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Pattern of External Injuries Sustained during Bomb Blast Attacks in Karachi, Pakistan from 2000 to 2007

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Abstract : Objective: Terrorism and suicidal bomb blast attacks are commonplace in Karachi, Pakistan. During the years 2000 to 2007, there were over 60 bomb explosions resulting in more than 1500 casualties. These explosions produce a wide variety of external injuries. We undertook this study to evaluate pattern of external injury produced after bomb blast attacks and to compare injury profile resulting from explosions in open versus semi-confined blast environments. Method: A retrospective, cross-sectional, study was conducted to review injuries sustained after bomb blast attacks in Karachi, Pakistan, from January 2000 to October 2007. Emergency medical records and medico legal certificates of patients presented to three major public sector hospitals of Karachi were evaluated using self-design proforma. Results: Data of 481 victims meet inclusion criteria and were incorporated for final analysis. Of these, 63.6% were injured in open spaces and 36.4% were injured in semi-confined blast environments. Lacerations were commonly encountered as external injury (47.7%) followed by penetrating wounds (15.3%). Lower and upper extremities were most commonly affected (38.6% and 19% respectively). Open and semi-confined blast environments produced a specific injury pattern and profile (p=<0.001). Conclusions: Bomb blast attacks in Karachi produce an external injury pattern consistent with other studies, with exception of an increased frequency in penetrating wounds. Semi-confined blast environments were associated with severe injuries. Further studies are required to better classify injuries and their severity based on standardized scoring systems. Effective emergency response systems must be designed to cope with mass causalities following bomb explosions.

Keywords : bomb blast attacks, injury pattern, external injury, open space, semi-confined space, blast environment
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