

Mesenteric Vascular Injury in Trauma: an NTDB study



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Introduction

- This study aims to describe traumatic mesenteric injuries including: type of arterial injuries, their mechanisms, and patient outcomes
- Large studies describing mesenteric injury patterns and patient outcomes are lacking

Methods

- Retrospective, descriptive study
- Data from the 2012 National Trauma Data Bank (NTDB)
- Injuries to mesenteric arteries (identified by ICD-9 codes 902.2-902.29)
- Demographic information and clinical characteristics included age, gender, race, ISS, ED disposition, hospital disposition
- STATA[®] statistical software for Windows, version 12 (StataCorp, College Station, TX)
- Chi square and multivariate analysis was used to analyze the data, results reported as odds ratios (OR) with 95% confidence intervals (CI). Statistical significance defined as $p < 0.05$

Results

- 1133 total patients (832,800 total NTDB 2012)
 - 0.1% of all traumatic injuries
- Blunt trauma - 740 (65%) of the injuries
- Penetrating trauma - 364 of the injuries (32%)
- Patients with penetrating injuries - 1.43 times more likely to die from their injuries than from blunt trauma (95% CI 1.04-1.98, $p < 0.05$)
- Males were more likely to suffer from penetrating injuries than females (37% vs 13%, $p < 0.001$)

Results

- African Americans were nearly 4 times more likely to present with penetrating injuries (69% vs 17%, $p<0.001$)
- Most common age group 21-44 years (47%)
- Overall mortality – 17%, 21 % penetrating, 16% blunt
- ISS>16 - 5.39 times greater mortality than ISS 1-8
- ISS>25 - 15.1 times greater mortality than ISS 1-8
- Injuries to the hepatic and superior mesenteric arteries were correlated with higher mortality - OR 2.03 and 3.03, respectively ($p<0.001$)

Conclusions

- Mesenteric injuries are rare
- Highly lethal
- Young African-Americans males disproportionately represented
- Penetrating mesenteric injuries less common but more lethal

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