

EDITORIAL

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FEM in 2024, a quick look

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Over the past year, the journal *Frontiers in Emergency Medicine (FEM)* has reinforced its dedication to advancing emergency medicine by featuring research from five continents, including Iran, Turkey, India, Ethiopia, Spain, Canada, and the United States. The high volume of submissions reflects growing trust in FEM, though only 20.9% are accepted due to stringent scientific and ethical standards. A major milestone this year was FEM's inclusion in the EBSCO and Magiran databases, increasing visibility. FEM aims to expand publishing opportunities while maintaining quality through expert review. This article highlights key achievements and research contributions from the past year.

1. Trauma

Analysis of Iran's national trauma registry led to four articles. Rahmanian et al. identified factors influencing intensive care unit (ICU) admission and mortality in road traffic accident victims, noting associations with low GCS, high injury severity scale (ISS), and ventilation needs (1).

Tabatabaei et al. found that most trauma patients were male, with road traffic crashes and falls being the primary causes (2). Older age and lower Glasgow coma scale (GCS) correlated with higher mortality, while ICU admission was linked to older age and higher ISS. Khavandegar et al. analyzed whether identical abbreviated injury scale (AIS) scores indicated varying risks across body regions, calling for more research on higher AIS scores (3). Another study by Khavandegar et al. compared ISS, GCS, and revised trauma score (RTS) as mortality predictors, with ISS proving the most effective (4).

Bahreini et al. highlighted deficiencies in Iran's trauma care system, advocating for specialized training and dedicated trauma teams (5). Sharma et al. in India found that self-fall/skid accidents were the most common, with a 4.43% fatality rate (6). As migration is a major concern in the world, Greenhill et al. highlighted the trauma migrants face at the US-Mexico border, focusing on four key injury mechanisms: desert crossing, border wall traversal, fleeing authorities, and train travel (7). The study underscored the unique health-care needs of this underserved population and the difficulties they encounter in obtaining adequate care due to deportation and lack of follow-up. Alinezhad et al. examined

incidental brain CT findings in head trauma patients, with a 10.6% prevalence increasing with age (8). Yamini et al. emphasized the need for early traumatic injury detection to prevent severe complications (9).

2. Diagnostic tests

Quick and accurate diagnostics are essential in emergency medicine. Murat Yazici et al. proposed the inferior vena cava contrast reflux score as a mortality indicator for acute pulmonary embolism (10). Ekici et al. studied thiol/disulfide homeostasis in acute pancreatitis, finding lower thiol levels in severe cases (11). Shahir et al. evaluated the Amsterdam wrist rules, noting high specificity but moderate sensitivity (12). Çinpolat et al. examined ECG-based hyperkalemia detection, finding the T/R ratio more reliable than T-wave amplitude alone in patients with low eGFR (13). Sandooghchian et al. analyzed inflammatory markers in familial Mediterranean fever, finding elevated RDW levels during attacks (14). Piñero-Saez et al. studied oxygen saturation during CPR at varying altitudes, showing moderate altitude benefits but limited high-altitude improvements (15).

3. ED management and disasters

Hospital preparedness for mass casualties and disasters is crucial. Heydari et al. assessed Isfahan's hospital safety index, revealing infrastructure and disaster planning gaps (16). Pashaei Asl et al.'s systematic review linked man-made disasters to increased cardiovascular disease prevalence, highlighting the need for post-disaster health risk management (17).

4. Critical care and sedation management

Research on sedation and managing critically ill patients continues. Irajian et al. found dexmedetomidine improved hemodynamic stability compared to magnesium sulfate in orthopedic surgeries (18). Pourlak et al. demonstrated intranasal dexmedetomidine's effectiveness in postoperative pain relief, reducing opioid use (19). Habtamu et al. identified key delirium risk factors in ICUs (20).

Managing difficult airways remains challenging. Ottoveggio

et al. showed the effectiveness of a combined laryngeal mask airway and fiberoptic guidance in critical patients, emphasizing flexible airway management approaches (21).

5. Prehospital medical services

Emergency medical services (EMS) are crucial for patient care. Rashidi et al. highlighted challenges in prehospital childbirth in Iran, recommending more female personnel and better training (22). Aghababaeian et al. examined pediatric prehospital care, identifying challenges like inadequate child-specific equipment and training (23). Both studies called for improvements in EMS resources and workforce diversity.

6. COVID-19

Despite the pandemic's end, research insights remain valuable. Pakniyat et al. validated a 12-point lung ultrasound protocol for COVID-19 detection, proving effective compared to low-dose chest CT scans (24). Akbari et al. used point-of-care ultrasound (POCUS) to assess intravascular volume in 34 critically ill COVID-19 patients (25). They found that 97.1% had an inferior vena cava diameter below 21 mm, suggesting conservative fluid management. Though limited by a small sample size, the study underscores POCUS's value in COVID-19 treatment. Balaji discussed "Kounis syndrome," an allergic reaction linked to acute coronary syndrome exacerbated by COVID-19. Elevated inflammatory markers and allergic reactions are key indicators (26).

7. Case reports and innovations

Yildiz et al. described "Man in a barrel" syndrome, a rare neurological condition mimicking stroke (27). Buyurgan et al. reported ruptured intracranial dermoid cysts, which require urgent surgery (28). Mirbagheri et al. detailed a rare case of cardiac air tamponade due to lung cancer (29), while Aarabi examined emphysematous cystitis in a diabetic patient, stressing prompt treatment (30). Leis et al. discussed hyponatremia as a cause of headache in the postpartum period (31).

Leis et al. studied the impact of simulation training on family medicine residents' confidence and knowledge in managing first-trimester bleeding in the emergency department (32). They concluded that simulation training is an effective educational tool for improving residents' competence in life-threatening emergencies and recommended its integration into family medicine curricula. Geraiely et al. looked at the effects of cigarette smoking on one-year outcomes for STEMI patients after primary percutaneous coronary intervention (33). It found that while current smokers had lower unadjusted hazard ratios for major adverse cardiac events and death compared to non-smokers, these differences disappeared after adjusting for age and comorbidities. Researchers attributed the "smoker's paradox" to younger age and fewer comorbidities among smokers, emphasizing the

importance of smoking cessation and the need for further research on smoking's impact on cardiovascular outcomes.

Eftekhari introduced "prudent love" in medicine, advocating for compassion to enhance patient care and reduce burnout (34). Aqavil-Jahromi addressed ED challenges, proposing design thinking to improve workflow and staff satisfaction (35).

8. Conclusion

The past year has been pivotal for FEM, with global research contributions and high-quality publications. Studies underscored evidence-based practices, multidisciplinary collaboration, and continuous improvement in emergency care. Despite challenges in acceptance rates and submission volumes, FEM remains committed to impactful research and enhancing patient outcomes. Moving forward, FEM aims to uphold high standards, promote innovation, and support the global emergency medicine community through timely research dissemination.

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