ASYM groups at initial and follow-up timepoints. CI above 70 (+/-4) considered "normal"; lower CI correlates with more brain dysfunction and symptoms.

Results: Initial CI of SYM group worse than ASYM (median score 25 vs. 48, respectively; $p<0.001$). Scores in both groups <70, indicating impairment whether "brain fog" symptoms present or not. At follow-up, median CI of SYM group improved more than ASYM [27.6 point change ($p<0.003$) vs. 9.5, respectively]. CSI score improved in SYM group over time ($p<0.003$); ASYM group lower symptom burden initially, little change at follow-up.

Conclusion: Differences in CI and CSI scores between SYM and ASYM COVID-positive subjects suggest BrainScope has potential to detect functional changes associated with COVID-19 infection whether "brain fog" is present or not and potentially monitor changes over time to observe recovery or non-recovery.

[OP-167]

How the Living Will has Become a Global Patient Safety Risk

Ferdinando L. Mirarchi

University of Pittsburgh Medical Center Hamot, Department of Emergency Medicine, Erie, USA

Advance directives have been promoted for decades as a tool for a patient to have a voice in their medical care when at end of life. What has not been shared with patients is the risk of harm that occurs to both patients and families as a result of advance directives. Paper based or digitized versions of documents relate in nothing more than a medical guess of what a patient wants by a medical stranger who does not even know the patients values or desires for medical care. Despite decades of use we see medical errors, described as discordant medical care, greater than 50% of the time. Patient safety research known as the Realistic Interpretation of Advance Directives (TRIAD), revealed this patient safety risk is not just in the USA but also a global risk. The TRIAD research has shown that this risk has evolved from the initial do not resuscitate order, to advance directives and then Physicians Orders for Life-Sustaining Treatment orders. The TRIAD research has also shown that we can mitigate patient safety risk but utilizing tools such as checklists or prescribed video-based technology. These simple enhancements to safety can ensure patients are seen, heard and understood by medical strangers who then can provide the right care at the right time. Advance directives are another aspect of medical that needs to embrace technology. After all patients deserve more than a guess in their care when it comes to life or death. Patients deserve accuracy.

ORAL PRESENTATIONS

[OP-375]

My Emergency Department Induction Experience in United Kingdom: A Comprehensive Overview

Abbas Mofidi, Dalip Kumar, Michael Acidri, Ionut Negrea

Southend University Hospital, Department of Emergency Medicine, Essex, United Kingdom

Aim: Joining a new organisation can be an overwhelming experience, but a well-structured induction process can make all the difference. As an international medical graduate new to the National Health Service, I recently had the opportunity to attend a three-day induction programme that covered 12 key topics.

Materials and Methods: We covered key topics, including house rules, departmental procedures and key roles and responsibilities. Each session was carefully planned to ensure a comprehensive understanding of how the department and hospital works. The speakers were knowledgeable. One of the most impressive aspects of the induction was the detailed introduction to our department. Understanding the structure, key functions, and strategic goals of the department provided a solid foundation for our roles. Following the induction, I had the chance to participate in a two-week shadowing program. This was supported by a self-guided induction checklist for international medical graduates who are new to the hospital. This hands-on experience was invaluable, allowing me to apply the knowledge gained during the induction in real-world scenarios. To gauge the effectiveness of the induction, feedback from 10 of my fellow participants were taken that were positive.

Results and Conclusion: Overall, the induction program was a resounding success. It effectively prepared us for our new roles, provided critical departmental insights, and offered a supportive environment for learning. This induction not only met but exceeded my expectations, setting a strong foundation for my future with the organization.

Keywords: Emergency department, doctors, induction

[OP-137]

Ciguatera Poisoning: A Case Series and Review of Literature

Mohamad Hamim Mohamad Hanifah, Yin Xian Leom, Nur Shafiza Ishak, Nora Wahab

Labuan Hospital, Department of Emergency and Trauma, Labuan, Malaysia

Aim: Ciguatera fish poisoning, which occurs after consumption of tropical and subtropical reef fishes contaminated with Ciguatoxin, is the most commonly reported marine disease in the world. However, it remains under-diagnosed and under-reported in South East Asian countries such as Malaysia, which, ironically, has vast coral reefs of where these organisms thrive. Patients affected with ciguatera fish poisoning will develop a constellation of clinical findings, involving the gastrointestinal, neurological and cardiovascular systems. On rare occasions, ciguatera poisoning can be fatal.

Case Reports: First patient, a 23 years old lady presented with multiple episodes of loose stools, vomiting and facial flushing. She was hypotensive and bradycardic. Electrocardiogram showed heart block. She consumed a barracuda fish with its internal organs 3 hours prior to the development of symptoms. Second patient, a 35 years old gentleman presented with sudden onset of profuse sweating and dizziness 6 hours after eating the same fish. Patient was hypotensive and bradycardic. Third patient, a 43 years old gentleman presented with dizziness, perioral numbness and generalized limb weaknesses. He was normotensive but bradycardic. He also consumed the same fish at the same time.

Conclusion: Ciguatera fish poisoning is often under diagnosed and under reported. It may present with a myriad of multisystemic manifestation. Thus, awareness as well as a high clinical suspicion and a proper history taking is important for optimal management for patients with ciguatera fish poisoning. Ciguatera poisoning, particularly its severe form, represents an important public health issue for endemic regions, especially coastal countries like Malaysia.

ORAL PRESENTATIONS

[OP-174]

A QA Study for Reducing Blood Culture Contamination in Emergency Department Labuan Hospital

Mohamad Hamim Mohamad Hanifah, Siti Mustajar Mohd Razaman, Ahmad Munir Zulkunain, Diyana Mohd Daud, Nadia Herman Ramli, Nora Wahab

Labuan Hospital, Department of Emergency and Trauma, Labuan, Malaysia

Aim: Blood cultures are fundamental investigation performed in the Emergency department (ED) in establish diagnosis and provide targeted antimicrobial therapy in septic patients. Blood culture contamination is a common problem in the ED that leads to unfavourable outcome towards patient management and global healthcare system. 1) To determine the blood culture contamination rate in ED Labuan Hospital from 2021-2022 and its associated factors. 2) To identify the common organism detected in blood culture.

Materials and Methods: This is a QA study conducted within 1 year in ED Labuan Hospital. An online database for blood culture sampling was generated and the sample taker need to fill up the data needed after each sampling. The result of blood culture was traced via Labuan Hospital iLab portal and incorporated into the database. The period of intervention was done in between January 2022-April 2022 which augment the blood culture taking technique and empowerment through knowledge by poster, video, and lectures in ED.

Results: Sixty four of 849 (7.54%) cultures were contaminated in 2021, compared to 50 of 1275 (3.98%) during the intervention period ($p<0.001$) in 2022. During the study period, the most isolated pathogens for true positive blood cultures was *Escherichia coli* 17 (3.2%) meanwhile the most isolated pathogens in blood culture contamination were coagulase-negative staphylococci 22 (4.2%). The difficulty in blood taking affect the rate of blood culture contamination ($p<0.001$).

Conclusion: Blood culture contamination rates in ED can be reduced with a good blood culture knowledge and technique.

[OP-400]

High-stakes Treatment: Addressing Aluminum Phosphide Poisoning with Advanced Interventions

Sumitha Murthy, Rodha Mahaveer, Rohila Amit, Sharma Ankur, P.C. Shan Adeeb, Bansal Avanshu, Jayswal Shiwangini

All India Institute of Medical Sciences Jodhpur, Department of Emergency Medicine, Rajasthan, India

A 27-year-old male presented to the Emergency department 1.5 hours after ingesting celphos (aluminum phosphide), with multiple episodes of vomiting. Upon initial evaluation, he exhibited tachycardia and tachypnea. During further examination, he appeared drowsy. Blood gas analysis revealed metabolic acidosis with lactic acidosis and hyperkalemia. An initial point-of-care ultrasound indicated normal left ventricular (LV) function. Treatment began with gastric lavage using a coconut oil and sodium bicarbonate mixture, activated charcoal, and intravenous fluids. The patient was also started on magnesium sulfate and N-acetyl cysteine infusion. Two hours later, reassessment showed worsening hypotension, increased metabolic acidosis, and rising lactate levels. A repeat ultrasound revealed reduced LV contractility with an ejection fraction of 35%. Consequently, vasopressors were administered, and due to persistent hypotension, high-dose insulin infusion was initiated. The patient was also prepared for early extracorporeal membrane oxygenation (ECMO) and intubated to secure the airway before being transferred to the intensive care unit. Following two days of ECMO, the patient's condition improved, and he was extubated, moved to the ward, and eventually discharged with stable vital signs. Aluminum phosphide poisoning, a common method of suicide in various countries, leads to toxicity through the release of phosphine gas, which inhibits oxidative phosphorylation and causes cell hypoxia and circulatory failure. The treatment for aluminum phosphide toxicity remains largely supportive due to the lack of a specific antidote. The mortality rate for this type of poisoning is very high, ranging from 37% to 100%.

Keywords: Aluminium phosphide poisoning, ECMO

ORAL PRESENTATIONS

[OP-398]

Sudden Collapse from Snakebite: A Pilot Study on Antivenom's Role in Cardiac Arrest Management

Padmapriya P. Nair, Siju V. Abraham, Deo Mathew, Vijay Chanchal, Babu Urumese Palatty

Jubilee Mission Medical College and Research Institute, Department of Emergency Medicine, Thrissur, India

Aim: Sudden collapse following snakebite envenomation is a critical emergency with high mortality. This study aims to describe the clinical characteristics, management, and outcomes of patients who experienced sudden collapse after snakebite envenomation and to evaluate the role of antivenom in these cases.

Materials and Methods: A retrospective review was conducted on cases of sudden collapse following snakebite envenomation treated at our center from January 2024 to August 2024. Patient demographics, clinical presentations, treatments, and outcomes were analyzed, focusing on the use of antivenom during cardiac arrest.

Results: We report five cases of sudden collapse (within 30 minutes of the bite) following snakebite envenomation. Among the patients, 60% (3/5) presented with cardiac or respiratory arrest at admission, while 40% (2/5) collapsed and were brought in with loss of consciousness (1/5) or a large ischemic stroke (1/5). All patients received antivenom during resuscitation. Cardiopulmonary resuscitation (CPR) was performed in 40% (2/5) of cases, both resulting in return of spontaneous circulation (ROSC) after antivenom administration. Despite this, one patient (20%) died, three patients (60%) were discharged with symptomatic improvement, and one patient (20%) was transferred and lost to follow-up.

Conclusion: Sudden collapse and cardiac arrest following snakebite envenomation are underreported due to poor prognosis and present significant clinical challenges. Although antivenom administration during CPR is not typically recommended due to limited evidence, this study suggests a potential role in achieving ROSC during cardiac arrest. However, outcomes remain dependent on comprehensive supportive care.

[OP-422]

Incidentaloma: The Dark Side of Minor Emergency

Carmine Nasta, Romeo Morelli, Antonia I. Facciuto, Francesca Palumbo, Angela Di Sisto, Martina Finelli, Maria De Crescenzo, Mauro Giordano

Marcianise ASL Caserta, Universita' Della Campania Luigi Vanvitelli, Department of Emergency Medicine, Marcianise, Italy

Aim: What is an incidentaloma? An incidental finding (mass, lesion, anomaly) detected during a diagnostic investigation unrelated to the main clinical question.

Materials and Methods: Observation period: we observed all the access to the Marcianise Emergency Department from 1 January 2023 as of 31 December 2023, including only patients over the age of 18.

Results: We analyzed the records of 35,081 patients, with a finding of 53 incidentalomas of a neoplastic nature. An average of 1 incidentaloma per week, incidence equal to 1.52 cases out of 1,000 therefore accidents are not a rare finding. Below the characteristics of the patients with incidentaloma finding: gender: 69% women 31% men. Age: 61% over 65 years 31% 40-65 years 8% under 40 years. Triage access code: 62% green 38% blue, so no major codes (red or orange). Reason for access to the Emergency department: 38% abdominal pain, 15% severe anemia, 8% haemot, 8% epileptic seizures, 8% UTI, 8% dyspnea, 8% others, 7% constipation. Diagnostic exam carried out: 51% CT scan, 27.5% ultrasounds, 21.5% X-ray. Incidental neoplasies found: 31% gastrointestinal, 23% pulmonary, 15% breast, 15% ovarian, 8% cerebral, 8% renal.

Conclusion: Incidentaloma are not a rare finding. Incidentaloma have always been found in minor codes, never in major codes.

ORAL PRESENTATIONS

[OP-304]

Device-related Sepsis Impact on Emergency Department, the Role of POCUS and Biomarkers

Silvia Navarin[1], Sonia Zotti[1], Giacomo Casavecchia[1], Silvia Mazzaroppi[1], Dino Eminente[1], Francesco Santelli[2], Federica Sambuco[1], Emanuele Gilardi[1], Simone Scarlata[3], Francesco Travaglino[1]

[1]Fondazione Policlinico Universitario Campus Bio-Medico, Department of Emergency Medicine, Rome, Italy

[2]Università di Trieste, Mathematical and Statistical Sciences (DEAMS), Department of Economic, Trieste, Italy

[3]Fondazione Policlinico Universitario Campus Bio-Medico, Operative Research Unit of Internal Medicine, Rome, Italy

Aim: Sepsis' impact on Emergency department (ED) is still very high and frightening. Considering the increasing number of patients with devices (PwD), aim of this prospective observational study was to compare sepsis' mortality, length of stay (LOS), antibiotic choice, and multidrug-resistant (MDR) prevalence between "naïve" patients and PwD. Moreover, procalcitonin, lactate, and MR-pro adrenomedullin blood levels differences between two groups were evaluated and point-of-care-ultrasound (POCUS) utility in early identification of infection's site was investigated in the whole population.

Materials and Methods: Seventy seven patients with SOFA score ≥2 or qSOFA ≥2 and infection suspicion referring to the Fondazione Policlinico Campus Biomedico ED in Rome were enrolled between February and May 2024. Fifty seven were "naïve" and 20 were PwD (mean age 77 and 73 yo respectively).

Results and Conclusion: Preliminary results of our study showed that LOS was significantly different (p value=0.004), highlighting delay in blood cultures results and device removal timing, while MDR prevalence and mortality rate were not (p value=0.933), probably due to MDR and sepsis spread among general population. Lactate was the only biomarker able to confirm its predictive value measured 12 hours from ED arrival. POCUS showed to be a promising tool in early identification of infection's site at first emergency physician's visit, especially in "naïve" patients, demonstrating a good but not statistically significant concordance with final diagnosis (p=0.3). Limitations of this study are single-centre enrollment and small population, apart from the known difficulty of ED setting; further researches are thus necessary.

[OP-191]

Analyzing the Impact of Various Clinical Care Pathways on Trauma Recidivism Rates: A Retrospective Cohort Analysis

Anna Nguyen[1], Luke Walls-Smith[2], Jeffry Nahmias[2], Lindsey C. Spiegelman[2]

[1]California University of Science and Medicine, Medical Student, California, USA

[2]UC Irvine Medical Center, Department of Emergency Medicine, California, USA

Aim: Recidivism of trauma patients poses significant challenges to trauma care and public health, contributing to increased mortality rates, increased Emergency department (ED) crowding and substantial financial burdens on healthcare systems. While demographic factors contributing to trauma recidivism are well-researched, the effectiveness of different clinical care pathways in mitigating this issue remains understudied.

Materials and Methods: We conducted a retrospective descriptive cohort study of adult patients (>18 years-old) discharged following an ED visit. Patients were categorized into different pathways: direct ED discharge, ED observation followed by discharge, inpatient admission and discharge, and ED observation followed by inpatient admission and discharge. We analyzed recidivism rates within 30 and 120 days post-discharge across different trauma severity levels.

Results: Patients discharged directly from the ED had a recidivism rate of 5.3%, while those who were first observed and then ultimately admitted had the highest rate at 8.8%. Survival analysis also revealed significant differences in the timing of recidivism among pathways, with ED-discharged patients having highest risk for a quick return.

Conclusion: The lowest recidivism rate was among patients discharged directly from the ED, suggesting effective patient selection for discharge. However, these patients may return sooner, indicating potential gaps in follow-up care. Higher recidivism among admitted patients requires further look into discharge planning and transition of care processes. Overall, by refining discharge protocols and follow-up care, healthcare systems may be able to reduce trauma recidivism and thereby improve patient outcomes reduce healthcare expenditures.

Keywords: Trauma recidivism, clinical care pathways, Emergency department

ORAL PRESENTATIONS

[OP-359]

Comparative Analysis of the Follow-up Dynamics of Acute Myocardial Infarction with Q-wave in Patients with and Without a History of COVID-19

Fozilakhon Omonova[1], Abdugaffor Azimov

[1]Central Asian University School of Medicine, Medical Student, Tashkent, Uzbekistan
[2]Republican Scientific Center of Emergency Medical Care, Cardiac Intensive Care Unit, Tashkent, Uzbekistan

Aim: Acute myocardial infarction (AMI) with pathological Q waves is a leading cause of death. Coronavirus disease-2019 (COVID-19) is believed to exacerbate pre-existing cardiovascular diseases, including hypercoagulability, and increased risk of thromboembolic events worsening AMI outcomes. We compared outcomes of Q-wave AMI patients with and without a history of COVID-19.

Materials and Methods: The study involved 235 Q-wave AMI patients. The main group (MG) included 82 patients with COVID-19 history, and the comparison group (CG) included 153 patients without COVID-19 history. Both received standard treatment, with MG divided into two subgroups based on additional treatment where MG2 (n=41) also received atorvastatin 80 mg daily and 5-30 mg rivaroxaban.

Results and Conclusion: Over a 3-month follow-up, tachycardia was more prevalent in MG1 than in CG and MG2 with 13.9%, 8.6%, and 10.8%, respectively showing greater treatment efficacy in the latter groups. Atrioventricular block in the CG was present in 2.1% of patients at discharge and was absent 3 months after hospital discharge. In MG1 and MG2, atrioventricular block was observed in 5.6% and 2.7% after 3 months, demonstrating the effectiveness of the treatment in MG2. Stent thrombosis was noted in 1.4% of CG, 2.8% in MG1, and 2.7% in MG2 at discharge. After 1 month, it occurred in 0.7% of CG and 2.8% of MG1, with none in MG2. The standard pharmacotherapy for Q-wave AMI in CG was comparable to comprehensive treatment in MG2. Post-COVID-19 patients (MG1) require more intensive treatment due to a worse prognosis.

Keywords: COVID-19, AMI, cardiovascular treatment

[OP-361]

Corrosive Myocardial Injury: Rare Presentation of Hydrochloric Acid Poisoning

Adeeb Shan PC[1], Rodha Mahaveer[2], Sharma Ankur[2], Kumar Amit[2], Bhavya[2], Bansal Avanshu[2], Pendam Nitin[2]

[1]AIIMS, Jodhpur, Department of Emergency Medicine, Rajasthan, India
[2]AIIMS, Jodhpur, Department of Trauma and Emergency Medicine, Rajasthan, India

A 31-year-old female with past history of TB was admitted after ingesting ceramic and toilet cleaning agent which contain hydrochloric acid (HCl) with the intention of self-harm. She complained of severe burning sensation over retrosternum and epigastric region with episodes of nausea and vomiting. Laboratory studies revealed severe metabolic acidosis (pH of 7.01), with rise in cardiac markers (Troponin I-4.9 ng/mL). Electrocardiogram showed sinus tachycardia with left anterior fascicular block with deep q waves in V2 and V3. Point of care ultrasound was suggestive of global LV hypokinesia with left ventricular ejection fraction of 15-20%. Upper gastrointestinal endoscopy was suggestive of Zargar IIIb corrosive injury to both esophagus and stomach. Thoraco-abdominal computed tomography scan excluded signs of any abdominal perforation.

After ingesting HCl, cardiovascular symptoms are exceptionally uncommon and mechanism is barely understood and minimally described in literature. We hypothesize that HCl fumes and aspiration caused lung injury and hyperinflammatory state leaded to stress cardiomyopathy. The mechanism of development of metabolic acidosis is not known exactly, proposed mechanism is lactic acid accumulation due to organ dysfunction and tissue injury. Acidosis also contributes for myocardial dysfunction.

In conclusion, although cardiovascular manifestations are rare after HCl ingestion, it may still cause myocarditis and myocardial ischemia which could manifest fatally. Emergency physicians should be aware of possibility of cardiovascular manifestations and manage patients accordingly.

Keywords: Corrosive ingestion, caustic myocarditis

ORAL PRESENTATIONS

[OP-047]

Beyond Academic Excellence: Nurturing Mental Health and Wellbeing of Medical Students

Akhilesh Pathak

AIIMS, Bathinda, Forensic Medicine and Toxicology, Punjab, India

In the current scenario of medical education, the main focus is often on academic excellence and gaining clinical skills. However, despite the rigorous curriculum and unrelenting pursuit of medical knowledge, medical students' mental health and well-being must not be overlooked. The journey through medical school presents a unique set of challenges at undergraduate and postgraduate levels that can significantly impact students' psychological and emotional states. During their medical studies, students face intense academic pressure, the emotional burden of witnessing human suffering, language barriers, issues with the quality and hygiene of food, and homesickness, all of which can seriously affect their mental health.

It's urgent to recognize and address the mental health needs of medical students. Doing so helps them become future doctors who can provide excellent patient care. Students' mental health directly influences their ability to learn effectively, make sound clinical decisions, and maintain meaningful interpersonal relationships. Moreover, untreated mental health issues among medical students can have far-reaching consequences, extending beyond the individual to affect the broader healthcare system. That's why it's essential to create a supportive environment in medical institutions that promotes mental health and well-being throughout medical education and can help the students, who are really in need of it. By prioritizing students' mental health and well-being, we can demonstrate our commitment to the holistic development of future physicians and contribute to cultivating a resilient and compassionate healthcare workforce capable of meeting the diverse needs of patients and society at large.

[OP-051]

Overcoming Emergency Challenges with Poise: Emerging Strong India

Akhilesh Pathak

AIIMS, Bathinda, Forensic Medicine and Toxicology, Punjab, India

India is a vast and diverse nation, and due to the large population, we have unique challenges in the healthcare sector, particularly in the Emergency departments of hospitals. Despite these challenges, the country is making significant improvements in healthcare delivery, and also emerging as a robust player on the global stage.

This presentation explores the multifaceted difficulties encountered by Emergency departments in India, including resource constraints, high patient volumes, and systemic inefficiencies. Through a combination of innovative solutions, and adaptive strategies, Indian healthcare institutions are overcoming these obstacles with commendable poise. As a result, India not only meets its own healthcare needs but also moving towards supplying skilled healthcare professionals to other countries such as Germany, the UK, and the USA.

By delving into case studies and practical examples, this presentation will shed light on the methods and strategies employed to tackle common challenges in the Emergency department. It will also discuss the broader implications of these efforts for the healthcare sector's evolution in India. Attendees will gain insights into the best practices that can be adapted and implemented to enhance emergency care services, thereby creating excellence and resilience in healthcare systems globally.

ORAL PRESENTATIONS

[OP-135]

Worth the Wait? A Survey Investigating Patient's Perceptions Regarding Acceptable Waiting Times in the Emergency Department

Brad Peckler[1], Euan Watt[2], Alice Rogan[2], Sagar Galwankar[3], Stephanie Murphy[3], Emily Wheeler[3]

[1]FACEP FACEM, Wellington, New Zealand

[2]Wellington Hospital, Clinic of Emergency Medicine, Wellington, New Zealand

[3]Florida State University College of Medicine, Emergency Medicine Residency, Sarasota, USA

Aim: *In situ* simulation training has well established benefits as a teaching modality and is an effective way of consolidating technical and non-technical clinical skills in a safe learning environment. A commonly cited barrier to undertaking *in situ* simulation is the competing service demand. Many perceive that patients would not tolerate a delay to receiving their medical care for the sake of simulation, but very limited literature exists that examines this hypothesis. This study examined whether the delay to care that patients were willing to tolerate for simulation scenarios was comparable to a variety of real clinical scenarios.

Materials and Methods: This prospective survey questioned a convenience sample of 827 patients in a tertiary ED waiting room. Patients were asked to indicate a perceived acceptable additional wait time in the event of seven different clinical scenarios. Mixed effects models were used to examine differences in the selected wait times tolerable between scenarios, with Bonferroni-adjusted pairwise comparisons conducted where appropriate.

Results: Eight hundred and twenty-seven patients with a median age of 54 were included in analyses. The primary dataset showed that 41.4% of respondents were willing to wait ≥40 minutes extra to receive care to allow the trauma simulation, For the paediatric arrest simulation, 40.4% were willing to wait ≥40 minutes.

Conclusion: These data suggest that many patients were willing to tolerate a delay up to 40 minutes to medical care to allow *in situ* simulation scenarios to occur. The data also showed patients were significantly more likely to tolerate delays to care for real medical scenarios.

[OP-124]

Evaluation of Presepsin for an Early Diagnosis of Sepsis in the Emergency Department

Andrea Piccioni[1], Gloria Rozzi[1], Michela Novelli[1], Silvia Baroni[2], Fabio Belvederi[2], Chiara Nonno[3], Marcello Candelli[1], Marcello Covino[1,3], Antonio Gasbarini[3], Francesco Franceschi[1,3]

[1]Fondazione Policlinico Universitario Agostino Gemelli-IRCCS, Department of Anesthesiological and Reanimation, Division of Emergency Medicine, Rome, Italy

[2]Unit of Chemistry, Biochemistry and Clinical Molecular Biology, Fondazione Policlinico Universitario Agostino Gemelli-IRCCS; Università Cattolica del Sacro Cuore, Department of Laboratory and Hematological, Rome, Italy

[3]Facoltà di Medicina e Chirurgia, Università Cattolica del Sacro Cuore, Rome, Italy

Aim: Sepsis is a common systemic disease in the Emergency department (ED) and a major cause of death among ED patients. It is diagnosed based on clinical suspicion and evaluation of the patient's overall condition since there are no specific markers for its diagnosis. Presepsin, an elevated N-terminal portion of the soluble component of CD14, is mainly seen in infectious conditions and elevates very early compared to other markers in use. This study aims to evaluate the role of serum presepsin in the early diagnosis of sepsis in ED patients with clinical suspicions and compare its diagnostic performance with traditional biomarkers.

Materials and Methods: We conducted a monocentric, observational, prospective study at Policlinico A. Gemelli in Rome. We enrolled patients admitted to ED over the age of 18, presenting with symptoms suggestive of sepsis. The blood withdrawal for presepsin dosing was collected at the administration.

Results and Conclusion: We enrolled 172 patients who visited the ED and met the eligibility criteria. In the diagnosis of sepsis, according to the "Sepsis-3 consensus of 2016", presepsin showed a sensitivity of 57.14% and a specificity of 76.54% (area under the curve: 0.721). In patients with negative procalcitonin, a positive presepsin identified septic patients with a specificity of 90%. Presepsin specifically identified septic patients not detected by procalcitonin in this group of patients. Observing the diagnostic performance parameters, presepsin offers higher specificity (76.54%) compared to procalcitonin. Based on this data, we believe that incorporating presepsin into standard protocols in ED could enhance early sepsis diagnosis.

ORAL PRESENTATIONS

[OP-126]

Multi-Marker Approach in Patients with Acute Chest Pain in the Emergency Department

Andrea Piccioni[1], Licia Antonella Scatà[1], Silvia Baroni[2], Martina Candela[1], Marta Scaccia[1], Federica Manca[1], Marcello Candelli[1], Alessandra Bronzino[1], Marcello Covino[1], Antonio Gasbarrini[3], Francesco Franceschi[1]

[1]Fondazione Policlinico Universitario Agostino Gemelli-IRCCS, Department of Emergency, Anesthesiological and Reanimation Sciences, Rome, Italy

[2]Unit of Chemistry, Biochemistry and Clinical Molecular Biology, Department of Laboratory and Hematological Sciences, Fondazione Policlinico Universitario Agostino Gemelli-IRCCS, Università Cattolica del Sacro Cuore, Rome, Italy

[3]Fondazione Policlinico Universitario Agostino Gemelli-IRCCS, Università Cattolica del Sacro Cuore, Department of Medical and Surgical Science, Rome, Italy

Aim: Chest pain is a prevalent reason for emergency room referrals and presents diagnostic challenges but management become difficult when traditional clinical criteria, electrocardiogram, and troponin values are insufficient. Recently, the focus has shifted to a "multi-marker" approach to improve diagnostic accuracy and prognosis in patients with chest pain.

Materials and Methods: This observational, prospective, 360 patients presenting to the Emergency department with typical chest pain and included a control group of 120 healthy subjects. In addition to hsTnI, we added biochemical markers sST2 (tumorigenicity suppression-2) and suPAR (soluble urokinase plasminogen activator receptor).

Results: We identified two groups of patients: a positive one (112 patients) with high levels of hsTnI, sST2>24.19 ng/mL, and suPAR>2.9 ng/mL, diagnosed with ACS; and a negative one (136 patients) with low levels of hsTnI, suPAR<2.9 ng/mL, and sST2<24.19 ng/mL. During the 12-month follow-up, no adverse events were observed in the negative group. In the intermediate group, patients with hsTnI between 6 ng/L and the ischemic limit, sST2>29.1 ng/mL and suPAR>2.9 ng/mL, showed the highest probability of adverse events during follow-up, while those with sST2<24.19 ng/mL and suPAR<2.9 ng/mL had a better outcome with no adverse events at 12 months.

Conclusion: Our data suggest that sST2 and suPAR, together with hsTnI, may be useful in the prognosis of cardiovascular patients with ACS, providing additional information on endothelial damage. These biomarkers could guide the clinical decision on further diagnostic investigations.

[OP-048]

Online vs. Onsite Disaster Preparedness Simulation Module for Medical Students: Which is More Effective?

Vimal Krishnan Surendran Pillai, Aaditya Katyal, Soumya S. Nair, Kirtana Raghurama Nayak

Manipal Academy of Higher Education, Kasturba Medical College, Manipal, Department of Emergency Medicine, Karnataka, India

Aim: Disaster preparedness is crucial for effective disaster management and has been a significant focus in the healthcare sector for decades. Currently, the Indian medical undergraduate curriculum lacks a disaster preparedness module. Understanding the knowledge and confidence levels in disaster preparedness among Indian medical students is essential. Evaluate the baseline knowledge and confidence levels in disaster preparedness among undergraduate medical students. Compare the knowledge scores and confidence levels of students after participating in either an online or onsite disaster preparedness module.

Materials and Methods: In this educational intervention study, 103 Phase II Medical students were divided into two groups to participate in either an online or an onsite session of a validated disaster preparedness module. The study included 52 students in the online group and 51 in the onsite group. Knowledge was assessed using single-response MCQs, and confidence was measured with Likert scale-based questions. Pre-test and posttest scores were analyzed using two-tailed t-tests for paired analysis within each group and heteroscedastic analysis for comparisons between groups.

Results: All 103 students completed the study, with 52 in the online group and 51 in the onsite group. Both groups showed a statistically significant increase in knowledge and confidence. However, there was no significant difference in the percentage change in knowledge or confidence between the online and onsite groups.

Conclusion: The study indicates that there is no significant difference in the percentage change in knowledge or confidence between online and onsite disaster preparedness training. Online disaster preparedness training could complement traditional training.

ORAL PRESENTATIONS

[OP-226]

Impact of a Short-term Mediterranean Diet Intervention on Plasma Lipidic Metabolites: A Pilot Study

Vincenzo Pizza[1], Alessandra Maria Pizza[1], Eugenio Luigi Iorio[2], Olle Melander[3], Paola Antonini[4], Teresa De Pascale[5], Anella Agresta[1], Roberto De Marinis[1], Salvatore Di Somma[4,6]

[1]Department of Emergency and Time Dependent Network, Neurology Unit, San Luca Hospital, Vallo della Lucania, AL Salerno, Italy

[2]International Observatory of Oxidative Stress, Italy

[3]Lund University, Department of Clinical Science, Malmö, Sweden

[4]GREAT Health Sciences, Rome, Italy

[5]San Luca Hospital, Vallo della Lucania, Health Management, AL Salerno, Italy

[6]University of Rome Sapienza, Department of Medical Surgery Sciences and Translational Medicine, Rome, Italy

Aim: The lipid profile has a significant impact on metabolic and cardio-cerebrovascular diseases. Through lipidomics, we studied lipid changes in subjects undergoing a dietary intervention.

Materials and Methods: Fifty-nine Swedish subjects underwent a 6-day Mediterranean diet (MD) intervention in Cilento (Italy) with a typical local diet and extra virgin olive oil. The pre- and post-intervention lipidomic profile was investigated using a standardized gas chromatographic separation method on a non-dried blood sample. The obtained values were compared using the Wilcoxon test.

Results: The MD intervention resulted in pre/post changes in the lipids studied. In summary we recorded a significant increase in: palmitoleic acid [0.947/0.986; standard deviation (SD) 0.54/0.52, p=0.00]; oleic acid (23.09/23.58; SD, p=0.001); omega 3 (28.48/28.74; SD 2.95/3.46, p≤0.001); a significant decrease for: arachidonic acid (7.81/7.76; SD2.36/2.46, p≤0.002); docosaenoic acid (DHA) (2.10/2.02; SD 0.39/0.40, p≤0.005); palmitic acid (26.6/26.1; SD 1.57/1.68, p≤0.001); stearic acid (13.28/13.16; SD 2.09/2.17, p≤0.001).

Conclusion: The analysis of the results highlighted: a reduction in saturated fatty acids (palmitic and stearic) in favor of cis-monounsaturated fatty acids (oleic and palmitoleic), indicating an improvement in the cardiovascular risk profile; a lowering of arachidonic acid levels (progenitor of mediators with a predominantly vasoconstrictive, pro-inflammatory and pro-thrombotic function); a lowering of DHA levels (with a protective action on the brain and vision) which is more complex to interpret; a lowering of trans fatty acid levels indicating an improvement in the risk of degenerative diseases. These results highlight how even a brief dietary intervention can bring about effective changes useful for encouraging healthier food choices.

[OP-217]

Mean Serum Lactate Level in Patients with Sepsis Presenting to the Department of Emergency Medicine of a Tertiary Care Center: A Descriptive Cross-Sectional Study

Binita Pradhan, Urbi Ghimire, Nibedita Chapagain, Nishob Adhikari, Prajwala Yogi, Sujan Pandey, Sailesh Pradhan

Kathmandu Medical College, Department of Emergency, Kathmandu, Nepal

Aim: Sepsis is a life-threatening organ dysfunction caused by a dysregulated host response to infection. Sepsis involves organ dysfunction, indicating a pathobiology more complex than infection plus an accompanying inflammatory response alone. Serum lactate is useful in predicting the prognosis of critically ill patients. Elevated blood lactate levels as well as delayed clearance have been linked to a higher mortality in sepsis. Thus, monitoring lactate levels may aid clinicians in understanding tissue perfusion and detecting unrecognized shock and make prompt therapy adjustments.

Materials and Methods: A descriptive cross-sectional study was conducted at a tertiary care center from September 2022 to November 2022. Ethical clearance was obtained from IRC Kathmandu Medical College Teaching Hospital (reference no.: 26082022/02). Convenience sampling was used and the data was entered in Microsoft excel 2016, then exported and analyzed in Statistical Package for Social Sciences version. Point estimate at 95% confidence interval was calculated along with frequency and proportion for binary data.

Results: Among patients diagnosed clinically as sepsis, 52.83% cases we re found to have normal serum lactate level. However, 96.4% patients in shock with normal lactate level, were fond to have higher shock index (SI).

Conclusion: Patients with normal lactate level were also found to have high SI. Clinical diagnosis with SI index in conjuction with Serum lactate evaluation would be beneficial for the proper diagnosis of sepsis.

Keywords: Emergency, lactate, sepsis

ORAL PRESENTATIONS

[OP-358]

To Assess the Efficacy of Health System Building Training on Improving Facility-Based Emergency Care Systems in Medical Colleges in Uttar Pradesh, India

Roopa Singh Rawat[1], Sanjeev Bhoi[1], Tej Prakash Sinha[2], Dolly Sharma[2], Jagdish Chandra[2], Ravi Joshi[2], Divyanshu[2], Vinod[2], Abhishek[2], Manoj[2], Roopa Rawat[2]

[1]WHO Collaborating Centre for Emergency & Trauma Care, New Delhi, Delhi, India

[2]Emergency Medicine, JPNATC, AIIMS, New Delhi, India

Aim: Fragmented emergency care system (ECS) leads poor quality care, proved by AIIMS-NITI national study. Strengthening Six healthcare system block by WHO, can improve quality care. Capacity building is an effective intervention; therefore, this training program has been designed and executed. To improve the quality of ECS.

Materials and Methods: Prospective observational study conducted among Emergency department (ED) team of 35 medical colleges, UP during November 2022 to July 2023. Team consists of senior administrator, senior doctor, and senior nurse from ED. Advocacy was done at a higher level and among stakeholders. A standard self-assessment tool was provided to facilities (baselines assessment). Then ED Team sent for 5-day training program at JPNATC, AIIMS, New Delhi. The program (named Champions of Change) was designed on six pillars of healthcare system building and enhancing knowledge, skills, and humanistic aspects. Followed by on-site assessment of all facilities and validation of baseline data. Then data analyzed.

Results: System level changed observed; state identified this as first emergency care improvement program; state policy formed. Organization level changed observed; leadership engagement; formulation of committee for ED management and improvement, dedicated ED in-charges assigned. Standard list of essential items, gap identified, and procurement mechanism smoothed. Documentation quality improved with standard processes and formats. Regular training and simulation started with ED. Care delivery improved with a 24X7 investigation facility, triage established, red area strengthened, and fixed nursing staff.

Conclusion: Team focused ECS training may improve the overall system, process and quality of emergency

[OP-244]

The Added Prognostic Value of Interleukin-6 in Patients with Acute Heart Failure in the Emergency Department

Engy Khaled Mohamed Riead[1,2], Luca Crisanti[1,3], Gabriele Valli[2], Francesca De Marco[2], Elisa Cennamo[2], Caterina Bernardi[1], Michele Ruscitto[1], Ferdinando Terlizzi[1], Maria Pia Ruggieri[2], Salvatore Di Somma[3]

[1]Emergency Medicine, Sapienza University of Rome and Azienda Ospedaliera San Giovanni Addolorata, Rome, Italy

[2]Azienda Ospedaliera San Giovanni Addolorata, Rome, Italy

[3]Great Network, Rome, Italy

Aim: Interleukin-6 (IL-6) is a marker of inflammation and was found to have a prognostic role in patients with chronic heart failure (HF). Our aim was to investigate its role in identifying patients at higher risk of a new major acute cardiovascular event (MACE) during the 30 days after arriving at the Emergency department (ED).

Materials and Methods: Patients presenting to the ED with acute HF (AHF) were prospectively enrolled in a multicenter prognostic study. IL-6 concentrations were measured in a blinded fashion at the time of presentation to the ED. Follow-up was performed at 30 days. Patients presenting with cardiogenic shock, acute coronary syndrome as a trigger of AHF, or with a history of end-stage kidney disease were excluded from the study. MACE was defined as the combination of cardiovascular mortality, acute myocardial infarction, stroke, and HF rehospitalization.

Results: A total of 351 patients with AHF were enrolled. The median age was 84 (77.0-88.0) years and 49.3% were male. An IL-6 above the URL (6.65 pg/mL) was found in 278 (79.2%) patients. This group was older, had worse kidney function, lower hemoglobin concentrations and higher value of C-reactive protein. During the 30-days follow-up patients with a high IL-6 were at higher risk of new access to ED or experiencing a MACE compared to those with a negative IL-6 (OR 2.50, 95% CIs 1.03-6.09). Therefore, IL-6 could add relevant prognostic information for predicting ED re-admissions and MACE 30 days after ED admission due to AHF.

ORAL PRESENTATIONS

[OP-321]

Trauma in Pregnancy at a Tertiary Care Trauma Center in India

Anjali Ruhil, Sanjeev Bhoi, Tej Prakash Sinha, Sushila Birla, Mercy Santosh, Shakuntla Sundriyal, Kondru Shyamla

Jai Prakash Narayan Apex Trauma Centre, All India Institute of Medical Sciences, Department of Emergency Medicine, New Delhi, Delhi, India

Aim: Trauma affects 6% to 7% of all pregnancies and is one of the leading non-obstetric causes of maternal death during pregnancy. Trauma is the leading cause of maternal death, accounting for up to 46% of such cases. Motor vehicle collisions during pregnancy were indicated to be a significant risk factor for maternal and fetal deaths.[7] We reviewed our trauma Emergency department experience with the management of trauma in pregnancy in a low and middle income country.

Materials and Methods: This retrospective chart review study was conducted at Emergency department of JPNATC, AIIMS, New Delhi, India (a level-1 trauma center). All pregnant patients who were admitted to our Emergency department following trauma between 1st January 2024 to 30th June 2024 were included, and relevant data were collected and analyzed.

Results: During the six month period, total 75 pregnant patients with average age 26.7 years visited to our trauma ED. Common mechanism of injuries were assault 46.7% (35) followed by fall 28% (21) and Road traffic injuries 18.7% (14). 21.4% (16) didn't required any radiological examination rest all 74.6% (56) had E-FAST, X-ray chest and X-ray pelvis apart from relevant x-rays to detect fractures. USG for foetal wellbeing were performed in 74.6% (56) patients. Obstetric consultation were taken in 48% (36) patients while 36% (27) had multiple consults. 64% (48) patients had soft tissue injury while seven patients had fractures.

Conclusion: Trauma in pregnancy is relatively uncommon and mostly due to a road traffic injuries or deliberately inflicted trauma.

[OP-311]

Its High Time to Incorporate POCUS in Advanced Resuscitation of Cardiac Arrest Victims

Akhil S. L.[1], R Chandni[2], C.G. Sajeev[3]

[1]P K Das Institute of Medical Sciences, Emergency Medicine, Thiruvananthapuram, Kerala, India

[2]Department of Emergency Medicine, Government Medical College, Kozhikode, India

[3]Department of Cardiology, Government Medical College, Kozhikode, India

Aim: Prognostication of cardiac arrest victims based on ultrasound findings are studied extensively around the globe. POCUS has been recently used as a diagnostic as well as prognostic tool in including cardiac arrest victims. Sono cardiopulmonary resuscitation (CPR) can be done during the compression pauses and can identify some of the reversible causes of cardiac arrest which leads to interventions that increases the chance of survival. Still the incorporation of POCUS in cardiac arrest lacks definite guidelines.

Materials and Methods: Prospective observational cohort study done in 250 patients who underwent out of hospital cardiac arrest and brought to Emergency department of a tertiary care hospital and in hospital cardiac arrest victims are included. FEEL, CAUSE and SHoC algorithms are used for identifying reversible causes of cardiac arrest video clips are stored and detailed evaluation can be done during the compressions.

Results and Conclusion: Two hundred fifty participants were recruited for this study. The presence of cardiac activity on POCUS was associated with 4.67 times greater chance of having return of spontaneous circulation compared to those without a cardiac activity. The detection of a reversible cause was associated with 2.78 times greater chance of having return of spontaneous circulation compared to those without a reversible cause. The presence of cardiac activity was significantly associated with increased 24 hour, survival at hospital discharge compared to those without cardiac activity. POCUS must be incorporated in cardiac arrest algorithms without compromising high quality CPR.

Keywords: POCUS, cardiac arrest, cardiac activity, CPR

ORAL PRESENTATIONS

[OP-490]

Shifting the Vector: A New Angle on Management of Refractory Ventricular Fibrillation

Vinayak SR[1], Chandni R[1], Bipenthung N Jami[2], Gayathri Mohan[2]

[1]Government Medical College, Kozhikode, Department of Emergency Medicine, Kerala, India

[2]Government Medical College, Junior Resident of the Department of Emergency Medicine, Kerala, India

[3]Government Medical College, Department of Emergency Medicine, Kerala, India

Aim: Ventricular fibrillation refractory to conventional defibrillation is not an uncommon occurrence in both out-of-hospital and in-hospital cardiac arrest. This often leads to prolonged resuscitative efforts, often ending up futile, especially in resource limited areas. Newer strategies in defibrillation are coming into light and offer a promising outcome in such situations.

Materials and Methods: Here we present a series of 2 different cases where the patients presented with chest pain and later went into cardiac arrest at the Emergency department. The initial rhythms were ventricular fibrillation, which was refractory to conventional defibrillation despite repeated attempts. Vector change defibrillation was carried out by placing adhesive pads antero-posteriorly.

Results and Conclusion: In both our cases, return of spontaneous circulation was obtained following the very first attempt at vector change defibrillation. Both the patients underwent Percutaneous Coronary Intervention and attained full neurological recovery. Vector change defibrillation can therefore be considered as an effective means to manage refractory defibrillation, especially since it is simple to perform and makes use of pads instead of paddles, which further helps improve the chest compression fraction during cardiopulmonary resuscitation.

Keywords: Vector change defibrillation, ventricular fibrillation, cardiac arrest, resuscitation, defibrillation

[OP-378]

A Rare Case of Acute Kidney Injury Following a Scorpion Sting

Sarah Sabbagh Sharif, Elif Betül Balcı, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: Scorpion envenomation can lead to severe life threatening clinical complications. Nephropathy is one of the rare complications that can occur a couple of days following a scorpion sting.

Materials and Methods: A 59 year old female patient presented to the Emergency department with a three day history of epigastric pain, bloating, nausea, and vomiting. The patient reported that her symptoms started 48 hours after a scorpion stung her from her big toe five days before. The patient's initial vital signs and abdominal examination were normal. The patient's blood results from the previous day (fourth day after scorpion sting) were checked and showed an elevated white blood cell count on complete blood count, a normal C-reactive protein level, and a normal creatinine level with decreased estimated glomerular filtration rate. Other comprehensive metabolic panel parameters including amylase and lipase were unremarkable. New blood tests on the fifth day post-scorpion sting showed leukocytosis with an increased C-reactive protein level. The creatinine level increased indicating the presence of acute kidney injury. Electrocardiogram showed ST segment depression in leads V3-V6 however serum troponin level was normal.

Results and Conclusion: Acute renal failure is the most common scorpion sting induced nephropathy however subnephrotic proteinuria, vasculitis, haemolytic-uraemic syndrome, pigment nephropathy and interstitial nephritis have been also reported. There are few literature reporting kidney failure due to scorpion stings. Our case can contribute to further studies about acute kidney injury following scorpion stings since early diagnosis is essential to avoid serious complications.

Keywords: Scorpion sting, acute kidney injury, abdominal pain

ORAL PRESENTATIONS

[OP-314]

The Effect of the Gaza War on Visits to the Emergency Department of a Community Hospital in Jerusalem

Shaden Salameh, Evan Avraham Alpert, Isabella Sztuden, Aliza Goldman, Ahmad Nama, Jacob Assaf, Maximilian Nerlander

Hadassah University Hospital, Department of Emergency Department, Jerusalem, Israel

Aim: On October 7, 2023, 3000 Hamas terrorists invaded Israel from Gaza, killing 1200 and wounding over 1400. After this, Israel declared war on Hamas. Hadassah Mount Scopus (HMS) is a community hospital in Jerusalem, over 80 kilometers from Gaza. The objective of this study is to analyze the trends in Emergency department (ED) visits after the start of the war in a hospital distant to the frontline.

Materials and Methods: This is a retrospective study using anonymized patient data from HMS. A convenience sample of patients presenting to the ED from September 1, 2023, to December 31, 2023 (study period) and September 1, 2022 to December 31, 2022 (reference period) were studied.

Results: A total of 2000 patients were included. Comparing the two periods, the study period had a smaller proportion of patients presenting to the ED after October 7 than the reference period (51.6% vs. 61.1%, $p \leq 0.05$). In the study period, the proportion of non-ambulatory patients increased significantly after October 7 (50.4% vs. 58.8%, $p \leq 0.05$). By contrast, this relationship was nonsignificant in the reference period (49.1% vs. 54.2%, $p=0.14$). However, there was no significant difference in proportions of non-ambulatory patients in the study period compared to the reference period (58.8% vs. 54.2%, $p=0.15$).

Conclusion: Overall ED visits dropped significantly for the period after the start of the Gaza war at a community hospital far from the front. However, the proportion of non-ambulatory visits increased.

[OP-317]

Gender Disparities in Triage Times in the Emergency Department

Shaden Salameh, Tehila Oren, Ariella Kovacs, Avraham E. Alpert

Hadassah University Hospital, Department of Emergency Department, Jerusalem, Israel

Aim: Efficient triage in Emergency departments (EDs) is crucial for timely patient care, yet evidence indicates triage times could affect treatment outcomes. This objective of the study was to analyze the recent data from Hadassah Hospital at Mount Scopus (HMS) ED regarding potentional gender differences in triage times.

Materials and Methods: A retrospective descriptive analysis was conducted using anonymized patient data from HMS. The study objective focused on triage times by gender across different Emergency Severity Index (ESI) levels and different divisions of the ED.

Results: More than 40,000 visits were analyzed in the study period. The results indicated that women experienced a delay in triage compared to men. This disparity was less evident across higher ESI levels, and was notably more pronounced in the ambulatory division rather than the non-ambulatory care division.

Conclusion: The study confirms a noticeable gender gap in triage times, with women experiencing longer delays across various ESI levels, particularly in lower ESI levels within the ambulatory division. Addressing these disparities is vital for improving equity in emergency care. Future research should aim to understand the reasons behind these differences and develop strategies to ensure equitable treatment for all patients.

ORAL PRESENTATIONS

[OP-350]

Falls in Geriatric Trauma Patients and Their Importance

Ali Sarıdaş

University of Health Sciences Turkey, Prof. Dr. Cemil Taşcıoğlu City Hospital, Clinic of Emergency Medicine, İstanbul, Turkey

Aim: In our study, the epidemiological and clinical characteristics of geriatric trauma patients who applied to the Emergency department due to a fall from the same level were examined. It was aimed to determine in-hospital and 1-year mortality rates in geriatric patients.

Materials and Methods: Data on all geriatric (65 years and older) trauma patients who were admitted to the Emergency department of a tertiary hospital within a one-year period were retrospectively examined. Patients were examined in terms of trauma mechanism, accompanying organ injuries, chronic diseases, 1-year mortality and in-hospital mortality rates. Descriptive statistical analyzes were performed in our study. The relationship between continuous variables was compared with the t-test, and the relationship between categorical variables was compared with the chi-square test. $P<0.05$ was considered statistically significant.

Results and Conclusion: In the study, 775 geriatric trauma cases (n=748 and twenty-seven repeated admissions) admitted to the Emergency department were examined. Fifty-nine percent of the patients were female and 41% were male. Falls from the same level were the most common trauma mechanism with a rate of 70% (n=540). The distribution of injury areas detected in the patients is shown in the figure. Comorbid diseases accompanying the patients are given in the table. When the patients were examined in terms of one-year mortality, it was determined that 18% (n=95) of the patients who fell from the same level died within a year, and 5% (n=19) died while hospitalized.

[OP-179]

Predictors of One-year Postoperative Complications in Geriatric Hip Fracture Patients: A Retrospective Study at Tertiary Care Center

Warangkana Saripan, Jusmine Krainuch

Mahidol University Faculty of Medicine Ramathibodi Hospital, Department of Nursing Service, Bangkok, Thailand

Aim: Hip fractures (HFs) are commonly found in the elderly following a fall or an accident, which might lead to chronic illnesses and mortality. Specifically, if there are postoperative complications (PCs) that might develop both during admission and following discharge. Accordingly, this study aims to investigate the incidence of PCs in geriatric hip fracture patients (GHFPs) and predictors of the PCs.

Materials and Methods: A retrospective study was conducted using data retrieved from electronic medical records of GHFPs aged 60 years and over who underwent HF surgery and were admitted to an orthopeadic ward between January 2019 and December 2022. Data were collected using Case Report Form entailing demographics, comorbidities, medical histories, laboratory test results, fracture types, operation types, and admission records. Descriptive statistics and chi-square were conducted.

Results and Conclusion: Participants were 376 GHPFs with a mean age of 80 years (60-99 years). Within one year after HF surgery, 39.3% of the patients developed major clinical complications: 25.2% developed urinary tract infection, 10.6% developed pneumonia, 1.6% developed pulmonary embolism, 0.8% developed deep vein thrombosis, 0.8% developed surgical site infection and 0.3% developed hip dislocation. Significant predictors of the PCs consisted of gender and age ($p<0.001$), Charlson comorbidity index ($p=0.004$); nutrition status ($p=0.002$); hemoglobin level ($p=0.002$), the American Society of Anesthesiologists classification ($p<0.001$); waiting time for surgery ($p=0.006$); and length of stay ($p<0.001$). The results provide useful information, including the incidence of one-year PCs in GHFPs and the predictors of the PCs.

ORAL PRESENTATIONS

[OP-384]

The Hallmark of Aging

Farangiz Sautova[1], Riddhi Chawla[2]

[1]Central Asian University School of Medicine, Tashkent, Uzbekistan
[2]Central Asian University School of Dentistry, Tashkent, Uzbekistan

Aim: From ancient times, humankind has been trying to defy aging. The "Youth elixir" is not a magical drug that makes one immortal, but a combination of natural and artificial measures to decelerate the aging process on a molecular level. According to Lopez-Otin, the main features of aging include genomic instability, loss of proteostasis, epigenetic modifications, mitochondrial malfunction, cellular senescence, and telomere shortening. Among all, telomere shortening and the conservation of telomere length have gained a significant amount of attention.

Materials and Methods: Based on Hayflick's limit of telomeres, the approximate lifespan of an individual can be determined. Therefore, telomeres are also known as the biological clock, which can be extended using scientific manipulations or through the improvement of lifestyle. Among the natural methods, proper diet, regular exercise, quality sleep, stress management, not smoking, along with intermittent fasting showed significant effects. However, non-integrating approaches of telomere lengthening seem to be not as effective as the artificial technique for John Ramunas and Edward-Yakubov since they discovered a new method of increasing the length of mammalian telomeres by 10%, which is approximately 900 nucleotides. Mutated mRNA encoding telomerase reverse-transcriptase in human fibroblasts and myoblasts has been introduced and found out to be enhancing telomerase activity momentarily and extending telomeres quickly.

Results and Conclusion: The rate of telomere attrition is one of the essential biomarkers of longevity. Modern research showed several promising ways to sustain the ideal telomere length through both artificial and natural means.

Keywords: Youth elixir, biomarker of longevity, telomerase reverse-transcriptase

[OP-052]

Training the New Generation of Climate Medicine Physicians

Emily Sbiroli

Emergency Medicine Physician, California, United States of America

Environmental impacts on human health are well-documented and emergency clinicians are on the frontline of caring for patients affected by climate disasters. Inadvertently, the delivery of healthcare carries an enormous climate footprint and contributes to the ongoing problem posed by pollution and climate change affecting the very same patients seeking care in the Emergency department. Education for clinicians on the impacts of climate change on human health has been historically lacking in medical, resident, and post-graduate training, and is similarly lacking in preparing clinicians for the delivery of sustainable health care. The University of Colorado Climate and Health Program is a novel higher education training program that seeks to close the knowledge gap between climate change, sustainability, and medicine. This proposed oral presentation will highlight the most important concepts in sustainability relevant to emergency clinicians, and discuss a model for training clinicians at the forefront of the climate crisis.

ORAL PRESENTATIONS

[OP-318]

Clinical Reasoning in Emergency Department: A Critical Necessity

Rakesh Guna Shekar, Anil Kumar, Kailash, Ankur Gupta, Amit Rohila, Mahaveer Rodha,

All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

Diagnostic errors in Emergency departments (EDs) are multifaceted, arising from both human and systemic factors. These errors, particularly those linked to bedside diagnostic processes, often stem from cognitive challenges in identifying underlying conditions. The strongest predictors of diagnostic errors are cases with non-specific, mild, or atypical symptoms, which complicate clinical reasoning. Accurate diagnosis is crucial as it triggers appropriate investigations and treatments, leading to effective patient management. Emergency physicians (EPs) face the challenge of triaging patients in crowded, high-pressure environments, ensuring that critically ill patients receive timely care. However, cognitive errors can occur when EPs rely heavily on intuitive (System 1) reasoning, which, while efficient for initial diagnosis, may lead to mistakes in complex cases. For instance, a chronic obstructive pulmonary disease patient with worsening symptoms was misdiagnosed initially, only to be correctly diagnosed with pulmonary embolism after a more detailed evaluation. Similarly, a patient with chest pain was initially suspected of having a myocardial infarction but was later found to have an aortic dissection following further assessment. Overcrowding and stress in EDs exacerbate cognitive errors, leading physicians to make rushed decisions. This "tunnel vision" can limit their receptiveness to crucial information. Therefore, balancing intuitive decision-making with deliberate, analytical (System 2) reasoning is essential. Slowing down, reassessing, and maintaining awareness of cognitive pitfalls can reduce diagnostic errors. A deeper understanding of ED cognition is vital for navigating the cognitive minefield and ensuring high-quality patient care. Achieving this balance is key to improving outcomes and reducing errors in emergency settings.

Keywords: Cognition, overcrowding, diagnostic error

[OP-331]

Integrating Palliative Care in Emergency Medicine: Need for Early Intervention and Training

Rakesh Guna Shekar, Anil Kumar, Bhavya, Nitin, Ashok, Amit Rohila, Mahaveer Rodha

All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

A 70-year-old male with a known history of right lung carcinoma and multiple metastases, along with recurrent right pleural effusion, presented to the Emergency department with severe breathlessness. Upon arrival, he was tachypneic and assessed by the emergency physician. A dilemma arose when the patient's family refused interventions such as intubation, pleural tap, and central line insertion. After resuscitation, the patient showed some improvement in consciousness but declined hospital admission. Given the patient's poor prognosis, palliative care counseling was provided, and home-based care was recommended. In India, there is a pressing need for greater recognition and integration of palliative care, particularly given the high number of patients with terminal illnesses. Emergency physicians (EP) must be trained in palliative care to improve the quality of life for terminally ill patients. Palliative care aims to prevent and relieve physical, emotional, social, and spiritual suffering, and involves discussing and setting goals of care with patients. It can be provided alongside disease-modifying therapies such as chemotherapy or dialysis. As the population ages, the early incorporation of palliative care into patient management is increasingly critical. Studies suggest that Emergency departments (EDs) can play a significant role in addressing the palliative care needs of seriously ill patients. By equipping EPs with the skills to engage in advanced care planning and end-of-life discussions, we can close the gap in palliative care training within emergency medicine. Early palliative care interventions in the ED can positively impact patient care, reducing the burden on the healthcare system by decreasing ED visits.

Keyword: Palliative care

ORAL PRESENTATIONS

[OP-365]

Frontline Excellence: The Evolution and Impact of Emergency Medicine at AIIMS Jodhpur

Rakesh Guna Shekar, Mahaveer Rodha, Amit Rohila, Ankur Sharma, Bharat Choudhary

All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

Emergency medicine is a specialty that combines rapid decision-making and life-saving interventions, where every second matters. Practitioners are at the forefront of patient care, where their swift actions and expert judgments can be the difference between life and death. Originating from the battlefield during the French Revolution, where the concept of transporting wounded soldiers to receive definitive care began, emergency medicine has since become an essential part of modern healthcare. Recognized as a critical specialty by the Medical Council of India in 2009, it plays a vital role in healthcare systems across the globe. At All India Institute of Medical Sciences, Jodhpur, the department has undergone significant transformations since 2020, evolving from an unrecognized unit to a well-established department providing essential emergency care to the population of Western Rajasthan. Catering to 2,500 to 3,500 patients monthly, with 100 to 150 daily, the department handles cases of varying severity. In a country where emergency medicine is still establishing its foundation, we strive to become a model for the future. Academic rigor and strong teamwork have been crucial in overcoming challenges, and the introduction of ultrasonography has significantly enhanced patient care. Our residents and faculty, driven by adrenaline, are the backbone of our operations. Leading the team in the chaotic environment of a busy Emergency department, where multiple critical cases must be managed simultaneously, requires prioritization, focus, and leadership. While the intense pressure can lead to burnout, the satisfaction of seeing once critically ill patients recover keeps us motivated and dedicated to this demanding yet rewarding field.

Keyword: Emergency medicine

[OP-509]

Clinico-epidemiological Profile of Patients Requiring Massive Hemorrhage Protocol

Mohini Singh, Varnan Prajapati, Anand Kumar Das, Tej Prakash Sinha

All India Institute of Medical Sciences, New Delhi, Department of Emergency Medicine, New Delhi, India

Aim: Hemorrhagic shock remains the significant cause of mortality in trauma patients. The implementation of Massive Hemorrhage Protocols (MHPs) aims to improve outcomes in these patients. This study evaluates the demographic backgrounds, mechanisms of injury, and injury types that predict the need for MHP upon arrival to the Emergency department.

Materials and Methods: A retrospective study was conducted in the Department of Emergency Medicine at Jai Prakash Narayan Apex Trauma Centre, a Level 1 trauma center. All trauma patients admitted to the Emergency department who required MHP activation between 1st July 2024 and 30th August 2024 were included. Relevant data were collected and analyzed.

Results: During the two-month period, 64 patients required MHP activation, with an average age of 33.5 years. The most common mechanisms of injury were road traffic incidents (RTIs) (37.5%, n=24), followed by falls (25%, n=16). Of the patients, 84% (n=54) were male, and 16% (n=10) were female. 66.7% of patients had ABC score ≥2. Most patients had polytrauma involving the chest, abdomen, and pelvis, while a few had solitary injuries that necessitated MHP activation.

Conclusion: RTIs, particularly involving pedestrians and two-wheeler riders, are the most common mechanisms of injury requiring MHP activation, followed by falls. Other mechanisms also significantly contribute to the need for MHP in trauma patients. Majority had ABC score ≥2.

Keywords: Massive Hemorrhage Protocol, demographics, injury type, modified shock index, ABC score

ORAL PRESENTATIONS

[OP-382]

To Re-organize Red Area of Emergency Department of Medical College of Difficult Terrain Through Virtual Mentoring at Arunachal Pradesh, India-Nurse Led Pilot Project

Geeta Sinha[1], Roopa Rawat[2], Kanishka[3], Neha Bisht[4], Tej Prakash Sinha[5], Sanjeev Bhoi[5]

[1]Jai Prakash Narayan Apex Trauma Centre (JPNATC), All India Institute of Medical Sciences (AIIMS), New Delhi, Emergency Nurse, Delhi, India

[2]World Health Organization Collaborating Centre for Emergency and Trauma Care (WHO CCET), Regional Nursing Lead, New Delhi, India

[3]World Health Organization Collaborating Centre for Emergency and Trauma Care (WHO CCET), Delhi, India

[4]World Health Organization Collaborating Centre for Emergency and Trauma Care (WHO CCET), Community Lead, Delhi, India

[5]Jai Prakash Narayan Apex Trauma Centre (JPNATC), All India Institute of Medical Sciences (AIIMS), Emergency Medicine, Delhi, India

Aim: World Health Organization recognized importance of standardized resuscitation area to provide quality emergency care to sick patients. The lack of standard red area was identified in the national All India Institute of Medical Sciences-National Institution for Transforming India study. Therefore, an economic, feasible method was devised and piloted to reorganize the red area.

Materials and Methods: This is the interventional observational study conducted in a red area of an Emergency departments (ED) at Arunachal Pradesh Medical College during March-July 2024. Administration was sensitized and agreed for this improvement initiative. Virtual sessions started initially for connection building, sensitization, onboarding, and engagement of all the stakeholders. A comprehensive baseline assessment was conducted through virtual assessment, focus group discussions, and a standard self-assessment toolkit to check the availability, functionality, and usability of essential equipment, supplies, materials, and drugs. All information was discussed and analyzed with the researcher team. A contextualized plan for reorganization of the red area has been prepared based on the pattern of cases. Online virtual mentoring session started. Post-assessment was done through virtual assessment, video, and online simulation to ensure functionality of the reorganized red area.

Results: The red area was reorganized as per the national standards and contextualized as per the local needs with the help of experts for optimal utilization with ease in an economic way. The new red area looked organized and reduced the time, efforts, and energy of staff while doing lifesaving procedures.

Conclusion: The virtual mode of reorganization of the red area is an economic and pragmatic way to develop a quality resuscitation area.

[OP-196]

The Use of WhatsApp as a Dissemination Tool for Clinical, Ethical and Risk Management Medical Education in the Emergency Department

Merav Slotky

Bnai Zion Medical Center, Department of Emergency Medicine, Haifa, Israel

Aim: To highlight the use of WhatsApp as a tool for dissemination of medical education using local case reports. Dissemination has been defined as “the targeted distribution of information to a specific clinical practice audience”. Getting the findings of your medical practice and experience to the people who can make use of them, to maximize the benefit of the clinical knowledge without delay in order to stimulate the spread of knowledge and to help resolve the dilemmas of clinical practice.

Materials and Methods: Local case reports of patients who presented to the Emergency department of a single institute have been disseminated using WhatsApp. The audience was WhatsApp group members including attendings, residents, interns, nursing staff and risk management committee members.

Results: Between January 2023-July 2024, 30 case presentations have been disseminated. The cases have been de-identified, so patient and care giver authorization generally would not be required. To each case a quote from the relevant medical literature has been added, using short presentations which take only a few minutes to read. Subjects included: Intoxications, Neurology, Psychiatric Emergencies, Infectious Disease, Ethics, Medical Law, Vascular, Orthopedics, Acute Care at Home, Immunology, Trauma, Adverse events or complications and etc. All case presentations have been written by the same physician using the same PowerPoint template.

Conclusion: It is very difficult to demonstrate the efficacy of WhatsApp dissemination on the medical practice, nevertheless, we believe that it is a practical dissemination tool to help your audience understand and interpret your local medical experience and knowledge.

ORAL PRESENTATIONS

[OP-222]

Validation of the Acutely Presenting Older Patient Screener for Short-term Mortality Prediction in Older Patients Hospitalized for COVID-19

Rosalinde A. L. Smits[1], Bas F. M. van Raaij[1], Steffy W. M. Jansen[2], Jessica M. van der Bol[3], Carolien M. J. van der Linden[2], Harmke A. Polinder-Bos[4], Hanna C. Willems[5], Esther M. M. van de Glind[6], Ewout W. Steyerberg[7], Maarten van Smeden[8], Jacobijn Gusseklo[9], Simon P. Mooijaart[1,9], Stella Trompet[1]

[1]Leiden University Medical Centre, Department of Internal Medicine, Division Gerontology and Geriatrics, Leiden, The Netherlands

[2]Catharina Hospital, Clinic of Geriatrics, Eindhoven, The Netherlands

[3]Reinier de Graaf Hospital, Clinic of Geriatric Medicine, Delft, The Netherlands

[4]University Medical Centre, Erasmus MC, Department of Internal Medicine, Rotterdam, The Netherlands

[5]Amsterdam University Medical Centre, Department of Internal Medicine, Division of Geriatrics, Location AMC, Amsterdam, The Netherlands

[6]Alrijne Hospital, Clinic of Geriatrics, Leiderdorp, The Netherlands

[7]Leiden University Medical Centre, Department of Biomedical Data Sciences, Leiden, The Netherlands

[8]Utrecht University Medical Centre, Julius Center for Health Sciences and Primary Care, Utrecht, The Netherlands

[9]Leiden University Medical Centre, LUMC Centre for Medicine for Older People, Leiden, The Netherlands

Aim: During the Coronavirus disease-2019 (COVID-19) pandemic, reliable screening tools to predict outcomes were needed. The Aging-related Pseudomotoric Outcome Predictor (APOP) screener is routinely used on the Emergency department (ED) to predict risk of adverse outcomes in older people. The aim of this study was to validate the APOP screener for prediction of in-hospital and 30-days-mortality in older patients hospitalized for COVID-19.

Materials and Methods: Patients ≥70 years from a multicentre cohort hospitalized for COVID-19 with measured APOP risk were included. External validation analysis of the APOP screener was performed including discrimination and calibration.

Results: Three hundred and eighty-nine patients [median age 80 (interquartile range: 75-85) years, 138 APOP high risk] were included. APOP high risk patients more often lived institutionalized, (26% vs. 4%; p<0.001), had more comorbidities [Charlson Comorbidity Index 2 (1-3) vs. 2 (0-3); p=0.002] and were less often fit (Clinical Frailty Scale 1-3 17% vs. 62%; p<0.001). APOP high risk patients had a higher risk of in-hospital-death [odds ratio (OR): 1.6, 95% confidence interval (CI): 1.0-2.6] and death within 30 days [OR: 2.7 (95% CI: 1.7-4.2)]. The APOP screener discriminated poorly for in-hospital mortality [AUC: 0.56 (95% CI: 0.48-0.63)] and for 30-days-mortality [area under the curve (AUC): 0.56 (95% CI: 0.48-0.63)] . Calibration plots revealed that the APOP overestimated both mortality risks.

Conclusion: The APOP screener had a poor predictive performance for in-hospital and 30-days-mortality in older people hospitalized for COVID-19. Screening tools routinely used on the ED may not be useful to predict mortality in radically different than usual clinical circumstances such as during a pandemic of a novel disease.

[OP-150]

What Healthcare Needs Now: Frontline First

Thomas Spiegel

University of Chicago Medicine, Department of Emergency Medicine, Illinois, USA

In the current healthcare environment where compassion fatigue and burnout are pervasive, motivating exhausted healthcare workers to engage in quality care is more challenging than ever. Healthcare executives can look to other industries for transferable learnings and craft such learnings toward their own team's needs. During this session, Dr. Tom Spiegel, MD, MBA, MS will share leadership lessons and a novel quality improvement approach called "Frontline First" that drew from his 3 decade journey through the corporate and healthcare worlds and crafted collectively with the Quality Teams at University of Chicago (UChicago) Medicine. This session will focus on the components of a successful approach that develops an employee-centric and quality-minded culture and has been applied successfully in the Emergency Department at UChicago Medicine. Years prior to becoming the University of Chicago Medicine's Vice President and Health System Chief Quality Officer, for nearly two decades Dr. Spiegel was a member of Marriott International's management team including serving as the Vice President of Business Strategy for Marriott's Global Sales and Customer Care Division. Drawing upon his experience in both healthcare and the corporate world, Dr. Spiegel and team crafted an approach to Quality Improvement called "Frontline First". It consists of an eleven-step process beginning with executive-sponsored goals. The very next step brings these goals to frontline team members and actively engages them in solving the most pressing issues facing the Healthcare System. Every step of the process continues to keep frontline team members' at the center of the improvement process.

ORAL PRESENTATIONS

[OP-366]

Predictive Accuracy of Platelet-lymphocyte Ratio and Platelet-neutrophil Ratio in Detecting Early Trauma-induced Coagulopathy: A Pilot Observation

Amrutha T, Siju V. Abraham, Aboobacker Mohammed Rafi, Babu Urumese Palatty

Jubilee Mission Medical College and Research Institute, Department of Emergency Medicine, Kerala, India

Aim: Early trauma-induced coagulopathy (ETIC) is a significant predictor of morbidity and mortality in trauma patients. While traditional markers such as international normalized ratio (INR) and fibrinogen are used to detect ETIC, there is a need for cost-effective supplementary biomarkers. This study aimed to evaluate the predictive accuracy of platelet-lymphocyte ratio (PLR) and platelet-neutrophil ratio (PNR) in detecting ETIC alongside traditional parameters.

Materials and Methods: This prospective observational study enrolled 50 trauma patients presenting to the Emergency department within 6 hours of injury. PLR and PNR were calculated at admission, and patients were followed up for 24 hours to determine the presence of ETIC. Patients with an INR value above 1.4 or fibrinogen ≤100 mg/dL within 24 hours were considered to have ETIC.

Results and Conclusion: The predictive accuracy of PNR and PLR in detecting ETIC was assessed across two revised trauma score (RTS) severity categories: life-threatening (RTS 0-6) and non-life-threatening (RTS 7-12). In former, PNR showed a sensitivity of 85.71% and an accuracy of 53.3%, while PLR demonstrated a specificity of 87.50% with the same accuracy of 53.3%. In the latter PNR had a lower sensitivity of 28.57% and an accuracy of 34.9%, whereas PLR showed higher specificity (82.14%) and better accuracy (68.6%). When compared to traditional parameters, INR >1.4 demonstrated higher specificity and overall accuracy, particularly in the non-life-threatening category, where it achieved an accuracy of 94.3%. Fibrinogen ≤100 mg/dL showed lower sensitivity, high specificity across both categories.

[OP-292]

Investigation of Multiple Risk Factors in Patients Brought to the Emergency Department with Cardiopulmonary Arrest

Ziya Koçer, Başar Cander, Onur Bozdağ, Bahadır Taşlıdere

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: Cardiopulmonary arrest is a critical medical emergency requiring rapid and effective intervention, with a high risk of mortality. Understanding the risk factors leading to arrest, recognizing the event, and knowing how to intervene are essential for successful cardiopulmonary resuscitation (CPR). This study aims to guide healthcare professionals in improving resuscitation outcomes by emphasizing the importance of identifying and addressing multiple risk factors in cardiopulmonary arrest cases.

Materials and Methods: This retrospective study analyzed 151 witnessed cardiopulmonary arrest patients brought to the hospital over a twenty-seven-month period (01.02.2022-01.05.2024). Data on risk factors, including age, gender, comorbidities, and initial blood laboratory values, were statistically examined.

Results and Conclusion: Among the 151 patients, the mean age of those who survived with successful CPR was 68.48±15.85, compared to 68.03±14.67 for those who died, with no significant age difference between the two groups. Women made up 30.46% and men 69.53% of the patients, with no significant gender difference in CPR outcomes. Chronic kidney disease and coronary artery disease (CAD) were significantly associated with successful CPR. Among the blood values analyzed, only platelet and pH levels were significantly higher in survivors, while calcium, sodium, potassium, CKMB, troponin, and base deficit values were higher in non-survivors. High calcium and potassium levels were associated with increased mortality risk, while the presence of CAD and elevated pH levels were protective factors. Understanding the causes of arrest and the role of these risk factors is crucial for improving CPR success and patient outcomes in the Emergency department.

ORAL PRESENTATIONS

[OP-172]

Evaluation of Diuretic Therapy Response in Patients with Pulmonary Edema in the Emergency Department Using the Reverse-FALLS Protocol

Ömer Faruk Koç[1], Elif Betül Balcı[1], Ertan Sönmez[2], Başar Cander[1], Bahadır Taşlıdere[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Kütahya University of Health Sciences Faculty of Medicine, Department of Emergency Medicine, Kütahya, Turkey

Aim: Cardiogenic pulmonary edema (CPE) is a serious condition that can result in impaired gas exchange and acute respiratory failure, often with high mortality. Diuretics are considered the cornerstone of CPE treatment. The doses of furosemide should be individualized according to patient status and response. In cases of pulmonary edema, ultrasound (USG) is an effective method for determining extravascular and intravascular volumes. By considering both the extent of extravascular lung water and the inferior vena cava (IVC) size, clinicians can obtain objective data to guide them in determining the appropriate level of diuresis for safely and effectively treating pulmonary edema.

Materials and Methods: The reverse-FALLS protocol is a diagnostic tool used in emergency settings, primarily through bedside USG, to assess and manage fluid overload in patients, particularly those with pulmonary edema. This protocol involves the evaluation of both extravascular (B-lines) and intravascular volumes (IVC diameter).

Results and Conclusion: A decrease in B lines was detected in 82.5% of our patients when compared before and after diuretic treatment. When the number of B lines detected in the upper right, lower right, upper left, and lower left regions by USG performed when the patients were admitted to the emergency room was compared with the USG performed after diuretic treatment, a statistically significant difference was found. Diuretic therapy can be personalized for patients with pulmonary edema by using lung USG to assess fluid accumulation and tailor the treatment to the patient's specific needs.

Keywords: Cardiac tamponade, echocardiogram, pericardiocentesis

[OP-085]

Prehospital Medicine-importance and Challenges in a Thickly Populated Developing Country

Ajith Venugopalan, Smrithi Vijaykumar

Caritas Hospital & Institute of Health Sciences, Emergency Medicine & Trauma Care, Kerala, India

Aim: India is the second most populous country in the world. The speedy arrival of an emergency ambulance with trained personal (EMT/paramedics) could mean the difference between life and death for a seriously injured or ill person. Currently, India does not have a centralized body for Emergency Medical Services. Hence, in this study we would like to check whether the existing Prehospital System, is it adequate in India analysis over 200 plus transportations.

1. To evaluate the adequacy of the existing Prehospital System in India,

2. To evaluate the availability of communication platform from ambulances in India.

Materials and Methods: Doctrinal research is a theoretical study. The National Ambulance Code AIS:125 has been introduced. It was recommended by the CMVR-TSC and approved by the ministry. Our emergency medicine team at Caritas Hospital & Institute of Health Sciences, Kottayam, Kerala, India have been working hard for the development of various modalities of prehospital emergency care including bike ambulance, level D ambulance and even water medical unit. We have incorporated digital and AI units in these. Caritas Remote Ambulance Telemetry Service (C-RATS) is the first of its kind in Telemedic AI ED on wheels in India.

Results and Conclusion: Prehospital care is an essential component of patient care where the expert care is extended outside the hospital. New age ambulances are equivalent to critical care unit. Measures like C-RATS will help in providing better patient care.

ORAL PRESENTATIONS

[OP-053]

Global Warming and Artificial Intelligence-predicting Heat Injuries and Reducing Heat Illness Mortalities in the Indian Setting

Niket Verma, Preeti S. Dhoat, Amandeep Kaur, Maninder Kansal, Deepak Chaudhary, Rohit Raina

All India Institute of Medical Sciences, Department of General Medicine, Punjab, India

Rising temperatures, coupled with high humidity levels have led to a 30 per cent rise in the magnitude of 'heat stress' in India between 1980 to 2020. With an increase in global warming, coupled with rapid urbanization and a declining green cover, India is bearing the brunt of heat related illnesses. Over the past few years, there has been a rise in the incidence of heat strokes across the country. With the Indian Meteorological department predicting widespread heatwave like conditions in 2024, the Union Health Ministry conducted preparedness reviews and instructed state governments to implement the Heat Health Action Plan. However, there is an urgent need to develop an effective 'Heat Injury Prediction System' to reduce mortality. Recently a digital platform was launched to record cases and deaths from heatstroke. Linking meteorological data on such platforms can identify temperature and humidity levels that correspond with the highest incidence of heat stroke. Healthcare institutions can be alerted and regional warnings may be issued in advance. Wearable devices are being developed which can detect changes in physiological parameters and predict an impending heat stroke. These can alert the wearer, family members and even nearby ambulances. Hospitals can receive the patient's vitals before arrival and plan further management. While the internet of things can connect such platforms, an artificial intelligence based application can analyse and learn from the data thereby reducing heat illness mortalities. This can have widespread use in India and across the world.

Keywords: Artificial intelligence, heat stroke, global warming

[OP-187]

Virtual Reality for Training Nursing Students

Paweł Więch, Izabela Sałacińska, Marek Muster, Dariusz Bazaliński

University of Rzeszów Faculty of Medicine, Department of Nursing and Public Health, Rzeszów, Poland

The Centre for Medical Simulation endeavors to advance the practical training of students, particularly in nursing, through the incorporation of sophisticated simulation technologies. Historically, high and low fidelity simulators have been fundamental in the educational framework, offering varying degrees of realism to emulate clinical scenarios. Nevertheless, with the progression of technology, the implementation of virtual reality (VR) in medical training has become increasingly prominent, providing immersive and interactive experiences that can substantially augment educational outcomes. Body interact (BI) is an exemplar of such VR-based tools utilized for clinical education. It fulfills several key functions: enhancing clinical education, optimizing pedagogical processes, and assessing the efficacy of these interventions. By replicating real-world medical scenarios, BI enables students to transpose their theoretical knowledge into practical applications. This experiential learning approach facilitates the development of clinical reasoning abilities, diagnostic skills, and informed decision-making in patient care. Empirical evidence indicates that the use of BI in small group settings has a favorable impact on individual learning experiences. It effectively merges theoretical instruction with practical application, supports the cultivation of communication skills, and augments the capacity for group management and risk assessment. These observations underscore the significance of BI in delivering a holistic educational experience, equipping students with the competencies necessary for real-world clinical environments.

ORAL PRESENTATIONS

[OP-326]

Elevated Interferon-gamma Levels and Their Impact on Sepsis Survival Outcomes

Rahmatul Yasiro[1], Agustin Iskandar[2], Indah A. Wulanda[2], Deasy A. Tandio[3]

[1]Dr. Saiful Anwar General Hospital, Faculty of Medicine Universitas Brawijaya, Clinical Pathology Resident, East Java, Indonesia

[2]Dr. Saiful Anwar General Hospital, Faculty of Medicine Universitas Brawijaya, Department of Clinical Pathology, Clinical Pathologist, East Java, Indonesia

[3]Siloam Hospital Kupang, Clinical Pathologist, East Nusa Tenggara, Indonesia

Aim: Numerous biomarkers have been investigated as predictors of outcomes in sepsis patients. Interferon-gamma (IFN-γ) levels increase in response to bacterial or viral infections, suggesting its broad applicability for sepsis patients. However, survival studies focusing on IFN-γ in sepsis are limited, especially in developing countries. This study aims to know the role of IFN-γ as a mortality predictor in sepsis patients.

Materials and Methods: This survival cohort study included 78 sepsis patients diagnosed with SEPSIS-3 criteria. IFN-γ levels were measured using the LEGEND MAX ELISA kit. Kaplan-Meier survival analysis and Cox regression were employed to evaluate the performance of IFN-γ levels as mortality predictors in sepsis patients.

Results and Conclusion: Patients with IFN-γ levels below 65.82 pg/mL had a median survival of 22 days, whereas those with IFN-γ levels equal to or exceeding 65.82 pg/mL had a median survival of 9 days. The hazard ratio (HR) for mortality in patients with higher IFN-γ levels was 1.938 (95% confidence interval: 1.078-3.482, p=0.027), indicating a significantly increased risk of death. These findings suggest that elevated IFN-γ levels are associated with poorer survival outcomes in sepsis patients. The significant disparity in survival times highlights the potential of IFN-γ as a prognostic marker for sepsis. Furthermore, the HR value underscores the need for clinicians to consider IFN-γ levels when evaluating sepsis severity and prognosis. IFN-γ levels can serve as a valuable prognostic marker in sepsis patients, aiding in the prediction of clinical outcomes.

Keywords: Interferon-gamma, sepsis, survival analysis, hazard ratio

[OP-446]

The ER OPD: A Novel Approach in Emergency Department Functioning at AIIMS Bhopal

Mohammed Yunus, Rashmi Verma, Bhupeshwari Patel

All India Institute of Medical Sciences, Department of Emergency Medicine, Madhya Pradesh, India

Emergency departments (ED) frequently contend with severe overcrowding, unavailability of beds resulting in extended waiting periods and diminished patient satisfaction, leading patient -doctor disharmony. To mitigate this issue, All India Institute of Medical Sciences (AIIMS) Bhopal has instituted an innovative Fast Track System (FTS) designed to expedite the care of all acuity patients through the concept of emergency room (ER) outpatient department (OPD). The innovative notion is helpful and functional 24*7, on all holidays and festivals when the patient finds difficulty in receiving treatment from routine OPD. This system identifies patients with non-urgent vs. urgent conditions coming to emergency where symptomatic management, observation, counselling and discharge on oral medication. ER OPD serves for treatment, offering care to patients with chronic, non-treatable terminal illnesses who have frequent health complaints. The ER OPD has significantly changed the patient in-flow dynamics. Preliminary data reveals a marked reduction in wait times for all acuity patients, thereby enhancing overall patient flow and optimizing resource allocation within the ED. Moreover, the system has demonstrated significant potential in elevating patient satisfaction and improving clinical outcomes by delivering timely care and alleviating the strain on emergency resources. The deployment of the ER OPD at AIIMS Bhopal signifies a pioneering advance in emergency care delivery, potentially serving as a paradigm for other institutions grappling with similar challenges. Further the topic is warranted to evaluate the long-term impact of this approach on patient outcomes and healthcare efficiency. Emergency care through FTS for Swift Management of All Acuity Patients through ER OPD at AIIMS Bhopal is a new approach.

ORAL PRESENTATIONS

[OP-145]

Anaphylactoid Syndrome of Pregnancy: A Case Study

Mohizodabegim Ravshabek Qizi Yusufbekova[1], Gulzoda Nishanova[2], Kamoliddinbekzod Yusupov[1]

[1]Central Asian University Faculty of Medicine, Medical Student, Tashkent, Uzbekistan

[2]King Faisal General Hospital, Obstetrics and Gynecology Surgeon Specialist, Riyadh, Saudia Arabia

Aim: The catastrophic entry of amniotic debris into the maternal pulmonary circulation, leading to cardiovascular collapse, results in emergency complications in pregnancy with an unknown aetiology. This can occur in healthy women during labor or cesarean section, and up to 48 hours post-delivery, during abortion, and amnio-infusion. Data from the National Amniotic Fluid Embolus Registry indicate that the process resembles anaphylaxis more than embolism, leading to the current use of the term anaphylactoid syndrome of pregnancy.

Materials and Methods: A 45-year-old woman, G4P5 at 39 weeks, was admitted for labour. Artificial rupture of the membrane was done and fetal distress developed which indicated urgent cesarean section under general anaesthesia, she experienced two cardiac arrests during surgery. Post-operation, she began bleeding on drainage. A total abdominal hysterectomy was performed, but the bleeding continued after a 2-hour follow-up. A haematologist treated it as disseminated intravascular coagulation, initiating cryoprecipitate and factor 7a. A third cardiac arrest occurred, and after resuscitation, her blood pressure was 80/60 on dopamine and epinephrine. She was transferred to the intensive care unit (ICU) in critical condition for ICU. Despite multi-disciplinary team management, she expired.

Results and Conclusion: The maternal mortality rate for this complication ranges from 10 to 16% globally, while the fetal mortality rate exceeds 30%. Complications include pulmonary edema, intractable convulsions, disseminated intravascular coagulation, and cardiac arrest. Early recognition and prompt aggressive treatment can improve survival rates and are crucial for nurses and other clinicians.

Keywords: Amniotic fluid embolism, anaphylactoid syndrome of pregnancy, obstetric emergency

[OP-046]

Regional Anesthesia as an Adjunctive Tool for Pain Management During Mass Casualty Incident

Muhamad Syis Zulkipli, Mohamed Alwi Bin Abdul Rahman

Selayang Hospital, Clinic of Emergency Medicine, Selangor, Malaysia

Strenuous environment has become the norms in Emergency department. The influx of patients is no stranger to the inadequacy of paramedics which become the major obstacle in maximizing the highest level of care to the patients. The congestion in ward led to longer stranded time for the patients in emergency ward. A family of five were involved with MVA and were triaged to red zone. Code disaster was activated. The first patient sustained mangled limb with crushed injury of right foot and the other patient had crush injury over left hand. Both were restless, shouting in pain and tachycardic. Titrated dose of fentanyl 0.1/kg mcg was served until the total dose of 0.2 mcg/kg. The pain was persistent until the emergency physician decided to perform right femoral and sciatic nerve block for the first patient and supraclavicular nerve block for the second one. The procedure was ultrasound guided and intravenous diluted ropivacaine 0.5% was used. Both of the patients showed dramatic decrement in pain intensity with pain score dropped from 10/10 to 1/10 in five minutes. The pain threshold remained under control before both of the patients were sent to operation theatre. In conclusion, using nerve block for pain management dramatically transformed the quality of care of the patients by providing better pain control and allowed medical staffs to focus more on other numbers of task in Emergency department without compromising the quality of care.

ORAL PRESENTATIONS

[OP-406]

Early Administration of Acylclovir Dramatically Improved the Clinical Outcome of Bickerstaff's Encephalitis

Muhamad Syis Zulkipli, Shuib Rambat, Khatijah Ahmad

University Technology of Malaysia, Selayang Hospital, Clinic of Emergency Medicine, Selangor, Malaysia

Bickerstaff encephalitis is an autoimmune disorder which characterized by ataxia, reduced of consciousness and opthalmoplegia. The treatment includes plasmapheresis and intravenous immunoglobulin. It is a clinical diagnosis and computed tomography brain is inconclusive. This is a case of a 25-year-old gentleman who was diagnosed as Bickerstaff encephalitis during his visit to Emergency department and receive prophylactic intravenous acylclovir and showed remarkable improvement. A 25-year-old Nepalese gentleman presented to Emergency department of Selayang Hospital in 1st of July 2023 with complains of headache and eye pain. He was triaged to red zone because the team suspected he had intracranial pathology as he also claimed that he is suffering from the worst headache he never experienced before. Further history revealed that he had cough and runny nose with sore throat and denies history of travelling. After 30 minutes of admission in red zone, he developed status epilepticus and was intubated. Pre and post intubation was unremarkable and intravenous ceftriaxone 1 with intravenous acylclovir 500 mg stat was served. Blood parameters showed normal leukocytes count and increment of lymphocytes value 3 times higher than normal. At this point, the diagnosis of meningoncephalitis with differential diagnosis of Bickerstaff's encephalitis was established. The case was consulted to neurologist on-call and he accepted the case with the diagnosis which was made by the attending emergency physician. In this case, the patient does not receive intravenous immunoglobulin but showed dramatic improvement with multi approach care and recovered dramatically.

[OP-738]

Mind the Gap, Across Theory: Multidisciplinary Team as Innovative Teaching for Clinical Skills Acquisition

Francesca Bono, Nilsu Gencap, Jien Li Hu, Asya Minolfo, Christian Mustaccio, Giovanni Ricevuti, Martina Rusu, Guillemette Tekieli

University of Pavia Faculty of Medicine, Pavia, Italy

Aim: The Covid pandemic has prompted a need for change in the role of pharmacists, leading to a necessary evolution in pharmacy education. The University of Pavia is addressing this by introducing an innovative teaching methodology that focuses on developing the hard and soft skills required for clinical pharmacist.

Materials and Methods: Inter-faculty courses have been included within the pharmacy, medicinal chemistry and pharmaceutical technology and medicine programmes.

With frontal and practical lectures, each student can acquire the necessary knowledge and understand the basic life parameters tests.

Following the training phase, each student learns to assess real or fictitious clinical cases invented by students or using softwares like "Mydispense", engaging in role-plays as a part of a student multidisciplinary team (sMDT) in a specific assigned health profession.

Moreover, interfaculty courses that organize cardio metabolic cognitive screening provide real-life experience and skills to students.

Lectures by international professors, featuring European institutions like University of Paris Saclay and Trinity College of Dublin, introduces a mixed experience during the course which allows comparison and the sharing of pedagogical methods across universities.

Achievement of the objectives set was assessed by a practical examination, where successful students receive an Open Badge.

Results and Conclusion: With this project, we can affirm the concrete importance of the introduction of inter-faculty courses in academic training, where the student becomes an active part of sMDT, putting into practice theoretical concepts while also developing soft skills. This opportunity allows the students to understand their future role in the medical world and explore ways to work within their own community.

ORAL PRESENTATIONS

[OP-739]

First Look at Emergency Department Pharmacist in Multidisciplinary Team

Francesca Bono, Nilsu Gencap, Jien Li Hu, Asya Minolfo, Christian Mustaccio, Giovanni Ricevuti, Martina Rusu, Guillemette Tekieli

University of Pavia Faculty of Medicine, Pavia, Italy

Aim: Medication management is crucial in the Emergency department (ED). The American College-of Emergency Physicians (ACEP) 1 recognizes the crucial role of Emergency Department Pharmacist (EDPh) in ensuring the appropriate utilization of pharmaceuticals.

Accordingly, the aim of this project is to highlight the evolving role of the EDPh as an integral member of the Multidisciplinary-Team (MDT), actively involved in therapeutic reconciliation-optimization.

Materials and Methods: This prospective observational study, conducted in the ED of a hospital in Lombardy, focused on drug intoxications and interactions using "INTER check-Web"2 and the summary-of-product-characteristics. Patient data were recorded in a precompiled form based on preliminary/posthumous medical history, excluding iatrogenic diagnoses. During discharge, the EDPh assisted the physician in explaining the prescribed therapy to the patient.

Results and Conclusion: Over five weeks, 137 clinical cases were analysed, which three were selected:

First case involved a 22-year-old man who had intentionally overdosed on Paracetamol.

The EDPh collaborated with the "Centro-Antiveleni"3 and physicians were to determine the optimal dosage of Acetylcysteine for detoxification.

Second case concerns a 43-year-old woman with Atrial-Fibrillation and Hypertension who entered ED with Hypokalaemia and dizziness caused by Hydrochlorothiazide and Salbutamol, as well as LongQT due to an interaction between flecainide and hydrochlorothiazide. After consulting a cardiologist, flecainide and olmesartan/hydrochlorothiazide were discontinued, and magnesium was added.

Third case involved a 53-year-old woman with a congenital-solitary-kidney, being treated for diabetes mellitus. She reported abdominal pain, emesis, and nausea. During a consultation, the EDPh identified diabetic-ketoacidosis due to SGLT2 inhibitor use.

From the cases presented above, the collaboration between the physician and the EDPh can be useful to expedite.

[OP-479]

Analysis of Isolated Clavicle Fractures Seen in the Emergency Department

Ayşe Şule Akan

Erzurum City Hospital, Clinic of Emergency Medicine, Erzurum, Turkey

Aim: Clavicle fractures are common fractures, especially in childhood. There are rare cases in adulthood. Since the clavicle is close to the shoulder area, the potential for trauma is high. Fractures are generally seen in the middle third of the region with some displacement. Many clavicle fractures can heal without surgery. In more serious clavicle fractures, surgical treatment may be required due to complications such as nonunion and malunion.

Materials and Methods: This study was planned with patients who applied to Kayseri City Hospital Emergency department between 01.01.2023 and 31.12.2023 and were diagnosed with isolated clavicle fracture (ICD diagnosis code: S42.0). The patients' age, gender, trauma and fracture types, joint association, and treatment method information were obtained retrospectively from the hospital information operating system database. Patients with missing data were excluded from the study.

Results and Conclusion: A total of 37 patients, including 26 (70.2%) male patients and 11 (29.7%) female patients, were included in our study. The mean age of all patients was calculated as 29.83±9.89 years. Of the patients participating in our study, 15 (40.5%) had clavicle fractures due to sports, 14 (37.8%) had clavicle fractures due to motor vehicle accidents, and 8 (21.6%) had clavicle fractures due to other traumas. It was determined that 35 (94.5%) patients had unilateral clavicle fracture and 2 (5.4%) patients had bilateral clavicula fractures. Clinicians should also consider the presence of an isolated clavicle fracture, especially in cases of high-energy trauma.

ORAL PRESENTATIONS

[OP-333]

Comparison of the Effectiveness of Scoring Systems in Paediatric Patients Presenting to the Emergency Department with Head Trauma

Egemen Keser, Övgü Özertural, Serhat Örün

Namık Kemal University Faculty of Medicine, Department of Emergency Medicine, Tekirdağ, Turkey

In our study, we examined the capacities of the Pediatric Emergency Care Applied Research Network, Canadian Assessment of Tomography for Childhood Head Injury and Children's Head Injury Algorithm for the Prediction of Important Clinical Events scales to detect traumatic brain injuries on the cases of children who applied to the emercency department with complaints of head trauma and underwent cranial computed tomography examination.

[OP-739]

Evaluation of the Nutrition of Patients Diagnosed with DM and CKD Who Applied to the Hospital From the Emergency Department

Sema Ayten, Emine Ünal

İstanbul Göztepe Prof. Dr. Süleyman Yalçın and Training and Research City Hospital, Clinic of Emergency Medicine, İstanbul, Turkey

Aim: Malnutrition is a common condition in hospitalized patients with chronic diseases. Unregulated blood sugar levels adversely affect nutritional status in patients with diabetes mellitus (DM). Additionally, factors such as insulin and oral antidiabetics, gastroparesis, certain psychological problems, and decreased physical activity can also impair nutritional status. In patients with chronic kidney disease (CKD), protein-energy malnutrition is common due to insufficient protein intake and increased catabolic processes.

Materials and Methods: In our study, we compared patients with DM and CKD-both among the most impactful chronic diseases on the human body-who developed acute conditions requiring hospitalization (diabetic ketoacidosis and acute kidney failure) with a control group of the same size to determine the extent to which these acute conditions are related to the patients' malnutrition status. Our control group consisted of patients diagnosed with DM and CKD who did not require hospitalization upon admission to the emergency department and were discharged in good health.

Results and Conclusion: A total of 101 patients were included in the study, comprising 51 cases (hospitalized patients) and 50 controls (discharged patients). Hospitalized patients were assessed with NRS-2002 (Nutritional Risk Screening) and mini nutritional assessment (MNA). According to the classification based on the NRS 2002 score, malnutrition was detected in 48 individuals (47.5%), while the remaining 53 individuals were found to be normal. Moreover, according to the classification based on the MNA score, 21 (20.8%) were normal, 51 (50.5%) were at risk of malnutrition, and 29 (28.7%) were malnourished.

Keywords: Diabetes mellitus, chronic kidney disease, malnutrition

ORAL PRESENTATIONS

[OP-740]

In Patients Diagnosed with Pulmonary Emboli Hounsfield Unit Value in Risk Classification Investigation of Its Importance

Yasemin Pisgin[1], Temel Fatih Yılmaz[2], Basar Cander[1], Bahadir Taslidere[1]

[1]Bezmialem Vakif University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Bezmialem Vakif University Faculty of Medicine, Department of Radiology, İstanbul, Turkey

Aim: Pulmonary embolism is a common condition that can cause significant morbidity and mortality. Hounsfield Unit (HU) is a scale used to measure radiodensity in computed tomography. In this study, the HU values of the clot were examined in the pulmonary CT scans of patients diagnosed with pulmonary embolism who presented to the emergency department.

Materials and Methods: The study was conducted by evaluating the pulmonary CT scans of patients diagnosed with pulmonary embolism who presented to the emergency department, with appropriate calculation of the HU.

Results and Conclusion: A total of 169 patients were evaluated; The average measured HU value was 58.24. In the ROC analysis, it was seen that the HU value had a statistically higher diagnostic efficiency in distinguishing between massive and peripheral in patients with high-medium Wells score (p=0.007). The HU value in deceased patients was statistically 18 HU higher than in survivors (p=0.047). The HU value of patients with high Wells scores was 25 HU lower than the HU value of patients with medium Wells scores (p=0.004). Our study highlights the potential utility of HU measurements in the assessment of PE. HU values not only provide diagnostic clarity in differentiating the severity of PE but also offer prognostic information that could inform clinical decision-making. Specifically, higher HU values are associated with increased mortality, while lower HU values are associated with more severe admissions and the potential for inpatient admissions.

Keywords: Pulmonary embolism, pulmonary CTA, Hounsfield Unit

[OP-741]

Investigation of Lactate, Base Deficit and Alactıc Base Deficit in Patients with Upper Gastrointestinal System Bleeding

Yılmaz Ersöz[1], Elmas Biberci Keskin[2], Başar Cander[1], Fatma Çakmak[3], Bahadır Taşlıdere[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Şişli Hamidiye Etfal Training and Research Hospital, Department of Internal Medicine, İstanbul, Turkey

[3]İstanbul Atlas University Department of Internal Medicine, İstanbul, Turkey

Aim: Gastrointestinal system (GIS) bleeding is one of the most common reasons for emergency department visits. The aim of this study is to investigate the impact of base deficit, lactate, and alactic base deficit-parameters that can be quickly assessed through blood gas analysis-on predicting the clinical outcome in patients presenting to the emergency department with GIS bleeding.

Materials and Methods: The study was retrospective and conducted at a single center from January 1 to December 31, 2022. The collected data included age, gender, blood gas (lactate, base deficit), and outcomes (discharge, intensive care, death).

Results and Conclusions: The study included 205 patients (135 males and 70 females). Deceased individuals had a lower average base deficit and higher lactate levels. There were no significant differences in ward admission based on alactic base deficit status. A base deficit cut-off value of >-0.65 was used to predict ward admission, yielding a sensitivity of 57.71%, specificity of 63.33%, PPV of 90.18%, and negative predictive value of 20.43%. According to the data obtained in our study, we observed that a lactate cut-off value >2.07 could be effective in predicting ICU admission for patients. We also found that a base deficit cut-off value >-0.65 could be effective in predicting admission to the ward. The mean base deficit was lower in patients who resulted in death compared to survivors, while the mean lactate level was higher. However, no significant result was found regarding alactic base deficit.

Keywords: Upper gastrointestinal bleeding, base deficit, alactic base deficit

Xth World Academic Congress of Emergency Medicine

WACEM 2024 ITALY

POSTER PRESENTATIONS

November 6, 2024-November 9, 2024

Eurasian J Emerg Med. 2024;23(Supplement 1): 75-135

http://dx.doi.org/10.4274/eajem.galenos.supplement.1

[PP-393]

Challenges in Implementation of Electronic Medical Records in the Busy Emergency Department of A Tertiary Care Hospital

Nirmal Peter Abraham, Renjith T.P.

Iqraa International Hospital and Research Centre, Calicut, Kerala, India

Aim: Implementing electronic medical records (EMR) in the Emergency department (ED) poses distinct challenges compared to those in outpatient and inpatient settings. This study aimed to examine the specific difficulties associated with introducing EMR in the bustling environment of a tertiary care hospital's ED.

Materials and Methods: A descriptive cross-sectional study was carried out with 120 ED staff members, including doctors and nursing officers, to explore the challenges associated with the introduction of EMR in the ED. The study used a structured questionnaire administered one month after the EMR system was implemented. Descriptive statistical analysis of the questionnaire responses was performed, with quantitative data analysed using frequencies, percentages, means, and standard deviations. Additionally, thematic analysis was employed to identify recurring themes and patterns in the qualitative responses to open-ended questions.

Results and Conclusion: The study provided valuable insights into the difficulties associated with implementing the new EMR system. Challenges identified included insufficient basic computer knowledge, difficulties adapting to the EMR, problems with the new software, inadequate computer availability, and limited support from the IT department. The EMR system has affected patient care by increasing the time spent per patient and negatively impacting doctor/nurse-patient communication. Despite these issues, the EMR system has been accepted by the staff due to its improvements in documentation and acceleration of the discharge process. Recommendations were made and implemented to enhance the EMR system's effectiveness and acceptance. A follow-up study is planned six months after the introduction of the EMR.

Keywords: EMR, emergency, challenges

[PP-512]

Diffuse Alveolar Hemorrhage After Electronic Cigarette Use: Case Report

Ayşe Şule Akan, Fatma Hançer Çelik

Kayseri City Hospital, Clinic of Emergency Medicine, Kayseri, Turkey

The widespread use of electronic cigarettes and vaporizing devices has become an important public health problem because the aerosols used in these devices cause various damages to the lungs. A 23-year-old male patient came to the Emergency department with complaints of cough and shortness of breath for the last two days. His vital signs were blood pressure 117/53 mmHg, pulse 147 beats/minute, respiratory rate 20 breaths/minute, and fingertip oxygen saturation 60% in room air. Physical examination revealed rales in the lower and middle zones of both lungs. In his detailed anamnesis, it was learned that he had started to use electronic cigarettes for two days and had used them in excessive amounts because he liked the taste and then blood came from his mouth with coughing. On admission laboratory findings, hemoglobin was 6.3 g/dL, C-reactive protein 23.2 mg/L, white blood counts 12.89 10^3/microliter. Other laboratory parameters were within normal limits. Contrast-enhanced computed tomography of the patient showed no embolism in the pulmonary artery and its branches, but diffuse ground glass appearance was observed in the lower and middle zones of bilateral lungs. Pulmonary hemorrhage due to electronic cigarette was considered and the patient was transferred to the intensive care unit with medical treatment. The patient whose tachypnea increased, general condition deteriorated, saturation did not increase despite high-flow nasal oxygen and could not tolerate naninvasive mechanical ventilation was intubated the next day. The patient, whose general condition did not improve, died on the 7[th] day of intensive care unit admission.

POSTER PRESENTATIONS

[PP-349]

Evaluation of Risk Score for Transport Patients for Interhospital Transport of Critically 3 Patient in India

Ajay Ambalakkatte[1], Aruvi Poomali[2], Sreelal T.P.[3], Nithyanand M.[4]

[1]All India Institute of Medical Sciences, Nagpur, Maharashtra, India
[2]The Indian Council of Medical Research Delhi, India
[3]Dr. Moopen's Medical College Department of Community Medicine, Meppadi, India
[4]Dr. Moopen's Medical College Meppadi, India

Aim: Interhospital transfers pose significant risks for critically ill patients. The Risk Score for Transport Patients (RSTP) scale can be used as a triage tool to evaluate patient severity, thereby optimizing the use of advanced care ambulances.

Materials and Methods: In total, 200 transfers of critically ill patients were classified in two groups of severity according to the RSTP. Statistical analysis was performed using the receiver operating characteristic (ROC) curve and goodness of fit statistics. Inter rater reliability of the test was tested using percentage agreement and Cohen's kappa.

Results: In total, 127 patients (63.5%) were classified as high risk and 73 (36.5%) as not high risk. Major enroute complications were more common in high-risk group (21.3% vs. 11%). Hemodynamic instability was the most common complication. sensitivity to predict a major adverse event during transport was 77%. Discrimination power of RSTP was fair (area under the ROC curve 0.7; cut-off value >6). Percentage agreement was 72.5% and Cohen's kappa was calculated to be 0.36.

Conclusion: The RSTP had some discrimination ability and fair interrater reliability to be considered as a triage tool. Hemodynamic instability is the most common problem encountered during transfer.

[PP-289]

A Rare Case of Radiculomyelopathy Mimicking Transient Ischemic Attack in A Diabetic Patient with Cognitive Impairment

Anna Ambartsumova, Dildora Tukhtamisheva

Central Asian University, Tashkent, Uzbekistan

Aim: Transient ischemic attack (TIA) is a short episode of neurological deficits due to temporary reduced blood flow to the brain, spinal cord, or retina. However, nearly 60% of patients with TIA-like symptoms receive a different final diagnosis. Anxiety-related symptoms often mimic TIA in women. Acute lumbosacral radiculopathy can cause pain, loss of sensation and motor function and is prone to imitate cerebrovascular disease. This report aims to highlight that psychiatric exacerbations can cause diagnostic challenges in the Emergency department.

Materials and Methods: A 65-year-old female with type 2 diabetes, hypertension, and cognitive impairments presented to the Emergency department with severe headache, dizziness, tinnitus, nausea, vomiting, bilateral leg numbness and restricted movements. Blood pressure was 162/114 mmHg, heart rate 96 bpm, oxygen saturation 96%. Physical examination revealed deviated tongue and uvula, leg paraparesis, hyposensitivity; and mild retrograde amnesia (MMSE score 21). Suspecting TIA, neurologist and resuscitator decided to admit her to the neurology department. Hours later, she became stable but still anxious, with severe back pain and right thigh numbness. Signs of nerve root tension were positive. Lumbosacral magnetic resonance imaging (MRI): L3-L4, L4-L5, and L5-S1 herniations, spondylodiscitis, inflammation of the sacro-coccygeal region. Head MRI: cerebrovascular encephalopathy. The final diagnosis was vertebrogenic lumbar myelopathy.

Results and Conclusion: As a result, acute lumbosacral radiculopathy, particularly in those with psychiatric disorders, can also resemble TIA. This case emphasizes the importance of thorough history-taking and clinical signs evaluation to differentiate between acute neurological conditions and psychiatric disorders in Emergency medicine.

Keywords: Radiculomyelopathy, TIA, anxiety

POSTER PRESENTATIONS

[PP-508]

Resurrectional Aspiration

Amal Paul Arackal, Jithin Jacob Varghese, Jerry Mathew, Wasim Chettiyam Kandy

Sree Gokulam Medical College And Research Foundation, Kerala, India

Aim: A chronic liver disease patient with Blunt trauma abdomen presenting to emergencey department (ED) is a condition where we get confused with focused assessment with sonography for trauma (FAST) findings. With Bedside ultrasonography, we can perform diagnostic aspiration in case of diagnostic dilemmas.

Case Reports: A 68-year-old chronic alcoholic male patient presented as restlessness for the past 2 days, bystander gave a history of 2 episodes of syncope, following the seizure-like episode. The patient wasn't taking alcohol past 5 days following an renal tubular acidosis which happened 5 days ago. The patient sustained mildly displaced multiple left rib fractures in the posterior aspect and was discharged against medical advice. On examination the patient was confused, the airway was patent, Saturation was 99%, heart rate was 98/min and blood pressure (BP) was found to be 70/50 mmHg. On receiving 1 litre of intravenous fluid BP improved to 100/80 mmHg. A bedside ultrasound showed a thin rim of fluid was noted in the right hepatorenal pouch. No significant increase in the free fluid was noted after repeat FAST and then shifted for CT brain. Upon receiving back in ED BP was found 80/50 mmHg immediately repeat FAST was done which showed a significant increase in the free fluid in the abdomen. Aspirate showed frank blood, hemoperitoneum was diagnosed and shifted for emergency laparotomy. Intraoperatively 3000 mL of hemoperitoneum, 900 mg of blood clots, grade 5 splenic injury noted.

Results and Conclusion: In case of free fluid in the abdomen with diagnostic dilemmas or cases of overlapping between surgical and medical causes a "diagnostic aspiration under ultrasound guidance" can be a lifesaving tool.

[PP-233]

Mediterranean Spotted Fever: A Clinical Research

Jalal Ashkar, Pavel Peschansky, Mahmoud Odeh

Hillel Yaffe Medical Center, Hadera, Israel,
Rappaport Faculty of Medicine, Haifa, Israel

Aim: In Israel the disease has some differences from the better known Mediterranean spotted fever (MSF).

Rickettsia conorii is a tick-born organism responsible for MSF and Rickettsia sharoni (with some antigenic differences from R.conorii) is the Israel representative. Patients treated at the Hillel Yaffe Medical Center live in the area between Zichron Yaakov in the north and Netanya in the south. According to epidemiological reports of the Ministry of Health, there are endemic areas surrounding the hospital. In the years 2020-2023, 81 patients were hospitalized in various departments of Hillel Yaffe, suffering from this disease.

Materials and Methods: Clinical research.

Results and Conclusion: In the study we highlight several significant points that must be taken into account in the case of MSF, since it is known that. It is known that delay in treatment significantly increases mortality (according to the literature). Therefore, an aggressive approach to treatment with a simple drug such as Doxylin can save lives and prevent irreversible effects such as disseminated intravascular coagulation.

POSTER PRESENTATIONS

[PP-234]

Clinical Significance of Elevated D-Dimer in Emergency Department: A Clinical Research

Jalal Ashkar, Pavel Peschansky, Mahmoud Odeh, Ma'anit Shapira, Marina Dalal

Hillel Yaffe Medical Center, Hadera, Israel
Rappaport Faculty of Medicine, Haifa, Israel

Aim: Commonly found in the circulation when venous thromboembolism in present. False positive readings can be due to various causes: liver disease, high rheumatoid factor, inflammation, malignancy, trauma, pregnancy, recent surgery as well as advanced age. False negative reading can occur if the sample is taken either too early after thrombus formation or if testing is delayed for several days. Additionally, the presence of anticoagulation can render the test negative because it prevent thrombus extension. Two general methods of measuring D-dimers: ELISA method, latex agglutination. The aim of research is to analyze the cases of different values of D-dimer elevation and interpret their clinical and diagnostic management.

Materials and Methods: Clinical research.

Results and Conclusion: The maximal D-dimer value presence is definitely an alarming sign to the patient and the caregiver. It is important to note that getting a good patient anamnesis, physical examination findings in combination with clinical thought and intelligent use of lab and imaging tests are the secret of success in diagnosis and treatment a patient.

[PP-235]

Acute Abdominal Pain and Syncope in an Old Man: A Case Report

Jalal Ashkar, Pavel Peschansky, Mahmoud Odeh

Hillel Yaffe Medical Center, Hadera, Israel, Rappaport Faculty of Medicine, Technion, Haifa, Israel

Aim: A differential diagnosis of acute abdominal pain and syncope is very broad and includes traumatic and non-traumatic causes. Splenic rupture is a potentially life-threatening condition, often associated with significant chest or abdominal trauma. We report a case of splenic rupture due to minor blunt abdominal trauma. Spontaneous rupture is very rare and is usually reported as being secondary to underlying pathological conditions, that can be a result of splenomegaly. Minor trauma can be also a cause of splenic rupture, especially in a cohort of asthenic patients.

A detailed history, including minor trauma, must be taken from each patient with suspected acute abdomen.

Materials and Methods: Case report.

Results and Conclusion: Emergency physician should keep in mind a different causes of splenic rupture in management of acute abdominal pain and syncope in Emergency department. In some cases the patient does not remember the minor trauma very well, but it can be the cause of a splenic rupture, which could be life-threatening, especially in a cohort of habitus patients.

POSTER PRESENTATIONS

[PP-236]

An Emergency Department Intervention to Improve Earlier Detection of Community - Onset Bloodstream Infection Among Hospitalized Patients

Jalal Ashkar, Regev Cohen, Elias Tannous, Orna Ben Natan, Mira Leybel

Hillel Yaffe Medical Center, Hadera, Israel, Rappaport Faculty of Medicine, Haifa, Israel

Aim: Blood cultures (BCs) are essential microbiologic tests, but blood culturing diagnostic stewardship is frequently poor, including solitary BCs, inadequate blood-volumes per bottle and high contamination rates. We aimed to study the process-related failures and to evaluate the effect of an Emergency department (ED) intervention on BCs collection practices and yield.

Materials and Methods: BC-process mapping included establishing and analyzing reports regarding BC-related data and observations in the ED. An ED-quality improvement intervention included educational sessions, phlebotomists addition, promoting single-site strategy (SSS) for BC-collection (obtaining 2 sets of bottles in a single draw) and hospital-wide pre-analytical data feedback. BC bottles collected, positive BCs, blood volumes and documentation of collection times were measured, before (Dec 2021-Aug 2022) and after (Sept 2022-July 2023) intervention. Results were corrected to hospitalizations admissions or days, as appropriate. We assessed community-onset bloodstream infection (CO-BSI) rates and healthcare-associated (HA)-BSIs. We used interrupted-time series analyses for comparisons.

Results: A total of 64,295 BC-bottles were evaluated, 26,261 before and 38,034 post-intervention. The median BCs collected/week increased from 671 to 801 BCs ($p<0.0001$), resulting from increased early (CO) sampling ($p=0.0001$). ED-solitary BCs decreased (95% to 28%), documented time of sampling increased (2.8% to 25%), and average blood-volume increased (3L to 4.5mL) post-intervention. Positive CO-BSIs increased (39.6 to 52 bottles/1000 admissions, $p=0.0001$), while HA-BSIs decreased (39 to 27 bottles/10,000 days, $p=0.0042$). Contamination rates did not change.

Conclusion: An ED-focused intervention based on education sessions and SSS, improved culturing stewardship and facilitated the early identification of CO-BSI without an increase in contamination rates.

[PP-346]

The Critical Importance of Preventing and Managing Reperfusion Injuries in Elderly Patients in Emergency Care Settings

Shakhnoza Babamukhamedova,

Central Asian University Medical School, Tashkent, Uzbekistan

Aim: When adequate blood flow and perfusion are restored to previously ischemic tissues or organs, reperfusion injury takes place due accumulation of reactive oxygen species. Subsequently, oxidative damage to lipids, proteins, and DNA strands triggers an inflammatory cascade evolving an extended damage even to distant organs and tissues. Advanced age is a major risk factor, as endothelial dysfunction, along with increased oxidative stress and inflammation, signifies the extreme susceptibility and exacerbation of reperfusion injury in the settings of emergency care. This review aims to provide a dedicated outline of strategies for preventing and managing reperfusion injury in the elderly population in emergency care settings.

Materials and Methods: A comprehensive review of related clinical literature and evidence-based guidelines was conducted to identify the best practices regarding the current issue in the elderly patient population. Early prevention, use of pharmacological therapy, and patient care in a glance of emergency settings took a key role in this investigation.

Results and Conclusion: Advanced aging is a non-modifiable risk factor that can signify the accumulation of reactive oxygen species via age-related changes such as mitochondrial dysfunction, overexpression of otinamide adenine dinucleotide phosphate oxidase, reduced antioxidant defense, and disrupted iron homeostasis consensually lead to exacerbation of reperfusion injury within this age group. As a consequence, it is important to consider that early prevention, pharmacological management, and proper patient care play a huge role in decreasing the number of elderly patients facing this issue in emergency care settings.

Keywords: Reperfusion injury, emergency care, prevention, early management

POSTER PRESENTATIONS

[PP-177]

Readmission of Pulmonary Embolism with Post-Discharge Complications: A Report of Two Cases

Ebubekir Bahar, Utku İlhan, Öner Bozan, Asım Kalkan

Health Science University Turkey, Prof. Dr. Cemil Taşcıoğlu City Hospital, İstanbul, Turkey

Aim: Pulmonary embolism and acute ischemic stroke are diseases with high morbidity and mortality, rarely occurring simultaneously and progressing with both arterial and venous embolism.

Case Reports: Our case report consists of two pulmonary embolism cases that came to the Emergency department of our hospital in December 2023 and also had arterial embolism. Our first case included coronary intensive care follow-up after the diagnosis of postpartum pulmonary embolism, followed by intensive care follow-up with emergency admission after discharge-treatment refusal, and neurology follow-up due to cerebral infarction. In our other case, we presented a patient who presented with repeated syncope 3 days after admission and discharge from the hospital due to head trauma after syncope and had pulmonary embolism and renal infarction (RE) on computed tomography angiography (CTA).

Results and Conclusion: In the Emergency department of our hospital, we determined the first case as pulmonary embolism and acute ischemic stroke with pulmonary CTA and diffusion magnetic resonance imaging. In our other case of pulmonary embolism, we observed RE in the right kidney, which was observed because it was included in the examination section on pulmonary CTA. Both arterial and venous embolisms are seen as paradoxical embolism, and the most common cause is the patent foramen ovale. The patient's hereditary disease that causes thromboembolic predisposition or previous surgery and immobilization, and active malignancy may also cause this condition. Rarely, there may be paradoxical embolism with no cause at all.

[PP-255]

A Case Report of 23-Year-Old Male With a New Onset Atrial Fibrillation

Elif Betül Balcı, Alaa Saad Ahmed Aldujaili, Başar Cander, Bahadır Taşlıdere

Bezmialem Vakıf University Hospital, Department of Emergency Medicine, İstanbul, Turkey

Aim: Atrial fibrillation (AF) in early adulthood, though less common than in older populations, represents a significant clinical concern due to its association with adverse cardiovascular events and long-term health implications. AF in young adults often presents with fewer traditional risk factors, such as hypertension or diabetes, and may be linked to genetic predispositions, lifestyle factors, or underlying structural heart disease. Management strategies typically include rhythm or rate control, anticoagulation therapy to prevent thromboembolic complications, and lifestyle modifications.

Case Reports: A 23-year-old male patient presented to the Emergency department with palpitations, dizziness, and mild shortness of breath for the past 3 hours. On physical examination the patient had a heart rate of 180 bpm, blood pressure of 137/86 mmHg and respiratory rate of 19 breaths per minute. His oxygen saturation was 99% on room air and the heart showed normal S1 and S2 sounds on auscultation. The patient was hemodynamically stable. The rate control was achieved with a calcium-channel blocker [e.g., diltiazem 20 mg intravenous (IV)]. The patient was anticoagulated with enoxaparin sodium 0.6 subcutaneous (Sc). Given the recent onset of AF (<48 hours), the patient was considered for pharmacologic cardioversion. Amiodarone 150 mg IV was administered, leading to successful cardioversion to normal sinus rhythm within 1 hour.

Results and Conclusion: Understanding the unique characteristics and risk profiles of AF in early adulthood is crucial for developing targeted therapeutic approaches and improving long-term outcomes.

Keywords: Atrial fibrillation, arrhythmias, palpitations

[PP-256]

Should Low Blood pH Stop us Performing a Cardiopulmonary Resuscitation? A Rare Case with a Patient who was Stuck in the Fire Exposure with 6.3 pH Returned to Life

Elif Betül Balcı, Alaa Saad Ahmed Aldujaili, Başar Cander, Bahadır Taşlıdere

Bezmialem Vakıf University Hospital, Department of Emergency Medicine, İstanbul, Turkey

Aim: Normal human blood pH is between 7.35-7.45. According to physiology and medical texts, it is possible to survive with a pH interval of 6.8-7.8; however outliers to this pH interval is incompatible with life.

Case Reports: We describe a case of successful resuscitation in a patient who was stuck in a fire place with unknown time interval and initial arterial blood pH: 6.3, COHb: 29.6% and lactate: 13.3 mmol/L. The patient was brought to the emergency room intubated and in respiratory and cardiac arrest. After 5 minutes of effective cardiopulmonary resuscitation (CPR), the patient went into ventricular fibrillation and the heart rhythm was recorded 2 minutes after defibrillation. Approximately 5 hours after CPR performed and the patient was under mechanic ventilation, his blood pH returned to 7.27, COHb: 3.4% and lactate: 9.0 mmol/L.

Conclusion: With this case, we emphasize the importance of performing CPR even with extremely abnormal blood test results that are incompatible with life. Also we believe that this is the lowest recorded PH after carbon monoxide poisoning that returned the life after an effective CPR.

Keywords: Cardiopulmonary resuscitation, cardiopulmonary arrest, acidemia

[PP-313]

Lithium Intoxication After the Grief Process

Elif Betül Balcı, Abdullah Yaser Güney, Başar Cander, Bahadır Taşlıdere, Onur Bozdağ, Ömer Faruk Öz

Bezmialem Vakıf University, Clinic of Emergency Medicine, İstanbul, Turkey

Aim: Lithium is the most effective long-term treatment for bipolar disorder; It protects against both depression and mania, reducing the risk of suicide and short-term death. However, treatment is complicated by lithium's narrow therapeutic index and its effect on renal function, both of which increase the risk of toxicity. Lithium intoxication can affect multiple organs; however, the primary site of toxicity is the central nervous system, and clinical signs may be asymptomatic or may appear as confusion, ataxia, or seizures.

Materials and Methods: A 52-year-old male patient with a known history of bipolar disorder and diabetes was brought to the Emergency department by his family with complaints of increasing food refusal and tremors for two days. It was learned that the patient's mother had recently passed away and he had been in a depressed mood for the last week. In the physical examination, Glasgow Coma Score: 11. The patient, who was unoriented and partially cooperative, was observed to have tremors and dysarthria.In addition, he had ongoing tachypnea and shortness of breath. Laboratory results :creatinine 1.49 mg/dL and lithium level was 1.59 mmol/L.The patient was followed up in the Emergency department due to lithium intoxication, acute renal failure and respiratory failure.

Results and Conclusion: The grief process is a situation that includes physical effects as well as psychological effects. As seen in our case, refusal to eat and dehydration due to the grief process may cause lithium intoxication. We believe that follow-ups with multidisciplinary approaches will facilitate the process.

POSTER PRESENTATIONS

[PP-371]

Bilateral Internal Carotid Artery Dissection due to Neck Hyperextension in a Patient with Headache and Nausea: A Case Report

Elif Betül Balcı, Ömer Faruk Öz, Sarah Sabbagh Sharif, Başar Cander

Bezmialem Vakıf University Hospital, Department of Emergency Medicine İstanbul, Türkiye

Aim: Bilateral internal carotid artery dissection (ICAD) secondary to neck rotation or hyperextension is a rare and life-threatening condition characterized by the separation of the arterial wall layers, often leading to obstruction. It is a rare but condemning cause of stroke, specifically in young to middle-aged patients. ICAD can develop spontaneously or as a result of trauma, connective tissue disorders and notably, the neck hyperextension or rotation.

Case Reports: A 48-year-old male was admitted to the Emergency department with headache and nausea that had lasted for a week and did not decrease with painkillers. He was having focal neural deficits such as drooping of the right eyelid, difficulty swallowing, weakened smell and taste perception. Afterwards, a decrease in calibration in bilateral internal carotid artery starting from the C2 level and continuing to the petrous segment and non-obstructive bilateral ICA dissection were detected. Later, the patient stated that he had hung the curtains of the house a week ago when we questioned the patient's history. The patient's history of hanging curtains causing neck hyperextension has explained the cause of ICAD.

Results and Conclusion: Carotid artery dissection happens when a rupture in the carotid artery's intimal layer results in an intramural hematoma. This may impair blood flow to specific brain regions and increase the risk of stroke. In our case, it is seen that head and neck hyperextension can cause ICAD and detailed medical history taking is essential from every patient.

Keywords: Bilateral internal carotid artery dissection, headache, hyperextension

[PP-199]

Uncovering Racial Trauma to Recognize and Mitigate the Unforeseen Implications of Implicit Bias

Jasmine Beasley, Sobia Ansari

Rush University Medical Center, Clinic of Emergency Medicine, Chicago, USA

Aim: Racial trauma training is an evolving exigency in medicine. Trauma not only includes mental, emotional, and physical injury, but encompasses marginalization, discrimination, systemic and generational trauma. Kenneth V. Hardy, Ph.D. developed Healing the Hidden Wounds of Racial Trauma to guide personal reflection of racial sense of self and implicit biases. Dr. Hardy emphasizes recognition of the interrelationship between racial oppression and trauma, as an inability to recognize this relationship limits effective care for people of color. This training program provides insight on the anatomy of racial trauma and highlights strategies for intervention.

Materials and Methods: The course was delivered virtually between February and March of 2023. Participants were randomly assigned to one of three cohorts (A,B,C). The composition of the cohorts remained the same throughout the duration of the program. The course consisted of four sessions. Each session was four hours long, occurring 1-2 weeks apart. Sessions were moderated by Dr. Hardy. Participants received online surveys before and after each session. Survey completion was optional, but highly recommended. Survey Monkey was used for data collection. Continuing medical education credit was provided.

Results and Conclusion: Survey results demonstrated participants had a greater awareness of their racial sense of self, were able to acknowledge how implicit bias affects their practice, and were more likely to apply strategies to enhance racial sensitivity and awareness after completing the training. On average, participants equally expressed interest in ongoing trainings, workshops, and periodic gatherings to process racial sensitivity learning.

POSTER PRESENTATIONS

[PP-109]

Risk Factors Evaluation for Mortality in COVID-19 Patients Admitted in ICU

Tekiy Markos Bedore, Addis Abeba, Yonas Kefelegn, Rediet Solomon, Yemane Gebremedhin Tesfay, Lombamo Liranso Gichamo, Mohammed Kelifa Nuguse, Desalegn Keney

Aim: Coronavirus disease-2019 (COVID-19), caused by the recent severe acute respiratory syndrome novel virus, is considered one of the greatest global public health crisis by the WHO. It claimed millions of lives globally, with death occurring among populations with certain contributing factors. The aim of this study was to assess clinical profile, management outcome and associated factors of COVID-19 infected patients who were admitted from June 8, 2020 to May 30, 2021 to St. Paul Hospital Millennium Medical College COVID-19 ICU Center.

Materials and Methods: Institution-based cross-sectional study design was conducted at ICU of St. Paul's Hospital millennium medical college on patients admitted to the COVID-19 ICU from June 8, 2020, to May 30, 2021. A simple random sampling technique was applied to select eligible patients' charts. The data were entered and analyzed using SPSS version 26. Descriptive analysis was used for statistical analysis of baseline data, and regression analysis was used to determine association between dependent and independent variables. A p value <0.05 was considered significant.

Results and Conclusion: A total data of 272 patients were analyzed, with a median age of 60.5 years and more than two-thirds, 183(67.3%) being males. Most (75.7%) had a pre-existing comorbid medical condition and a majority (71.3%) had a COVID-19 disease of critical disease severity. Overall, in-ICU mortality rate was 64.3%. Multivariable analysis showed that adverse outcome was significantly associated with intubation (AOR: 2.813; 95% CI: 1.176-6.731), pulmonary embolism (AOR: 36.702; 95% CI: 4.062-331.605), Vasopressor usage (AOR: 84.954; 95% CI: 23.413-308.254).

[PP-116]

Elderly People Abandoned in Hospital and in Their Homes

Irina Benedek, Evelina Nicoleta Chisca

Emergency Medicine, Brasov, Romania

Aim: Our society is oriented towards young people and tends to neglect and devalue the old people. The number of elderly people hospitalized has increased. The social situation of elderly determined the extension of hospitalization, these being abandoned on wards, impassable, they don't have identity documents, and they cannot be institutionalized, because the laws have changed. Highlighting the problems faced the Emergency Hospital from Brasov and the work of social workers to find solutions for elderly people in risk situations.

Materials and Methods: Study was made between April 2022-August 2023. In the year 2022- 1135 patients benefited from social services, and in 2023 until August the number increased to 1670 patients.

Results: The authorities didn't find solutions in the city of Brasov, which led to the extension of hospitalizations. Elderly people who needed social services could not benefit from them, the lack of home care services, state asylums and their pensions being insufficient to benefit from a private asylum. There were elderly women who died in hospital wards, in their own homes or on the streets, before they could benefit from their rights.

Conclusion: We need for a more efficient organization of social systems, the establishment of social and psychological counseling services centers, medical recovery, the establishment of specialized mental health and medico-social services that can provide services adapted to the needs of people in need to increase the quality of life.

Keywords: Abandon, elderly, hospital

POSTER PRESENTATIONS

[PP-100]

Assessment of Cariporide for Initiation of Return of Spontaneous Circulation and Post Resuscitation Sequel in Hypoxic Cardiac Arrest Rat Model

Subhashini Bharathala, Lakshmi Kanth Kotarkonda, Ankit Kumar Sahu, Sanjeev Bhoi, Tej Prakash Sinha

All India Institute of Medical Sciences New Delhi, Clinic of Emergency Medicine, New Delhi, India

Aim: The global burden of cardiac arrest especially sudden cardiac arrest is significantly increasing across all age groups. Hypoxia is a key factor, which can lead to cardiac arrest that exacerbates lactic acidosis and compromise resuscitation efforts during the return of spontaneous circulation (ROSC). It is hypothesized that the inhibition of the sodium-hydrogen exchanger-1 (NHE-1) channel by the selective blocker cariporide may aid in initiating ROSC by mitigating lactic acidosis and calcium overload.

Materials and Methods: Male Wistar rats were anesthetized, tracheostomized, intubated, and exposed to sustained hypoxia leading to cardiac arrest. Rats were resuscitated either a single bolus dose of Cariporide and/or CPR with the primary outcome of return of spontaneous circulation. Secondary outcomes include analysis of arterial blood gas, CBP, cardiac injury markers and inflammatory cytokines by ELISA, NHE-1 and HIF-α by Western blot and histopathology analysis.

Results: In this hypoxic sudden cardiac arrest rat model, the number of rats that achieved ROSC was significant by maintaining stable MAP with Cariporide (0.3 mg/kg). Furthermore, it also attenuated the serum lactate levels, reduced cardiac injury markers and inflammatory cytokines post resuscitation. Inhibition of NHE-1 also improved survival by NLR ratio. The histopathology and immunoblot analysis showed reduced inflammation NHE-1 and HIF-α expression in the treatment group.

Conclusion: This study demonstrated for the first time that Cariporide is effective during resuscitation in achieving ROSC. In the treated group, a significant reversal in pro and anti-inflammatory cytokine levels, cardiac injury markers and lactate levels for ample tissue perfusion post-resuscitation.

[PP-424]

A Rare Diagnosis in the Emergency Medicine: Achalasia

Candan Kayın Bilgin, Serhat Örün, Mehmet Çelik, Anıl Çakıcı

Emergency Medicine Doctor, Tekirdağ, Turkey

Achalasia is a rare disorder affecting the movement of the esophagus, characterized by the lower esophageal sphincter (LES) not relaxing properly and a loss of esophageal peristalsis. Symptoms include difficulty swallowing (dysphagia), chest pain behind the breastbone (retrosternal pain), regurgitation, and weight loss. The disorder is linked to nerve degeneration in the esophageal wall and typically worsens over time. Diagnosis is made using clinical findings, esophageal manometry, and endoscopic evaluation. This report discusses the diagnosis and treatment of Type 1 achalasia in a patient who came to the Emergency department.

POSTER PRESENTATIONS

[PP-228]

Case Report on Incidental Finding of Complex Abdominal Aneurysms with The Use of a Bedside Ultrasound in the Emergency Department

Nancy K. Brulinska, Nabeel Ahmad, Mohamed Sultan

University Hospital Limerick, Emergency Medicine Trainee, Limerick, Ireland

An 81-year-old male presented to the Emergency department (ED) with haematuria persisting for four weeks. His medical history included hypertension, cerebral microvascular ischaemia, diverticulitis, and a long-term smoking habit. Initial examination revealed a stable and comfortable patient, with a normal abdominal presentation. However, bedside ultrasound revealed an incidental abdominal aortic aneurysm measuring 4.4 cm, a right common iliac artery aneurysm of 4 cm, and a left common iliac artery aneurysm of 3 cm. These findings were confirmed by a CT scan, detailing an infrarenal abdominal aorta of 4.5 cm at maximal diameter, a 4 cm aorto-iliac junction, and the right and left common iliac arteries measured 4.3 cm and 3.3 cm respectively, with bilateral internal iliac artery aneurysms also present.

Learning points:

Bedside ultrasound in the ED extends beyond primary indications, enabling incidental detection of serious vascular conditions like complex abdominal aneurysms.

Early diagnosis of abdominal aneurysms is crucial given the risk of rupture, which can lead to catastrophic consequences.

Emergency clinicians should maintain a high index of suspicion and utilize available diagnostic tools for the prompt identification of potentially life-threatening conditions.

The incidental finding of complex abdominal aneurysms in this case underscores the invaluable role of bedside ultrasound in the Emergency department. This imaging modality not only facilitates rapid diagnosis but also enhances patient outcomes through early identification and intervention. In scenarios where clinical symptoms may be nonspecific or overshadowed by other complaints, ultrasound serves as a critical tool for uncovering hidden yet severe conditions.

[PP-259]

Myocardial Infarction-induced Free Wall Rupture

Şeyma Nur Çalışır[1], Oğuzhan Abanoz[2], Başar Cander[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Bezmialem Vakıf University Faculty of Medicine, Department of Cardiology, İstanbul, Turkey

Aim: Free wall rupture is often a fatal complication of acute myocardial infarction. In the acute phase, clinical findings include sudden chest pain, tamponade, and sudden death while in the subacute phase, localized pericardial effusion and pseudoaneurysm can be detected with bedside echocardiography.

Case Reports: A 64-year-old female patient presented to the Emergency department with complaints of shortness of breath and confusion. Bedside echocardiography in the Emergency department revealed a left ventricular ejection fraction below 50%, with an inferior wall motion abnormality and circumferential pericardial effusion. The patient was consulted with cardiology with a preliminary diagnosis of tamponade. Thoracoabdominal computed tomography angiography showed there was high-density pericardial effusion consistent with hemopericardium. The patient was consulted with cardiac and vascular surgery with a preliminary diagnosis of acute aortic syndrome.

Conclusion: Free wall rupture diagnosis is often based on clinical suspicion. In this case, the patient presented with altered consciousness, and initial consideration was given to neurological diagnoses. However, ECG findings of a previous myocardial infarction prompted evaluation with POCUS, leading to the diagnosis of free wall rupture. Hence, multisystem evaluation of patients can facilitate the diagnosis of high-mortality conditions such as free wall rupture.

POSTER PRESENTATIONS

[PP-261]

Takotsubo Sydrome Due to Magnetic Resonance Imaging

Şeyma Nur Çalışır[1], Oğuzhan Abanoz[2], Sezgin Uzunoğlan[2], Onur Bozdağ[1], Ahmet Bacaksız[2], Başar Cander[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Bezmialem Vakıf University Faculty of Medicine, Department of Cardiology, İstanbul, Turkey

Aim: Stress cardiomyopathy is a syndrome of transient left ventricular dysfunction occurring during intense physical or emotional stress. It is also known as Takotsubo Syndrome due to the classical finding of preserved basal left ventricular systolic function but apical ballooning.

Case Reports: A 68-year-old female patient presented to the neurology clinic with complaints of forgetfulness. Brain MR imaging was requested. The patient panicked during imaging, followed by compressive chest pain, and subsequently presented to the Emergency department. The patient was consulted to the cardiology department with a preliminary diagnosis of acute ST-elevation myocardial infarction. No critical stenosis was observed in coronary imaging to explain the ECG findings and elevated cardiac enzymes. Considering the stress factor, ventriculography was performed, revealing apical ballooning.

Conclusion: Stress cardiomyopathy is a relatively rare clinical picture, observed in 1-2% of patients suspected of acute coronary syndrome. Patient with stress cardiomyopathy secondary to fear experienced during MR imaging, despite having no cardiac history, to highlight the negative effects of imaging studies that are often preferred and relatively safe.

[PP-385]

Relationship Between Triglyceride-glucose Index and Coronary Artery Disease in Young Non-diabetic Patients

Şeyma Nur Çalışır[1], Oğuzhan Abanoz[2], Abdullah Yaser Güney[1], Asım Enhoş[2], Bahadır Taşlıdere[1], Ramazan Özdemir[2], Başar Cander[1]

[1]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[2]Bezmialem Vakıf University Faculty of Medicine, Department of Cardiology, İstanbul, Turkey

Aim: The triglyceride-glucose (TyG) index is a new marker for predicting metabolic syndrome and insulin resistance. It is a simple and easily accessible screening method used to screen for insulin resistance.This study aimed to investigate the relationship between high TyG index and multivessel disease in non-diabetic young patients who have experienced myocardial infarction.

Materials and Methods: This study was conducted as a single-center, retrospective study. A total of 193 patients under the age of 45, who were admitted to the Emergency department of Bezmialem Vakıf University Hospital between 2019 and 2024 with a diagnosis of acute coronary syndrome without known diabetes mellitus, and who underwent coronary angiography in the adult catheterization laboratory, were included in the study. The patients were divided into three groups based on the results of coronary angiography: those diagnosed with non-critical coronary artery disease, those diagnosed with single-vessel disease, and those diagnosed with multivessel disease. In the calculation of the TyG index, the cut-off value was determined as 4.5 with a sensitivity of 82.6% and a specificity of 82.1% (AUC=0.889 95% CI: 0.854-0.924) for this value.

Results and Conclusion: When comparing the three groups, the incidence of multivessel disease was statistically significantly higher in patients with a high TyG index compared to those without. ($p=0.025$ $x^2=7.36$) The incidence of a high TyG index was lower in patients with no coronary artery disease on coronary angiography compared to the group with multivessel disease. ($p=0.02$ $x^2=5.45$).

Keywords: Triglyceride, emergency, myocardial infarction

[PP-283]

A Patient with Splenic Infarction and Concurrent Infective Endocarditis: A Case Report

Yavuz Çelik, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: Splenic infarction is an uncommon altitude. Generally it is arise of hematologic, vascular and thromboembolic diseases. Infectious endocarditis (IE) is characterized by involvement of the heart valves, congenital cardiovascular lesions, prosthetic valves. Embolic events are common and life-threatening in patients with IE. This article presents a 60 year old woman with splenic infarction and infective endocarditis is presented.

Materials and Methods: A 60 year old woman presented to the Emergency department with foot and joint pain and fever of three weeks duration. Known diseases; choledocholithiasis, chronic hepatitis B virus, Familial Mediterranean Fever hypertension. Vital signs; blood pressure: 184/76, fever: 36.7. Other vitals were normal. No pathological findings on physical examination. Laboratory tests: lactate dehydrogenase (331 u/L), gamma-glutamyl transferase (60 u/L), white blood cell (20 10x6/uL), neutrophil (78.4%), lymphocyte (13.5%), C-reactive protein (121.1). A filling defect compatible with thrombus was observed in the segmental branch of the splenic artery in the splenic helix on computed tomography images. Consultation with general surgery and cardiovascular surgery was sought. Double valve replacement was performed. Ceftriaxone+vancomycin was started by the infectious diseases department. Splenectomy was performed by general surgery.

Results and Conclusion: The clinical signs and symptoms of IE are highly variable. All the classic signs such as fever, new heart murmur, anemia and splenomegaly may not always be present. All organ systems such as the skin, mucous membranes, central nervous system and kidneys may be affected due to embolic and immunological complications. IE should be considered in any patient with unexplained fever. This case study highlights the infection behind an embolic event.

[PP-351]

Extremely High Troponin Levels Induced by Acute Pulmonary Edema a Patient with Chronic Renal Failure: A Case Report

Yavuz Çelik, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: Cardiac troponins remain the gold standard markers for patients with acute coronary syndromes. However, these results may also be seen in non-cardiac conditions, leading a misdiagnosis of acute coronary syndrome. Pulmonary edema is a common cause of dyspnea. This case report detailed a dramatic presentation of pulmonary edema due to non-compliance with hemodialysis.

Materials and Methods: A 70 year-old male presented to the Emergency department with shortness of breath. Known diseases; diabetes, chronic renal failure, hypertension, coronary artery disease. Vital signs; blood pressure: 92/63, respiratory rate: 30, oxygen saturation: 75, blood glucose: 292, the others are normal. Diffuse rales were heard in lung sounds. Laboratory tests: lactate dehydrogenase (347 u/L), white blood cell (21 10x6/uL), neutrophil (89%), lymphocyte (3.7%), CK-MB (45.7 µg/L), troponin-I (7856 ng/L), BNP (3713 ng/L), creatinin (8.4 mg/dL), K (5.3 mmol/L). The patient was quickly connected to NIMV. There was acidosis in the blood gas (pH: 7.25). Urgent dialysis was planned. CK-MB (165 µg/L), troponin-I (>125.000 ng/L) in the control tests taken after dialysis. The test was repeated two more times. The same results were obtained. The patient had no chest pain. The patient underwent angiography. 70% stenosis was detected in three coronary arteries. Elective stent was planned.

Results and Conclusion: Herein, we report a case of extremely high troponin levels induced by pulmonary edema. In spite of the high levels, the patient's clinical outcome was good, and no evidence of new myocardial ischemic findings was found.

Keywords: Pulmonary edema, emergency, high troponin

POSTER PRESENTATIONS

[PP-120]

Extrapleural Hematoma Mimicking Hemothorax

Anmol Chanda[1], Murali Naik[2]

[1]All India Institute of Medical Sciences, Department of Emergency Medicine, Delhi, India
[2]All India Institute of Medical Sciences, Department of Radiology, New Delhi, India

After being attacked by a bull on the right side of his chest, a 45-year-old man arrived at the trauma emergency room complaining of right-sided chest pain and increasing dyspnea. He was breathing at a rate of thirty breaths per minute while on room air, with a saturation of 93%. His pulse rate was 98 beats per minute and had a blood pressure of 100/60 mmHg. There was reduced air entry on the chest's right side. Right side of the chest had a positive eFAST result. The radiograph of the chest showed a right-sided white-out lung with multiple rib fractures. After performing an urgent computed tomography scan on him and performing fluid resuscitation, it was discovered that he had a right sided hemothorax, for which a chest tube was placed. In the chest tube, only 50-60 mL of clotted blood were drained. His blood pressure began to drop and new blood began to spurt from his wound, which prompted the activation of a massive transfusion protocol. He went into cardiac arrest and being brought to the operating room, the trauma surgeons performed a right posterolateral thoracotomy after reviving him. Right subclavian artery laceration was found during the procedure. Remarkably, there was a large extrapleural hematoma with active bleeding from the right subclavian artery but little to no right sided hemothorax. The hematoma was removed, and the artery was fixed. After surgery, the patient was unconscious and passed away on the third post-operative day.

[PP-123]

Clinico Epidemiological Profile of Patients Presenting with Acute Chest Discomfort to the Emergency Department of a Tertiary Care Hospital

Anmol Chanda[1], Nidhi Kaeley[1], Barun Kumar[2], Meenakshi Khapre[3]

[1]All India Institute of Medical Sciences Rishikesh, Department of Emergency Medicine, New Delhi, India
[2]All India Institute of Medical Sciences Rishikesh, Department of Cardiology, New Delhi, India
[3]All India Institute of Medical Sciences Rishikesh, Department of Community and Family Medicine, New Delhi, India

Aim: Acute chest discomfort is a common presenting complaint in the Emergency department (ED). The primary objective was to study the clinico-epidemiological profile of patients with acute chest discomfort presenting to the ED. The secondary objectives were to assess the prevalence of premature acute coronary syndrome (ACS), to study the ED disposition and final hospital discharge diagnosis, and to assess the predictors of 24-hour mortality in such patients.

Materials and Methods: A prospective observational study of patients presenting with acute chest discomfort was conducted in the ED of a tertiary care hospital. We included adults >=18 years from December 2021 to December 2022 and excluded trauma patients. A standardized form was used to document patient demographic patterns, comorbidities, chest discomfort description, physical findings, investigations, consultations, ED management, and disposition. p value<=0.05 was taken significant

Results: A total of 200 patients were included. The most common cause of chest discomfort in the ED was cardiac, accounting for 48.5% of patients. The most common cardiac cause of acute chest discomfort was STEMI ~21%. Cardiac diagnosis was associated with the maximum number of admissions ≈80%. The prevalence of premature ACS was 13.9%. A 24-hour mortality was significantly associated with male gender, ambulance transport, history of coronary artery disease, and hypoxia and hypotension at the initial presentation.

Conclusion: ACS followed by respiratory causes are the predominant etiologies of acute chest discomfort in the ED. Knowledge of the differential diagnosis of acute chest discomfort in the ED can aid in prompt diagnosis and delivery of lifesaving treatment to these patients.

POSTER PRESENTATIONS

[PP-489]

Impact on Victims of Road Traffic Injury After Implementation of Good Samaritan Law in India-a Retrospective Analysis at an Urban Level 1 Trauma Center

Narendra Choudhary, Tej Prakash Sinha, Dinesh Bagaria, Subodh Kumar, Amit Gupta

All India Institute of Medical Sciences, Clinic of Emergency Medicine, Division of Trauma Surgery and Critical Care, Delhi, India

Aim: The role of good samaritan cannot be over emphasized at providing pre-hospital care to the road traffic injury victim in low middle income countries (LMICs) like India. Last decade witnessed over 1.3 million deaths on Indian roads. Moreover around half of these deaths could have been prevented if the victim received trauma care within "golden hour" the lacunae of existing state owned pre-hospital care can potentially be bridged with Good Samaritan based emergency care in LMICs. It is almost half a decade since enactment and implementation of the "Good Samaritan Law" in India. However its impact on pre-hospital care and transport rendered by Good Samaritan to injured victim is unclear.

Material and Methods: A retrospective analysis of the prospectively collected Good Samaritan database after implementation of Good Samaritan scheme. The road traffic injury victims brought by Good Samaritans and complying with inclusion criteria were recruited. A semi-structured proforma was used to gather information of demographic characteristics of Good Samaritan and details on their clinical status at the time of presentation and final outcome.

Results: Four hundred and seven injured patients were brought by 442 good Samaritans in last 2 years. The mean pre-hospital time of arrival was 51.76 minutes. 232, 162 and 12 patients were transported by 4-wheeler, 3-wheeler, and 2-wheeler vehicles respectively. Ambulances were used in 63 cases whereas 169 trauma victims were transported using passenger vehicle. Thirty-two patients succumbed to injury.

Conclusion: Active involvement of good Samaritan is invaluable in not only filling the lacunae in existing state.

[PP-163]

A Comparison of Point-of-Care and Laboratory Electrolytes Across Normal and Abnormal pH ranges in Two Children's Hospital Emergency Departments

Kelsey Clabby, Simo Kraguljac, Adalberto Torres

University of Central Florida, Faculty of Medicine, Florida, United States of America

Aim: Discrepancies between point-of-care (POC) and classical laboratory testing can lead to improper medical decisions. These discrepancies may be due to the I-stat device's use of whole blood sampling, while laboratories use serum plasma. Although discrepancies are noted, few studies are focused on critical ill pediatrics.

Materials and Methods: A retrospective chart review of patients aged 0-18 at Nemours Children's Hospitals from 2020 to 2022 who had both POC testing with the I-stat device and laboratory tests within one hour. Agreement and bias between POC and laboratory values were compared using paired t-tests and Bland-Altman plots. Electrolyte values were evaluated separately in those with a pH of 7.45.

Results: Sodium levels at pH <7.35 showed poor concordance (correlation: 0.809) between POC and lab [mean difference: 0.712, standard deviation (SD): 3.797, p=0.019]. At normal pH, concordance was also poor (correlation: 0.917) (mean difference: 0.703, SD: 1.917, p<0.001). At alkaline pH, concordance was good (correlation: 0.961) (mean difference: 0.308, SD: 1.932, p=0.288). Potassium results at pH <7.35 showed poor concordance (correlation: 0.706) (mean difference: -0.154, SD: 0.681, p=0.006). At normal pH, concordance was poor (correlation: 0.574) (mean difference: -0.138, SD: 0.756, p=0.020). At alkaline pH, concordance was good (correlation: 0.498) (mean difference: 0.192, SD: 0.965, p=0.243).

Conclusion: There is poor concordance between POC and laboratory results for sodium and potassium at pH 7.45. Clinicians should be aware that while POC testing using the I-stat device is efficient, it has significant unreliability and bias.

[PP-462]

Cosmetic Conundrums/Facial Faux Pas's

Christopher Markus Colbert

University of Illinois in Chicago, Department of Emergency, Illinois, USA

Cosmetic procedures i.e. fillers and botox are rapidly sought after procedures. With this increase in procedures are noted increase in complications presenting to both family practice office and emergency rooms. Physicians must be familiar with cosmic emergencies because these situations often involve visible injuries that potentially have long-term physical and psychological impact on patients. Quick and effective management of cosmetic emergencies, are crucial to minimizing scarring, preventing complications, and improve aesthetic outcomes. Understanding the approach techniques and indications for referral to specialist is essential. This presentation will review the most updated evidence-based literature to both define and manage cosmetic complications.

[PP-094]

The Universal Business of Emergency Medicine: A Worthy Investment All Global Emergency Physicians Need to Learn

Nicholas P. Cozzi, Nicholas Stark, Scott Pasichow

Rush University Medical Center, Medical Director of EMS and Disaster Medicine, Chicago, USA

Aim: To categorize and prioritize information related to the practice of emergency medicine that residents felt they were missing when starting to work as young attendings, and create a curriculum and material that would be frequently updated and modifiable to address those gaps.

Materials and Methods: Kern's 6 step method was used to conduct a literature review and needs assessment to determine the educational needs of young physicians. These assessment results were then used to prioritize 10 curriculum topics. Trainees, young physicians, and subject matter experts were assembled to create the content on these topics. Content was hosted on ACEP's educational platform with use data and reviews of the material collected from participants.

Results: The needs assessment revealed 10 topics that were chosen for curriculum content creation: billing and coding, negotiations, reimbursement, contracts and practice models, operations, risk management, quality and patient safety, em informatics, regulation and legal, and leadership and innovation. seventy-five authors and editors were necessary to create and review the information for each topic. In the 6 months since the launch of the product, more than 500 physicians have accessed some or all of the content. The methods stated here have also been used to evaluate other content and topic ideas for practice essential that have come up since the publication of the initial modules.

Conclusion: EMRA/ACEP's Practice Essentials of Emergency Medicine is an example of an effective use of a needs assessment to guide the creation of a tool that physicians will use to change their practice.

POSTER PRESENTATIONS

[PP-516]

Urban Late Adolescent Emergency Preparedness: Medical Student-led Life Saving Skill Training in Chicago's West Side as a Model for Global Bystander Readiness

Benjamin D. Muller[1], Ilyass Majji[1], Nicholas P. Cozzi[2]

[1]RUSH University Medical College, Medical Student, Illinois, USA
[2]RUSH University Medical Center, Department of Emergency Medicine, EMS and Disaster Medicine, Illinois, USA

Aim: Sudden cardiac arrests and traumatic injuries claim countless lives worldwide each year. The incidence of out-of-hospital cardiac arrests is rising, especially affecting minority populations who are less likely to receive bystander cardiopulmonary resuscitation (CPR). RUSH 911, a student group from RUSH University Medical College in Chicago, Illinois (USA), is dedicated to improving bystander CPR and stop-the-bleed education in Chicago's most vulnerable neighborhoods, with the potential to expand these vital skills to at-risk youth globally. This study aimed to teach critical bystander medical skills, including CPR, automated external defibrillator usage, choking prevention, Narcan/EpiPen administration, and bleeding control to adolescents in Chicago. Additionally, it sought to evaluate the effectiveness of the training by assessing participants' confidence and knowledge before and after the class through pre- and post-class surveys.

Materials and Methods: Pre- and post-class surveys utilized likert-based questions, which assessed participants' confidence and knowledge levels before and after participating in the RUSH 911 training class.

Results: The study involved 31 participants, with an average age of 23 years. Nine participants identified as male (29.03%), 19 as female (61.29%), and three as non-binary (9.68%). Participants reported a significant increase in confidence in their ability to perform all the taught skills post-training ($p<0.00001$). Knowledge levels also showed a statistically significant improvement between pre-and post-class surveys ($p<0.05$).

Conclusion: This study showed that the training effectively enhanced participants' confidence and knowledge in performing life-saving skills, which can be extrapolated to show possible implementation worldwide. Future research will assess the sustainability of these improvements over time.

[PP-399]

Comprehensive Management of Lance-Adams Syndrome with Action-induced Myoclonus in a Post-cardiac Arrest Patient

Marabeth R. Davila Marquez

University of Pavia, Medical Student, Pavia, Italy

Aim: Lance-Adams syndrome (LAS) is a rare neurological disorder characterized by action-induced myoclonus following hypoxic brain injury, often occurring after successful resuscitation from cardiac arrest. This case report aims to present the clinical management and outcomes of a 50-year-old male who developed LAS after a cardiac arrest, focusing on the challenges of symptom control and the patient's response to treatment.

Materials and Methods: The patient, a 50-year-old male with no prior medical history, suffered a cardiac arrest due to ventricular fibrillation and pulseless electrical activity (VFib/PEA). Post-resuscitation care included therapeutic hypothermia, He was in a coma for 13 days, with prognosis was uncertain. He developed stimulus-induced rhythmic, periodic, or ictal discharges (SIRPIDs) on electroencephalography, leading to a diagnosis of LAS. Treatment involved clonazepam for myoclonus and Keppra (levetiracetam) for seizure prophylaxis. Follow-up assessments focused on treatment effectiveness and management of ongoing symptoms, including periodic limb movements during sleep and mild obstructive sleep apnea.

Results and Conclusion: Despite initial uncertainty, the patient showed a positive overall outcome. Significant improvement in myoclonus control was achieved with clonazepam and Keppra, though mild sedation was reported. Daytime myoclonus resolved, while nighttime movements persisted. Cardiac function was preserved, as indicated by an magnetic resonance imaging (MRI) showing normal ejection fraction and no anoxic brain injury. This case highlights the importance of tailored pharmacological management in LAS and underscores the need for further evaluation of cardiac arrest survivors with initially uncertain prognoses to optimize long-term outcomes.

POSTER PRESENTATIONS

[PP-436]

Incidence and Prevalence of Transposition of the Great Vessels in Peru

Joseph Eid, Johnathan Lowe

Oklahoma State University, Oklahoma, USA

This case presents a 1-year-old child from rural Peru, brought to the clinic with concerns about a respiratory infection. The child was known to have transposition of the great vessels, a congenital heart defect. Despite this, the necessary corrective surgery had not been performed due to the family's financial and geographic challenges. As emergency physicians, we encounter cases where lack of access to healthcare worsens a manageable condition. This child, though not in immediate distress, is at risk of serious complications without intervention. The likely presence of a ventricular septal defect has allowed some blood mixing, delaying the onset of severe symptoms. However, this is only a temporary solution. The case also demonstrates the broader issue of healthcare disparities in rural areas, where financial and geographic limitations prevent timely treatment of serious conditions. It also highlights the importance of accessible healthcare services and the impact of socioeconomic factors on disease management. This case demonstrates the vital role emergency physicians play in identifying health disparities and the importance research plays into addressing these issues.

[PP-343]

Scribe Utilization İmproves Wellness and is Increasingly Being Looked at by EM Residency Applicants

Frederick Fiesseler, Brian Walsh, Renee Riggs

Morristown, New Jersey, Unite States of America

Aim: The accreditation council for graduate medical education (ACGME) limits the hours that residents can work in a given time period. This is done for both patient and resident safety. These rules are unique to emergency medicine and different rules apply when our residents are on off-service rotations.

Materials and Methods: An anonymous survey was created using Google Forms and distributed to all residents in a well-established, suburban emergency medicine residency with 29 residents. Residents were given 5 scheduling scenarios and asked to determine if they were a violation. Of note, none of the five scenarios had violations. Additionally all residents were asked why they thought the schedule was a violation.The percent of residents responding with each option was calculated.

Results: All 29 residents responded to the survey. Post-graduate year (PGY) year distribution comprised: PGY1 (n=10) PGY2 (n=10) and PGY3 (n=9). Males comprised 62% (n=13). Only 7% (n=2) residents got all cases correct. One was a PGY3 and the other was a PGY1. The average resident got 44% correct (n=2.2). Of note, our 2 chiefs who created the schedule received a 25% and 0% correct. Percentages correct based on the PGY year were 46%, 36% and 50%, for PGY1, PGY2 and PGY3, respectively. Gender specific scores demonstrated that males averaged 2.3 correct versus 2.1 for women.

Conclusion: The accreditation council for graduate medical education duty hours are not well understood by residents and they had difficulty determining if violations occurred.

[PP-344]

Scribe Utilization Improves Wellness

Frederick Fiesseler, Brian Walsh, Renee Riggs

Morristown, New Jersey, USA

Aim: Resident wellness is an important component of emergency medicine resident training. Charting and getting out late after one's ED clinical shift negatively affect resident wellness. Both of these functions can be improved by utilizing scribes. We hypothesized that scribe utilization would improve resident wellness.

Materials and Methods: A multicenter anonymous questionnaire was created using Google Forms and distributed to two emergency medicine programs. Residents were tallied about their views of scribes with respect to resident wellness and timeliness. Question responses were on a 1-5 Likert scale, with 1 meaning unfavorable and 5 being extremely favorable. The percent of residents responding with each option was calculated. We also asked residents to estimate time saved at the end of shift utilizing scribes. A One-Way ANOVA calculation was utilized with statistically significance set at <0.05%.

Results: Thirty residents responded to the anonymous survey. 50% were males. Overall scribe effect on wellness was 4.27, with PGY1, PGY2 and PGY3 scoring 3.77, 4.55, and 4.83 respectively (p=0.11). Distribution by gender demonstrated males having a score of 4.33 versus a female score of 4.2 (NS). A plurality felt that the scribes got them out between 30-60 minutes earlier (n=13), the second most common response was 60-90 minutes (n=10), and the least common response was <30 minutes (n=1).

Conclusion: Overall the residents thought that scribes had a positive impact on resident wellness and expedited them getting out sooner.

[PP-154]

Predictive Value of Left Ventricular Ejection Fraction in Cardiogenic Shock Patients: Gender Differences in Outcomes and Readmission Rates

Lucrezia Fiorentino[1], Salvatore Di Somma[2], Donatella Caserta[3], Lori B. Daniels[4], Nathalie Pandolfo[1]

[1]Sapienza University of Rome, Rome, Italy

[2]Emergency Medicine, Department of Medical-Surgery Sciences and Translational Medicine, University Sapienza Rome, Sant'Andrea Hospital, Rome, Italy

[3]Department of Surgical and Medical Sciences and Translational Medicine, Sapienza University of Rome, S. Andrea Hospital, Rome, Italy

[4]Sulpizio Cardiovascular Center, University of California San Diego, La Jolla, USA

Aim: This study investigates the predictive value of left ventricular ejection fraction (LVEF) in patients with cardiogenic shock, with a focus on gender differences. The objective was to understand how LVEF and other clinical parameters could influence outcomes in male and female patients.

Materials and Methods: The research was conducted at the Jacob Medical Center in San Diego from October to November 2022, involving 74 patients (45 men and 29 women). Parameters analyzed have been: Age, body mass index (BMI), heart rate, systolic and diastolic blood pressure, cardiac biomarkers [high-sensitivity troponin T (hs-TnT), NT-proBNP, lactate, LDH], LVEF at admission, and glomerular filtration rate (GFR).

Results: Parameters such as age, BMI, diastolic blood pressure (DBP), systolic blood pressure, GFR, and beats per minute showed no significant differences between genders in terms of mean and median values, allowing exclusion as potential causes of outcome differences. Men had lower LVEF values at admission compared to women. Despite that, short-term mortality rates were similar between genders, with no significant differences. However, long-term mortality was slightly higher in women. Women had better-preserved LVEF, correlating with a higher readmission rate within six months, whereas in men, readmission was correlated with lower LVEF.

Conclusion: The study suggests LVEF is a crucial indicator of cardiac function and outcomes in cardiogenic shock patients, with notable gender differences. The findings underscore the importance of tailored treatment and follow-up strategies for men and women to improve clinical outcomes.

Keywords: Cardiogenic shock, left ventricular ejection fraction, gender differences

POSTER PRESENTATIONS

[PP-248]

Resilience Unveiled: Myxedema Coma in a Survivor Case report

Noa A. Fried-Regev[1], Tzachi Slutsky[2], Amit Frenkel[3], Moti Klein[3], Shlomi Codish[4], Dan Schwarzfuchs[2]

[1]Soroka Medical Center, Beer-sheva, Israel, Department of Emergency Medicine, Beer-Sheva, Israel

[2]Department of Emergency Medicine, Soroka University Medical Center, Ben-Gurion of the Negev, Beer-Sheva, Israel

[3]Department of Anesthesiology and Critical Care, Soroka University Medical Center, Ben-Gurion of the Negev, Beer-Sheva, Israel

[4]Director General, Soroka University Medical Center, Ben-Gurion of the Negev, Beer-Sheva, Israel

We present the unique case of an 84-year-old woman who was taken captive from her home by Hamas organization on October 7th, 2023. Throughout her 51-day captivity, she was deprived of basic humanitarian conditions and denied medical care, including her essential chronic medications, in violation of international law. She was released in a critical condition, near death, and was admitted to Soroka University Hospital in Beer-Sheva in southern Israel. She was diagnosed with myxedema coma, a rare, life-threatening complication of untreated hypothyroidism. The medical team fought for her life and was able to successfully resuscitate her. This case highlights not only the medical challenges faced by individuals in captivity but also the potential for remarkable resilience and recovery. This patient has touched all the medical team involved in a very deep and emotional way and has left an indelible mark on us all. We believe that this report adds a unique perspective to the existing literature and contributes valuable insight into the management and outcomes of patients with similar experiences.

[PP-356]

Iliac Stent Migration to Right Ventricular Outflow Tract

Patrick Frost[1], Michael Shalaby[2], Daniela Usuga[3]

[1]Emergency Medicine Resident (PGY-3), Emergency Department, Mount Sinai Medical Center, Miami Beach, Florida, USA

[2]Emergency Medicine Attending Physician, Emergency Department, Mount Sinai Medical Center, Miami Beach, Florida, USA

[3]Fourth Year Medical Student, Florida International University, Miami, Florida, USA

Peripheral stent migration to the heart is a rare but important pathology to consider when assessing a patient with a history of vasculopathy with prior stent placement that presents with abnormal outpatient findings, chest pain, or shortness of breath. Our case centers on the migration of an iliac stent that had broken loose and lodged in the patient's right ventricular outflow tract. It highlights the utility of point-of-care ultrasound in the Emergency department with regard to expediting patient disposition and the rendering of definitive care. A 74-year-old male presented to our Emergency department after undergoing a routine echocardiogram. Finding were abnormal, so the patient was referred to the Emergency department. Our emergency medicine physicians utilized a bedside echocardiogram to confirm a foreign body within the right ventricle. A non-contrast computed tomography (CT) scan confirmed the presence of a foreign body. The patient's history of peripheral vascular disease with stent placement in the left iliac vein several months prior led us to believe that the foreign body in the patient's heart was in fact a dislodged stent. Our cardiothoracic surgery team was quickly consulted, and the patient was taken to the OR for retrieval of the stent. The patient made a full recovery. Our poster will include striking images of both the coronal view CT scan as well as the apical four chamber view ultrasound clearly showing the iliac stent lodged in the right ventricle.

POSTER PRESENTATIONS

[PP-425]

A Retrospective Review of Emergency Department Coronavirus 2019 Cases Vs. County Wide Cases to Demonstrate a Temporal Correlation

Brian Fu[1], Alexander T[2], Limkakeng Jr[2], Marcus Ong[2], Jason Theiling [2]

[1]Medical Student, Duke-NUS Medical School, Singapore
[2]Duke Univeristy Duke-NUS Medical School, Department of Emergency Medicine, College Rd, Singapure

Aim: New forms of community surveillance for future Coronavirus disease-2019 (COVID-19) variants are necessary to predict community-wide outbreaks, with one direction being Emergency department (ED) COVID-19 cases. To find a temporal correlation between ED and County COVID-19 cases and determine if ED COVID-19 trends can serve as an indicator to predict County-level outbreaks.

Materials and Methods: A retrospective analysis of COVID-19 data from March 2020 to April 2023 compared Durham COVID-19 cases in the ED versus Durham County cases. Data was analyzed using two metrics: A positivity cutoff and a cross-correlation analysis. The positivity cutoff (percent of positive tests to total tests) compared County and ED dates that crossed the 4% threshold (based on Centers of Disease Control and Prevention guidelines). The cross-correlation analysis between the County and the ED determined the time lag interval (in days) that had the strongest correlation, defined by the highest r-squared value across 6 outbreaks.

Results: There were both 7 ED and County dates that met the cutoff, but only 5 that corresponded to the same outbreaks. The County outbreaks preceded ED outbreaks, ranging from 2-59 days, with a mean of 42 days prior. The cross correlational analysis underwent a sensitivity analysis looking at 4 of the 6 outbreaks, resulting in an r-squared values ranging 0.8435-0.9271, averaging 8.25 days of County precedence.

Conclusion: ED data may be a poor predictor of county level COVID-19 cases; however, the strong correlation of County precedence may prove helpful in allocation of hospital resources in preparation for future COVID-19 outbreaks.

[PP-330]

Mystery in the Skull: A Case Report of Spontaneous Pneumocephalus

Bharath Gopinath[1,2], Daniel Stancicu[2], Ajaz Qasba[2]

[1]Department of Emergency Medicine, John Radcliffe Hospital, Oxford University Hospitals, Oxford, UK
[2]Department of Emergency Medicine, Colchester General Hospital, Colchester, UK

Aim: Pneumocephalus, a rare condition involving the presence of air within the cranial cavity, is usually associated with trauma, bony defect or surgical procedures. We present a case of spontaneous pneumocephalus in a 34-year-old male with a two-day history of sudden onset headache, highlighting the atypical nature of this presentation.

Materials and Methods: A 34-year-old male presented to the Emergency department with a two-day history of headache. The headache was sudden in onset, severe and bifrontal. The patient denied any associated symptoms, and there were no identifiable precipitating factors such as trauma or recent medical procedures. Patient did not remember forceful nose blowing, sneezing or valsalva maneuver in the past. Physical examination revealed no signs of meningitis. CT revealed a frontal pneumocephalus.

Results: The patient was initiated on antibiotics to prevent potential meningitis. No cause for pneumocephalus was identified. CT paranasal sinus and mastoid and lumbar puncture were normal. MRI brain was normal except for the pneumocephalus. No neurosurgical intervention was done in the absence of any identifiable source of leak. The patient's symptoms improved during the hospital stay, and he was discharged with follow up. Repeat CT scans showed persisting pneumocephalus but patient remained asymptomatic. Further evaluation by a multidisciplinary team is pending for a comprehensive treatment plan.

Conclusion: Spontaneous pneumocephalus, although an extremely rare condition, should be considered as a potential diagnosis in patients presenting with unexplained sudden onset headache without any neurological deficit. Immediate initiation of management for potential meningitis, along with appropriate neurosurgical referral, is imperative in the ED.

POSTER PRESENTATIONS

[PP-180]

Alleged H/O Intake of Cyanide in Young Female

Rajat Gupta Gupta, Manisha Arora, Alok

Medical Profession, Delhi, India

A young female aged 25 years presented to the emergency with alleged history of ingestion of potassium cyanide. On initial 10 sec assement, CNS- unconsicous, b/l fixed dilated pupil, -gasping breathing, pulse, BP not recordable, heart rate was 36/min.

RBS-260 mg/dL, temperature: 97 F.

ECG-sinus bradycardia

VBG- pH-6.8, Po_2-33, pCO_2-48, lactate->15

Cyanide is a mitochondrial toxin that causes death within minutes to hours of exposure. The patient after exposure may present with symptoms of dizziness, headache, nausea/vomiting, rapid breathing, respiratory failure, loss of conciousness or convulsion, however management should be inititaed immediately as soon as cyanide poisoning is suspected.In this patient, immediate CPR was given and patient was put on ventilator. Gastric lavage was done and IV Fluids were given in boluses. CVP and Arterial lines were inserted. High dose vasopressors and soda bicarb infusion were also given. The specific antidote-Inj. Hydroxycobalamine 5 gm iv was given slowly and repeated. Pt was managed with antacisa and other supportive treatment.

All the respective investigation: Routine blood test, blood cyanide level, urine for toxicology, serial ABG were done. Hemodynamic monitoring with MAP >65 mmHg, urine output, serial ABG 2 hourly and lactate monitoring were done. Hemodialysis is initiated and continued.

The patient begin to improve gradually, ionotropes were tapered and stopped, soda bicarb was also stopped as pH improved.

RT feed started @50 mL/2 hrly along with balanced IV fluids. Patient began to improve the following day, after which she was put on weaning mode. Finally, on day 7 of ICU management she was succesfully extubated.

[PP-045]

Exploring the Correlation of Venous Lactate Levels with Surgical Intervention in Polytrauma Patients with Abdominal Involvement

Cynthia Habib, Mohamad Kanso

Emergency Medicine Resident, American University of Beirut, Beirut, Lebanon

The study addresses the critical issue of trauma management by assessing the predictive value of venous lactic acid levels in identifying the need for abdominal surgical intervention following polytrauma. Trauma is a major global health concern, responsible for approximately six million deaths annually, with elevated lactate levels often indicating severe trauma and correlating with increased mortality rates. Early identification of severe injuries, particularly in polytrauma cases, is crucial for effective management and improved outcomes.

This retrospective observational study analyzed 630 electronic medical records of patients admitted to the American University of Beirut Medical Center Emergency Department due to abdominal trauma between November 15, 2018, and August 30, 2023. Data collected included demographics, laboratory and imaging findings, and clinical outcomes. Statistical analysis, performed using IBM SPSS Statistics version 28.0, revealed significant findings.

Logistic regression demonstrated that patients with elevated lactic acid levels (>2.2 mmol/L) were significantly more likely to require surgical intervention compared to those with normal levels ($p<0.01$). Abnormal findings in FAST and CT abdomen scans were also more prevalent among patients with elevated lactic acid levels ($p<0.05$), suggesting a correlation between elevated lactate and the severity of abdominal trauma. Furthermore, elevated lactic acid levels were associated with prolonged hospital stays and higher Glasgow Coma scale scores (both $p<0.01$).

In conclusion, the study underscores the utility of venous lactic acid levels as a predictive marker for identifying patients at higher risk of needing abdominal surgery following traumatic events. These findings advocate for the integration.

POSTER PRESENTATIONS

[PP-380]

Impact of Glaucoma on Blindness Development in Patients with Diabetic Retinopathy

Javokhir Ibatov[1], Zulaykho Shamansurova[2]

[1]Medical Student, Central Asian University Faculty of Medicine, Tashkent, Uzbekistan
[2]Associate Professor, Central Asian University Faculty of Medicine, Tashkent, Uzbekistan

Aim: Glaucoma and diabetic retinopathy (DR) are major causes of irreversible blindness. This study investigates how these conditions interact to accelerate blindness development, aiming to identify predictive markers and therapeutic targets.

Materials and Methods: A meta-analysis was performed using data from PubMed, Medline, and Scopus. The study included patients over 40 years old diagnosed with both glaucoma and DR. Data collection involved regular ophthalmic examinations, intraocular pressure (IOP) measurements, and systemic health monitoring, including HbA1c levels and blood pressure (BP). The analysis focused on progression rates to blindness and the impact of systemic and ocular risk factors.

Results and Conclusion: Epidemiologic studies indicate that vision impairment in people with diabetes mellitus (DM) typically occurs after age 50, more often in women (59%). Blindness due to DM accounted for 3.3% of cases, with higher prevalence in Arabic populations. Glaucoma prevalence increased with age, particularly after 70 years, contributing to 8.39% of blindness. The onset of blindness was earlier in patients with both DM and glaucoma (63.85±7 years). Glaucoma was present in 4.96% to 14.6% of people with DM. Screening for glaucoma in DM patients, and vice versa, is essential to prevent vision loss. BP monitoring is crucial in patients with both conditions to reduce blindness risk.

Keywords: Glaucoma, diabetic retinopathy, blindness, intraocular pressure, blood pressure

[PP-252]

Walled-of Necrosis, a Late Complication of Acute Pancreatitis: A Rare Case Report in the Emergency Department

Utku İlhan, Ebubekir Bahar, Öner Bozan, Asım Kalkan

University of Health Sciences Turkey, Prof. Dr. Cemil Taşcıoğlu City Hospital, Clinic of Emergency Medicine Department, İstanbul, Turkey

Aim: Acute pancreatitis is an inflammatory condition associated with damage and necrosis of the exocrine pancreas. It can range from mild cases that resolve spontaneously to severe cases that can lead to systemic inflammatory response syndrome, organ failure, and even death. Walled-off pancreatic necrosis (WOPN) is a delayed complication, typically occurring four weeks after the initial attack, and is associated with significant mortality and morbidity.

Materials and Methods: A 39-year-old male patient presented with widespread abdominal pain, nausea, and vomiting. He had a history of chronic pancreatitis, hypertension, and diabetes mellitus. Laboratory tests showed elevated leukocytes and lactate levels, while amylase and lipase levels were normal. Ultrasound and CT scans revealed an abscess in the pancreatic head, necrotic areas, and peripancreatic fat stranding. Treatment included antibiotics and fluid resuscitation, with norepinephrine administered to manage hypotension. The diagnosis of WOPN was made, and the patient was admitted to the general surgery department.

Results: WOPN develops in the delayed phase of acute necrotizing pancreatitis and is characterized by a encapsulated collection of necrotic material. Optimal management requires a multidisciplinary approach involving gastroenterologists, surgeons, interventional radiologists, intensivists, infectious disease specialists, and nutritionists. Imaging studies are crucial for diagnosing infected necrosis and other complications. In severe cases, broad-spectrum antibiotics and fluid resuscitation are necessary. Following diagnosis, minimal invasive interventions and ongoing monitoring are recommended.

Conclusion: The patient's condition improved with antibiotic treatment, so debridement, drainage, or necrosectomy were not performed. Minimal invasive endoscopic treatments and regular gastroenterology follow-up were advised. Most collections resolve spontaneously, but

POSTER PRESENTATIONS

[PP-387]

The Fast and Furious Storms: Stellate Ganglion Block for Electrical Storm in Thyroid Storm

Sahana T. Kathimanda[1], Rahul R Mamidi[2], Sanjeev Bhoi[3], Golak P Patra[3], Karthik KS Naik[3], Rahul S Margiya[3], Arun K Gnanasekaran[3], Saleek Palakursi[3], Anuvinda P Govindan[3]

[1]All India Institute of Medical Sciences, New Delhi, Department of Emergency Medicine, New Delhi, India

[2]Department of Emergency Medicine, Nizam's Institute of Medical Sciences, Telangana, India

[3]Department of Emergency Medicine, All India Institute of Medical Sciences, New Delhi, India

Aim: Hyperthyroidism affects cardiovascular system directly and indirectly, predisposing risk for arrhythmias. Ventricular tachyarrhythmias are less common and pose a challenge in managing when they become refractory to primary treatment. Stellate ganglion block is an emerging treatment modality for refractory ventricular storm. It helps in reverting ventricular storm by suppressing the sympathetic activity.

Materials and Methods: A 26-year-old male with no prior comorbidities presented to our emergency with complaints of palpitations and shortness of breath for 10 days. On arrival he had a heart rate of 180/minute with no hemodynamic instability. His electrocardiogram showed atrial fibrillation with non-sustained ventricular tachycardia (VT). Rate control drugs (metaprolol (15 mg) and diltiazem (12.5 mg) followed by amiodarone(150 mg) were given. Rhythm changed to VT with pulse and the patient was cardioverted (3 shocks). The VT was refractory to standard pharmacological and electrical therapies. Stellate ganglion block with 2% lignocaine was given under ultrasound guidance to halt the VT storm. VT subsided with no recurrence. Based on history and clinical examination thyroid storm was suspected (Bursch Wartofsky point scale score 45). His labs showed reduced TSH (0.006 mIU/mL), raised total T3 (2.93 ng/mL), total T4 (14.4 mg/mL) and free T4 (2.37 ng/dL) confirming our initial suspicion.

Results and Conclusion: Stellate ganglion block is a useful bedside procedure to control electrical storm that is refractory to all standard resuscitative therapies.

Keywords: Refractory ventricular tachycardia, electrical storm, stellate ganglion block, thyroid storm

[PP-342]

Neurofilament Light Chain as a Prognostic Biomarker in Acute Brain Injury: A Systematic Review and Meta-Analysis

Saidkomol Khursandov[1], Khikmat Anvarov[2]

[1]Republican Research Centre of Emergency Medicine, Tashkent, Uzbekistan

[2]Associate Professor, Central Asian University, Tashkent, Uzbekistan

Aim: Early identification of patients at risk for poor outcomes is crucial for optimizing treatment strategies. Neurofilament light chain (NfL), a biomarker reflecting axonal damage, has emerged as a potential prognostic indicator. This study aimed to assess the prognostic accuracy of NfL in predicting short-term outcomes in patients with acute brain injury.

Materials and Methods: A systematic search of electronic databases (PubMed, Embase, Cochrane Library, Scopus) identified 82 studies involving 15,427 patients. Inclusion criteria encompassed adult patients with acute brain injury, measurement of serum NfL levels, and assessment of short-term outcomes. Data were extracted on study characteristics, patient demographics, NfL levels, and outcome measures.

Results and Conclusion: Pooled analysis demonstrated that elevated NfL levels were significantly associated with increased risk of mortality (HR 2.47, 95% CI 1.92-3.18, $p<0.001$) and poor functional outcome (measured by modified Rankin scale score ≥3, HR 2.15, 95% CI 1.67-2.76, $p<0.001$). Subgroup analysis revealed that the prognostic value of NfL was most pronounced in ischemic stroke patients (HR 2.91, 95% CI 2.25-3.77, $p<0.001$). These findings support the prognostic role of NfL in acute brain injury. Elevated NfL levels are associated with increased risk of mortality and poor functional outcomes. These results highlight the potential of NfL as a valuable prognostic biomarker to guide clinical decision-making and inform future research.

Keywords: Neurofilament light chain, acute brain injury, biomarker

POSTER PRESENTATIONS

[PP-391]

Features of Diagnostics of Aortic Dissecting Aneurysm

[1]Gulzoda Kodirova, [2]Mustapha Obeid, [2]Odilbek Sultanov, [3]Abdusalom Abdurakhmanov

[1]Central Asian University Faculty of Medicine, Tashkent, Uzbekistan
[2]Republican Research Center for Emergency Medicine, Clinic of Cardiac Surgery, Tashkent, Uzbekistan
[3]Republican Scientific Center for Emergency Medicine, Clinic of Cardiac Surgery, Vascular Surgery with Microsurgery, Tashkent, Uzbekistan

Aim: Aortic aneurysm dissection (AAD) surgery mortality rates are high, making research on the subject important. Early diagnosis and timely surgical care are crucial for saving lives. AAD has an incidence of 3 cases per 100,000 people. The study aims to early diagnose and enhance the outcomes of AAD patients.

Materials and Methods: The study involved 48 patients with AAD type 1 and 2 who underwent surgery at the Republican Scientific Center of Emergency Medicine between 2013-2024. Instrumental examinations like electrocardiography (ECG), chest X-ray, transesophageal echocardiography (TE EchoCG), and multi-spiral computed tomography were conducted on the patients.

Results and Conclusion: The study included 48 patients with an average age of 55.4 years, dominated by men-34 (70%), and women 14 (30%). 29 of the patients (60%) had DeBakey type 1, while 19 (40%) had type 2. Forty-two cases suffered from hypertension for an average of 12 years. Patients with high blood pressure and severe chest pain were suspected of having AAD. After the exclusion of acute myocardial infarction by ECG, AAD was confirmed in 6 (14%) of 42 patients by radiography, whereas TE EchoCG showed that 30 (71%) patients suffered from AAD. However, all patients were confirmed with AAD by contrast-enhanced CT. The postoperative mortality rate was 22.9% and is higher in patients with elevated blood pressure levels. Long-standing hypertension with malignant evolution indicates increased AAD risk and immediate cardiac surgery may be necessary for confirmed cases.

Keywords: Aortic aneurysm dissection, hypertension, cardiac surgery

[PP-099]

Role of NF-κB Signalling Pathway in Trauma Haemorrhagic Shock

Lakshmi Kanth Kotarkonda, Subhashini Bharathala, Tej Prakash Sinha, Sanjeev Bhoi

All India Institute of Medical Sciences, Clinic of Emergency Medicine, Delhi, India

Aim: Trauma-haemorrhagic shock (THS) is characterized by a strong inflammatory response that conceivably may be critical for survival following the insult. However, a sustained and exacerbated inflammatory response may be deleterious. NF-κB is a pleiotropic transcription factor that regulates the transcription of hundreds of genes involved in inflammation, immunity, apoptosis, cell proliferation, and differentiation. The role of NF-κB in the inflammation causes cytokine storm and subsequent sepsis, multiorgan failure leading to increased mortality in THS. We hypothesize that the activation of this NF-κB pathway might induce the expression of several NF-κB-responsive genes, including iNOS and ICAM-1 in THS.

Materials and Methods: The total number of subjects included was 80. Among the 80.30 were healthy donors and considered in this study as controls, and 50 patients of THS patients. The peripheral blood mononuclear cells (PBMCs) were isolated from the participants and the methods used in the study are quantitative reverse transcriptase polymerase chain reaction, immunofluorescence, Western blot, ELISA.

Results and Conclusion: In this study, NF-κB, RelA (p65), is reportedly the main proinflammatory transcription factor in THS. NF-κB is localized in the cytoplasm and binds to I-κBα, which prevents its translocation into the nucleus. Once activated, NF-κB may translocate into the nucleus and trigger proinflammatory cytokine release. Thus, our study indicated that inhibiting the NF-κB pathway can alleviate injury-induced THS by inhibiting inflammation. In the present study, we demonstrated NF-κB activation in PBMC cells following THS by showing its increased phosphorylation and accumulation in the cell nucleus and inducing an inflammatory cascade leading to a cytokine storm, sepsis and mortality.

POSTER PRESENTATIONS

[PP-515]

The Rush University Medical Center Advanced Trauma Training Program: An Immersive Training Program with Global Combat Medical Readiness Applications

Crystal B. Lafleur, Nicholas Cozzi, Jessen Schiebout, Kevin Johnson, Col Dave Leckrone

Rush University Medical Center Emergency Medicine, Clinic of Emergency Medicine Resident Physician, Chicago, USA

Aim: Combat medical training is essential for military members. Rush's Advanced Trauma Training Program, a one-week course of interactive lectures and hand-on dynamic exercises, was designed to keep international and United States (US) military medical units combat ready. The primary research outcome was to characterize course graduate feedback and belief of medical readiness before and after transition from primarily classroom, case-based simulation to a hands-on, procedural based training program with immersive mass casualty exercise simulation taught by emergency medicine physicians.

Materials and Methods: Graduates from 2022-2024 electronically completed a self-administered, anonymous survey. Specific feedback was obtained on the program's content, instructor impact, level of combat medical preparedness, and demographic data. Permission was obtained from all participants to use survey data for research purposes.

Results and Conclusion: Approximately 200 military members attended the one-week course, 144 before course changes and 55 post intervention. The prominent level of training was mergency Medical Technician-Basic (34.2%) followed by RN (23.6%). Preprogram intervention reflected 58% of participants who felt the program prepared them for deployment "well" or "very well" versus 91% post intervention who "agreed" or "strongly agreed". 96% of members felt that lessons learned during the course would assist them in accomplishing their unit collective mission. Rush's Advanced Trauma Training Program is a targeted course for US and international military members overall combat medical readiness. Improvements in the curriculum to improve member engagement with an increase in hands-on activity and the addition of an immersive mass casualty exercise reflects a higher self-reported personal and unit readiness.

[PP-037]

Approach to Hypertension in the Emergency Department

Mark I. Langdorf

Professor of Clinical Emergency Medicine, University of California, Irvine. Editor of the Western Journal of Emergency Medicine, Yorba Linda, CA, USA

Hypertension is prevalent among Emergency department visits. This talk will review evidence based diagnostic strategies and treatment options for patients with varying degrees of hypertension, and highlight pitfalls of potential mismanagement.

POSTER PRESENTATIONS

[PP-157]

It's (Not) a Disaster! the Impact of Cognitive Aid on Physician Stress, Cognitive Load, and Decision-Making in the Emergency Department

Anna C. Levitt, Pia Daniel

SUNY Downstate Medical Center/Kings County Hospital Center, Clinic of Emergency Medicine, New York, USA

During disasters, physicians face information overload and cognitive burden, impeding decision-making. While benefits of cognitive aids are widely recognized, empirical evidence on its impact on physician stress, cognitive load, and decision-making remains limited. This study aims to understand the relationship between disaster protocol cognitive aids and physician response.

Emergency medicine physicians participated in a biologic disaster drill and were divided into a control group using standard protocol and an experimental group using a cognitive aid in the form of a one-page "just-in-time" training. Participant surveys measured stress levels and cognitive load. Critical action checklists measured decision-making. Descriptive statistics were used to analyze the impact of disaster cognitive aids on physician stress, confidence levels, and decision-making.

Five participants were in the control group and 9 participants were in the experimental group. The experimental group reported a decrease of 22% in stress level compared with 0% in the control group. The experimental group reported an increase of 67% in confidence level and 56% in familiarity with protocol, as compared to 0% in the control group. The experimental group reported 58% less in elevation of stress levels than the control group. The experimental group completed 96% of the critical actions versus 78% in the control group. The results support utilizing cognitive aids to improve physician stress level, protocol confidence, and decision-making during a disaster. Overall the results are promising and reinforce the idea that cognitive aids can prevent increase in stress level and improve familiarity, confidence, and decision making during a disaster.

[PP-325]

Evaluation of Copeptin Level as Prognostic Marker of Decompensated Acute Heart Failure

Gabby Ardani Loman, Edwin Darmawan, Novi K. Firani, Hani Susianti

Universitas Brawijaya Faculty of Medicine, Department of Clinical Pathology; Dr. Saiful Anwar General Hospital, Malang, Indonesia

Aim: Heart failure is a disease with a poor prognosis, making it essential to identify biomarkers that can predict mortality in heart failure. Copeptin is a hypothetical biomarker that may describe the ongoing pathophysiological process of heart failure, reflecting neurohormonal activity in acute heart failure. This study assessed the prognostic ability of copeptin in patients with acute heart failure by evaluating the level of this biomarker associated with mortality at 180 days after hospitalization.

Materials and Methods: This is a prospective cohort study. Serum samples were examined for the level of Copeptin using ELISA at initial admission and upon the participants' return home. The participants were followed until the 180[th] day to collect mortality data.

Results and Conclusion: The total number of participants was 42, but only 28 samples met the inclusion criteria. There were significant differences in changes in the level of Copeptin between the survival and non-survival groups ($p<0.05$). The group of patients with changes in Copeptin greater than 40.82 pg/mL had a relative risk of death within 180 days that was 10.3 times higher. The area under the curve, sensitivity, and specificity of copeptin as a prognostic biomarker for decompensated acute heart failure were 0.75, 99%, and 66%, respectively. In conclusion, Copeptin is a promising prognostic marker for mortality within 180 days in patients with decompensated acute heart failure.

Keywords: Copeptin, heart failure, prognostic marker

POSTER PRESENTATIONS

[PP-169]

Emergency Department Efficiency and Point of Care Testing

Joshua J. Lynch

University at Buffalo Faculty of Medicine, Department of Emergency and Addiction Medicine, Clinic of Emergency Physician, New York, USA

Aim: This Emergency department (ED) has led the region in patient satisfaction and throughput metrics for many years. As part of a system wide optimization plan, we transitioned to point of care (POCT) for the ED and eliminated on-site laboratory services.

Materials and Methods: The objective was to evaluate the effect on ED throughput implementing a robust POC testing program at a busy standalone ED. In April 2021, we launched the POC testing initiative. ED nurses were trained to use each machine, and to perform quality control procedures along with basic troubleshooting measures.

Results: In the first month of the program, 1,728 POC tests were performed by the facility's ED nurses. In the last month evaluated 3,302 tests were performed, a 91% increase in testing volume. The average monthly ED volume between October 2020 and March 2021 was 990 patients and 1,740 patients between September 2023 and February 2024. ED volume overall increased by 75% in this three-year period. The median time was 98 minutes in the 6 months before the launch of the program and 91 minutes in the most recent six months. This represents an improvement in throughput of 7.2%.

Conclusion: Despite a volume increase of 75% and a 91% increase in POC tests performed each month, the median time from an ED physician or advanced practice provider signing up to care for a patient and the patient's checkout was reduced. POCT programs should be explored for EDs both large and small to help provide increased efficiency.

[PP-327]

Seasonal Variation in Acute Poisoning Incidents: A Proposed Retrospective Study in Emergency Departments

Makhmudjon Madrakhimov, Asadbek Sultonov

Central Asian University; Republican Research Center for Emergency Medicine, Tashkent, Uzbekistan

Aim: Acute poisoning incidents present a major challenge for Emergency departments globally, with their frequency and nature influenced by seasonal variations. Understanding these patterns is essential for improving emergency preparedness, optimizing resource allocation and enhancing patient outcomes. This study aims to investigate how seasonal changes affect acute poisoning cases and determine which gender and age groups are most at risk during different seasons.

Materials and Methods: This retrospective study will analyze acute poisoning cases reported at the Republican Research Center for Emergency Medicine and its branches across Uzbekistan over a 2-year period from March 2022 to March 2024. Data will be sourced from patient medical history files, focusing on patient demographics, types of poisoning and seasonal trends. The study will categorize poisoning incidents by gender, age group, route of exposure and cause to identify seasonal vulnerability patterns.

Results: Distinct seasonal patterns in poisoning cases are anticipated. Carbon monoxide poisoning may peak in winter due to heating appliance use, while pesticide-related poisonings might increase in summer linked to agricultural activities. Drug overuse incidents could show seasonal variations based on medication usage patterns. Younger individuals may be more prone to accidental poisonings, while older adults may face higher rates of medication-related incidents.

Conclusion: Validated results will emphasize the need to consider seasonal and demographic factors in managing and preventing acute poisoning incidents. Identifying peak periods for specific poisoning types will guide public health interventions, thereby improving patient care and outcomes.

Keywords: Acute poisoning, public health, Emergency departments

POSTER PRESENTATIONS

[PP-411]

Challenges in Diagnosing Acute Pericarditis in A Complex Case of Cryoglobulinemic Vasculitis from an Emergency Perspective

[1]Jad Majed, [2]Ciro Esposito, [2]Song Kwan Kim, [2]Saajid Meeran

[1]University of Pavia Faculty of Medicine, Department of Molecular Medicine, Pavia, Italy
[2]ICS Maugeri; University of Pavia, Pavia, Italy

Aim: Chest pain (CP) is the most common complaint in Emergency departments (EDs). It requires thorough evaluation and remains diagnostically challenging in EDs and outpatient settings. This case highlights the diagnostic complexity in a 61-year-old male presenting to the ED with CP relapse having a history of cryoglobulinemic vasculitis (CryoVas) secondary to chronic hepatitis C virus infection and membranoproliferative glomerulonephritis. They presented with CP a year earlier and were diagnosed with paroxysmal supraventricular tachycardia. This case report aims to highlight the difficulty of CP differential diagnosis in patients with multiple comorbidities and the importance of considering multifaceted approaches in emergency medicine.

Materials and Methods: Investigations conducted were urinalysis, blood test, electrocardiography (ECG), and echocardiography (Echo).

Results and Conclusion: ECG showed a junctional rhythm with a 35 beats-per-minute heart rate. Biochemical examinations indicated a slight increase in serum troponin I levels (0.477 ng/mL), hyperkalemia (K+ 6.47 mmol/L), acute kidney injury (serum creatinine 3.27 mg/dL), increase in serum C-reactive protein and oliguria. These examinations suggested inflammation rather than ischemia. Echo revealed non-hemodynamically significant pericardial effusion. Considering their history of CryoVas, the presence of rash, arthralgia, and renal impairment, and after excluding other potential causes, guided by imaging and laboratory findings, pericarditis was definitively diagnosed. Treatment included non-steroidal anti-inflammatory drugs and levofloxacin, gradually resolving symptoms. This case emphasizes the diagnostic challenges of pericarditis amidst systemic inflammatory conditions. It highlights the significance of multidisciplinary approaches in EDs and early recognition, avoiding misdiagnosis or treatment delays.

Keywords: Chest pain, cryoglobulinemic vasculitis, pericarditis

[PP-374]

Enhancing Infection Control in Emergency Departments: The Transformative Role of Artificial Intelligence

Jabir Majeed, Nirmal Peter Abraham

IQRAA International Hospital and Research Centre, Clinic of Emergency Medicine Entre, Kozhikode, Kerala, India

Aim: Artificial Intelligence (AI) is revolutionizing infection control within Emergency departments (EDs). Its ability to analyze vast amounts of data and provide real-time insights significantly enhances infection management, particularly in high-pressure environments like the ED. This review explores the use of AI in optimizing infection control practices within EDs, focusing on predictive analytics, surveillance, antimicrobial stewardship, diagnostic accuracy, and protocol adherence.

Materials and Methods: AI leverages predictive analytics to identify potential infection outbreaks by analyzing historical and real-time data. Machine learning models monitor ED environments for unusual patterns in patient admissions or antibiotic use, triggering real-time alerts for early intervention. AI tools assist in antimicrobial stewardship by recommending appropriate antibiotic treatments and tracking resistance patterns, reducing the risk of antibiotic resistance. AI-enhanced diagnostic tools rapidly analyze tests and imaging studies, improving the accuracy and speed of infection detection. Systems monitor adherence to infection control protocols and provide insights into healthcare worker behaviors, suggesting areas for improvement. AI also aids in contact tracing, risk stratification, and optimizing ED workflows, ensuring efficient resource allocation and reducing patient wait times.

Results and Conclusion: AI plays a transformative role in infection control in EDs by enabling early detection, optimizing treatment protocols, and improving adherence to infection control measures. As AI continues to evolve, its integration into emergency medicine will further enhance the management of infectious risks, protect healthcare workers, and improve patient outcomes. However, challenges such as data privacy and integration with existing systems must be addressed to maximize AI's potential in this field.

POSTER PRESENTATIONS

[PP-407]

Unmasking Thoracic Aortic Aneurysm: The Role of Early Echocardiography in a Case of Supraventricular Tachyarrhythmia

Jabir Majeed MP, Muhammed Ameen, Renjith T.P,

IQRAA International Hospital and Research Centre, Clinic of Emergency Medicine Entre, Kozhikode, Kerala, India

Case Reports: We present a case involving a 79-year-old female who experienced palpitations and generalized fatigue. An electrocardiogram revealed a rapid supraventricular tachyarrhythmia. Subsequent transthoracic echocardiography uncovered a pseudoneurysm distal to the aortic arch along with moderate pericardial effusion. A computed tomography scan of the chest confirmed the presence of a thoracic aortic aneurysm. Thoracic aortic disease can manifest in various forms, often discovered incidentally during a chest X-ray performed for unrelated reasons. Remarkably, our patient had no traditional risk factors for an aortic aneurysm. While the literature does report instances of aortic dissection presenting with supraventricular arrhythmias, this case is, to our knowledge, the first where an arrhythmia was the initial indication of a non-dissected aortic aneurysm. Current guidelines for managing supraventricular tachyarrhythmia do not specify when to perform echocardiography during the diagnostic process. We suggest that early echocardiography can be particularly beneficial when evaluating patients in the emergency room presenting with paroxysmal tachyarrhythmias. Early imaging may aid in the timely identification of underlying structural abnormalities, such as aortic aneurysms, that could otherwise remain undetected until they lead to more severe complications.

Learning Point: This case highlights the potential value of incorporating early echocardiography into the assessment protocol for patients presenting with supraventricular tachyarrhythmias, particularly when the patient lacks typical risk factors for aortic disease.

[PP-409]

A Case of Apparent Mineralocorticoid Excess Due to Chronic Liquorice Ingestion Presenting as Status Epilepticus, Atypical Pres

Jabir Majeed, Renjith T.P., Nirmal Peter Abraham, Noorjahaan, Vinayak M.S.

IQRAA International Hospital and Research Centre, Clinic of Emergency Medicine entre, Kozhikode, Kerala, India

An elderly female presented to the Emergency department with generalized tonic-clonic seizures followed by unresponsiveness. Her medical history included hypertension, bronchial asthma, unprovoked pulmonary embolism, mixed depression and anxiety, and two recent hospital admissions for accelerated hypertension with acute pulmonary edema, and urosepsis with type 2 respiratory failure. She was on multiple medications, including warfarin, but had a history of non-compliance and had been consuming large quantities of indigenous medications containing licorice (glycyrrhiza glabra) for 1-2 months.

Upon arrival, she was intubated due to low Glasgow Coma Scale scores. Initial investigations revealed hypokalemia [K+3 milliequivalents per litre (mEq)/L], hypomagnesemia [magnesium (Mg^2)+1.34 mEq/L], and metabolic alkalosis [pH 7.59, bicarbonate (HCO3)-47, partial pressure of carbon dioxide (pCO_2) 48]. MRI showed T2/FLAIR hyperintensities in the grey and subcortical white matter. She was started on antiepileptics (levetiracetam), antibiotics (linezolid) for enterococcal urinary tract infections, and electrolyte corrections. Her condition improved, and she was extubated but later reintubated due to status epilepticus.

Persistent metabolic alkalosis (pH 7.56, HCO_3-42) and hypokalemia prompted further investigation, revealing a normal aldosterone/renin ratio and cortisol level, suggesting apparent mineralocorticoid excess due to chronic licorice ingestion. Management included continuation of antiepileptics, blood pressure control with calcium channel blockers and spironolactone, and correction of metabolic disturbances. Her sensorium improved, and she was successfully extubated again. The patient remains stable, with normal blood pressure and potassium levels, and is currently under outpatient follow-up.

Learning Point: Recognition of apparent mineralocorticoid excess as a potential cause of persistent metabolic alkalosis and hypokalemia in patients with a history of chronic licorice ingestion.

POSTER PRESENTATIONS

[PP-355]

Clinical Significance of Lateral X-Ray of the Cervical Spine Before Intubation in the Elderly Population During an Emergency Situation to Prevent Atlantoaxial Subluxation

Nodira Makhmudova

Central Asian University Medical School, Tashkent, Uzbekistan

Aim: With a growing elderly population, emergency medicine introduces unique challenges, especially concerning airway management. More common among older adults are such conditions as cervical spine degeneration, osteoporosis, past fractures, and even congenital issues like Klippel-Feil syndrome plus rheumatoid arthritis and neuromuscular disorders. These greatly bring the risk of atlantoaxial joint instability closer to one developing serious complications such as cervical radiculopathy, myelopathy resulting from cord compression, brainstem compression, and even vertebrobasilar insufficiency. This paper reviews how important it is to ensure lateral cervical spine X-rays are taken before considering or planning for intubation in the elderly; this could help avert progressive atlantoaxial subluxation during emergency procedures by all means.

Materials and Methods: We conducted thorough literature review on topics including "lateral neck radiographs," "emergency intubation," and "atlantoaxial subluxation" published in the PubMed database from 1990 to 2024.

Results and Conclusion: Among the subjects addressed in the papers there were the identification of atlantoaxial dislocation, comprehension of its etiology and clinical manifestations, prevention and treatment, and assessment of the utility of lateral neck X-rays. We did discover that there is still a lack of information particularly on intubation in the elderly, though. In order to identify any structural abnormalities that may cause atlantoaxial subluxation in older patients, lateral cervical spine X-rays prior to intubation are crucial. To enhance patient safety and results in emergency situations, we stress the need for additional research and standardized practices.

Keywords: Atlanto-axial subluxation, lateral neck X-ray,emergency intubation, geriatric population

[PP-237]

Scoping Review of Outcomes, Outcome Measure Instruments and Measurement Timepoints Reported in Experimental Studies with Older Adults in Emergency Department Settings

Kara Mc Loughlin[1], Prof Katie Robinson[1], Prof Rose Galvin[1], Elaine Toomey[2], Ms Eve Larkin[1]

[1]School of Allied Health, Faculty of Education and Health Sciences, Ageing Research Centre, Health Research Institute, University of Limerick, Limerick, Ireland

[2]Centre for Health Research Methodology, School of Nursing and Midwifery, University of Galway, Galway, Ireland

Aim: The number of older adult Emergency department (ED) attendances is rising in line with population ageing. ED visits are associated with adverse outcomes for older adults. Consequently, intervention studies with older adults in the ED aiming to mitigate adverse outcomes are increasing. However, there is currently no agreement on what outcomes to measure in these studies. This outcome heterogeneity has negative implications for synthesising research evidence and for generating policy implications. To address this issue, we plan to develop a core outcome set (COS) for use in studies with older adults in the ED setting. The first step in this process is to generate a long list of potential outcomes to include in the COS. A scoping review was conducted to identify the outcomes, outcome measurement instruments and and outcome measures reported in studies involving older adults in the ED.

Materials and Methods: A scoping review was conducted with ClinicalTrials.gov, MEDLINE, CENTRAL and CINHAL) to locate experimental studies that recruited a population of older adults [aged 65 yrs (+)] or in the ED setting.

Results and Conclusion: Over 23,000 papers were screened with a full text review of 363 papers and a final inclusion of 101 papers for data extraction. Outcomes were split into primary and secondary with a total of 217 in total reported across included studies (93 primary and 124 secondary outcomes). The greatest number of outcomes focused on hospital and resource use such as ED length of stay. This scoping review has highlighted the large variety of outcomes currently utilised.

POSTER PRESENTATIONS

[PP-162]

Accuracy of Focused Cardiac Ultrasound Interpretation Among Emergency and Critical Care Medicine Residents in Ethiopia: A Multi-Center Cross-Sectional Study

Nahom Mesfin Mekonen[1], Temesgen Beyene Abicho[1], Kalsidagn Girma Asfaw[1], Tigist Workneh Leulseged[2,3], Nebiat Adane Mera[4], Yegeta Wondafrash Habte[5], Fekadesilassie Henok Moges[6], Yidnekachew Asrat Birhan[7], Meron Tesfaye[1], Birhanu Tesfaye[1]

[1]Addis Ababa University Faculty of Health Sciences, Department of Emergency and Critical Care Medicine, Addis Ababa, Ethiopia

[2]Medical Research Lounge, Addis Ababa, Ethiopia

[3]St. Paul's Hospital Millennium Medical College, Department of Internal Medicine, Addis Ababa, Ethiopia

[4]Yekatit 12 Hospital Medical College, Department of Internal Medicine, Addis Ababa, Ethiopia

[5]Global Medical Solutions, Zaid Military Hospital, Abu Dhabi, UAE

[6]Aurora West Allis Medical Center, Department of Internal Medicine, Milwaukee, WI, USA

[7]Addis Ababa University Faculty of Health Sciences, Department of Internal Medicine, Division of Cardiology, Addis Ababa, Ethiopia

Aim: Focused cardiac ultrasound (FoCUS) has emerged as a valuable tool in emergency and critical care medicine, allowing for rapid assessment of cardiac function and structure at the bedside. This rapid diagnostic technique holds particular promise in resource-limited settings like Ethiopia, where access to standard echocardiography may be limited and delayed.

Materials and Methods: A cross-sectional study was conducted from October to December 2023 among 80 residents at Tikur Anbessa Specialized Hospital and St. Paul's Hospital Millennium Medical College. To assess diagnostic accuracy, 15 pre-selected cardiac ultrasound videos (normal and pathological cases) were selected from ACEPs website and the PoCUS Atlas, and accurate interpretation was defined as correctly answering at least 12 out of 15 readings. A logistic regression model was fitted to identify significant factors at the 5% level of significance, where significant results were interpreted using adjusted odds ratio (AOR) with 95% confidence interval (CI).

Results: The overall accuracy in interpreting FoCUS findings was 47.5% (95% CI: 38.8-60.0%), with highest for collapsing inferior vena cava (91.3%) and standstill (90.0%), and lowest for regional wall motion abnormality of left ventricle (46.3%). Residents who received training (AOR: 4.14, 95% CI: 1. 32-13.04, p=0.015), perceived themselves as skilled (AOR: 4.81, 95% CI: 1.06-21.82, p=0.042), and felt confident in acquiring and interpretation (AOR: 3.16, 95% CI: 1.01-9.82, p=0.047) demonstrated significantly higher accuracy.

Conclusion: The study identified a low overall accuracy in FoCUS interpretation, with accuracy improving with training and better perceived skill and confidence.

[PP-231]

Assessment of Non-urgent Emergency Department Visits and Associated Factors at a Level 1 Trauma Center in Southern California

George R. Mina, Michael Baham, Akhil Chandekar, Christian Makar, George Mina, Soheil Saadat, Candice Taylor-Lucas

Medical Students and Medicine Doctors, Irvine, CA, USA

Aim: Inefficient Emergency department (ED) utilization exacerbates healthcare costs and strains primary care physician (PCP) relationships with patients. We aim to evaluate factors such as patient race, insurance, and ED referrals associated with non-urgent ED visits (NU-EDV) in a level 1 trauma center in Southern California.

Materials and Methods: A 29-item researcher-made questionnaire assessed the healthcare-seeking behavior of adult patients presenting to the ED. An Emergency Severity Score >3 was considered NU-EDV. Chi-square tests were used to identify statistically significant associations. Type 1 error level was set to 5%. Effect size is presented by odds ratio (OR) and 95% confidence interval (CI).

Results: Of 723 adult patients, 331 (45.8%) were identified as NU-EDV. NU-EDV was more frequent among patients not referred by a medical professional (OR: 1.94; CI: 1.40-2.71). Having a PCP was inversely associated with NU-EDV (OR: 0.597; CI: 0.40-0.89). While merely having health insurance was not associated with NU-EDV, Medicaid was associated with NU-EDV among those with health insurance (OR: 1.50; CI: 1.15-2.22). Race was not associated with NU-EDV (p=0.077).

Conclusion: Patients referred to the ED by a physician were less likely to have NU-EDV than those referred by a family or friend. While insurance status was not a factor, insurance type was associated with more NU-EDV visits, specifically for Medicaid/Medi-Cal patients with lower socioeconomic status. Our findings suggest that providing efficient primary care may mitigate NU-EDV, a cost-effective approach that promotes health equity.

POSTER PRESENTATIONS

[PP-159]

A Rare Case of Hyperosmolar Hyperglycemic State Presented with Hemiballismus Hemichorea

Mohamad Hamim Mohamad Hanifah, Nadia Herman, Nur Shafiza Ishak, Nora Wahab

Labuan Hospital, Department of Emergency and Trauma, Labuan, Malaysia

Chorea is a non-rhythmic, non-suppressible involuntary jerky movement that occur due to overactivity of dopamine in area that control movement in brain. Hemiballismus is a severe form of chorea which characterized by involuntary and violent course of movement. Non-ketotic hyperglycemia such as hyperglycemic hyperosmolar state (HHS) can unusually manifest as hemiballismus hemichorea which can be challenging to recognize. However, this is usually reversible with glycemic control. This is a case of 71-year-old lady who had underlying poorly controlled long standing diabetes mellitus on subcutaneous insulin therapy, presented to the Emergency department with one day history of uncontrollable, spontaneous left upper limb and left lower limb movements. Patient was fully conscious during the episodes. She was diagnosed as HHS as she was hyperglycemic with increased effective plasma osmolality of 324 mOsm/kg in the absence of ketoacidosis. Computed tomography brain was done to rule out cerebrovascular accidents (CVA) which shows bilateral basal ganglia hypodensities and calcifications. In ward, her symptoms subsided with tight capillary glucose control. However, the symptom recurs as hyperglycemia repeats. She was discharged well after hyperglycemia and her symptoms resolve. Hyperglycemic hemiballismus hemichorea can easily be overlooked due to unfamiliarity with this syndrome. It is usually mistreated as other more common disease such as CVA, meningitis or seizure. Nonetheless this disease has good prognosis and can easily resolved with early recognition and treatment to reduce glucose level. Thus, it is imperative for clinician to be vigilant about this syndrome.

[PP-188]

Late Presentation of Traumatic Diaphragmatic Hernia: Not All Vomiting is Stomach Upset, It may be Stomach Upward

Muhamad Hariz Hazwan Bin Mohd Zarir[1], Muhamad Syis Zulkipli[2]

[1]Emergency Medicine Doctor, Hospital Selayang, Department of Emergency Medicine, Kuala Lumpur, Malaysia

[2]Nor Khatijah Binti Ahmad - Hospital Selayang, Department of Emergency Medicine, Selangor, Malaysia

Traumatic diaphragmatic ruptures are rare injuries seen in 1-7% of major blunt trauma. This case highlights the importance of proper history, examination, and imaging in the Emergency department (ED). A 50-year-old sewage cleaner gentleman presented to the ED with a three-day history of epigastric pain, vomiting, and reduced oral intake. Further history, he had a trauma 1 week prior when he fell on his chest at work. He visited a local clinic but was discharged with analgesics and no imaging was done. He was well until the gastrointestinal symptoms started. On arrival, the patient was stable with a BP of 147/90 mmHg, HR of 94 bpm, and SpO_2 of 98% on RA and minimally coated tongue. Abdomen was soft with minimal epigastric tenderness. Chest examination revealed minimal abrasion wound, with breath sounds reduced at the left side and bowel sounds heard in the left lower chest. CXR showed elevated left hemidiaphragm, left rib fractures (3rd and 5th), and subcutaneous emphysema. He was referred to surgery and computed tomography abdomen confirmed the diagnosis of left diaphragmatic rupture with stomach herniation. Emergency laparotomy was performed, and the patient recovered well and discharged from surgical follow-up 20 days later. Trauma complications may present later, including the rare case of diaphragmatic hernia. Early recognition and appropriate management in the emergency setting are crucial for optimizing patient outcomes. This case highlights the importance of considering a broad differential diagnosis in patients with a history of blunt trauma, regardless of the delay in symptom onset.

POSTER PRESENTATIONS

[PP-401]

Time is Eye - Point of Care Ultrasonography in Sudden Vision Loss

Sumitha Murthy, Rodha Mahaveer, Rohila Amit, Sharma Ankur, GS Rakesh, Bhavya, CM Sreevidya

All India Institute of Medical Sciences, Department of Emergency Medicine, Jodhpur, Rajasthan, India

Optic neuritis is an inflammatory condition affecting one or both optic nerves. In India, it presents differently from Western cases, both in clinical features and prognosis. Prompt identification of the underlying cause is crucial for initiating effective treatment. This case study reports a 30-year-old male who experienced fever, generalized weakness, and myalgia a month prior. He presented to the Emergency department with a sudden onset of painful, decreased vision in both eyes-right eye for four days and left eye for one day-accompanied by a frontal headache. The initial examination was normal, but eye tests revealed the ability to count fingers at one meter in both eyes, sluggishly reactive pupils, and normal extraocular movements, although they were painful. Ocular ultrasound showed an optic nerve sheath diameter of 6.8 mm in the right eye and 6.4 mm in the left eye. Brain magnetic resonance imaging showed bilateral hyperintensities of the optic nerves. Blood tests and cerebrospinal fluid analysis were normal. Optic neuritis was diagnosed, and the patient was treated with a stat dose of 1 gram of intravenous methylprednisolone. Further investigation did not reveal additional causes, suggesting the optic neuritis was a result of viral sequelae rather than multiple sclerosis. On follow-up, the patient's vision improved to 6/6 in both eyes without further deterioration. Recognizing the clinical features of optic neuritis early is vital for emergency physicians to prevent long-term complications associated with the condition.

Keywords: POCUS, optic neuritis

[PP-403]

A Venomous Dilemma: Resolving a Neurotoxic Snake Bite with Timely Intervention

Sumitha Murthy, Rodha Mahaveer, Sharma Ankur, Rohila Amit, N Sumitra, Sharma Abhishek, Pendam Nitin

All India Institute of Medical Sciences, Department of Emergeny Medicine, Jodhpur, Rajasthan, India

A 32-year-old woman with no prior health issues arrived at the Emergency department after experiencing multiple episodes of vomiting and altered mental status over the past day. Initially managed conservatively at a rural health center, she was later referred to our facility. Upon arrival, the patient displayed signs of compromised airway, bradycardia, hypotension, and suspected autonomic dysfunction. Blood gas analysis revealed respiratory acidosis. Clinical examination showed a Glasgow Coma Scale (GCS) score of E1V1M1, quadriplegia, mute plantar reflexes, 3 mm reactive pupils, and bilateral ptosis. To secure her airway, she was intubated, and given 20 vials of anti-snake venom due to suspicion of a neurotoxic snake bite. She was subsequently transferred to the intensive care unit. The patient gradually improved, with normal neuroimaging results and a neuromuscular transmission defect identified on repetitive nerve stimulation test. After conservative management, she was discharged with a GCS of E4V5M6 and stable vital signs. Snake bites are a critical emergency, particularly in rural tropical areas. About 70% of bites are non-poisonous, 15% are dry bites, and only 15% lead to envenomation. Snake venom, which can be neurotoxic, vasculotoxic, or myotoxic, is produced by modified salivary glands. Polyvalent anti-snake venom is generally effective against common poisonous snakes. Timely diagnosis and administration of anti-snake venom are crucial for reducing mortality and morbidity. The combination of internal and external ophthalmoplegia can resemble brain death in cases of krait bites, presenting a significant diagnostic challenge.

Keywords: Neuroparalytic snake envenomation, anti snake venom

POSTER PRESENTATIONS

[PP-405]

When Hormone Deficiency Hits Hard: A Case of Adrenal Crisis in Emergency

Sumitha Murthy, Rodha Mahaveer, Sharma Ankur, Rohila Amit, Kumar Anil, Fulwariya Kailash, Choudhary

All India Institute of Medical Sciences, Department of Emergency Medicine, Jodhpur, Rajasthan, India

Adrenal crisis is a severe and potentially fatal condition resulting from an acute deficiency in adrenocortical hormones, particularly cortisol and aldosterone. A 59-year-old female presented to the Emergency department with altered mental status for the past 30 minutes and a syncope episode two hours earlier. Upon arrival, the primary assessment revealed a compromised airway, hypoxia, tachypnea, bradycardia, and shock. Her Glasgow Coma Scale (GCS) score was E1V1M2, with additional signs of facial puffiness and abdominal striae. The patient was intubated to secure her airway. An electrocardiogram showed a complete heart block, and blood gas analysis indicated normal anion gap metabolic acidosis and hyponatremia. Despite administering two doses of atropine (0.6 mg each), her heart rate did not improve, leading to the initiation of adrenaline infusion and the placement of a temporary pacemaker. Suspecting adrenal crisis, hydrocortisone was administered. The patient's history revealed that she had been taking over-the-counter steroids for five years but had abruptly stopped five days prior. She is a known case of hypothyroidism. After being transferred to the intensive care unit, her condition gradually improved, and she was extubated. Blood tests confirmed normal thyroid function but low cortisol levels, verifying the diagnosis of adrenal insufficiency. The patient was eventually weaned off the temporary pacemaker and inotropes and discharged with stable vital signs and a GCS of E4V5M6. Adrenal crisis should be considered in patients with septic-like symptoms but no clear infection source, and immediate treatment with parenteral steroids is crucial for those with suspected.keywords-adrenalcrisis

[PP-059]

Acute Presentations of Orbital Vascular Anomalies: A Case Series

Soumya S. Nair, Sudha Menon, Neetha KIR, Vijaya Pai H

Kasturba Medical College Manipal Manipal, Manipal Academy of Higher Education, Department of Ophthalmology, Manipal, Karnataka, India

Aim: Orbital vascular anomalies can significantly impact ocular health and may even pose life-threatening risks. Diagnosing these conditions is particularly challenging, as patients often lack classic symptoms like pulsatile proptosis or bruit. This study presents the clinical profiles, ophthalmic manifestations, and outcomes of four patients who presented to the Emergency department with such lesions.

Materials and Methods: This single-center retrospective case series involves four patients who exhibited acute proptosis and ophthalmoplegia. Each patient underwent comprehensive ophthalmic evaluations, orbital and brain imaging, and necessary ancillary testing. Diagnoses included one case of arteriovenous malformation and three cases of carotico-cavernous fistula (CCF) (two unilateral, one bilateral).

Results: All patients were suspected of having orbital vascular anomalies and received Digital Subtraction Angiography for confirmation. Three patients underwent endoscopic balloon dilatation with coil or squid injection, leading to symptom resolution and improved vision.

Conclusion: Emergency physicians and ophthalmologists should maintain a high index of suspicion for orbital venous anomalies in patients presenting with acute or subacute proptosis. A history of recent trauma is particularly indicative of CCF. Early diagnosis and prompt treatment are crucial in reducing visual morbidity and preventing mortality in these patients.

Keywords: Orbital vascular anomalies, carotico cavernous fistula, arteriovenous malformations, South India

POSTER PRESENTATIONS

[PP-282]

AI Improving Time-to-Treatment Metrics for Stroke Patients in Emergency Setting

Nilufar Alisher qizi Odilova

Medical Student, Central Asian University, Tashkent, Uzbekistan

Aim: Stroke is the second leading cause of mortality in the world and the outcome of the patient depends on the time-to-treatment metrics (1 minute of treatment delay is equal to the loss of 4.2 days of healthy life). The aim of this study is to discuss the role of [artificial intelligence (AI) and ML (machine learning)] in dealing with stroke patients in emergency settings.

Materials and Methods: AI algorithms are capable to make better quality images and reveal pathologies, that could be missed by the human eye, in few seconds. With the application of AI, it is willing to reduce the time needed for magnetic resonance imaging and minimize the damage to the patient. However, patients with aberrant anatomy are the subject for further investigation as they don't fit the determined algorithms.

Results: Modern technologies offer incredible solutions for reducing time for choosing right treatment plan. One of them- using of real-time electromyograms by AI to reveal stroke in patients of emergency settings. Additionally, AI can keep all the data related to each patient and implement it during the decision making process.

Conclusion: Our generation stands on the threshold of the era of AI. Stroke might not be one of the leading causes of the death anymore with the help of AI and ML in reducing the time-to-treatment. In the near future AI itself can deal with imaging studies and decision making in stroke patients all over the world.

Keywords: AI, stroke, time-to-treatment

[PP-284]

Beware the Dual Diagnosis - An Unexpected Finding of STEMI in a NOF Patient

Conor O'Gara[1], Mustafa Mehmood[2]

[1]Registrar and Core Specialist Trainee in Emergency Medicine, St James's Hospital, Dublin, Ireland

[2]Department of Emergency Medicine, St James's Hospital, Dublin, Ireland

A woman in her 80s was presented to the Emergency department (ED) following a fall. She lives alone and has a background of left NOF fracture, osteoporosis, hypertension, and IHD. She complained of right hip pain. X-rays revealed a right NOF fracture. The patient was commenced on our ED's Code Hip Pathway to facilitate expedited transfer to an orthopaedic ward. Her pain was controlled with IV analgesia and an US-guided fascia iliaca block. As part of the Code Hip Pathway Safe Transfer Checklist, the patient had an electrocardiogram (ECG). Despite absence of any chest pain, this revealed an anterolateral ST-elevation myocardial infarction (STEMI) with STE in V2-V6. The patient was diverted to the cath lab where she underwent PCI to a severe stenosis of her LAD. Following admission to CCU, the patient had a hip hemiarthroplasty on day 14 of her stay. She was discharged to a step-down facility on day 79 and is currently back living at home independently. This case highlights the importance of following a checklist. Had the patient's ECG not been performed in the ED; her STEMI diagnosis may have been delayed, with significant morbidity/mortality potential. It also emphasises the importance of considering a sinister underlying diagnosis in NOF patients. Always ask - why did they fall? While there is evidence to support expedited transfer of NOF patients to an orthopaedic ward, it is important that checklists & clinical suspicion are utilised to in this rapid process to ensure that potentially fatal underlying diagnoses are not overlooked.

POSTER PRESENTATIONS

[PP-275]

A Patient with Rhabdomyolysis in Diabetic Ketoacidosis

Ömer Faruk Öz, Onur Bozdağ, Ömer Faruk Çakıroğlu, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

The clinical and laboratory illness known as rhabdomyolysis (RM) is brought on by the spilling of muscle cell contents into plasma. Diabetic ketoacidosis (DKA) is the non-traumatic etiological cause of RM. A 31-year-old male patient applied to the Emergency department with a complaint of diarrhea and abdominal pain for five days. The patient has diabetes, a known chronic disease. When the patient arrives at the cricital care unit, vital signs were: arterial blood pressure: 83/24 mmHg, fingertip blood sugar: 328 mg/dL, pH: 6.98, and other vital signs were good. On physical examination, the patient's general condition was fine, abdominal examination was comfortable, and no guarding or rebound was detected. The laboratory findings were: Urea: 71 mg/dL, BUN: 33 mg/dL, creatinine: 1.38 mg/dL, e-GFR: 67 mL/min, calcium: 8.7 mg/dL, potassium: 5.58 mmol/L, White Blood Cell: 20.12 10^3/uL, creatinine kinase: 2253 U/L, phosphorus: 1.1 mg/dL, and C Reactive Protein: 76.6 mg/L. in the complete urinalysis, ketone was two (++) positive. Serum sodium, serum osmolality and blood glucose levels are important factors for the development of RM in diabetic patients (1). In DKA, high intracellular calcium may cause protease activation, and a decrease in potassium and phosphorus levels is observed due to insulin therapy and renal losses (2). RM has an effect on mortality due to decreased renal function (3). RM should be kept in mind in the diabetic emergency patient group, as it is a complication with mortality that can lead to acute renal failure.

[PP-279]

A Patient Presented with Hyperkalemia and Hyponatremia, which We Diagnosed as Sick Sinus Syndrome

Ömer Faruk Öz, Yasemin Pişgin, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: A condition of the sinoatrial node, sick sinus syndrome, sometimes called sinus node dysfunction, is brought on by compromised pacemaker performance and impulse transmission, which results in a constellation of irregular rhythms. These include atrial tachyarrhythmias, bradycardia alternating with tachycardia, and occasionally bradycardia, which is frequently referred to as tachy-brady syndrome. About half of patients have syncope or near-fainting due to cerebral hypoperfusion, which is the most common cause.

Materials and Methods: A 74-year-old female patient applied to the Emergency department with diarrhea and fatigue for two days. The patient has chronic diseases such as diabetes, hypertansion and chronic renal failure. When the patient arrives at the cricital care unit, his vital signs were: fever: 36, pulse: 40/min, SpO_2: 98%, and arterial blood pressure: 107/54 mmHg. On physical examination, the patient's general condition was fine (Glasgow Coma scale: 15). In laboratory findings, urea: 77 mg/dL, blood urea nitrogen: 36 mg/dL, creatinine: 1.81 mg/dL, estimated glomerular filtration rate: 27 mL/min, calcium: 8.4 mg/dL, potassium: 6.37 mmol/L, white blood cell: 9.43 10^3/uL, troponin-I: 3.8 ng/L, mass CK-MB: 0.3 µg/L, C-reactive protein: 8.8 mg/L.

Results and Conclusion: There are numerous outside factors that could influence the SA node's pacing function. These can happen in diseases like autonomic dysfunction, vasovagal syncope, and carotid sinus hypersensitivity, where there is an aberrantly elevated vagal tone. Additionally, metabolic disorders such hypothyroidism, hyperkalemia, hypokalemia, hypocalcemia, hypoxia, and hypothermia can cause the SA node's pacing function to be lowered. Sick sinus syndrome, caused by hyperkalemia, is a rare condition.

POSTER PRESENTATIONS

[PP-475]

A Rare Diagnosis in the Emergency Department: Achalasia

Mehmet Çelik, Övgü Özertural Akın, Serhat Örün

Tekirdağ Namık Kemal University, Health Application and Research Hospital, Department of Emergency Medicine, Tekirdağ, Turkey

Aim: Achalasia is a rare esophageal motility disorder marked by the inability of the lower esophageal sphincter (LES) to relax and the absence of normal peristalsis. Symptoms typically include dysphagia, retrosternal pain, regurgitation, and progressive weight loss. The condition, often linked to nerve degeneration in the esophageal wall, worsens over time, necessitating early diagnosis through clinical signs, esophageal manometry, and endoscopy.

Case Reports: A 47-year-old male presented to the Emergency department with a three-month history of worsening dysphagia, nausea, vomiting, and significant weight loss exceeding 10% of his body weight. Despite outpatient follow-up, his symptoms persisted, prompting further investigation. Laboratory tests revealed hypernatremia, and imaging studies showed a dilated esophagus. Endoscopy was complicated by food retention in a tortuous, dilated esophagus. Manometry confirmed type 1 achalasia, characterized by a complete loss of peristalsis and LES relaxation failure. The patient received supportive care, including total parenteral nutrition and treatment for hypernatremia. He was referred to a specialized center for advanced diagnostic procedures, such as high-resolution manometry. This case underscores the importance of considering achalasia as a differential diagnosis in patients presenting with unexplained dysphagia and weight loss in the Emergency department.

Conclusion: Achalasia, though rare, can be effectively diagnosed and managed in an emergency setting, highlighting the importance of a multidisciplinary approach.

[PP-360]

A Rare Complication Unveiled: Right Atrial Tamponade induced by Urinothorax Post-nephrolithotomy

Adeeb Shan P.C.[1], Rodha Mahaveer[2], Rohila Amit[2], G.S. Rakesh[2], C.M. Sreevidya[2], Jayswal Shiwangini[2], Murthy Sumitha[2]

[1]All India Institute of Medical Sciences Jodhpur, Department of Emergency Medicine, Rajasthan, India

[2]All India Institute of Medical Sciences Jodhpur, Department of Trauma and Emergency Medicine, Rajasthan, India

Right atrial tamponade caused by right side pleural effusion is rare finding that leads to hemodynamic instability. Massive pleural effusion can sometimes lead to tamponade like physiology by impairing cardiac filling due to increased intrapleural pressure. We present a case of 39-year-old male presented to emergency with complaints of shortness of breath which developed 4 days back and progressed. On arrival patient was having tachypnea and tachycardia with tracheal shift to left side and asymmetrical chest rise. There was decreased air entry on right side. Patient was having history of renal stones and undergone right side percutaneous nephrolithotomy with double J stenting under spinal anaesthesia 5 days back. Point of care ultrasound suggestive of right sided massive pleural effusion with right atrial systolic and diastolic collapse. Electrocardiography suggestive of S1Q3T3 pattern. Chest radiography was suggestive of findings of hydropneumothorax. Intercostal drainage was done with 24 Fr thoracostomy tube. Evaluation of sample was shown transudative fluid with pleural fluid to serum creatinine ratio greater than 1 suggestive of urinothorax. Patient's symptoms improved gradually after intercostal drainage. Repeat echocardiogram suggestive of resolution of Right atrial tamponade. Urinothorax is rare cause of pleural effusion and in the rarest instances, significant pleural effusion might result in the right atrial tamponade effect.

Keywords: Point of care ultrasonography, complication of urological procedure

POSTER PRESENTATIONS

[PP-362]

From Cyanosis to Clarity: A Case of Severe Methemoglobinemia Treated with Methylene Blue

Adeeb Shan P. C.[1], Rodha Mahaveer[2], Rohila Amit[2], C.M. Sreevidya[2], N. Sumitra[2], Sharma Abhishek[2], Ashok[2]

[1]All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

[2]All India Institute of Medical Sciences, Jodhpur, Department of Trauma and Emergency Medicine, Rajasthan, India

80-year-old female known hypertensive currently on tablet amlodipine and atenolol presented to emergency with complaints of altered sensorium in the form of decreased responsiveness and decreased verbal output since 10 hours back. There is no history of fever, nausea, vomiting, seizure, chest pain, abdominal pain. On presentation patient was cyanotic, drowsy with Glasgow Coma scale (GCS) of E3V3M5, PR 108 bpm, BP 132/62 mmHg, SpO_2 77% on room air. Arterial blood gas suggestive of severe metabolic acidosis with lactic acidosis (HCO_3- 12.6 mmol/L, lactate 10.6 mmol/L) with PO_2 of 74.2 mmHg and SO_2 of 91.4%. Patient was started on high flow oxygen, but saturation was not improved. Blood sample was sent for methemoglobin levels which was suggestive of 67.4%. 100 mg intravenous methylene blue (1-2 mg/kg) was given over 3 to 5 minutes. Arterial blood gas was repeated after 15 minutes which was suggestive of decreased methemoglobin levels to 6% and improved metabolic and lactic acidosis (HCO_3- 5.1 mmol/L, lactate 5.61 mmol/L). Patient GCS improved to E4V5M6 within minutes and cyanosis gradually improved. Patient's attenders were giving a history of receiving antimalarials (artesunate) 3 weeks back. Patient was observed for rebound methemoglobinemia and shifted to general ward for further evaluation which was not conclusive of any other causes of methemoglobinemia, and patient was discharged.

Keywords: Methemoglobinemia, cyanosis, methylene blue

[PP-372]

From Party to Emergency Room: Managing a Life-threatening Pulmonary Embolism in a Young Adult

Adeeb Shan P. C.[1], Rodha Mahaveer[2], Garg M.K.[2], Rohila Amit[2], G.S. Rakesh[2], C.M. Sreevidya[2], Bhavya[2]

[1]All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

[2]All India Institute of Medical Sciences, Jodhpur, Department of Trauma and Emergency Medicine, Rajasthan, India

Twenty two years old male presented to emergency with complaints of sudden onset unresponsive state for around 5 minutes while dancing in a party at around 11:30 pm on 31st December 2023 followed by developed mild retrosternal chest pain with shortness of breath, 3-4 episodes of nausea and vomiting and generalised weakness. On arrival patient was tachypneic, hypoxic and tachycardic. On assessment there was no hypotension. Electrocardiogram showed RBBB with S1Q3T3 with sinus tachycardia. Blood gas suggestive of type 1 respiratory failure with A-a gradient 110 mmHg. Point of care ultrasound was suggestive of right atrium and ventricle dilatation and right ventricular hypokinesia. Troponin I was elevated. CTPA done and pulmonary embolism with large clot burden confirmed. Considered high risk submassive pulmonary embolism, as there was no thrombolysis contraindication patient was lysed with alteplase. Patient further evaluated for etiology and discharged with stable vitals.

POSTER PRESENTATIONS

[PP-153]

Prognostic Value of NT-proBNP Prognosis in Patients with Cardiogenic Shock; is There Any Gender Difference?

Nathalie Pandolfo, Salvatore Di Somma, Donatella Caserta, Lori B. Daniels, Lucrezia Fiorentino

Sapienza University of Roma, Rome, Italy

Aim: Cardiogenic shock is a critical condition with high mortality rates, necessitating accurate prognostic markers for improved outcomes. NT-proBNP, a biomarker of cardiac stress, holds potential in predicting outcomes in cardiogenic shock, but its value concerning gender differences is underexplored. Women often have higher mortality rates in cardiogenic shock compared to men. This study evaluates the correlation between NT-proBNP levels and patient outcomes in cardiogenic shock, focusing on gender differences.

Materials and Methods: A retrospective analysis was conducted on 74 cardiogenic shock patients admitted to Jacob Hospital, San Diego, CA, from October 2, 2022, to November 29, 2022. The initial sample included 29 women and 45 men aged 20-95 years, excluding patients with atrial fibrillation and body mass index (BMI) >30. Data collected included NT-proBNP values, age, sex, BMI, vital signs, cardiac biomarkers, ejection fraction, etiology, renal function, and outcomes. After excluding 15 patients with missing data, 59 patients remained (23 women and 36 men). NT-proBNP levels were correlated with 30-day mortality using descriptive statistics and Pearson correlation coefficients, stratified by gender.

Results: Women had significantly higher mean NT-proBNP levels (14,392.3 pg/mL) than men (12,450.81 pg/mL). A moderate correlation between NT-proBNP levels and 30-day mortality was observed in women (r=0.475), but not in men (r=0.038). Scatter plot analysis indicated a linear relationship between NT-proBNP levels and mortality in women, which was not evident in men.

Conclusion: NT-proBNP is a significant prognostic marker for women with cardiogenic shock. Utilizing NT-proBNP for risk stratification in women could enhance outcomes through personalized interventions.

[PP-305]

Efficiency of Cholangiostomy in Old Patients with Acute Cholecystitis

Charos Dilshod kizi Parpijalilova

Medical Student, Tashkent, Uzbekistan

Aim: A cholecystostomy is a minimally invasive procedure designed to drain infected fluid from your gallbladder, which helps to clear the infection and may improve your chances of a successful future surgery. You will receive an IV for fluids and antibiotics, and possibly a sedative, as cholecystectomies are typically done under conscious sedation. You will remain awake during the procedure.

Materials and Methods: Sixty three women comes to Emergency department because of right upper quadrant pain, radiating to right shoulder, temperature 38 °C, and nausea. She has a recurrent pain for 3 weeks, but today it worsened by eating palow. Physical examination shows positive Murphy's and, Blumberg sign, abdomen is tender by palpation. Ultrasonography shows several small stones and the gallbladder wall is thickened by the inflammation. Diagnosis of acute cholecystitis was confirmed. When discussing treatment option, considering patients age, inability receiving general anesthesia and post operative complications, doctors found cholecystectomy very dangerous. They decided to held cholecystectomy under local anesthesia. Procedure was done by half an hour. While and after procedure patient feel herself very well.

Results and Conclusion: If you have an infected gallbladder or are too sick to be a candidate for gallbladder removal, or you are old you will likely need a cholecystostomy. If you're unable to undergo anesthesia, you're not a suitable candidate for gallbladder removal.

Keywords: Cholecystostomy, local anesthesia, acute cholecystitis

[PP-499]

Profile of Elderly People Hospitalized in Emergency in a Sample of Belgian Hospitals

Magali Pirson, Dimitri Martins, Julie Van Den Bulcke, Pol Leclercq

Université Libre de Bruxelles, School of Public Health, Department of Hospital Management and Nursing Research, Brussels, Belgium

In the scientific literature, older people are often defined as those aged 65 and over. Very old people are those aged 85 and more. The notion of frailty is much more appropriate to reflect aging but this information is rarely available in routine in hospitals. Among the elderly, many are hospitalized after being treated in an Emergency department. This descriptive study aims to describe the elderly hospitalized population admitted in emergency from a medical and economic point of view. This study was conducted in 12 Belgian hospitals for patients hospitalized in 2022 (n=189,620 stays). Among the stays of 65 years and older, 49% were admitted in emergency. 58.4% had already been hospitalized during the year. 80.1% came from home and 14.3% from a nursing home. 19.2% of the patients will be transferred to a nursing home. The mortality rate for these patients is 9.7%. 10.7% have been in intensive care. The length of stay (standard deviation) is 11.37 (13.67) days for a hospital cost of €8,796.89 (12,968.03). Among the stays of 85 years and older, 70.8% were admitted in emergency. 55.3% had already been hospitalized during the year. 69.3% came from home and 26.7% from a nursing home. 34.1% of the patients will be transferred to a nursing home. The mortality rate for these patients is 13.7%. 5% have been to intensive care. The length of stay (standard deviation) is 12.21 (11.61) days for a hospital cost of €8,472.74 (7,986.32). The most common reasons for admission are respiratory and cardiac problems for both age groups.

[PP-299]

Angiography After Out-of-Hospital Cardiac Arrest: Does the Procedure's Timing Matter?

Krzysztof Kurek[1], Michal Pruc[1], Sagar Galwankar[2], Fatimah Lateef[3], Basar Cander[4], Salvatore Di Somma[5], Lukasz Szarpak[1,6]

[1]LUXMED Group, Department of Clinical Research and Development, Warsaw, Poland

[2]Florida State University College of Medicine, Emergency Medicine Residency Program; Sarasota Memorial Hospital, Sarasota, USA

[3]Singapore General Hospital, Department of Emergency Medicine, Singapore, Singapore

[4]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[5]University La Sapienza Rom, Faculty of Medicine and Psychology, Postgraduate School of Emergency Medicine, Rome, Italy

[6]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Houston, USA

Aim: Myocardial infarction commonly leads to cardiac arrest that occurs outside of a medical facility. Nevertheless, the advantages of doing early coronary angiography and revascularization in resuscitated patients remain uncertain. We conducted a meta-analysis to reconcile the findings.

Materials and Methods: Following PRISMA guidelines, we systematically searched PubMed, Embase, and Cochrane databases for randomized controlled trials comparing emergency vs. delayed coronary angiogram among survivors of out-of-hospital cardiac arrest patients.

Results: The meta-analysis included seven studies, which involved 1,465 OHCA patients. Survival to hospital discharge occurs in 85.1% of the early coronary angiography (ECA) group compared to 77.7% of the delayed coronary angiography (DCA) group [odds ratio (OR): 1.72; 95% confidence interval (CI): 1.15, 2.57; p=0.009]. Thirty-day survival rate was 55.4% vs. 60.6%, respectively (OR: 0.80; 95% CI: 0.63, 1.02; p=0.08), and 180-day survival rate was 51.9% vs. 52.2% (OR: 0.99; 95% CI: 0.77, 1.28; p=0.93). ECA compared to DCA was associated with a significantly lower risk of ventricular arrhythmias (5.7% vs. 15.9%; p=0.03). There were no significant differences in adverse events between ECA and DCA in: myocardial infarction (0.4% vs. 0.7%; p=0.61), stroke (4.0% vs. 1.9%; p=0.64), major bleeding (4.6% vs. 3.4%; p=0.47); and rearrest (5.9% vs. 4.6%; p=0.78).

Concluson: In conclusion, ECA improves the chances of hospital discharge compared to DCA, although it does not significantly affect long-term survival or the risk of serious adverse events, except for a lower risk of ventricular arrhythmias.

POSTER PRESENTATIONS

[PP-301]

Meta-analysis of Ringer's Lactate vs. Normal Saline's Efficacy in Acute Pancreatitis Management

Michal Pruc[2], Zenon Truszewski[1], Wojciech Wieczorek[1], Burak Katipoğlu[3], Togay Evrin[4], Lukasz Szarpak[2,5]

[1]Warsaw Medical University, Department of Emergency Medicine, Warsaw, Poland

[2]LUXMED Group, Department of Clinical Research and Development, Warsaw, Poland

[3]Ufuk University Faculty of Medicine, Department of Emergency Medicine, Ankara, Turkey

[4]Yüksek İhtisas University Faculty of Medicine, Department of Emergency Medicine, Ankara, Turkey

[5]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Houston, USA

Aim: Aggressive fluid resuscitation is advised as the initial approach for managing acute pancreatitis. Nevertheless, there is a scarcity of studies that specifically examine the various modalities of fluid therapy. We conducted a meta-analysis to reconcile the findings.

Materials and Methods: We used the PRISMA guidelines to search the PubMed, Embase, and Cochrane databases for randomized controlled trials that compared the effectiveness of Ringer's lactate (LRS) and normal saline (NSS) in treating acute pancreatitis. Five studies with a total of 299 of patients met the inclusion criteria. The data was pooled as risk ratio (RR) with its 95% confidence interval (CI) in a random effect model using STATA 17 MP.

Results and Conclusion: In-hospital mortality among LRS and NSS groups was 0.0% vs. 3.3% (RR: 0.34; 95% CI: 0.06, 2.12; p=0.25). LRS compared to NSS was associated with a statistically significantly lower incidence of pancreatic necrosis (6.6% vs. 17.5%; RR: 0.42; 95% CI: 0.21, 0.84; p=0.01). There was no similar relationship for other complications: overal local complications (14.5% vs. 22.9%; RR: 0.66; 95% CI: 0.38, 1.15; p=0.14), acute prepancreatic fluid collection (18.4% vs. 20.4%; RR: 0.91; 95% CI: 0.40, 2.03; p=0.81), pseudocysts (4.1% vs. 2.0%; RR: 1.59; 95% CI: 0.20, 12.44; p=0.66), and welled-off nectosis (2.0% vs. 6.1%; RR: 0.43; 95% CI: 0.07, 2.80; p=0.38). The results of the study showed that although the trend indicated a reduction in mortality in the LRS group, the difference was not statistically significant, while LRS was associated with a significantly lower risk of pancreatic necrosis compared to NSS.

[PP-312]

Serum Cystatin C as a Diagnostic Biomarker for Pediatric Acute Kidney Injury at the Emergency Department Level

Michal Pruc[2],Lukasz Jankowski[1], Monika Tomaszewska[2], Lukasz Szarpak[2,3]

[1]Medical University of Warsaw, Department of Transplantology, Immunology, Nephrology and Internal Diseases, Warsaw, Poland

[2]LUXMED Group, Department of Clinical Research and Development, Warsaw, Poland

[3]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Houston, USA

Aim: Cystatin C (CysC) is recognized as a highly reliable biomarker for the early detection and monitoring of acute kidney injury (AKI). CysC, unlike traditional markers like serum creatinine, exhibits less influence from factors such as age, gender, muscle mass, and ethnicity, rendering it a more consistent and accurate indicator of renal function. The aim of this study is to assess the diagnostic value of serum CysC as a marker of AKI among pediatric patients.

Materials and Methods: We performed manual and digital searches using specific keywords ("acute kidney injury" OR "AKI" AND "cystatin c" OR "CysC" AND "children" OR "pediatric" OR "paediatric" AND "critically ill" OR "PICU" OR "ICU" OR "intensive care" OR "critical") and found English-language literature published up to July 22, 2024. PubMed, ScienceDirect, Scopus, MEDLINE Complete, and EMBASE databases were used. Mean differences with 95% confidence intervals (CI) were calculated using random effects models with the Mantel-Haenszel method.

Results: The meta-analysis included seven studies, involving 532 patients. Pooled analysis of serum CysC among patients with and without AKI varied and amounted to 1.38±0.68 vs. 0.550.19 mg/L, respectively (MD: 0.94; 95% CI: 0.49 to 1.39; p<0.001).

Conclusion: The meta-analysis, demonstrated a significant difference in serum CysC levels between patients with and without AKI. These findings underscore the potential of serum CysC as a reliable biomarker for diagnosing AKI.

POSTER PRESENTATIONS

[PP-072]

Variation in Duration of Emergency Department Boarding by Patient Demographics

Christiana K. Prucnal, Melissa Meeker, Martin Copenhaver, Paul S Jansson, Rebecca E Cash, William Hillmann, Steven Knuesel, Amber Moore, Wendy Macias-Konstantopoulos, Jonathan D Sonis

Massachusetts General Hospital, Clinic of Emergency Medicine, Boston, Massachusetts

Aim: Emergency department (ED) boarding, by which admitted patients receive care in the ED while awaiting an available inpatient bed, increasingly strains capacity and negatively affects patient outcomes. Boarding has been linked to an increase in ED length of stay, hallway care, poor patient satisfaction, longer hospital stays, and higher mortality. Prior research found capacity metrics like hallway care were inequitably allocated based on patient race and ethnicity, however it is unknown whether boarding patterns vary significantly based on these characteristics. We examined whether duration of ED boarding varied significantly based on patient demographics.

Materials and Methods: This single-center cohort study included consecutive adult ED patients who boarded in the ED after admission to the non-intensive care inpatient medicine service between February 2020 to February 2023 at an urban academic tertiary hospital with >110k annual ED visits. Primary outcome was time from admission order to transport to inpatient bed. Patient demographics (age, sex, race, ethnicity, language, insurance, and housing status), visit characteristics (emergency severity index, time, and day), and bed request features (telemetry, sitter need, and active isolation precaution) were obtained via the electronic medical record. We examined these using mean or median, depending on distribution for continuous variables, and proportion for categorical variables. We assessed for bivariate relationships between boarding time and patient demographics with descriptive statistics and analysis of variance. We used both adjusted and unadjusted regression analyses with generalized estimating equations to account for patient level correlation (Software R version 4.3.1).

Results and Conclusion: A total of 22.291 encounters.

[PP-171]

Impact of Echographic Pulse Check on Resuscitation in Cardiac Arrest due to Kounis Syndrome: A Case Report

Raffaella Pugliese[1], Emanuele Crisafulli[2], Caterina Solieri[2], Francesco Luppi[2], Marco Paolo Donadini[3]

[1]University of Insubria, Department of Emergency Medicine, Varese, Italy
[2]Pronto Soccorso e Medicina d'Urgenza, Arcispedale Santa Maria Nuova, Department of Emergency Medicine, Reggio Emilia, Italy
[3]University of Insubria, Department of Medicine and Surgery, Varese, Italy

Our objective is to describe how echographic pulse check during resuscitation in cardiac arrest can impact clinical management. Observations were obtained from a case report performed in the Emergency department of Reggio Emilia (Italy); they were recorded concurrent with medical chart. A 62 year-old man was rescued by emergency medical services for loss of consciousness. Medical history recorded mastocytosis and allergy to hymenoptera. Rescuers found him unresponsive with bradycardia and hypotension; adrenaline autoinjector had folded needle. Parenteral adrenaline, chlorphenamine and hydrocortisone were administered. Transcutaneous pacing was placed obtaining electrical but not mechanical capture. Patient crashed to cardiac arrest with pulseless electrical activity (PEA): therefore, orotracheal intubation, cardiopulmonary resuscitation (CPR) and advanced cardiopulmonary life support (ACLS) were performed. When in the emergency room, monitor and pulse check on femoral artery confirmed PEA. ACLS continued. After 2 minutes, echoscopy showed standstill heart. After 4 minutes no palpable pulse was detected, but point-of-care ultrasound (PoCUS) revealed femoral arterial pulse and iperkynetic heart. A 12-lead electrocardiogram showed stable rhythm and infero-posterior-ST elevation. CPR was discontinued starting norepinephrine plus epinephrine infusion. Urgent coronarography was performed not revealing any coronary affection, and confirming Kounis syndrome. Despite this, the patient showed poor neurological outcome due to anoxic encephalopathy and he died five days later. In this case PoCUS pulse check impacted patient management allowing for early recognition of return of spontaneous circulation (ROSC) and rapid switch to post-ROSC supportive care, resulting in faster hemodynamic stabilization and early window for catheterization laboratory.

POSTER PRESENTATIONS

[PP-011]

Point-of-Care Ultrasound Guided Pupillary Assessment vs. Clinical Examination in Adult Ocular Trauma Patients Presenting to the Emergency Department

Manu Ayyan S[1], Thirumoorthy Ramamoorthy[2]

[1]Jawaharlal Institute of Postgraduate Medical Education and Research, Department of Emergency Medicine, Puducherry, India
[2]Sri Lakshmi Narayana Institute of Medical Sciences, Department of Emergency Medicine and Trauma, Puducherry, India

Aim: To determine the agreement between clinical examination and point-of-care ultrasound (POCUS) for assessing pupillary reflex and size in adult ocular trauma patients.

Materials and Methods: This prospective analytical study was conducted in the Emergency department. Three hundred and seventy-six adult ocular trauma patients were recruited and underwent a clinical examination followed by POCUS-guided pupillary size measurement. The normality of pupillary diameter distribution was tested using the Kolmogorov-Smirnov test. Statistical analysis included the intraclass correlation coefficient (ICC), Wilcoxon signed-rank test, and Bland-Altman plots.

Results: The agreement between clinical examination and POCUS for pupillary light reflex examination [pupillary diameter (PD) at rest, during direct and consensual light stimulation] was moderate to good, with ICC ranging from 0.585 (0.140-0.767) to 0.754 (0.432-0.867). Measurement of pupillary reaction for direct and indirect light stimulation from PD at rest showed moderate agreement, with ICC ranging from 0.504 (0.393-0.595) to 0.563 (0.462-0.645). Significant differences in PD measured by clinical examination and POCUS at rest, during direct light stimulation, and consensual light stimulation ranged from -12.10 ($r=-0.44$, $p<0.001$) to -13.50 ($r=-0.49$, $p<0.001$). The limits of agreement between clinical examination POCUS measurements for left and right PD during direct and indirect light reflex indicated a significant systematic difference between the methods.

Conclusion: There is moderate agreement between clinical and POCUS examinations for assessing pupillary size at rest and during light reflex. Significant differences were found in PD measurements, suggesting that POCUS may be a more reliable method in emergency settings for ocular trauma assessment. POCUS was also effective in diagnosing relative afferent pupillary defect.

[PP-494]

Ultrasound Guided Fascia Iliaca Block for Hip Fracture in the Emergency Department: A Prospective Observational Study

Vinayak S R[1], Chandni R[1], Sibin Surendran[2]

[1]Government Medical College, Department of Emergency Medicine, Kerala, India
[2]Government Medical College, Department of Orthopedics, Kerala, India

Aim: Hip fractures can be excruciatingly painful when untreated or under-treated. In addition, elderly patients with hip fractures are at a high risk of developing delirium, which can have serious consequences in terms of mortality, morbidity, and health-care costs. To enhance pain relief and diminish the risk of delirium from typically administered parenteral analgesics and continued pain, the efficacy of ultrasound guided fascia iliaca block (FIB) was tested.

Materials and Methods: A prospective observational study was done, to assess the analgesic efficacy of FIB in peri-trochanteric fracture patients. One hundred and forty-two patients, aged 18 and older, presenting with peri-trochanteric fracture in the Emergency department were treated with ultrasound guided FIB for pain management. Primary study outcome was decrease in pain score - visual analogue scale at 1, 2 and 6 hrs, compared to baseline. A decrease in pain score of more than 50% would be considered a successful block. Secondary outcomes included need for additional analgesia and adverse effects.

Results and Conclusion: There was found to be significant decrease in pain score. At 1 hour, 117 (82.4%) out of 142 patients had significant (>50% reduction) reduction in pain score. At 2 hours, 131 (92.3%) patients had significant pain score reduction. One hundred and thirty eight (97.2%) patients had significant reduction in pain score at the end of 6 hrs. The ultrasound guided FIB is a quick, effective, safe, and simple way to achieve excellent pain control in ED patients with hip fractures.

POSTER PRESENTATIONS

[PP-357]

A Rare Case of Aortic Dissection in a Patient with Acute Gout Attack

Sarah Sabbagh Sharif, Ömer Faruk Çakıroğlu, Onur Bozdağ, Bahadır Taşlıdere, Başar Cander

Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

Aim: Aortic dissection is a life-threatening emergency that is commonly misdiagnosed. Detailed anamnesis is the key for a correct diagnosis.

Materials and Methods: A 67 year old male patient with a past medical history of hypertension presented to the Emergency department with a two day history of pain and redness in his right big toe. He reported visiting the Emergency department the week before due to abdominal pain and nausea. The patient was hypertensive on admission with a blood pressure (BP) of 150/99. Although the patient denied being previously diagnosed with gout involvement of the first MTP joint and mildly elevated uric acid levels in the patient's previous medical records made acute gout attack be considered as one of the first differential diagnosis. Blood tests showed increased creatinine level indicating the presence of acute kidney injury. A more detailed anamnesis was taken due to the increased liver function tests and bilirubin levels. The patient described a widespread abdominal pain that radiated to the back. Since that patient was hypertensive on admission aortic dissection was suspected due to the patient's characteristic abdominal pain. An emergent throacic and abdominal intravenous CT scan were performed and revealed a Stanford B type 3 aortic dissection extending from the aortic arch to the abdominal aorta with right renal infarction.

Results and Conclusion: Our case can contribute to further investigations about the possible association between uncontrolled uric acid levels in gout patients and the risk of aortic dissesction.

Keywords: Aortic dissection, gout, renal infarction

[PP-195]

Respiratory Rate, an Abandoned Vital Sign in Primary- and Emergency-Care Systems: Clinical and Medicolegal Implications

Shaden Salameh, Abdallah Kurd, Yoni Gershinsky, Samuel N Heyman

Hadassah University Hospital-Mount Scopus, Department of Emergency Medicine, Jerusalem, Israel

Determination of respiratory rate is invaluable in the emergency triage assessment and in appraising the clinical status both in primary care settings and in the Emergency department. Yet, it is rarely obtained and documented in both settings in Israel. Since respiratory compromise can be easily missed in the absence of overt dyspnea, once and again we encounter flawed clinical judgement caused by ignoring this vital sign. Few cases are presented with devastating outcomes that likely could have been managed earlier with better consequences if respiratory compromise has been detected and addressed on admission. Obligatory obtaining and documenting respiratory rate and pattern in defined clinical conditions is needed for the sake of a higher level of quality, minimizing potentially preventable catastrophes.

POSTER PRESENTATIONS

[PP-383]

An Interesting Case of Pneumocephalus and Sigmoid Sinus Thrombosis as a Complication of Acute Otitis Media

Florence Salotun, Rashaan Jackson-Wade, Dalip Kumar, Michael Acidri, Ionut Negrea

Southend University Hospital, Clinic of Emergency Medicine, Southend-on-Sea, Essex, UK

Aim: Acute otitis media (AOM) is defined as an acute infection of the middle ear. AOM occurs much more commonly in children than in adults. Here we present an interesting case involving an elderly woman who developed pneumocephalus and thrombosis of the sigmoid sinus as a complication to AOM.

Materials and Methods: This 73-year-old woman had a past medical history of hypertension. She presented with a 3-day history of flu-like symptoms and left ear pain, confusion, vomiting and decreased urine output. On examination she was tachypnoeic, tachycardic, afebrile but warm and clammy. She was drowsy and otoscopy revealed a bulging, erythematous tympanic membrane. Blood work revealed hypokalaemia and neutrophilia. Treatment was started with fluids, including potassium supplementation and intravenous antibiotics. Computed tomography head scan showed opacification of the middle ear with pneumocephalus in the cavernous sinuses and deep venous system. After 5 hours, her condition began to deteriorate rapidly. GCS dropped to 6/15, with new left-sided focal neurology, a fixed upward gaze and an inability to maintain her airway. Repeat imaging revealed left otitis media with left sigmoid/transverse sinus thrombosis and left cerebellar venous infarction. The posteromedial wall of the left mastoid air cells was defective, which was probably the cause of the pneumocephalus. The patient was transferred to high dependency unit.

Results and Conclusion: Pneumocephalus and sigmoid/transverse thrombosis are very rare complications of acute otitis media. A high index of suspicion is required for timely diagnosis.

Keywords: Emergency department, otitis media, sigmoid sinus thrombosis, pneumocephalus, sepsis

[PP-438]

A Case Report: A Two-in-One Case of Massive Pulmonary Embolism and Acute Myocardial Infarction

Muhammed İkbal Şaşmaz[1], Mustafa Uçar[2]

[1]Manisa Celal Bayar University Faculty of Medicine, Department of Emergency Medicine, Manisa, Turkey
[2]Manisa Celal Bayar University Faculty of Medicine, Department of Cardiology, Manisa, Turkey

Acute coronary syndromes and pulmonary embolism are the leading causes of mortality worldwide. In both conditions, patients most commonly present to the Emergency department with chest pain and shortness of breath. Both conditions should be considered in the differential diagnosis, but clinical suspicion is more prominent especially in the diagnosis of pulmonary embolism. While fibrinolytic therapy has been widely used in the treatment of pulmonary embolism, percutaneous coronary interventions are currently used in acute coronary syndromes. Therefore, differential diagnosis should be performed rapidly and accurately. Fortunately, because their pathophysiology is quite different, they are unlikely to present together. However, here we report a patient with simultaneous massive pulmonary embolism and acute anterior myocardial infarction.

POSTER PRESENTATIONS

[PP-338]

Economic Impact and Consumption Trends of Direct Oral Anticoagulants in Emergency Medicine: A Retrospective Analysis in the Context of a University Hospital

Camilla Servidio, Katiuscja Malandrini, Marcello Vaccar, Lorenzo Martellone, Adriana Coluccia, Giacomo Polito

Hospital Pharmacy, Policlinico Umberto I, Rome, Italy

Aim: Over the past decade, direct oral anticoagulants (DOACs) have become prominent therapeutic options for managing venous thromboembolism in patients with heart related diseases by inhibiting coagulation factors like thrombin (dabigatran) or factor Xa (rivaroxaban, apixaban, edoxaban). Both real-world studies and clinical trials have demonstrated the superiority of DOACs over vitamin K antagonists in terms of efficacy and benefit-risk balance. Given their growing use, managing healthcare costs becomes crucial. The aim of this study is to analyze DOACs cost and consumption trends in emergency medicine scenarios at a university hospital.

Materials and Methods: A retrospective analysis was conducted based on data extracted from an internal hospital database over the period 2021-2023 considering three macro-areas of different operating units: emergency room (ER), emergency medicine and neurovascular treatment unit (EM/UTN) and intensive care (IC).

Results and Conclusion: DOACs costs in 2021 and 2022 were €6.562,85 and €10.307,00, respectively, with 89% of usage in the ER, 7% to EM/UTN and 4% to IC. In 2023, consumption dropped by 26% and 49% compared to 2021 and 2022, with costs totaling €4.197,80 (74% ER, 13% EM/UTN, 13% IC). Conversely, Warfarin use was minimal, averaging 800 tablets annually, mainly in the ER. In conclusion, according to our analysis, DOACs represent the first-line treatment in acute care settings, supporting their continued adoption over traditional anticoagulants. Their advantages, including reduced international normalized ratio monitoring, fewer food-drug interactions, and faster effects, make them a cost-effective strategy for treating and preventing thromboembolic disorders.

Keywords: Pharmacoeconomics, DOACs, emergency medicine

[PP-348]

Fireworks in My Fingers and Toes

Shuheda Shah, Dalip Kumar, Michael Acidri, Ionut Negrea, Mohammed Tanvir Shah, Vijith Kumar, Syed Shah

Southend University Hospital, Clinic of Emergency Medicine, Southend-on-Sea, Essex, UK

Aim: Gulliane-Barré syndrome (GBS) is a rapidly progressive, acute inflammatory immune mediated neuropathy which can result in paralysis if not managed appropriately.

Materials and Methods: We report the case of a male patient in his 60's who presented to the Emergency department twice within the space of one week, experiencing progressive worsening of his ability to walk, pain and paraesthesia.

Results and Conclusion: This case study illustrates that some features of GBS can be vague and overlap with commonly seen conditions. In today's age of advanced technology, preliminary investigations may not always reveal conclusive results. However, a thorough clinical examination can play a crucial role in the diagnostic process.

Keywords: Emergency department, Gulliane-Barré syndrome (GBS), diagnosis

POSTER PRESENTATIONS

[PP-300]

Navigating the Complexity of Dual Toxidromes: A Case Study and Review of Concurrent Anticholinergic and Opioid Toxicity

Irtiqa Sheikh, Anand K Das, Kartikeyan, Jamshed Nayer

All India Institute of Medical Sciences Jodhpur, Department of Emergency Medicine, New Delhi, Delhi, India

Aim: Antispasmodic pain killers are commonly prescribed drugs for various colicky pain conditions. Dicyclomine and tramadol are common constituents of these medications. Though each drug has a well-established safety profile when used alone, their simultaneous overdose can present a complex clinical picture. Dicyclomine overdose causes atropinic effects while tramadol can result in opiate toxidrome and seizures when used in supratherapeutic dose. We describe a case with an overlapping toxidrome due to acute overdose of a combination drug.

Materials and Methods: Anticholinergic toxicity is very rarely encountered at our high-volume tertiary care center. We report case of a 39-year-old male who presented to our Emergency department with acute onset altered sensorium with frequent episodes of extensor posturing and continuous extreme agitation. The patient was diagnosed with overlapping toxidrome. He was managed with quality supportive care, decontamination and discharged after 48 hours. Our review examined the literature on the combined toxicity of dicyclomine and tramadol, focusing on their pharmacological effects, potential interactions, and clinical management. Use of physostigmine as antidote for anticholinergic toxicity is controversial and it is not an easily available drug.

Results and Conclusion: This case highlights the presentation and management of simultaneous overlapping anticholinergic and opioid toxidrome due to overdose of a combination tablet, which is a commonly prescribed antispasmodic and has a high abuse potential. As an emergency physician one must be vigilant to diagnose complex toxidromes. The case reiterates that quality supportive care is a cornerstone management, especially when antidotes are not available.

Keywords: Toxidrome, anticholinergics, opioids

[PP-310]

The Dilemma in Administering ASV in VICC-the Rajasthan Variant

Rakesh Guna Shekar, CM Sreevidya, Bhavya, PC Shan Adeeb, Rohila Kumar Amit, Rodha Mahaveer

All India Institute of Medical Sciences Jodhpur, Department of Emergency Medicine, Rajasthan, India

Snake envenomation remains a significant, time-sensitive, and life-threatening condition, with the World Health Organization estimating approximately 5 million snakebites globally each year. In India, the impact is severe, with a study noting 45,900 annual deaths nationwide due to snakebites. Rajasthan, in particular, faces a concerning scenario with 52,100 deaths over 14 years. A majority of these cases are attributed to the "big four" snakes: common krait, Indian cobra, Russell's viper, and saw-scaled viper. This case study highlights a 28-year-old male bitten by a snake, in the Thar Desert region of Rajasthan. Despite receiving 60 vials of antivenom at a rural primary healthcare center, the patient presented with hematuria, shock, and prolonged coagulation profile, indicating venom-induced consumption coagulopathy. Echis carinatus sochureki, a subspecies in this region, has a venom composition that may contribute to the low efficacy of polyvalent antivenom due to its unique phospholipase A2 and snake venom metalloproteinase content. These variations may explain the increased treatment burden and poor response to standard antivenom. To address these challenges, establishing regional venom banks, enhancing venom research, and developing monovalent vaccines tailored to specific geographic venoms are recommended. Such initiatives could significantly reduce the public health burden of snake envenomation in India.

Keywords: Wilderness medicine, toxicology, hemotoxic snake bite

POSTER PRESENTATIONS

[PP-316]

Untwisting the Shock-drug Reaction with Eosinophilia and Systemic Symptoms to the Diagnosis

Rakesh Guna Shekar, Avanshu Bansal, Sumitha Murthy, Shiwangini Jayswal, Ankur Sharma, Mahaveer Rodha

All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

A 20-year-old male with recently diagnosed pulmonary tuberculosis was initially started on the HRZE regimen (isoniazid, rifampin, pyrazinamide, and ethambutol). Although his early response to treatment was favorable, he developed recurrent drug-induced hepatitis after one month, necessitating a change to a modified anti-tuberculosis regimen. Shortly thereafter, he presented with a one-week history of fever and a generalized rash that began on the abdomen and spread to cover his entire body. Upon emergency admission, the patient exhibited tachycardia and hypotension, which were effectively managed with fluid resuscitation and vasopressors, guided by Point-of-Care Ultrasound. Clinical examination revealed generalized lymphadenopathy and a wdespread, dusky erythematous rash covering over 70% of his body, including the face, neck, trunk, and limbs. The rash was non-blanchable and associated with petechial lesions on the hard palate and erythematous plaques on the glans penis. Laboratory tests indicated eosinophilia and elevated transaminases, and application of the RegiScar criteria confirmed a diagnosis of Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome. Immediate discontinuation of the suspected drugs, along with the initiation of systemic steroids and immunosuppressants, led to marked improvement in his skin lesions and overall clinical condition. The patient was discharged in a stable state and scheduled for outpatient follow-up. This case underscores the importance of recognizing severe cutaneous drug reactions in emergency settings. DRESS syndrome, an idiosyncratic and potentially life-threatening hypersensitivity disorder, typically develops 2-6 weeks after starting the offending drug and requires prompt identification and management to differentiate it from conditions like sepsis.

Keywords: Dermatological emergencies, Drug Reaction with Eosinophilia and Systemic Symptoms, DRESS

[PP-328]

Emergency Department Thoracotomy-the Adrenaline Storm

Rakesh Guna Shekar[1], C.M Sreevidya[1], Sumithra[1], Abhishek[1], Marina[2], Mahaveer Rodha[1]

[1]All India Institute of Medical Sciences, Jodhpur, Department of Emergency Medicine, Rajasthan, India

[2]All India Institute of Medical Sciences, Jodhpur, Department of Trauma Surgery, Rajasthan, India

Emergency thoracotomy, or "cracking the chest", was first successfully executed by Igelsrud in 1906 on a trauma patient in cardiac arrest, with Spangaro introducing the classic left anterolateral incision approach the same year. In 1961, Beall further advanced the procedure by performing resuscitative thoracotomies in trauma patients within emergency settings. This highly resource-intensive procedure necessitates a rapid assessment of its potential benefits, particularly in patients with penetrating trauma who remain hemodynamically unstable despite resuscitation efforts. Conversely, patients with blunt trauma generally have much lower survival rates, and Eastern Trauma guidelines typically consider those without vital signs as unsuitable candidates for this intervention. This case report details a 25-year-old male, run over by a tractor and brought to the Emergency department within 10 minutes. The patient arrived unconscious, without a palpable carotid pulse. High-quality cardiopulmonary resuscitation, bag-mask ventilation, and intravenous adrenaline were administered, along with the initiation of a massive transfusion protocol and bilateral chest drains. Bedside ultrasound indicated pericardial effusion with pseudo-pulseless electrical activity, prompting an Emergency department thoracotomy. Return of spontaneous circulation was achieved, and the patient was transferred to the operating room where cardiac lacerations were sutured. Unfortunately, the patient later succumbed to cardiac arrest. This case suggests that while Eastern Trauma guidelines may not be fully applicable in community hospitals, where swift action is crucial, emergency thoracotomy remains a vital procedure that requires a well-coordinated team and regular training for emergency physicians.

Keywords: Emergency department thoracotomy, traumatic cardiac arrest, ultrasound in cardiac arrest

POSTER PRESENTATIONS

[PP-376]

A Case Report of Wellens' Syndrome

Chirag Bhanu Singh, Saurabh Kumar Patel, Bharath Gopinath, Ajaz Qasba, Javaid Iqbal

Colchester General Hospital, Clinic of Emergency Medicine, Essex, United Kingdom

Aim: Wellens' syndrome is an uncommon presentation of Acute Coronary Syndrome (ACS), characterized by electrocardiogram (ECG) changes that are not classical for myocardial ischemia. This case aims to illustrate this atypical presentation to emphasize the importance of prompt diagnosis and ensure timely intervention in the Emergency department (ED).

Materials and Methods: A forty-year-old male arrived to ED with sudden onset central chest pain, non-radiating and crushing in nature, lasting four hours. Patient was hemodynamically stable, had no other symptoms, and reported no prior medical history. The initial ECG revealed biphasic T-waves in leads V2, V3 with mildly raised troponin, suggestive of Wellens' Type-A syndrome.

Results: Given the clinical picture and ECG findings suggestive of Wellens' syndrome, the ACS treatment protocol was initiated. Repeat ECG demonstrated deep T-wave inversions in leads V2-V5 and raised troponin, consistent with Wellens' Type-B syndrome. Echocardiography revealed anterior myocardial wall hypokinesia. Patient was immediately moved to catheterization facility for percutaneous coronary intervention (PCI). Angiography revealed proximal left anterior descending obstruction, and PCI was performed immediately. Patient had improved, was no longer symptomatic upon the subsequent follow-up and was responding well to the oral medications.

Conclusion: This case highlights Wellens' syndrome, a rare but important ST-elevation myocardial infarction equivalent. Early recognition and intervention are crucial in the ED to minimize the high morbidity and mortality associated with coronary artery disease.

Keywords: Wellen's syndrome, ST-elevation myocardial infarction, Emergency department

[PP-503]

A Pneumonia Mimic in Intensive Care Unit

Abhishek Kumar Sinha, Ritu Singh, Sanjeev Kumar

Medical Profession, Patna, India

Aim: Type 1 respiratory failure often leads to intensive care unit (ICU) admission, especially if unresolved. Rare causes like lepidic adenocarcinoma, a subtype of invasive lung cancer where tumor cells line alveolar walls, should be considered. This cancer can mimic pneumonia but has a 90% 5-year survival rate post-surgery. We present a case diagnosed as lepidic adenocarcinoma.

Materials and Methods: A 65-year-old non-smoker with no significant weight loss presented with low-grade fever, productive cough, right cervical lymphadenopathy, and persistent leukocytosis (>20,000) for over two months. He had shortness of breath for a month, initially showing cavitation pneumonia on radiographs. Previous treatments included broad-spectrum antibiotics and antifungals. High-resolution computed tomography revealed nodular lesions, cavitations, consolidation in the right lower lung, and enlarged lymph nodes. Despite negative tests and a non-revealing positron emission tomography scan, he developed kidney injury requiring renal replacement therapy and a rising leukocyte count of 50,000 before being transferred to our center.

ICU Course: Patient required non-invasive ventilation for type 1 respiratory failure. Routine and special tests, including bone marrow biopsy and tumor markers, were normal. Modified ATT was restarted due to ongoing deterioration and high TLC. A ultrasonography-guided lung biopsy revealed lepidic adenocarcinoma. Unfortunately, the patient succumbed to sepsis and respiratory failure before appropriate therapy could begin.

Results and Conclusion: When patients do not respond to targeted therapy, alternative diagnoses should be considered. This case underscores lepidic adenocarcinoma as a rare cause of lung lesions. Early and accurate diagnosis can significantly reduce morbidity and mortality.

POSTER PRESENTATIONS

[PP-190]

Assessment of Platelet-lymphocyte Ratio as a Prognostic Biomarker in Sudden Cardiac Arrest Patients

Lukasz Szarpak, Başar Cander, Salvatore Di Somma, Sagar Galwankar, Michal Pruc, Krzysztof Kurek

LUX MED Group, Department of Clinical Research and Development, Warsaw, Poland

Aim: Platelet-lymphocyte ratio (PLR) is an emerging biomarker used to evaluate the inflammatory response and coagulation status in patients with sudden cardiac arrest (SCA). Therefore, our aim was to conduct a meta-analysis to evaluate the prognostic value of PLR in the context of return of spontaneous circulation (ROSC), survival to discharge and to provide more accurate and integrated conclusions on the role of this biomarker in clinical practice.

Materials and Methods: We conducted a search using PubMed, MEDLINE, Scopus, Web of Science, and the Cochrane Library, which lasted until July 2024. A total of 4 studies (1-4), which involved 1249 cardiac arrest patients, were included in our meta-analysis. We included studies that compared PLR levels among different adult cardiac arrest patient groups.

Results: Pooled analysis showed no statistically significant differences between the ROSC and non-ROSC patient groups [MD=6.20; 95% confidence interval (CI): -7.07 to 19.46; p=0.36]. PLR among patients who survived and descended also showed no statistically significant differences (MD=-11.68; 95% CI: -64.47 to 41.10; p=0.66).

Conclusion: In conclusion, our meta-analysis indicates that the PLR does not show statistically significant differences in predicting ROSC or survival outcomes in patients with SCA. The findings suggest that while PLR is an emerging biomarker for inflammatory response and coagulation status, its prognostic value in the context of SCA may be limited. Further research with larger sample sizes and more comprehensive data is required to fully elucidate the role of PLR in clinical practice for SCA patients.

[PP-298]

Safety and Efficacy of Targeted Temperature Control in Cardiogenic Shock Patients

Lukasz Szarpak[1,2] Sagar Galwankar[3], Fatimah Lateef[4], Krzysztof Kurek[1], Karol Bielski[1], Başar Cander[5], Michal Pruc[1], Salvatore Di Somma[6]

[1]LUX MED Group, Department of Clinical Research and Development, Warsaw, Poland

[2]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Texas, United States of America

[3]Florida State University College of Medicine, Sarasota Memorial Hospital, Emergency Medicine Residency Program, Florida, United States of America

[4]Singapore General Hospital, Clinic of Emergency Medicine, Singapore, Singapore

[5]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[6]University La Sapienza Roma, Faculty of Medicine and Psychology, Postgraduate School of Emergency Medicine, Rome, Italy

Aim: Researchers are exploring hypothermia in cardiogenic shock as a potential adjunct therapy due to its ability to reduce metabolic demand and improve cardiac contractility. However, its effectiveness remains under investigation, with some studies showing potential benefits in hemodynamic parameters, while others have not demonstrated significant improvements. We conducted a meta-analysis to reconcile the findings.

Materials and Methods: Following PRISMA guidelines, we systematically searched PubMed, Embase, and Cochrane databases for randomized controlled trials (RCTs) comparing Targeted Temperature Control versus normothermia in cardiogenic shock patients. Risk ratios (RR) with 95% confidence intervals (CI) were calculated using the random-effects model using STATA 17 MP.

Results and Conclusion: Four RCTs with a total of 539 patients [262 in the Targeted Temperature Control (TTC) group] were included. Pooled mortality among TTC and non-hypothermia groups showed no statistically significant differences regardless of follow-up and was 19.2% vs. 27.0% for 7-day follow-up (RR=0.77; 95% CI: 0.47, 1.25; p=0.28); 43.5% vs. 48.0% for 30 days follow-up (RR=0.90; 95% CI: 0.75, 1.09; p=0.29); and 53.5% vs. 58.2% for 180 days follow-up (RR=0.92; 95% CI: 0.77, 1.10; p=0.35), respectively. MACE occurrence at 30d follow-up was observed in 53.4% vs. 63.5% respectively (RR=1.49; 95% CI: 0.22, 10.33; p=0.69). Our meta-analysis revealed that while hypothermia in cardiogenic shock shows some hemodynamic benefits, it does not significantly reduce mortality at any follow-up interval.

POSTER PRESENTATIONS

[PP-302]

Bébé Vie Scope™ as an Alternative for Direct Laryngoscope in Novice Intubators

Lukasz Szarpak[1,2] Pawel Wieczorek[3], Michal Pruc[1], Wojciech Wieczorek[4], Togay Evrin[5], Burak Katipoğlu[6]

[1]LUX MED Group, Department of Clinical Research and Development, Warsaw, Poland

[2]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Texas, United States of America

[3]John Paul II Upper Silesian Health Centre in Katowice, Pediatric Intensive Care Unit, Katowice, Poland

[4]Warsaw Medical University, Department of Emergency Medicine, Warsaw, Poland

[5]Yüksek İhtisas University Faculty of Medicine, Ankara, Turkey

[6]Ufuk University Faculty of Medicine, Department of Emergency Medicine, Ankara, Turkey

Aim: In life-threatening emergencies, airway management is the cornerstone of emergency response for patients of all ages, including children. Endotracheal intubation in children is associated with several risks due to the improper technique of performing the procedure. The search for alternatives to direct laryngoscopy, especially among medical personnel inexperienced in intubation, is crucial. The purpose of this study was to compare the Bébé VieScope and Macintosh laryngoscopes for securing a child's airway in simulated conditions.

Materials and Methods: This study was designed as a randomized crossover simulation trial. Two types of laryngoscope were used in the study: a standard Macintosh laryngoscope with blade #2 (DL; HEINE Optotechnik GmbH & Co. KG, Gilching, Germany) and a new Bébé VieScope® laryngoscope (VieScope; Adroit Surgical, Oklahoma City, United States of America). Twenty-seven nurses during the PALS course performed endotracheal intubation on a 6-year-old child's simulator. Intubation was performed under normal airway conditions. The study's participants had experience with direct laryngoscopy (<10 intubations) but no experience with Bébé VieScope.

Results and Conclusion: The success rate of the first intubation attempt using bébé VieScope vs. DL varied and was 77.8% vs. 55.6% (p=0.041), respectively, the duration of intubation was 32.5 (12.9) vs. 31.8 (21.6)s; (p=0.712), and the subjective assessment of the ease of intubation measured on a 10-point scale was 4.2 (1.4) vs. 6.6 (2.1); (p=0.03), respectively. The study shows that the Bébé VieScope is a viable alternative to the DL, and participants are able to perform intubations with high efficiency after only a short training.

[PP-307]

Comparing Intubations with VieScope and Direct Laryngoscopy in a Tongue Edema Scenario: Pilot Data

Lukasz Szarpak[1,2] Wojciech Wieczorek[3], Michal Pruc[1], Başar Cander[4], Sagar Galwankar[5]

[1]LUX MED Group, Department of Clinical Research and Development, Warsaw, Poland

[2]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Texas, United States of America

[3]Warsaw Medical University, Department of Emergency Medicine, Warsaw, Poland

[4]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[5]Florida State University College of Medicine, Sarasota Memorial Hospital, Emergency Medicine Residency Program, Florida, United States of America

Aim: Although endotracheal intubation is widely considered the established practice, it requires a high level of expertise and frequent re-training. Airway management in unconscious patients with respiratory distress is essential to ensure proper ventilation and avoid complications of hypoxemia. Swelling of the tongue can make intubation much more difficult. In tongue edema conditions, we wanted to compare endotracheal intubation by nurses using the VieScope and direct laryngoscope, as well as assess whether it is possible to perform intubation with high efficiency using the VieScope after only a short training course.

Materials and Methods: We designed the study as a randomized crossover simulation trial. The study was conducted among nurses who participated in ACLS courses. Participants in the study performed endotracheal intubation of a patient under simulated tongue swelling. We performed the intubation using a standard Macintosh laryngoscope with blade #3 (DL; HEINE Optotechnik GmbH & Co. KG, Gilching, Germany) and a new VieScope® laryngoscope (VieScope; Adroit Surgical, Oklahoma City, United States of America). The study's participants had experience with direct laryngoscopy (<10 intubations) but no experience with VieScope; therefore, standardized instruction in the use of both techniques was made.

Results and Conclusion: Thirty-three nurses participated in the study. The success rate of the first intubation attempt for VieScope and DL varied and was 84.8% vs. 51.5% (p<0.001), respectively, while the time to perform endotracheal intubation was 38.5 (9.2) vs. 51.3 (13.2)s; (p<0.001), respectively. Summarize, VieScope may be helpful to achieve a quicker, favorable first pass success rate of intubation compared to DL.

POSTER PRESENTATIONS

[PP-320]

EOlife®-A New Standard in the Pediatric Patient Ventilation Teaching Process: Pilot Data

Lukasz Szarpak[1,2], Wojciech Wieczorek[3], Michal Pruc[1], Başar Cander[4], Sagar Galwankar[5]

[1]LUX MED Group, Department of Clinical Research and Development, Warsaw, Poland

[2]Baylor College of Medicine, Henry JN Taub Department of Emergency Medicine, Texas, United States of America

[3]Warsaw Medical University, Department of Emergency Medicine, Warsaw, Poland

[4]Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, İstanbul, Turkey

[5]Florida State University College of Medicine, Sarasota Memorial Hospital, Emergency Medicine Residency Program, Florida, United States of America

Aim: Appropriate ventilation is crucial for individuals experiencing cardiac arrest in order to ensure proper oxygenation and prevent further damage to the brain and other organs. When it comes to pediatric patients, ventilation necessitates special consideration due to the distinct difficulties associated with their narrower airways and more fragile respiratory system. This study aimed to assess the efficacy of the EOlife device (Archeon Medical, France) in teaching ventilation with a bag-valve mask (BVM) during simulated infant CPR.

Materials and Methods: Participants in the study received standard theoretical and practical training in performing BVM ventilation on a pediatric patient under simulated cardiopulmonary resuscitation. They were then divided into two groups and assessed the degree of ventilation quality with BVM (primary evaluation), after that, the first of which practiced ventilation with EOlife and the second without EOlife device. Then, after 2 weeks, they were asked to perform continuous ventilation for 2 minutes using only BVM.

Results: Twenty-two novice medical students participated in this trial. The primary evaluation showed no statistically significant differences in the correctness of ventilation with BVM (52.5% vs. 54.2% for with and without EOlife groups, respectively; p=0.757). In the secondary evaluation (2 weeks after exercise), the correctness of ventilation with BVM in the groups that exercised with and without EOlife varied and was respectively: 84.5% and 63.7% (p=0.013).

Conclusion: In conclusion, EOlife is a device that should be used during training on the correct ventilation of the pediatric patient.

[PP-369]

Mineralising Angiopathy - an Uncommon Cause of Paediatric Stroke

Amrutha T, Jyothi Antony, Siju V. Abraham

Jubilee Mission Medical College and Research Institute, Department of Emergency Medicine, Kerala, India

Aim: We present the case of a 1.5 year old female child with complaints of left sided, upper and lower limb weakness since morning on waking up from sleep. She had a history of fall from scooter hitting right side of head, the previous day. No complaints of loss of consciousness, vomiting, ear, nose, and throat bleed, seizures. The objective is to describe the clinical presentation, diagnostic findings, treatment and outcomes in this complex scenario.

Materials and Methods: We reviewed the patient's medical records, including the history, clinical examination, vital signs, imaging, like computed tomography (CT)-brain, and magnetic resonance imaging (MRI) brain and blood investigations

Results and Conclusion: Vitals - PR- 130/min; SpO2- 100% on RA, RR-28/min CRT <3 ec PP: well, felt, b/l Peripheries: warm.

Systemic examination:

CNS: E4 V5 M6

B/l pupils reactive

B/l upper and lower limb tone-normal on right side decreased on left side

Right U/L and L/L power grade 5/5

Left U/L and L/L power 0/5

Knee jerk Right 2+

Left 2+

Plantar right Flexor

Left extensor

CT brain

Bilateral basal ganglia calcification

Mineralising vasculopathy

MRI brain

Acute infarct in right posterior capsuloganglionic region and corona radiata

Normal MR on angiogram study of cerebral vessels and neck vessels

Neurology consultation done. The child was diagnosed as a case of paediatric stroke and was started on Inj. Dexamethasone, aspirin (5 mg/kg/day), syrup piracetam (500 mg/5 mL) and other symptomatic and supportive measures.

Physiotherapy was done. Vitals monitored. She showed symptomatic improvement. This case underscores the clinical complexity of paediatric ischemic-stroke, which was unusual when presented with head trauma.

POSTER PRESENTATIONS

[PP-386]

The Mississippi Mystery

Minu Rose Thomas[1], Deo Mathew[2], Derlin Thomas[1]

[1]Amala Institute of Medical Sciences, Department of Anesthesia and Critical Care, Kerala, India
[2]Jubilee Mission Medical College, Department of Emergency Medicine, Kerala, India

Aim: Hypersensitivity reactions to antibiotics, particularly Vancomycin, can lead to rapid deterioration in patients, requiring immediate and effective emergency management. This case report highlights the critical interventions employed in the Emergency department (ED) to stabilize a 22-year-old male who developed a severe reaction to Vancomycin before a planned ventriculo-peritoneal shunt surgery. The purpose of this report is to underscore the importance of preparedness and quick decision-making in managing drug-induced emergencies.

Materials and Methods: The patient, after receiving a test dose of Vancomycin, was administered 1g IV, following which he exhibited symptoms of a severe hypersensitivity reaction, including erythema, dyspnea, hypotension, and unconsciousness. Our team initiated a rapid sequence of interventions: administration of 0.5 mg IM adrenaline, securing the airway through intubation, and stabilization with other measures. Arterial and central venous lines were established for continuous monitoring and management. The patient's condition was stabilized and owing to the primary emergent condition the surgery was successfully performed with no intraoperative complications within 4 hours. This case highlights the efficacy of the rapid response protocol in the ED and intensive care unit.

Conclusion: This case emphasizes the need for vigilance and preparedness, especially when administering drugs with known hypersensitivity risks. Comprehensive preoperative assessments, availability of emergency equipment are crucial for optimizing patient outcomes. The timing of surgery after an event should also be optimally decided.

Keywords: Vancomycin hypersensitivity, emergency management

[PP-388]

Do Automatic Push Notifications Improve Patient Flow in the Emergency Department?

Daniel Trotzky[1], Liron Posner[2], Jonathan Mosery[3], Aya Cohen[3], Shiran Avisar[4], Gal Pachys[3]

[1]Tel Aviv University Faculty of Medicine, Department of Medical Management, Shamir Medical Center (Assaf Harofeh), Tel Aviv, Israel
[2]Tel Aviv University Faculty of Medicine, Department of Internal Medicine, Shamir Medical Center (Assaf Harofeh), Tel Aviv, Israel
[3]Tel Aviv University Faculty of Medicine, Department of Emergency Medicine, Shamir Medical Center (Assaf Harofeh), Tel Aviv, Israel

Aim: Congestion in Emergency departments (ED) is a significant challenge worldwide. Any delay in the timely and immediate medical care provided in the ED can affect patient morbidity and mortality. Our research analyzed the use of an innovative platform to improve patient navigation in the ED, as well as provide updated information about their care. Our hope is that this can improve ED efficiency and improve overall patient care. The primary objective of our study was to determine whether the use of an automatic push notification system can shorten "length of stay" in the ED, improve patient flow, and decrease ED patient load.

Materials and Methods: This was a prospective cohort study utilizing data extrapolated from the electronic medical records of 2972 patients who visited the walk-in ED of a large-scale central hospital in Israel from January 17th 2021 to March 15th 2021. During this period, the automatic push text notification system was activated on a week-on week-off basis. We compared data from our experimental group with the control group.

Results: The results of this study indicate that the use of an automatic push notification system had a minimal impact on specific parameters of ED patient flow. Apart from a few significant reductions of specific timed-intervals during patients' ED visit, the majority of results were not statistically significant.

Conclusion: This study concluded that the anticipated benefits of a push text notification system in the ED do not, at this stage, justify the system's additional cost.

POSTER PRESENTATIONS

[PP-390]

Resilience of Hospital Staff Facing COVID-19 Pandemic

Daniel Trotzky[1], Uri Aizik[2], Jonathan Mosery[2], Natali Carady[2], Guy Tavori[3], Aya Cohen[2], Gal Pachys[2], Miri Avraham[4], Osnat Levtzion-Korach[1], Orna Tal[1,5,6]

[1]Shamir Medical Center (formerly Assaf Harofeh Medical Center), Medical Management; Tel Aviv University, affiliated with the Faculty of Medicine, Zerifin, Israel

[2]Shamir Medical Center (formerly Assaf Harofeh Medical Center), Department of Emergency Medicine; Tel Aviv University, affiliated with the Faculty of Medicine, Zerifin, Israel

[3]The Hebrew University of Jerusalem Faculty of Medicine, Jerusalem, Israel

[4]Shamir Medical Center (formerly Assaf Harofeh Medical Center), Nursing Administration; Tel Aviv University, affiliated with the Faculty of Medicine, Zerifin, Israel

[5]Israeli Center for Emerging Technologies (ICET), Zerifin, Israel

[6]Bar Ilan University Faculty of Medicine, Department of Management, Ramat Gan, Israel

Aim: The Coronavirus disease-2019 (COVID-19) pandemic has placed additional burden on already strained healthcare systems worldwide, intensifying the responsibility and burden of healthcare workers. Although most of hospital staff continued working during this stressful and challenging unprecedented pandemic, differences in the characteristics and attributes were noted between sectors and hospital departments. Israeli healthcare workers are trained and experienced in coping with national emergencies, but the pandemic has exposed variations in staff reactions. Understanding the intrinsic differences between sectors and departments is a key factor in staff and hospital preparedness for unexpected events, better resource utilization for timely interventions to mitigate risk and improve staff wellbeing. To identify and compare the level of resilience, secondary traumatization and burnout among hospital workers, between different sectors and hospital departments, during the COVID-19 pandemic.

Materials and Methods: Cross-sectional research to assess the resiliency, secondary traumatization and burnout of healthcare workers at a large general public hospital in central Israel. The sample consisted of 655 participants across various hospital units exposed to COVID-19 patients.

Results: Emergency department physicians had higher rates of resilience and lower rates of burnout and secondary traumatization than staff in other hospital departments. In contrast, staff from internal medicine departments demonstrated the highest levels of burnout. Overall, physicians demonstrated higher levels of resilience and lower levels of burnout compared to other workers.

Conclusion: Identifying resilience characteristics across hospital staff, sectors and departments can guide hospital management in education, preparation and training of healthcare workers for future large-scale health emergencies.

[PP-329]

Pluriennal Monitoring of the Consumption of Six Reserve Class Antibiotics in a University Hospital in the Lazio Region

Marcello Vaccaro, Lorenzo Martellone, Katiuscja Malandrini, Camilla Servidio, Adriana Coluccia, Giacomo Polito

Farmacia Ospedaliera, Policlinico Umberto I di Roma, Rome, Italy

Aim: According to Italian National Institute of Health (ISS) data, in recent years, Italy has seen high consumption of reserve class (R) antibiotics (Antbio), which are indicated for severe infections and in cases where other Antbio have failed. The use of Antbio R in critical and Emergency departments (RCE) is of great concern due to the increasing development of antimicrobial resistance (RA), making it necessary to monitor the consumption of Antbio R in the RCE of our hospital.

Materials and Methods: Six Antbio R were evaluated: cefiderocol (Cefi), ceftolozane/tazobactam (Cef-Tazo), ceftazidime/avibactam (Cef-Avi), meropenem/vaborbactam (Mero-Vab), ceftaroline (Cefta), dalbavancin (Dalb), in 3 RCE: intensive care (TI), central resuscitation (RC), and Emergency department (DEA) in 2022-2023, and the consumption was calculated in terms of defined daily dose (DDD).

Results: The study shows an annual reduction in DDD consumption for all Antbio during the two-year period, except for Cefi (586.7 DDD in 2022 and 619.3 in 2023) with overall percentages for TI and RC around 80%. The highest DDD consumption in 2022-23 was observed for Cef-Avi, 2223.2 (50% RC, 35% TI) - 1590.0 (58.1% RC, 26.4% TI), followed by Cef-Tazo, 873.7 (46.6% RC, 31.7% TI) and 685.3 (49.6% RC, 40.2% TI), Mero-Vab, 843.0 (60.7% RC, 33.2% TI) and 750.7 (61.6% RC, 30.9% TI), and Cefi. Lower consumption was noted with Cefta, 50.0 (60% TI, 30% RC) and 135.0 (63% TI, 29.6% DEA), and Dalb 8.3 (100% TI) and 8.7 (76.9% TI, 23.1% DEA).

Conclusion: The study highlights the need for rigorous Antbio stewardship programs.

Keywords: Critical department, antibiotics, critical infections

POSTER PRESENTATIONS

[PP-055]

Plasma D-dimer Level as a Biomarker for Assessing Liver Dysfunction in Patients with Liver Cirrhosis

Niket Verma[1], Preeti S. Dhoat[1], Amandeep Kaur[1], Manjeet Kaur[2], Arnav Singh[1]

[1]All India Institute of Medical Sciences, Department of General Medicine, Punjab, India

[2]All India Institute of Medical Sciences, Department of Pathology, Punjab, India

Aim: The increasing prevalence of liver cirrhosis in India highlights the need for effective diagnostic and prognostic tools to effectively manage this challenging condition. Plasma D-dimer levels serve as a marker for assessing the status of fibrinolysis and the severity of liver dysfunction. Current imaging and laboratory techniques are labour-intensive or invasive and identifying a blood-based biomarker could reduce the need for patient transportation, expensive equipment and trained personnel in resource-poor settings. This study aims to investigate the utility of plasma D-dimer levels as a potential biomarker for assessing liver dysfunction in individuals diagnosed with liver cirrhosis. The comprehensive evaluation of liver cirrhosis in conjunction with D-dimer may unveil new avenues for early intervention and treatment which may positively alter the course of liver cirrhosis and its subsequent complications.

Materials and Methods: Cross-sectional study conducted on 149 patients diagnosed with liver cirrhosis. Severity was graded using the Child-Turcotte-Pugh (CTP) classification and the Model for End-Stage Liver Disease (MELD) score. D-dimer levels were estimated and the levels were correlated with each of the CTP Class and MELD score.

Results and Conclusion: D-dimer levels were highest in CTP Class C patients. There was a moderate positive relationship between transaminase levels and D-dimer values and a strong positive relationship between MELD scores and D-dimer levels. The findings reveal a clear correlation between elevated D-dimer levels and worsening liver dysfunction, encompassing both excretory and synthetic functions.

Keywords: Liver cirrhosis, fibrinolysis, biomarkers

[PP-341]

Emergency Medicine Resident Perspectives About Feedback in the Emergency Department

Brian W. Walsh, Frederick Fiesseler, Kristen Walsh

Morristown Medical Center at Atlantic Health System, Clinic of Emergency Medicine, New Jersey, USA

Aim: Resident feedback is an important component of emergency medicine resident training. Although residents often report that they do not get enough feedback, it is unclear what exactly they consider feedback. We sought to clarify resident views on the feedback they consider most helpful and in what areas they would appreciate more and less feedback.

Materials and Methods: An anonymous survey was created using Google Forms and distributed to all residents in an emergency medicine residency with 29 residents. Residents were asked multiple-choice questions about their views of feedback, specifically about the best times to give feedback, the areas in which they would like more and less feedback, and the manner in which they would like feedback given. The percent of residents responding with each option was calculated.

Results: Twenty-seven out of 29 residents (93%) completed the survey. Ninety-three percent said the most helpful feedback comes from attending physicians. Fifty-six percent said feedback is best given in private immediately after a patient encounter, while only 4% said it is best given at the bedside. Ninety-six percent said feedback is best given in small aliquots instead of during dedicated meetings. The top areas in which residents would like more feedback are management plans (85%) and patient assessments (70%). The area in which they would like less feedback are social skills and social interactions (44%).

Conclusion: Feedback is an important component of education. Clarifying resident views about it and ways in which feedback may be better-received by residents will likely benefit their education.

POSTER PRESENTATIONS

[PP-345]

Are There Differences in How Under-represented Groups Perceive Virtual Interviews?

Brian W. Walsh, Frederick Fiesseler, Kristen Walsh

Morristown Medical Center at Atlantic Health System, Clinic of Emergency Medicine, New Jersey, USA

Aim: Many academic societies encourage virtual interviews for residency. Council of Residency Directors in Emergency Medicine says "it is important for programs to make equitable decisions and neither reward nor penalize applicants for the decision to appear in person or virtually" we sought to determine whether members of underrepresented groups view the value of virtual interviews differently than others.

Materials and Methods: Using an anonymous, online questionnaire, we surveyed our emergency medicine department. On a 5-point Likert scale, respondents were asked whether they agree with the statement "it's not fair nor equitable to allow in-person contact between medical students and residents/faculty before the programs submit their rank lists." The survey also asked whether the respondent self-identified as a member of an under-represented group. Differences between groups were calculated along with 95% confidence intervals (CI).

Results: Thirty-nine emergency medicine physicians completed the survey. Nine (24%) considered themselves a member of an under-represented group. When asked if they agree that "it's not fair... to allow in-person contact... before the programs submit their rank lists," (1-strongly disagree, 5-strongly agree), there were no significant differences between the groups (1.7 vs. 1.4, difference -0.3, CI: -0.8, 0.2, NS). There was also no difference in those identifying equity as the primary benefit of virtual interviews (11% vs. 23%, difference 12%, CI: -20%, 44%, NS).

Conclusion: All groups agreed that in person contact with medical students is fair when making rank lists. Members of under-represented groups were not more likely to cite equity as the primary benefit of virtual interviews.

[PP-110]

Prevalence and Predictive Factors of Recurrent Deep Venous Thrombosis in Addis Ababa University Black Lion Hospital: Retrospective Cross-sectional Study

Zemedkun Motera Wirtu[1], Akililu Azazi[2], Tigist Worku[2], Tinbit Esyays[1]

[1]Hawassa University Faculty of Medicine, Department of Emergency Medicine, Hawassa, Ethiopia

[2]Addis Ababa University Faculty of Medicine, Department of Emergency Medicine, Addis Ababa, Ethiopia

Aim: About approximately 2-5% of people experience deep-vein thrombosis (DVT) during their lives. Death, disease recurrence, post-thrombotic syndrome, and excessive bleeding due to coagulant medications are among the most important DVT complications. Recent research found revealed a high incidence of DVT recurrence after the first attack. Disease recurrence has a mufti-factorial pathogenesis, and its probability is related with to the number and severity of risk factors. The present study aimed to investigate DVT recurrence and the its associated risk factors.

Materials and Methods: This retrospective cross-sectional study evaluated all DVT patients hospitalized in the Emergency Department of Tikur Anbessa Hospital from April 2017 to April 2020. The risk factors were obtained from patients' records, including smoking status, intravenous drug abuse, status, a history of coagulopathy disorder having, a history of surgery, a history of cardiac disease, cancer, immobilization and trauma, were obtained from patient records.

Results: A total number of 532 DVT patients were hospitalized in the Tikur Anbessa Hospital Emergency Department during the study period. It was only possible to extract the data from 130 patient records. A history of recurrent DVT was reported in 30 individuals (23%). The comparison between the risk factors in patients with a first-time DVT and those experiencing a recurrent DVT revealed significant differences solely in the prevalence of blood disorders. Applying stepwise regression indicated that coagulopathy (odds ratio: 5,389; 95% confidence interval: 0.004-0.761; $p<0.048$) has association with DVT recurrence.

Conclusion: Based on our findings, DVT patients with blood disorders.

POSTER PRESENTATIONS

[PP-111]

Integrating a Machine Learning Based Mortality Risk Prediction Score with Emergency Department Triage System to Better Predict 30-day Mortality

Yvonne Wong Qi Feng[1], Marcus Ong Eng Hock[1,2,3], Nan Liu, Yohei Okada[1,3,4], Stephanie Fook-Chong[1,3]

[1]Duke-NUS Medical School, Medical Student, Singapore

[2]Singapore General Hospital, Clinic of Emergency Medicine, Singapore

[3]Duke-NUS Medical School, Pre-hospital & Emergency Research Centre, Singapore

[4]Kyoto University, Graduate School of Medicine and Faculty of Medicine, Department of Preventive Services, Kyoto, Japan

Aim: Advancements in machine learning (ML) show great potential in improving Emergency department (ED) triage. This study aims to integrate a ML-based Score for Emergency Risk Prediction (SERP) with the Patient Acuity Category Scale (PACS) to derive an enhanced PACS+ and evaluate its effectiveness in predicting 30-day mortality among ED patients.

Materials and Methods: This single-centre, retrospective cohort study assessed all ED patients from 1 January 2018 to 31 December 2019. Visits in 2018 formed the derivation cohort, while visits in 2019 formed the test cohort. Using the derivation cohort, we applied a reclassification concept and integrated SERP and PACS to derive two variations of PACS+. PACS+ model 1 involves down-triaging patients with low risk of mortality based on their SERP-30d score, and up-triaging patients with high mortality risk. PACS+ model 2 takes a more cautious approach, up-triaging patients with high mortality risk, while patients with low mortality risk remain in the same triage level. In the test cohort, we measured the predictive performance of each model using area under the receiver operating characteristic curve (AUC) and decision curve.

Results and Conclusion: PACS+ model 1 [AUC: 0.828, 95% confidence interval (CI): 0.820-0.836] and model 2 [AUC: 0.812 (95% CI: 0.805-0.818)] demonstrated superior performance in predicting 30-day mortality compared to PACS [AUC: 0.722 (95% CI: 0.714-0.729)]. In the decision curve analysis, the PACS+ model 1 consistently achieved greater net benefit across the range of clinical thresholds. Integrating ML models has potential to enhance ED triage, achieving better clinical care and resource utilization.

[PP-276]

Assessing the Appropriateness of Intelligent Portable on-site Emergency Medical Kit

Hyunmo Yang, Youngjae Kim

Korea National University of Transportation, Department of Paramedicine, Chungcheongbuk-do, South Korea

The aging population and the concentration of the population in the capital region in South Korea have created social issues where elderly residents in rural areas struggle to receive timely medical services. To address this, visiting care services are being operated, but they are often managed by nurses rather than doctors, limiting the scope of patient evaluation. This study aims to investigate the impact of applying an Intelligent Portable on-site Emergency Medical Kit, developed to assist the Coast Guard's telemedicine guidance, on the satisfaction of telemedicine services. The study was conducted with 59 elderly residents in Wando, Jeollanam-do, who received telemedicine services through the medical kit, connecting them with healthcare professionals located approximately 82 kilometers away. The kit transmitted essential vital signs such as electrocardiogram, blood pressure, and oxygen saturation in real-time, and the elderly participants rated their satisfaction highly, with an average score of 9.95 out of 10. The necessity of introducing the kit was also highly rated, with an average score of 9.93. In an evaluation of the kit's applicability, involving 50 emergency medical technicians and nurses, nurses showed a significant preference for the kit's weight, screen size, and video quality during remote consultations. In conclusion, the Intelligent Portable on-site Emergency Medical Kit has the potential to significantly improve the quality and accessibility of healthcare services for elderly residents in rural areas. Integrating this kit into existing visiting care services could enhance health management for vulnerable populations.

POSTER PRESENTATIONS

[PP-377]

A New "Time Record" Using Compression-only Cardiopulmonary Resuscitation for Out-of-hospital Cardiac Arrest with Subsequent Full Neurological Recovery

Paul Yugendra, Christopher Wong

Emergency Physician, Singapore

Aim: Cerebral ischaemia has been postulated to set in within 4 to 6 minutes post cardiac arrest leading to poor neurological outcomes. We present a case of a 56-year-old gentleman who sustained an out-of-hospital cardiac arrest (OHCA) given immediate "compression only" cardiopulmonary resuscitation (CPR), achieving return of spontaneous circulation (ROSC) after a downtime of 18 minutes and full neurological recovery at 23 minutes.

Case Reports: Fifty-six-year-old emergency physician was playing tennis with 3 fellow colleagues. After 1 hour, he became near syncopal, which progressed to convulsions and eventual unresponsiveness. Immediate chest compressions was started by two colleagues as no pulse was felt. They took turns alternating between chest compressions and keeping the airway patent with head tilt and chin lift. The third colleague found an Automated external defibrillator, which was applied with a shock delivered when it arrived at 15 minutes. EMS arrived 19 minutes post-arrest along with a defibrillator-monitor. Monitor showed ventricular fibrillation and a second shock was delivered. He achieved ROSC at 21 minutes post-collapse and progressed to have full GCS at 23 minutes post-collapse. He was brought to the ED and was identified to have a Wellens type electrocardiogram. Successful percutaneous coronary intervention was performed for a 90% occluded LAD. He was discharged without complications on day 3. Is it possible that the intrathoracic pressure differentials generated by good quality chest compressions provide sufficient ventilation if airway patency maintained?

Conclusion: High quality compression-only CPR saves lives and is not inferior to chest compressions with ventilations in adult OHCA.

[PP-408]

Abdominal Cellulitis as a Rare Sign of Perforated Appendicitis with Severe Peritonitis

Muhamad Syis Zulkipli, Khatijah Ahmad, Shuib Rambat

Selangor, Malaysia

A 45-year-old gentleman had 2-day history of severe abdominal pain. He was brought to Emergency Medicine Clinic of Selayang Hospital. On arrival, he was triaged to Yellow Zone. On assessment, he was leaning right lateral and complaining of severe pain of the abdomen. Vital signs showed blood pressure 130/95 mmHg, pain score was 10/10, heart rate 130 per minute, glucometer was normal and SpO_2 100% on air. Further assessment revealed cellulitic changes of right upper quadrant and left lower quadrant of the abdomen. He revealed that he had multiple episode of diarrhea and vomiting and denied history of outside food consumption. Blood parameters showed leukocytosis with predominat neutrophils. Alvarado score was 9. The diagnosis of perforated appendicitis complicated with abdominal cellulitis was made by the attending emergency physician. The patient was started on intravenous antibiotics (cefoperazone 1 gm and metronidazole 500 mg), adequate pain management, keep fasted and referred to surgical team in Temerloh Hospital. The transfer process was uneventful. He underwent computed tomography abdomen with contrast and revealed perforated appendicitis and underwent surgical exploration. Intraoperative findings revealed gangrenous, perforated appendix with more than 500 cc of intraabdominal pus collection. The surgery went smooth without complication. He was admitted for seven days and was discharged well. Abdominal cellulitis is an unusual presentation and complication of severe appendicitis. The diagnosis of appendicitis was difficult because rebound tenderness and McBurney's sign were difficult to elicit because of the large area tenderness due to abdominal cellulitis. In this situation, the diagnosis of appendicitis.

EPAT Emergency Physicians Association of Turkey

WACEM

ATUDER Acil Tıp Uzmanları Derneği

17-20 APRIL 2025
STARLIGHT RESORT HOTEL, MANAVGAT / ANTALYA

12TH INTERCONTINENTAL EMERGENCY MEDICINE CONGRESS
&
12TH INTERNATIONAL CRITICAL CARE AND EMERGENCY MEDICINE CONGRESS

IN CONJUNCTION WITH

21TH NATIONAL EMERGENCY MEDICINE CONGRESS
&
2025 WACEM SUMMER LEADERSHIP SUMMIT

SCIENTIFIC SECRETARIAT

EPAT Emergency Physicians Association of Turkey

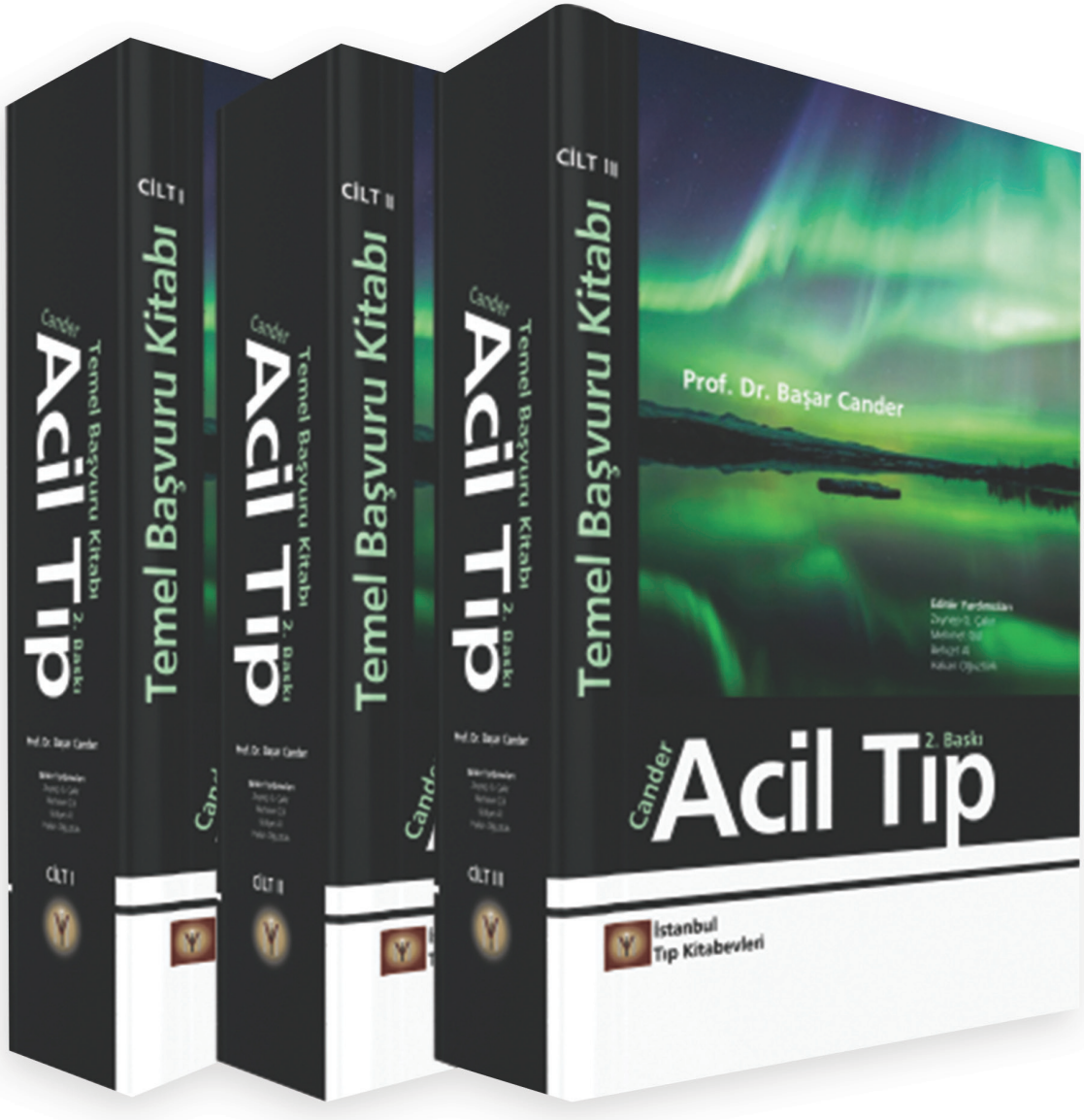
EMERGENCY PHYSICIANS ASSOCIATION OF TURKEY
Yukarı Ayrancı Güleryüz Sk. No:26/19
06550 / Çankaya / ANKARA
P: +90 312 426 12 14 F: +90 312 426 12 44
info@atuder.org.tr www.atuder.org.tr

ETHICON event & congress

ETHICCON EVENT & CONGRESS
Küçükbakkalköy Mah. Dereboyu Cad.
No:3/A Brandium AVM R5 Blok D:22 K:3 Ataşehir / İstanbul
www.ethiccon.com

EMERGENCY MEDICINE IS OUT NOW!

EMERGENCY MEDICINE BASIC CONSULTING BOOK WITH THE SUPPORT OF İSTANBUL TIP KİTABEVLERİ



www.istanbultip.com.tr

EPAT
Emergency Physicians
Association of Turkey

ATUDER
Acil Tıp Uzmanları Derneği

@atuder1999 | @atuderorg | @atuder_epat | @atuder1999

www.atuder.org.tr