



Non-operative Management of High-grade Renal Injuries in Children: A Review of Two Cases Seen at the Georgetown Public Hospital Corporation

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Conference Abstract

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ABSTRACT

Purpose: Blunt abdominal trauma in children results in renal injury in approximately 10 to 20% of cases. In about 20% of these patients, significant complications may arise; for example urinoma (1%) and post trauma extravasation (2-18%). Urinomas and persistent hematuria were traditionally managed surgically by partial or total nephrectomy. Today, nonoperative management is well accepted for the majority of high grade renal injuries, as organ preservation is highly desirable due to patients' projected lifespan. We present a retrospective review of two cases of high renal injuries seen at GPHC's Paediatric Surgical Department.

Methods: In February and April 2019, two patients met the criteria for grade four renal injury. All medical records were reviewed. Cause of injury, complications, interventions and hospital stay were analyzed. These patients were followed up post discharge, clinically and radiologically.

Results: Two males, ages 11 and 10 years, sustained blunt abdominal trauma and presented to GPHC with hematuria and abdominal tenderness. On initial assessment, they were hemodynamically stable and were diagnosed with grade four renal injuries by computed tomography. Complications developed after one week of hospitalization. One patient had persistent hematuria lasting over a week, requiring blood transfusions in excess of 4 units, and the other developed a urinoma, urinary tract infection and deep vein thrombosis. Both patients had paralytic ileus and acute hypertension. These complications were all managed non operatively. The very large urinoma was successfully treated with percutaneous drainage after 25 days. Average hospital stay was 35 days and both patients had complete resolution of their renal injuries within 90 days post trauma.

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Conclusion: Non operative management of high-grade renal injury is highly successful and safe in children. Even in the presence of significant complications, preservation of renal tissue should be considered.

Keywords: Renal injuries; children; blunt abdominal trauma.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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