

Is surgery indicated in renal trauma?

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Abstract

In the management of renal trauma, surgical exploration inevitably leads to nephrectomy in severe grade renal injuries. With current management options ,the majority of haemodynamically stable patients with renal injuries of high grade can be successfully managed non operatively. Improved radiographic techniques and development of a validated renal injury severity that is relatively easy to moniter. This study about option of management in haemodynamically stable patients with renal trauma.

Keywords: haemodynamically, renal trauma.

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trauma bank)² Injuries to other abdominal organs like liver and spleen, interventional radiology has important role. In the management of severe renal trauma interventional radiology –renal arterial embolization is making possible more individuals, in case of high grade renal trauma.⁴ Lack of studies from national trauma bank to analyse the outcome of renal arterial embolization to suggest that it can be used safely in high grade renal injuries (grade-4and5).So with wide spread implementation and apparent success of renal arterial embolization for renal trauma, is open surgery ever needed.

INTRODUCTION

In our understanding of the management of the renal trauma, we have come a long way in the recent decades. But still we lack studies comparing intervention VS conservative management. Is surgery ever indicated in case of renal trauma of any grade in a haemodynamically stable patient¹ Is is only in rare situation in which the bleeding from the kidney, which leads to haemodynamic instability of the patients that requires to make difficult management decisions about the renal trauma. the surgical team must perform immediate intervention in haemodynamically unstable patients with no OR transient response to resustation. In these situations the exploration of retroperitoneum and more often than not, nephrectomy. The technique of early vascular control and renorrhaphy, improved our understanding of low renal can be preserved. In cases of severe renal trauma, however contemporary rates of nephrectomy during retroperitoneal exploration remain high (54-83% in recent national

MATERIAL AND METHODS

The answer for above question is no. however, unfortunately the answer is yes and much like this answer, the indication can be nebulous 1) there will be always and emergent need for medial renal injuries (renal hilar avulsion) in most of these cases the appropriate course of action is nephrectomy 2) where in unstable who is undergoing exploratory laparotomy, who has been not fully staged renal injury, here it must be presumed that exploration of retroperitoneum could be potentially lifesaving. while attempt at renorraphhy after vascular control should be made, again nephrectomy often the result. Additionally, at centers without interventional radiology facilities, open surgery to control life threatening renal bleeding is mandatory(that is to transfer the patient to centre with interventional radiology capabilities is not acceptable for unstable patients)¹ The study was conducted on 20 patients who were admitted to father

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muller medical college hospital between august 2014 to January 2016.on admission detailed history was taken and patient was examined in detail and investigated using CECT and renal injury was graded according

Inclusion Criteria

- All patients with isolated renal injury of varying grades
- Haemodynamically stable patients

Exclusion Criteria

- Patients with multiple organ injury
- Patients with low GCS < 8

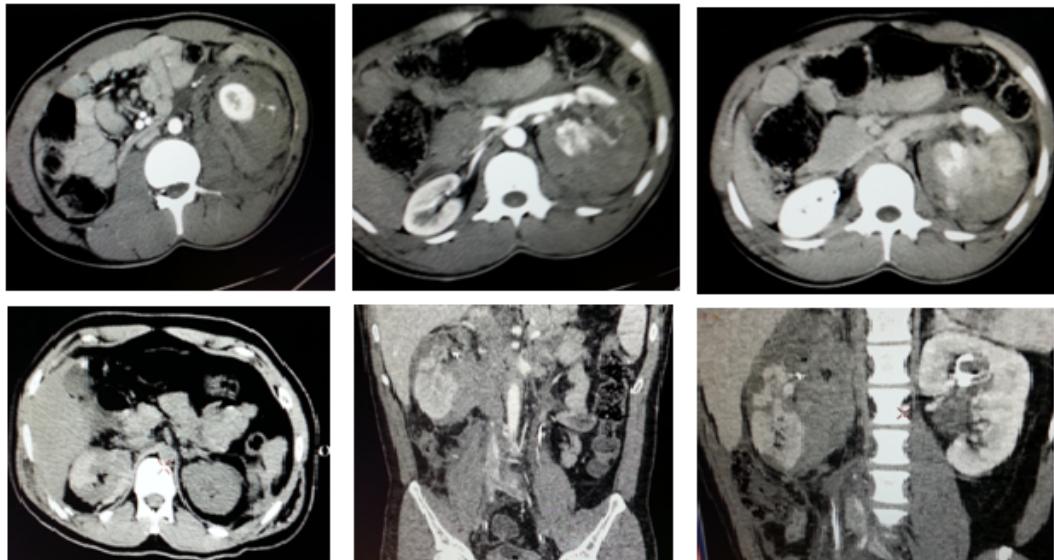
RESULTS

Table 1: In our study patients were between 20-70 years

Age	Number Of Cases	Percentage
21-30	4	20
31-40	8	40
41-50	6	30
51-60	2	10

Table 2: CECT is used as standered investigation of choice to grade the injury

Grade	Number Of Cases	Percentage
Grade 1	0	0
Grade 2	4	20
Grade 3	8	40
Grade 4	8	40
Grade 5	0	0



DISCUSSION

In our study all the patients was initially investigated by CECT and grade of injury was made. Patient was shifted to ICU care and strict bed rest. patients with low haemoglobin was transfused blood and serial monitored with Hb and pcv and BP. In our study study4 patients with grade-4 injury required ablation of the segment artery for persistent bleeding, 2 patients were explore with grade 4 and ended up with nephrectomy. Other patients were managed conservatively and were discharged in haemodynamically stable condition. Most renal trauma occurs as a result of blunt trauma. Renal injuries may be generally divided into 3 groups: renal laceration, renal contusion, and renal vascular injury. All subsets of renal trauma require a high index of clinical awareness and prompt evaluation and management. Renal trauma accounts for approximately 3% of all trauma admissions and as many as 10% of patients who sustain

abdominal trauma. Most blunt renal injuries are low-grade; therefore, they are usually amenable to treatment with observation and bed rest alone. Patients with indications for emergent exploration include those with hemodynamic instability. Unrelenting gross hematuria may require urgent exploration. However, the presence of a renal contusion does not typically require specific intervention. Findings from imaging studies may appear quite alarming, but most renal contusions resolve, particularly if the lesion appears to be of grade I-III.

Renal trauma grading is often done using the American Association for the Surgery of Trauma (AAST) according to depth of damage and involvement of the urinary collecting system and renal vessels.⁶⁻⁸

Classification

Grade I: contusion or non-enlarging subcapsular/perirenal haematoma, and no laceration

Grade II: superficial laceration <1 cm depth and does not involve the collecting system (no evidence of urine extravasation), non-expanding perirenal haematoma

Grade III: laceration >1 cm without extension into the renal pelvis or collecting system (no evidence of urine extravasation)

Grade IV: laceration extends to renal pelvis or urinary extravasation. **vascular:** injury to main renal artery or vein with contained haemorrhage. segmental infarctions

without associated lacerations. Expanding subcapsular haematomas compressing the kidney

Grade V

shattered kidney. Avulsion of renal hilum: devascularisation of a kidney due to hilar injury. ureteropelvic avulsions. Complete laceration or thrombus of the main renal artery or vein.

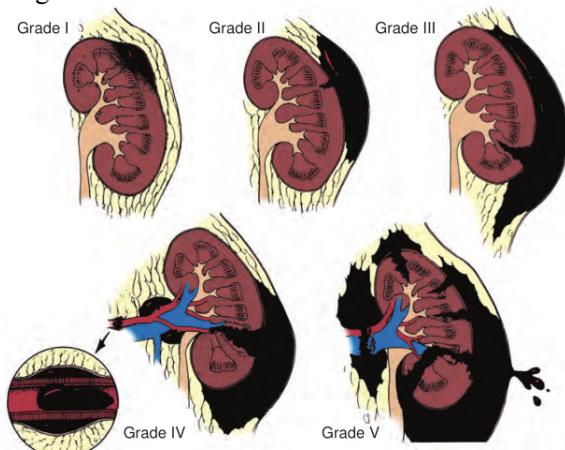


Figure 1:

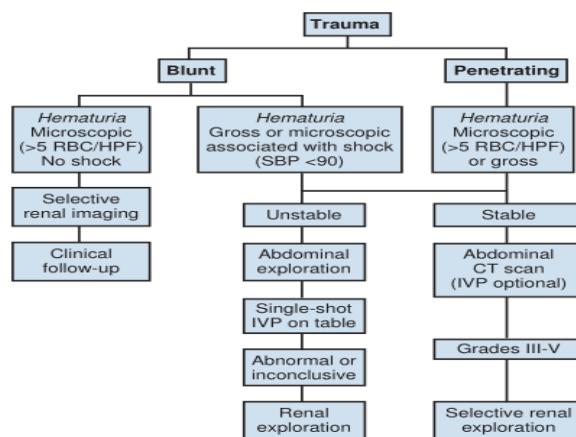
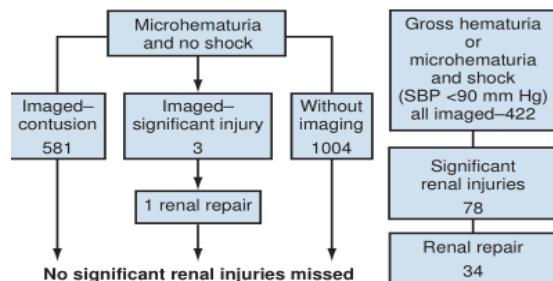


Figure 2: Flow chart for adult renal injuries to serve as a guide for decision making. CT, computed tomography; IVP, intravenous pyelography; RBC/HPF, red blood cells per high-power field; SBP, systolic blood pressure.⁹⁻¹¹

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