

TOO CONSERVATIVE? 10-YEAR EXPERIENCE OF BLUNT LIVER AND SPLEEN MANAGEMENT IN CHILDREN

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Aim

Non-operative management of haemodynamically stable paediatric patients with solid organ injury is the established norm. However, there is no consensus on the optimal lengths of bed rest (LBR) or length of hospital stay (LOS). The recent introduction of abbreviated bed rest protocols suggests dramatically shorter inpatient stay without pre-discharge imaging might be safe. Our aim is to evaluate our experience with non-operative management of blunt solid organ injuries in paediatric patients.

Methods

Review of a prospectively maintained trauma database, patients <16 years with liver or splenic injury from blunt trauma between 2007-2016 were analysed. Primary outcomes were LBR, LOS and mortality. Secondary outcomes were: interventions (surgery/ embolisation) and complications. Data was analysed in SPSSv20 ($p < 0.05$ considered significant).

Results

58 patients were admitted with blunt solid organ injuries: spleen ($n=32$), liver ($n=25$) or both ($n=1$); median AAST injury grade 3 (1-5). There were no deaths. Four patients underwent intervention: splenectomy ($n=1$), laparotomy and liver packing ($n=2$), interventional radiological hepatic embolization ($n=1$). Median LBR was 7 days (0-14) and LOS 9 days (1-192).

Patients with higher injury grades had longer LOS, although linear adjusted regression demonstrated that this effect was associated with other injuries or social factors delaying discharge ($P=0.005$), not injury grade itself ($p=0.131$). After adjusting for other injuries and confounding social factors our patients appear to have a median length of stay 4 days (range 0-13) longer compared to APSA for grade of injury and LBR of 5 extra days (range 1 - 8).

Grade-corrected, injury-adjusted LBR reduced over the study period ($p=0.002$), LOS was unaffected ($p=0.877$).

Conclusion

There is an opportunity to reduce LBR and LOS in children with blunt liver and splenic injury by closer adherence to APSA protocols at our centre. Exploring factors responsible for prolonged LBR and LOS could safely improve efficiency.