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Acetabular Surgery After-Hours: What could possibly go wrong?

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Keywords

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Abstract

Purpose

Open orthopaedic trauma rooms have alleviated historical pressure to operate at odd hours but trauma centers remain busy; the effect of suboptimal conditions on outcomes of complex acetabular surgery is unknown. The purpose of this study was to investigate the association of surgical timing to medical and surgical complications after fixation.

Methods

Adult patients presenting to our Level 1 academic trauma facility (2008-18) receiving unilateral traumatic acetabular fixation were reviewed. "After hours" was defined a priori as surgeries where >50% of the surgical time was after 3pm to 7am, Monday-Friday & weekends, based on staffing patterns. Surgical complications (1 yr) included reoperations for infection, hardware failure, loss of reduction, posttraumatic arthrosis requiring arthroplasty, postoperative nerve palsy. Medical complications (30-days) included pneumonia, ileus, cardiac event, stroke, renal failure necessitating dialysis, death. Data was analyzed via contingency tables, uni and multivariate logistic regressions.

Results

167/370 operations (45%) occurred after hours by a priori definition. Overall complication rates: 12% medical; 15% surgical. No differences existed between medical (51% vs 46%) or surgical (46% vs 54%) complication rates between groups respectively. Sensitivity analysis of the break point did not reveal statistically significant differences. Few patients were operated on after 8pm, yet these patients had high combined complications exceeding 40%. This subgroup was too small to analyze independently.

Conclusion

Largely, surgical timing does not appear to influence complications in acetabular care. Granular examination of cases performed at the end of the day suggest high rates of

medical and surgical complications in a difficult to study sub-population. Surgeons should consider the dynamics at their own institution.

