

# **URINARY TRACT INFECTION**

## **-PYELONEPHRITIS**

## **-CYSTITIS**

Presented By  
Ms.Divya K M  
Associate Professor  
MES College of Nursing

# Urinary tract infection

- Infection of urinary tract is a common condition
- The common cause is bacteria,
- virus, fungal and parasitic infections are rarely seen
- The commonest parasite infecting the urinary bladder is schistosoma haematobium
- The bacterial infection of kidney is called pyelonephritis and that of urinary bladder is called cystitis.

# Pyelonephritis

- **Acute pyelonephritis** is an acute suppurative infection of the kidneys
- Grossly kidney shows abscess
- Pyelonephritis is a condition resulting from permeation of pus into the renal pelvis and filling the entire renal pelvis

- **Chronic pyelonephritis** is a consequence of pyelonephritis
- This occur after repeated attacks of acute pyelonephritis
- This results in the destruction of the renal parenchyma which is then replaced by broad fibrous scar.

## Grossly

- The kidneys in chronic pyelonephritis are small and irregularly scarred
- The infection is mostly unilateral with asymmetric involvement.
- Dilatation of renal pelvis and blunted calyces

## Microscopy

Predominant changes seen in interstitium and tubules

- **Interstitium**

- Chronic interstitial inflammatory reaction
- Interstitial fibrosis

- **Tubules**

- Tubules shows varying degree of atrophy and dilatation

# Cystitis

- Cystitis is the inflammation of urinary bladder
- This occur in an acute form and chronic form
- Acute cystitis is characterized by grossly **visible congestion and mucosal haemorrhage in the urinary bladder**
- There may be **pus** formation
- In severe cases **ulceration may be seen.**
- This is visualized with cystoscopy
- **Microscopy shows features of inflammation**

- **Chronic cystitis** shows mucosa with variable morphology
- **Microscopy-** There may be **ulceration, thickening** of the mucosa or foci of haemorrhage
- **The wall of the bladder is thickened** if there is chronic obstruction of the tract by calculi or benign prostate hyperplasia



- A form of chronic cystitis characterised by formation of lymphoid follicles in the bladder mucosa is termed **cystitis follicularis**

# RENAL CELL CARCINOMA

- Renal cell carcinoma is the most common kidney tumor
- This affects predominantly men in older age group

# Etiology

High risk in

- smokers
- hypertensive
- obese
- family history
- who are exposed to cadmium

# Clinical features

- Persistent back pain
- Haematuria
- Abdominal swelling
- A lump in abdomen
- Fatigue
- Flank pain
- Recurring fever
- Weight loss
- Anemia

# Pathology

- Grossly renal cell carcinoma form nodules or masses in the kidney
- Tumor appears **yellow with areas of hemorrhage and necrosis**
- Larger tumor extends through the renal capsule into peritoneal fat
- The tumor has tendency to invade to renal vein.

- **Microscopy** shows tumor cells cuboidal in shape
- Majority of tumors are clear cell carcinoma having clear cytoplasm filled with glycogen and lipids. So these appear yellow
- Other histologic variant includes papillary carcinomas, chromophobe carcinoma, collecting duct carcinoma.



**THANK YOU**