Disaster Medicine and Public Health Preparedness

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Impact of Point-of-Care Ultrasound on Secondary Triage: A Pilot Study

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Abstract

Objectives: In mass casualty scenarios, patients with apparent hemodynamic and respiratory stability might have occult life-threatening injuries. These patients could benefit from more accurate triage methods. This study assessed the impact of point-of-care ultrasound (POCUS) on the accuracy of secondary triage conducted at an advanced medical post (AMP) to enhance the detection of patients who, despite their apparent clinically stable condition, could benefit from immediate life-saving interventions or priority earlier transport to definitive care.

Methods: A mass casualty simulated event consisting of a bomb blast in a remote area was conducted with 10 simulated casualties classified as YELLOW at the primary triage scene; patients were evaluated by 4 physicians at an AMP. Three patients had, respectively, hemoperitoneum, pneumothorax, and hemothorax. Two of the four physicians were provided the use of POCUS.

Results: All 4 physicians were able to suspect hemoperitoneum, but only physicians utilizing POCUS detected pneumothorax and hemothorax.

Conclusion: This study suggests that POCUS-enhanced secondary MCI triage at an AMP may represent an effective methodology to accurately detect nonapparent injuries that require time-dependent priority transport or life-saving interventions. Further studies with larger samples conducted in varied MCI scenarios are warranted.

Supplementary material. The supplementary material for this article can be found at http://doi.org/10.1017/dmp.2024.241.

Abstract

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