

Liver Trauma At Dr George Mukhari Academic Hospital

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Background : The evolution of management of hepatic trauma has followed a course from mandatory exploration for all patients to selective non-operative management and presently, to non-operative management with selective operation. There is, however, in specialized referral centers in countries with a high volume of trauma and limited access to facilities such as interventional radiology, still a role for major surgical resection in the management of the complex grades of liver injury. We report on our experience in a tertiary academic hospital in South Africa.

Methods : A retrospective analysis of all patients with liver injuries following trauma (blunt and penetrating) at a single referral center (Dr George Mukhari Academic Hospital) was performed. The data was obtained from a prospectively maintained database from January 2018 till November 2021. Data on identified patients was analyzed for demographic information, mechanisms of injury, associated injuries, hemodynamic stability on presentation, need for damage control surgery, overall management route (nonoperative vs operative), and outcome. All complications were analyzed and reported using the Clavien-Dindo scoring system.

Results : A total of 212 patients were managed at our center over the 4-year period. There were 57 blunt trauma patients (27%) and 155 penetrating trauma patients (73%). Non-operative management rate was 75% in blunt group vs 7% in penetrating group. Those patients who were managed operatively, 90% had associated injuries, 55% had liver injuries that could be managed by simple measures (diathermy and suturing) and 45% had high grade injuries that required more complex maneuvers (hepatotomy and vessel ligation, resectional debridement, lobar resection, perihepatic packing and relaparotomy, hepatic isolation). Overall mortality was 15% and was highest in the blunt injury group (20%) compared to penetrating trauma. Complications occurred in 72 (41%) out of 181 surviving patients. The complications correlated with the type and severity of the injuries (19% in stab wounds, 49% in gunshot wounds and 55% in blunt trauma) as well as with the number of associated injuries.

Conclusions : The management of complex liver injuries often requires advanced surgical techniques. This is especially the case in our setting where there is limited access to interventional radiology thus increasing the need for definitive surgical management of these patients. Surgical management of complex liver injuries is feasible in our setting and demonstrates a unique challenge with a unique solution.

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