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The effect of a concomitant renal injury on the outcome of colonic trauma

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Abstract

Background: The management of colon injuries has steadily evolved over the course of the last half century. So too has the management of renal trauma. It is not clear from the literature as to whether concomitant colon and renal injuries carry increased risk of morbidity and mortality, and whether this combination of injuries necessitates a specifically tailored management approach.

Methods: A retrospective review was carried out for the period January 2012 to December 2016. All patients over the age of 18 years who were subjected to laparotomy for penetrating trauma (gunshot wounds or stab wounds) and who sustained an intra-operatively proven colonic injury were included in this study. Operative management and outcomes were investigated. A direct comparison was made between patients with a combined colonic and renal injury and those with only a colonic injury.

Results: Over the five-year period a total of 268 patients sustained a colonic injury. The 239 patients with a colonic injury (Group A) were compared to the 29 patients with a combined colonic and renal injury (Group B). Regarding the management of the colonic injuries, there were no differences in the rates of primary repair, anastomosis, exteriorisation, or damage control surgery between groups A and B. As for the management of the renal injury, 14 were not explored at laparotomy; in 12 a nephrectomy was performed and in 3 the renal injury was repaired. The nephrectomy cohort were more likely to have undergone damage control surgery, to be admitted to ICU, to receive a colostomy, and had higher mortality. While there was no difference in the need for damage control surgery or mortality between groups, Group B had a significantly greater need for ICU admission. Morbidity was similar between the two groups – in particular, there was no difference in the rates of either gastro-intestinal complications or acute kidney injury between the two groups.

Conclusion: In patients with combined colon and renal injuries, it seems reasonable to treat each organ on its own merit, without the expectation of increased morbidity or mortality. In the non-damage control setting, most colonic injuries may be safely repaired, and a peri-renal haematoma that is not expanding or actively bleeding may be safely left alone.

Keywords

Colon injury, renal injury, combined colon and renal injury