

Pelvic Ring Injuries in the National Trauma Data Bank: Miscoded, Misclassified, or Misunderstood?

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Purpose: The American College of Surgeons has advocated participation in the National Trauma Data Bank (NTDB) for all trauma centers; however, no prior study has evaluated the accuracy of coding included in this data bank. The purpose of this study was to determine whether pelvic ring injuries are coded accurately in the NTDB, and, if not, how they were misclassified.

Methods: A retrospective review of all pelvic ring injuries based on Abbreviated Injury Scale (AIS) codes was performed at a single Level I academic trauma center from July 2010 to June 2013. A single fellowship-trained orthopaedic trauma surgeon reviewed thin-section CT scans in all patients and classified the injuries using AIS: posterior arch intact, incomplete posterior arch, or complete posterior arch. The surgeon was blinded to the AIS code and trauma code level from the registry. These CT-based classifications were compared with the pelvic ring injury codes designated trauma registry for each patient.

Results: 235 patients with a mean age of 42 years had pelvic ring injuries in our registry. The agreement between trauma registry codes and CT reclassification was 24% in the intact group, 43% in the incomplete group, and 59% in the complete group. Using only the trauma registry codes, injuries were underclassified in 48% of the incomplete group and 76% of the intact group.

Conclusion: Many pelvic ring injuries are miscoded and misclassified in the NTDB. The etiology of this misclassification is unclear, but any research data mined from these data bases should be regarded cautiously.