

Renal Laceration Management: A Case Report

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Abstract

Case Report

Renal lacerations are infrequent but significant injuries that necessitate immediate and proper treatment to avoid complications including bleeding and renal failure. We report a case of a male patient, aged 15, who experienced a kidney laceration due to forceful abdominal trauma. The patient was successfully treated using a combination of conservative methods and surgery, leading to a successful outcome. This example underscores the significance of prompt identification, suitable imaging studies, and quick action in treating kidney lacerations.

Keywords: Abdominal trauma, Renal laceration, Diagnostic imaging, Haemodynamic instability.

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INTRODUCTION

Renal trauma includes a range of injuries from minor contusions to serious lacerations, usually caused by blunt or penetrating trauma. Renal lacerations, albeit uncommon, can result in serious health complications and death if not quickly identified and treated. We provide a case of renal laceration in a 15 year old boy, detailing the clinical presentation, diagnostic process, and therapeutic measures utilized.

CASE PRESENTATION

A male, aged 15, arrived at the emergency department after a fall onto his left side from a trampoline. Upon arrival, he was hemodynamically stable but had significant abdominal pain on the left side. Upon physical examination, discomfort was noted on the left flank.

Diagnostic examination: The initial trauma examination performed focused abdominal sonography for trauma (FAST) and found free fluid in the left perinephric region, indicating a potential renal injury. A contrast-enhanced CT scan of the abdomen and pelvis was done, which confirmed a severe grade III renal laceration in the upper pole of the left kidney.

Therapeutic Approach: The patient was immediately transferred to a tertiary paediatric trauma unit.

Initially, the patient was treated conservatively with bed rest, pain relief medication, and careful monitoring of vital signs and haemoglobin levels. However, because of continuous pain and a fall in haemoglobin, surgery was considered required. Urologists performed a left partial nephrectomy. During the surgery, bleeding from the torn renal parenchyma was stopped, and the damaged part of the kidney was removed to stop the bleeding.

Follow-up and Outcome: After surgery, the patient was carefully observed in the intensive care unit for any indications of bleeding, kidney problems, or other issues. The patient underwent the treatment without complications and showed a steady improvement in discomfort and restoration of kidney function. Subsequent imaging examinations showed satisfactory repair of the renal injury with no signs of ongoing bleeding or urine leakage. The patient was sent home with scheduled follow-up with the urology specialists.

DISCUSSION

Renal lacerations can range from small tears in the outer layer to severe damage in the inside tissue with substantial bleeding. Management is contingent on the severity of the damage, the patient's hemodynamic stability, and the presence of any accompanying injuries. Although most renal lacerations may be treated with attentive monitoring, rare instances may necessitate surgical intervention to limit bleeding and maintain renal function. Prompt diagnosis and quick surgical

intervention resulted in a satisfactory outcome and preservation of kidney function in our case.

CONCLUSION

Renal lacerations are uncommon but severe injuries that necessitate quick diagnosis and proper treatment to avoid complications. An interdisciplinary approach including trauma surgeons, urologists, and critical care specialists is crucial for improving results in patients with renal trauma. Renal laceration should always be considered in the differential diagnosis of blunt abdominal trauma.

This example highlights the significance of promptly identifying, precisely diagnosing by imaging, and promptly intervening in the treatment of kidney lacerations.

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