RENAL CALCULI

Gross:

- Specimen received shows enlarged kidney with externally smooth surface.
- Cut Surface reveals cystic spaces and stones.

Microscopy:

- Reveal cysts within the cortex and medulla lined by simple flattened to cuboidal epithelial cells.
- At places ischemic atrophy and fibrosis of the parenchyma along with some sparing of the normal areas seen.
- Intervening stroma show chronic inflammation.

HYDRONEPHROSIS

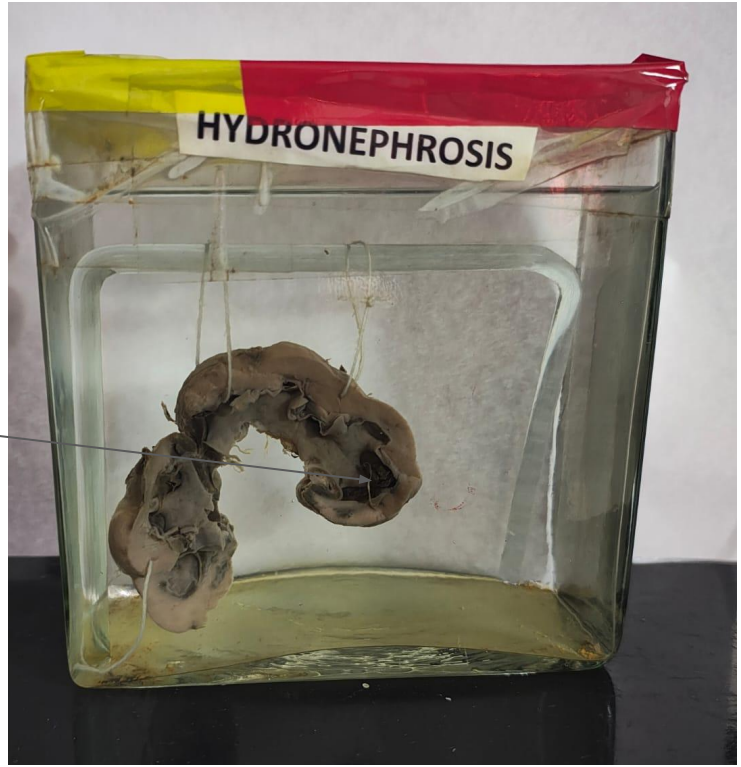
Gross:

- Specimen received shows a mildly enlarged kidney.

- Cut surface reveals distorted pelvicalyceal system.

Microscopy:

- Section studied reveals tubular dilatation, varying degrees of atrophy and fibrosis of the tubular epithelium with relative sparing of the glomeruli.



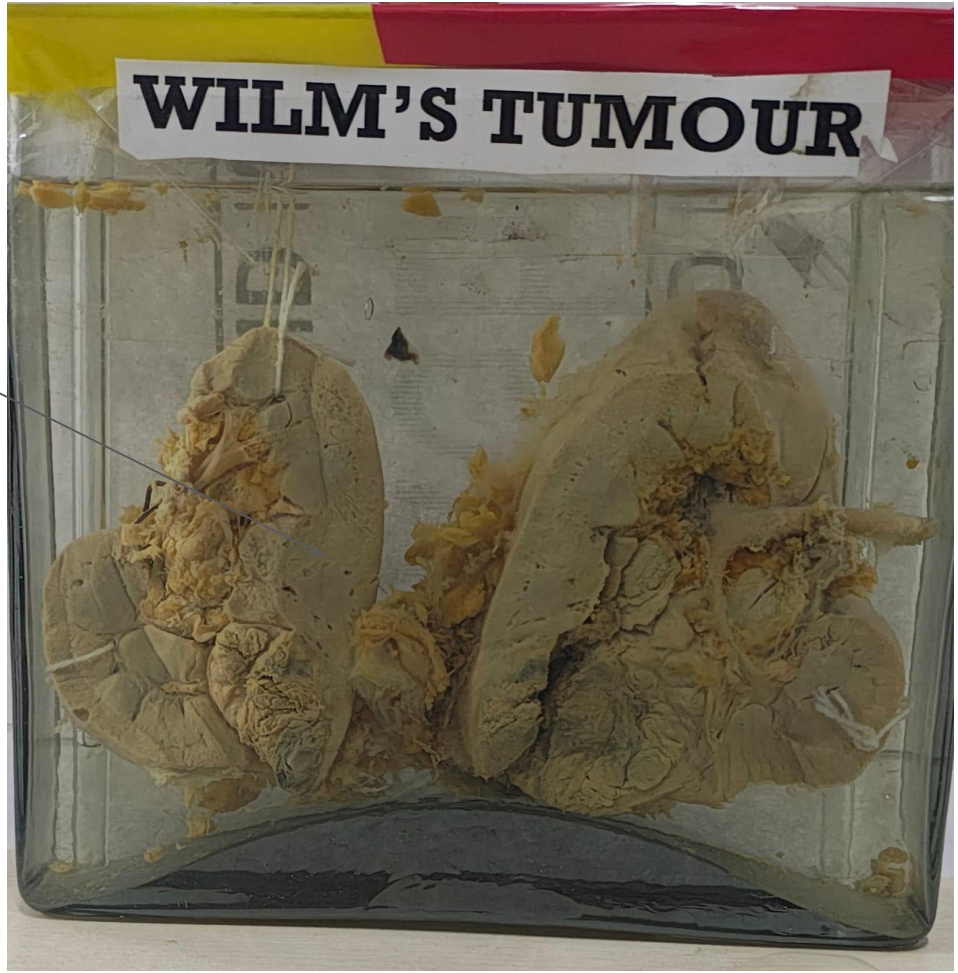
WILM'S TUMOR

Gross:

- Specimen received shows a large, solitary, well-circumscribed mass within the kidney.
- Cut surface reveals soft, homogenous and tan-gray areas of cystic degeneration with occasional foci of hemorrhage and necrosis.

Microscopy:

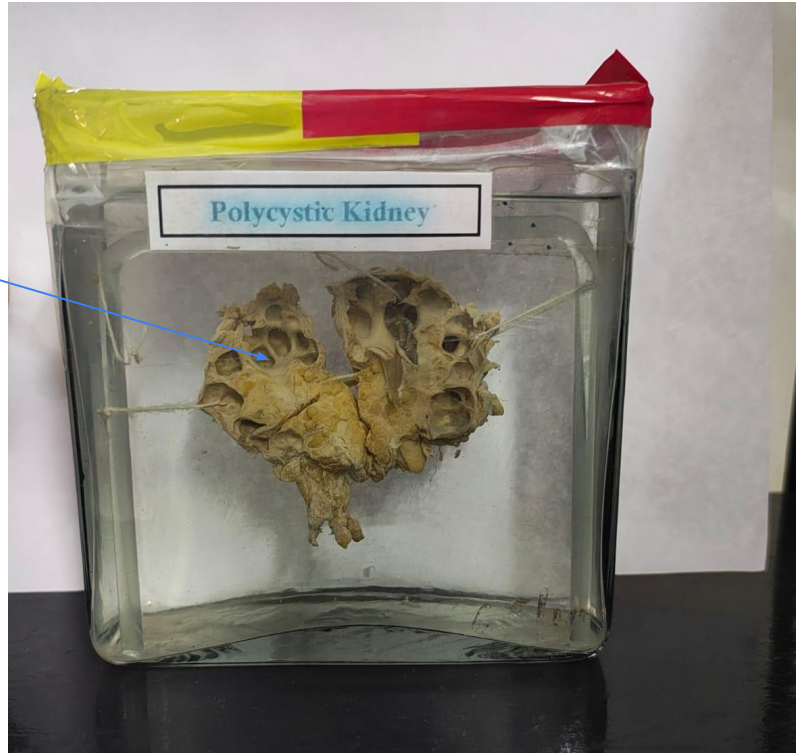
- Section studied shows mixture of primitive epithelium and mesenchymal elements included abortive tubules round to spindled tumour cells and smooth muscle cells ,fat cells and fibrous tissues are identifiable.



POLYCYSTIC KIDNEY

Gross:

- Specimen received shows an enlarged kidney with multiple cyst on the surface.
- Cut surface reveals variable size cysts filled with fluid.



Microscopy:

- Reveal cysts within the cortex and medulla lined by simple flattend to cuboidel epithelial cells containing proteneous material.
- At places ischemic atrophy and fibrosis of the parenchyma along with some sparing of the normal areas seen.

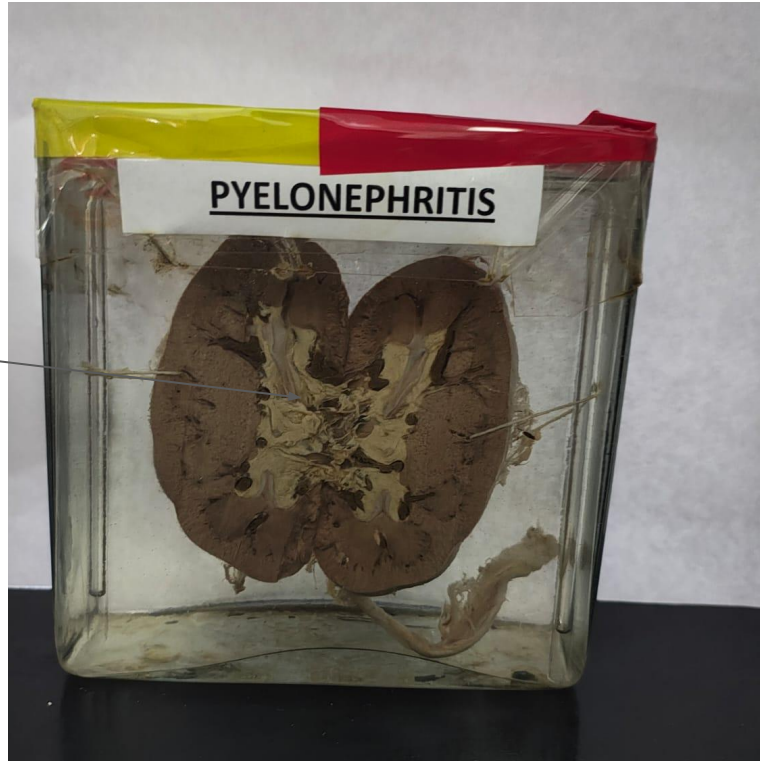
PYELONEPHRITIS

Gross:

- Specimen received of kidney with intact capsule.
- On cutting open corticomedullary junction is lost and pelvicalyceal unit is dilated and containing pultaceous material. Ureter is identified,

Microscopy:

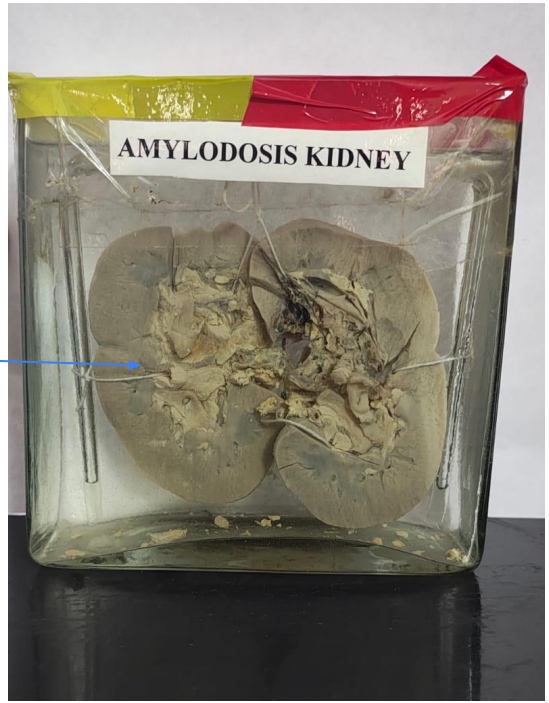
- Reveals atrophied renal tubules along with thyroidisation of the tubules.
- Glomeruli are sclerosed.
- Interstitium shows fibrosis,chronic inflammation and blood vessels.



AMYLOID KIDNEY

Gross:

- Specimen received shows a enlarged kidney . externally smooth surface.
- Cut surface shows solid , pale ,waxy and translucent.



Microscopy:

- Reveals atrophied renal tubules filled with eosinophilic material along with peritubular deposits.
- Glomerular basement membrane also show amyloid deposition.

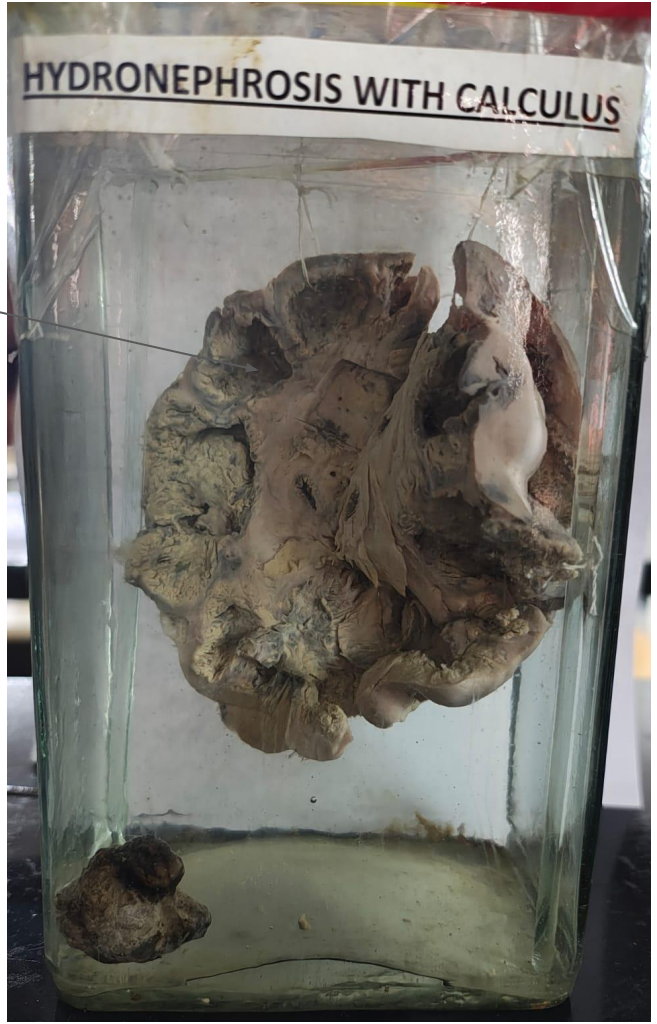
HYDRONEPHROSIS WITH CALCULUS

Gross:

- Specimen received shows marked dilated renal pelvis and calyces resembling ballooning.
- Cut surface shows thinning of cortex and medulla. Stone of variable sizes found.

Microscopy:

- Section studied reveals tubular dilatation, varying degrees of atrophy and fibrosis of the tubular epithelium with relative sparing of the glomeruli.



MYOLIPOMA OF KIDNEY

Gross:

- Specimen received shows a massively enlarged kidney.
- On cut section yellow tan soft nodule seen with areas of haemorrhage.

Microscopy:

- Shows mature adipose tissue and spindle shape smooth muscle cells.
- Calcification, osseous metaplasia and fibrosis seen at places.

PYONEPHROSIS

Gross:

- Specimen received shows enlarged, distorted kidney with dilated ureters.
- Cut surface shows pelvicalyceal system is dilated and filled with thick pus.
- Cortex and medulla are thinned out.

Microscopy:

- Sections show cortical edema, neutrophilic infiltration in interstitium and tubular lumina.
- At places cortical as well as tubular necrosis also seen.