







Proclaiming & Promoting Academic Leadership

WWW.INDUSEM.ORG









Official Voice of Academic College of Emergency Experts (ACEE)

Emergency Medicine Association (EMA)
An INDUSEM Undertaking

Chief Editor



Prof (Dr.) Bikram Gupta
Dept. of Anaesthesia & Critical Care

IMS, BHU, Varanasi, Uttar Pradesh Ph.:+91-8400100128 Email:teamsindusem@gmail.com

TEAMS Editorial Board

PRINCIPLE PROMOTOR
Prof (Dr.) Sagar Galwankar
CEO, INDUSEM

PATRON

Prof (Dr.) D K SinghExecutive Director, AllMS Bathinda

ASSOCIATE EDITOR

Dr. Suman Rastogi Assistant Prof. Heritage IMS, Varanasi

> **Dr. Tanvi Anand** Heritage IMS, Varanasi

From the Editor's desk... Hello Doctors,

Safeguarding Our Lifelines - Protecting Our Heroes : The Imperative of Doctor Safety in Emergency Medicine

In the pulsating heart of every hospital-the Emergency Medicine Department-doctors stand as the first responders, the healers, and the lifelines for those in dire need. Yet on an everyday basis, our cellphones ping with notifications about cases of physical abuse with doctors by agitated patient attendants, amid the flurry of life-saving interventions and split-second decisions, a silent crisis looms large: the safety of the very individuals entrusted with saving lives. Day after day, emergency medicine physicians face not only the relentless demands of acute medical care but also the growing threat of violence, aggression, and burnout. These dedicated professionals are often exposed to volatile situations, where emotions run high and the stakes are even higher. The alarming rise in incidents of physical and verbal assaults in emergency departments across the globe is a stark reminder that our healers are not immune to harm. In the chaotic atmosphere of the emergency department, where emotions are heightened, these threats become more pronounced, jeopardizing the safety of those who have committed their lives to saving others. The consequences of such a dangerous work environment extend far beyond the immediate physical risks. When doctors fear for their own safety, the ripple effects extend beyond their personal well-being - it undermines their ability to provide the highest quality of care. The stress and anxiety stemming from an unsafe environment can distract even the most skilled professionals. potentially leading to mistakes or delays in treatment that could affect patient outcomes. Additionally, the psychological toll of enduring such conditions can result in burnout, mental

health struggles, and even the decision to leave the profession. We must remember that doctors in emergency medicine are not just caregivers; they are mothers, fathers, siblings, friends and too have lives outside the hospital. They are individuals who, despite the risks, choose to stand on the frontlines of healthcare, driven by an unwavering commitment to their patients, this dedication should not come at the cost of their own safety. And this dedication alone cannot sustain them in the face of ongoing threats. It is imperative that we, as a society, recognize and address this issue with the urgency it deserves. To address this pressing issue, healthcare institutions must prioritize the implementation of robust safety measures. This includes investing in comprehensive safety protocols, including enhanced security measures, de-escalation training, and support systems that prioritize the physical and mental health of their staff. It is also crucial that hospitals enforce strict no-tolerance policies towards any form of violence and that legal protections are strengthened to shield healthcare workers from harm. Moreover, there is a need for increased public awareness and respect. Patients and their families must understand the importance of maintaining a safe and respectful environment in the emergency department. The doctor-patient relationship is built on trust, and it is only within a safe space that this trust can flourish, allowing doctors to perform their best work - saving lives. As we continue to face the challenges of healthcare, let us not overlook the importance of protecting those who protect us. Ensuring the safety of doctors in emergency medicine is not just a professional obligation or ethical responsibility - it is a moral duty. These doctors are our protectors in the darkest hours, in times of crisis, and it is essential that we take every possible step to safeguard their well-being as fiercely as they protect us.Let us stand together to make every emergency department a place of healing and hope, not only for the patients who seek care but also for the doctors who provide it.

SUDDEN CARDIAC ARREST: A HIDDEN DANGER



Sudden Cardiac Arrest (SCA) is an urgent medical crisis that occurs without warning, often leading to death within minutes if not treated immediately. This condition involves an abrupt cessation of the heart's activity, which stops blood flow to essential organs, including the brain. Although sudden, SCA is distinct from a heart attack, a common misconception. Understanding the differences and the processes behind SCA is crucial for healthcare professionals and the general population.

Prevalence and Risk Factors: SCA is a major health concern, causing between 300,000 and 400,000 deaths annually in the United States alone, with even more significant numbers globally. While SCA can affect people of any age, it is more prevalent in adults, especially those with existing heart conditions. Coronary artery disease is the primary cause of SCA in adults, whereas younger individuals are more likely to experience SCA due to structural heart diseases, like cardiomyopathies, or inherited arrhythmic conditions such as Long QT Syndrome. Various risk factors contribute to the likelihood of SCA, including a history of heart attacks, heart failure, severe left ventricular dysfunction, and previous occurrences of ventricular arrhythmias. Lifestyle choices, such as smoking, obesity, and a sedentary lifestyle, further increase these risks. However, SCA can also strike those with no prior indications of heart issues, highlighting the importance of awareness and preparedness on a broad scale.

Mechanisms of SCA: The underlying cause of SCA is usually an electrical malfunction in the heart, often presenting as ventricular fibrillation (VF) or ventricular tachycardia (VT). VF causes the heart's electrical impulses to become disorganized, leading to ineffective heartbeats. VT, on the other hand, causes the heart to beat so rapidly that it fails to pump blood effectively. Both conditions can quickly lead to loss of consciousness and death if not treated immediately. The triggers for these dangerous arrhythmias vary. A

common cause is ischemia, which occurs when the coronary arteries are blocked, leading to a heart attack that may then cause VF or VT. Other causes include imbalances in electrolytes, drug toxicity, and abnormalities in the structure of the heart.

Immediate Response and Diagnosis: SCA is typically diagnosed when a person collapses and is found to be unresponsive, without a pulse, and not breathing normally. Immediate cardiopulmonary resuscitation (CPR) is essential to maintain blood circulation until advanced medical help arrives. Using an automated external defibrillator (AED) is equally important, as it can deliver an electric shock to the heart to restore a normal rhythm. The likelihood of survival decreases by 7-10% for every minute defibrillation is delayed, making immediate action crucial.

Once emergency medical services arrive, advanced life support is necessary, including the administration of antiarrhythmic drugs and advanced airway management. Post-resuscitation care, such as therapeutic hypothermia and coronary angiography, plays a critical role in improving long-term outcomes for patients who survive the initial event.

Preventive Measures: Due to the sudden nature of SCA, prevention is focused on identifying and managing individuals at risk. Regular heart evaluations for those with known heart conditions, lifestyle changes, and, in some cases, the use of implantable cardioverter-defibrillators (ICDs) are key strategies. Public health initiatives aimed at increasing the availability of AEDs in public places and educating the public on CPR can significantly improve survival rates.

For those at high risk of SCA, such as individuals with a history of heart attacks or severe left ventricular dysfunction, ICDs have proven to be effective in improving survival rates. These devices continuously monitor the heart's rhythm and automatically deliver a shock if a dangerous arrhythmia is detected.

Conclusion

SCA remains a serious challenge due to its sudden onset and high mortality rate. While advancements in medical technology and public health efforts have improved survival rates, the key to reducing the impact of SCA lies in prevention, quick recognition, and immediate intervention. Ongoing education, both within the medical community and among the general public, is essential in combating this silent threat.

Recognizing the signs, understanding the risk factors, and being prepared to act swiftly can make a life-saving difference, highlighting the importance of continuous research, innovation, and public awareness in the fight against Sudden Cardiac Arrest.

EMINDIA 24 AIIMS, Bhopal



EMINDIA is the official Annual Conference of the Academic College of Emergency Experts in India, The Academy for Clinical Emergency Nursing in India and the Emergency Medicine Association. Policy Issues, Clinical Decision-Making Skills and Current Advances formed the core curriculum of the patient centered meeting. In the City of Lakes, Bhopal, Madhya Pradesh, "EMINDIA 24" mega conference was held at AIIMS, Bhopal was from 7th to 11th of August, 2024. The Theme for the 5 Days of EMINDIA 24 Mega-Conference was "Patient Centered Education, Research & Patient Care". 250 + speakers spoke at EMINDIA2024 and over 15 teams participated in the Sonography, Quiz and various other competitions. Leading medical professionals, nationwide came come together for the Thematic Sessions, which centered on the most important subjects in emergency medicine, point-of-care ultrasound, and emergency cardiology. They also examined how new developments in technology are improving patient outcomes. The Annual Event of the Congress, the Prestigious Professor Dr. Praveen Aggarwal



National CME was held on 9th August,2024 along with the 12th Convocation of the Academic College of Emergency Experts. This conference included multiple advanced workshops and symposia on - POCUS: Echo in EM, POCUS: Shock in EM, Emergency thoracotomy, Bronchoscopy in EM, Neonatal / Pediatric / Cardiac / Trauma resuscitation and Airway management.



Let's Pedal for a Cause:

CYCLOTHON 2024 in support of trauma survivors with collaboration of Department of Trauma & Emergency Medicine, AIIMS Bhopal & Bhopal Bicycle Riders was held on 11th August along with the introduction of EMGAMES24 by INDUSEM, ACEE and EMA, a unique multimodal annual day competition combining the knowledge and skills from academic emergency medicine and the competitive spirit of gaming into one Mega Event, a concept by Dr. Sagar Galwankar, CEO of INDUSEM, turned out to be a huge success.



CONTINUING MEDICAL EDUCATION AND 12TH SEED WORKSHOP OF AIRWAY MANAGEMENT FOUNDATION WORKSHOP CONDUCTED SUCCESSFULLY UNDER AEGIS OF GMCH-32 (IN COLLABORATION WITH EMERGENCY MEDICINE ASSOCIATION CHANDIGARH, PUNJAB, HARYANA) at GMCH-32 FROM 13th to 14th APRIL 2024.



Faculty, Delegates and Others who attended at GMCH 32 CME & 12th Seed workshop of AMF

The CME and 12th Seed workshop of Airway Management Foundation was conducted by Department of Anaesthesia and Intensive Care in GMCH 32 Chandigarh in collaboration of Emergency Medicine Association Chandigarh, Punjab and Haryana (under mission NEAT (National Emergency Airway Training) from 13th to 14th April 2024. This workshop aimed at enhancement of knowledge and strengthening of life saving skills of various delegates and faculty who are working in various hospitals of northern India.

The CME & workshop was being conducted with encouragement of Chief Guest Prof. A K Attri, Director Principal, GMCH-32 and Prof. Sanjeev Palta, Head of the department, Dept. of Anaesthesia and Intensive Care. Prof. Bhavneet Bharti was Guest of honour for this grand event. Over all, 167 delegates (anaesthesiologists and non- anaesthesiologists) registered for the event from all over colleges at Chandigarh, Haryana, Punjab, New Delhi, Rajasthan and Himachal Pradesh. The course coordinator Prof. Manpreet Singh (GMCH 32, Honorary Secretary Academic College of Emergency Medicine in India) ,General Secretary Prof. Dheeraj Kapoor (GMCH 32), Prof. Jasveer Singh (GMCH-32) and Treasurer

Galaxy S21 Ultra 5G

Prof. Richa Saroa along with all faculty of Dept of Anaesthesia GMCH 32 organized this event. Prof. Rakesh Kumar, President AMF and more than 72 faculty of EMA and AMF from all regions of country participated in this event.

The two day event, 16 hours practical training, comprised of trainings of the delegates for all the Airway Management skills of Oxygenation, Laryngoscopy, Intubation, Advanced Intubation techniques, Emergency front of neck access, Detailed airway anatomy and assessment. The CME and workshop comprised of very few lectures, Case discussions and "Hands On" practical scenario based simulated trainings on mannequins and simulators.

The event was a grand success under able guidance of AMF and EMA team and Prof. Sanjeev Palta HOD, Dept of Anaesthesia and Intensive Care, GMCH 32. Huge equipment armamentarium was arranged for this grand event and the Instructor: Delegate ratio was 1:3. The CME & Workshop was accredited with Airway Management Foundation, Academic College of Emergency Experts in India and Punjab Medical Council. With more than 270 delegates, faculty and others were involved in these grand successful two days event.

