Objective(s): To investigate the factors associated with outcomes in trauma patients diagnosed with mesenteric vascular injuries.

Methods: A retrospective database analysis was performed on patients who sustained a mesenteric vascular injury (MVI, ICD-9 902.20-902.29) identified by the 2012 National Trauma Data Bank (NTDB). Data was analyzed to identify differences in hospital length of stay, ER and final hospital disposition, and mortality based on patient age, gender, race, Injury Severity Score, and injury type (blunt or penetrating). A p-value <0.05 was considered statistically significant.

Results: Of the 1133 total patients included, blunt trauma accounted for 740 (65%) of the injuries, while penetrating trauma accounted for 364 (32%) of the injuries. Patients with penetrating injuries were 1.43 times more likely to die from their injuries than those with a lower ISS (95% CI 1.04-1.98, p<0.05). Patients with a higher ISS (>16) were 5.39 times more likely to die from their injuries than those with a lower ISS (95% CI 1.89-15.4, p=0.002), if ISS was >25 the patient was 15.1 times more likely to die (95% CI 5.5-41.7, p<0.001). Males were more likely to suffer from penetrating injuries than females (37% vs 13%, p<0.001), and African Americans were nearly 4 times more likely to present with penetrating injuries (69% vs 17%, p<0.001). Age was also found to be associated with mortality as patients >65 and between 21 and 44 were more likely to die from their injuries than patients in other age categories. Of the 740 patients with blunt MVIs, 326 (44%) were taken directly from the ER to the OR, 306 (41%) to the ICU, whereas with penetrating MVIs, 311 (85%) were taken to the OR from the ED, and 18 (5%) to the ICU. Of the 740 blunt MVIs, 115 died (16%), compared to 76 (21%) of the penetrating MVIs (p<0.001).

Conclusions: Mesenteric vascular injuries are associated with significant morbidity and mortality, whether caused by blunt or penetrating injuries.


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