

Liver Trauma: The III-IV Segment Tears

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Introduction: The liver is the most commonly injured intra-abdominal organ. The liver's mass is the key factor in determining the extent of the inertial force and consequently of damage in the case of sudden deceleration. Speed accidents, usually, produce characteristic lesions where the III-IV segment tear onto the hepatic ligament causing grade I-III liver injuries (LI). 5 cases of such injuries are described.

Methods: All trauma patients admitted at our hospital who sustained a blunt abdominal injury from January 1 to December 31 2004 were identified. Clinical records were reviewed for demographics, severity of LI, associated concomitant injuries, management scheme. Grade of LI was determined from initial CT or from intraoperative findings.

Results: A total of 159 patients were identified. In 14 (8.8%) one or more liver lesion/s were associated: low-grade injuries of which 3 were grade I, 8 were grade II. 40% were high-grade injuries comprised of 6 grade III and 1 grade IV. In this series, the more fre-

quent occurrence was a tear between the hepatic segments III and IV, by the acute impact of the liver onto the hepatic ligament.

Conclusions: An hepatic injury caused by the round ligament has been intraoperatively diagnosed in 1 of 5 liver trauma patients (35.7%) in our one-year abdominal blunt trauma series. Our clinical contribution underlines the high frequency of such lesions that seems to be related and characteristic of high speed trauma. In these cases immediate deceleration due to the impact may be relevant in the pathophysiology of the lesion.
