Mesenteric Vascular Injury in Trauma: an NTDB study

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I do not have any potential conflict of interest
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)
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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