

Non-operative Management - The First Option in the Treatment of Blunt Liver and Spleen Trauma in Pediatric Patients

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Abstract

Aim: The aim of the present study is to assess some characteristics of blunt hepatic and splenic injuries in children, the non-operative management (NOM) procedures and efficiency, over a 5-year period in a tertiary hospital for children.

Materials and Methods: We conducted a retrospective study on 32 patients with blunt liver and/or spleen injuries. Age, gender, mechanism of injury, hemoglobin and hematocrit levels, length of stay and bedrest, imaging diagnosis, hemostatics and transfusions, treatment, and discharge status were evaluated.

Results: 58% of patients were males. Mean age was 10.7 years. The main mechanism of injury was motor vehicle accident. Ultrasound (US) and Computed Tomography (CT) found 56.2% patients with spleen injury and 43.8% with liver injuries. On US the most frequent injuries were lacerations, and on CT were splenic-grade III and hepatic-grade II. 84.4% of patients were hospitalized in Intensive Care Unit and 15.6% in the surgical unit. The mean hemoglobin and hematocrit were 10.91g/l and 33%, respectively. The treatment was non-operative for 84.4%, and operative for 15.6%. When discharged, 56.2% of patients were cured and 43.8% were improved.

Conclusion: With a performing multidisciplinary team of surgeons, intensive care therapists and radiologists, NOM in pediatric patients with blunt liver and spleen injuries is safe and effective, may be conducted depending on the hemodynamic stability rather than the lesions' extension, and reduces the ICU length of stay, as well as the need for hemostatics and transfusion.

Key words: children, blunt abdominal trauma, liver injury, spleen injury, non-operative management