Summary

Recently, the rate of renal injuries has considerably increased and the use of proper diagnostic measures has become essential to minimize their rate of complications and mortality.

Injury to the kidney can be caused by blunt trauma, which is more common, or by penetrating wound. With the introduction of recent instrumentation in diagnosis and treatment of different renal diseases, the rate of renal injuries have also raised.

The clinical aspects vary according to the degree of renal injury. It may include pain, hematuria,reduced renal output or even shock.The degree of renal injury does not correspond to the degree of haematuria.

I.V.U. is no longer the primary modality for assessment of suspected renal injury. The primary role of I.V.U. is the assessment of gross function and evaluation of uninjuried kidney in hemdynamically unstable patients.

US. is well accepted as a method for detecting hemoperitoneum in suspected patients following trauma , but it is limited compared with CT. in the evaluation of renal parenchyma.

CT. is more sensitive and specific in the detection and characterization of suspected renal injury. CT. can provide definite delination of a renal laceration ,help determine the presence and location of a renal hematoma and indicate the presence of urinary extravasation or of devascularized segments of renal parenchyma.

Renal injury can be divided into:

- **Category I lesions:** are contusions and corticamedullary lacerations that don't communicate with the collecting system, these account for 75-85% of all renal injuries.
- **Category II lesions:** are parenchymal lacerations which communicate with the renal collecting system with resultant extravasations. These account for 10-15% of cases.
- **Category III lesions:** are major renal lesions that cause damage to the vascular pedicle including shattered kidneys. These account for 5% of injuries.
- **Category IV lesions:** comprise pelviureteric junction avulsion and lacerations of the renal pelvis. These are the least common renal injuries.

Renal trauma may be complicated by urinoma, secondary haemorrhage, atrophy of the kidney, hydronephrosis, arteriovenous fistula and hypertension.

- CT scan has many advantages over other methods and is now accepted as the gold standard investigation with an accuracy as high as 98%. It may also used to follow the course of patient with known renal damage and to evaluate the involvement of other organs.