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## Hydronephrosis:-

It describe urine filled dilation of the renal pelvis or calyces as a result of obstruction.

### Signs & Symptoms-

Symptoms & signs depend upon wheather the obstruction is acute or chronic, partial or complete Unilateral or bilateral,

If there is cause of kidney stone present with sudden onset intense pain at flank region may be Unilateral or bilateral associated ē Nausea, Vomiting fever Sometimes rigor ē chill.

### Causes:-

It may due to several different Causes:

① Structural Abnormality during fetal development

② Kidney Stones  
Retroperitoneal tumor

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4. Pregnancy cause compression of ureters
- ⑤ Hormone abnormalities
- ⑥ Blood clots
- ⑦ Infection
- ⑧ Trauma

### Pathophysiology:-

Obstruction that occurs anywhere along the upper urinary tract will lead to increase urinary pressure within the structure of the kidney due to inability to pass urine from the kidney to the bladder,

Common causes of upper tract obstruction include obstructing stones at ureteropelvic junction (UPJ) obstruction caused by intrinsic narrowing of the ureters or overlying vessels

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## Diagnosis:-

- ① Urine analysis
- ② Imaging studies
  - (i) intravenous urogram
  - (ii) renal ultrasonography
  - (iii) CT
  - (iv) MRI
  - (v) Antegrade or retrograde Pyelography
  - (vi) Doppler ultrasound

## Treatment:-

- ① correct the cause if there is obstruction, remove obstruction, & drain of urine that behind the obstruction, if there is
- ② obstruction via stones,  
< 6mm give  $\alpha$ -blocker if more than 6 > mm go for  
"Extracorporeal shock wave lithotripsy"  
"Nephrostomy"
- ③ Acute obstruction of upper urinary tract is usually treated by insertion of nephrostomy tube.

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(3) Chronic upper urinary tract ~~infection~~ obstruction is treated by the insertion of "ureteric stent" or "pyloplasty"

(4) lower urinary tract obstruction is usually treated by insertion of urinary catheter or supra pubic catheter.

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## Tuberculosis -

It is infectious disease usually caused by "Mycobacterium tuberculosis"

It usually affects lungs but may affect other organs known as extrapulmonary TB.

- ① Abdominal TB
- ② Tubercular meningitis
- ③ Vertebral Column TB / Potts disease
- ④ Bones TB

Most pt do not have symptoms having known as latent T.B.

About 10% latent T.B infections progress to active disease

## Risk factors -

- ① Recent immigrants
- ② Prisoners
- ③ HIV positive
- ④ Healthcare workers
- ⑤ Close contact of someone with TB
- ⑥ Steroid use.

- 7 Hematologic Malignancy  
 8 Alcoholic  
 9 Diabetics

### Sign & Symptoms -

- ⊗ Productive Cough
- ⊗ Chest pain,
- ⊗ occasionally blood in sputum
- ⊗ Night Sweat
- ⊗ Weight loss

- extrapulmonary sign & symptom

### TB meningitis

- Nausea
- Vomiting
- Headach
- Neck Stiffness
- Some time seizures,
- Loss of consciousness.

### Pott disease

- joint & bones pain

### Abdominal TB

- Abdominal pain
- Limping
- Diarrhea

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A more serious case of TB which spread via out body known as disseminated TB or "miliary TB"

### Causes:-

It is caused by "Mycobacterium tuberculosis" a small, aerobic, non motile bacillus"

### Transmission:-

It may spread from one person to another by cough, sneeze, speak, sing or spit via droplet.

### Diagnosis:-

#### ⊕ Best initial test:-

• chest X-ray

⊕ Sputum stain & culture for acid-fast bacilli.

⊕ Biopsy:- Biopsy is most accurate test

## Prevention:

- BCG vaccination
- Use surgical mask
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## Treatment:

Initial therapy Begin with 4 drugs

- ① Rifampin
- ② Isoniazid
- ③ Pyrazinamide
- ④ Ethambutol

After using all 4- drugs for two month then stop ethambutol & pyrazinamide & continue ① Rifampin

- ② Isoniazid

for next four months  
The standard therapy for 6 months total

if extrapulmonary TB treatment is extended to > 6 months.



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## Kidney Stone:-

It is also known as "nephrolithiasis"

### Pathophysiology / Formation of Stones

Small crystal formed in kidney, the most common crystal is calcium oxalate.

- ① Calcium & oxalate come together to make the crystal nucleus
- ② Continued deposition at the renal papillae lead to growth of the kidney stones
- ③ Kidney stone grows & collect debris, on this case kidney stone blocks all routes to the renal papillae.

### Types

- ① calcium oxalate stone
- ② uric acid "
- ③ staghorn stone
- ④ magnesium stone

## Signs & Symptoms<sup>2</sup>

Severe pain may be unilateral or bilateral Flank pain sometime radiating to scrotum & labia majora  
 Blood in urine, associated with nausea & vomiting.

## Causes :

Genetic & environmental factor.

## Diagnosis

- ① mostly clinically diagnosis
- ② Urine analysis.
- ③ Medical imaging
  - ① US abdomen & pelvis
  - ② CT, MRI
  - ③ X-ray Abdomen & pelvis

Ultrasound abdomen & pelvis is most suitable for diagnosis.

## ① Goiter:-

It is swelling of the neck resulting from enlarged thyroid gland.

## ② Types

- ① unimodular goiter
- ② multinodular goiter
- ③ Plunging
- ④ mediastinal
- ⑤ intra thoracic
- ⑥ Retrosternal

## ③ Causes:-

- ① iodine deficiency
- ② congenital hypothyroidism
- ③ Goitrogen ingestion
- ④ Adverse drug's reaction
- ⑤ Hashimoto thyroiditis
- ⑥ pituitary disease
- ⑦ Grave disease
- ⑧ Thyroiditis
- ⑨ Grave disease
- ⑩ thyroid cancer
- ⑪ thyroid hormone insensitivity.

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## Diagnosis

- ① clinically diagnosed
- ② TSH
- ③  $T_3$   $T_4$
- ④ Biopsy

## Treatment

- ① Goiter is treated according to the cause
- ⊕ Give iodine supplement of deficiency.
- ⊕ Radioactive iodine
- ⊕ 'Total or partial thyroidectomy'

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Atelectasis:-

It is the condition in which closure or collapse of lungs resulting in reduced gas exchange.

Sign & Symptom

- \* Cough, chest pain,
- breathing difficulty,
- low oxygen saturation.
- cyanosis.

Causes

- ⊕ Surgical
- ⊕ Smoker
- ⊕ Squamous Cell carcinoma
- ⊕ Tumor, lymph node  
tuber

Diagnosis

- X-ray chest
- CT chest
- Bronchoscopy

Treatment

- ① Physiotherapy
- ② incentive spirometer
- ③ continuous positive airway pressure.

③ Bronchitis

It is a disease in which permanent enlargement of airway of the lungs.

Signs & Symptom

- ⊛ Shortness of breath
- ⊛ Coughing of blood
- ⊛ Chest pain
- ⊛ wheezing
- ⊛ Nail Clubbing

Diagnosis

- Chest X-ray
- Biopsy
- CT chest

Treatment Antibiotic  
- Bronchodilator

Pneumonias-

It is an inflammatory condition of the lungs affecting the small air sac known as alveoli.

Sign & Symptoms:-

- Cough may be dry or sputum production cough
- Fever
- Breathing difficulty
- Rapid Breathing

Cause:-

- ① Bacteria
- ② Virus
- ③ Fungal
- ④ Aspiration

Risk factors

- ① cystic fibrosis
- ② COPD
- ③ Asthma

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④ Diabetes

⑤ Heart failure

⑥ History of smoking

### Prevention:

- Hand washing
- Vaccine
- Avoid smoking

### Treatment

- $O_2$  therapy
- Steroid
- Bronchodilator
- Antibiotics
- Antiviral
- Anti fungal