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Sub clinical medican

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Exam final term

Q1

Ans Hydronephrosis :- Hydronephrosis  
is the swelling of  
Kidney due to build-up  
of urine.

It happen when urine cannot  
drain out from the kidney  
to the bladder  
from a blockage  
or obstruction.

Hydronephrosis can occur  
in one or both  
kidneys

usually due to pain obstruction  
to the outflow  
of urine.

Hydronephrosis Some time during  
a prenatal ultrasound  
before the baby  
is born.

## Causes of Hydronephrosis:-

Some common causes of Hydronephrosis are following. but are not limited to the following risk factor - illnesses

- \* Kidney stone
- \* congenital blockage
- \* Blood clot
- \* Scarring of tissue
- \* Enlarged prostate
- \* Urinary tract infection

The one of most common causes of hydronephrosis is acute unilateral obstruction uropathy

## \* Pathophysiology of Hydronephrosis:-

Dilatation of the renal pelvis and calyces

## \* Type of Hydronephrosis

- ① pelvic type
- ② Renal type
- ③ pelvirenal type

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Hydronephrosis is caused by obstruction of urine before the renal pelvis. The obstruction causes dilation of the nephron tubules and flattening of the lining of the tubules which is turn causes swelling of the renal calyces.

### \* Diagnosis of Hydronephrosis

- symptoms and signs
- ultrasound
- IVP
- Cystoscopy
- RGP
- Delayed empty urine culture
- Isotope renography
- cystourethrogram

### \* Treatment of Hydronephrosis

Depends on the cause, site, duration and degree of kidney damage.

①

- ② prompt U-T.I damage Antibiotic therapy  
③ corrected to the cause  
④ Nephrectomy  
⑤ Relief of lower tract obstruction.

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Ans \* Goiter :-

Goiter is a gland that when condition increase the size of thyroid gland is called goiter.

\* Type of Goiter :-

Goiter have many causes. As a result there are different type are the following

\* colloid goiter :- A colloid goiter develop from the lack of iodine, and mineral essential of thyroid Hormone.

⑤

Q\* Nontoxic :- The cause of  
Nontoxic goiter usually is  
it usually unknown though  
cause may be be  
like Lithium - medications  
~~Eithium~~

✓ Toxic Nodular or multinodular  
goiter

This type of goiter  
from one or more  
small nodules as  
it enlarges the  
nodules produce  
their own thyroid  
hormone causing  
hyperthyroidism

It is generally  
-form extension of a  
simple goiter.

\* Causes of goiter

Iodine deficiency is the  
main cause of  
goiter

Iodine is essential to  
helping your thyroid produce  
thyroid hormones.

(b)

Other cause are the following.

(2) \* Graves' Disease :-

Graves Disease occurs when your thyroid produce more than the normal. The production in crease the thyroid. which is called Hyper thyroidism of Hormone size.

(3) \* Hashimoto's Diseases

thyroid can't produce the thyroid hormone when which occurs the Hashimoto's Diseases. and Low thyroid hormone make more stimulating hormone which cause thyroid swelling.

⑦  
\* Causes of goiter

① Inflammation  
Inflammation of the thyroid gland can cause the goiter.

\* Nodules  
Solid or fluid containing cysts may appear on the thyroid gland and cause a swelling. Those nodules are after non-cancerous.

Thyroid cancer  
Cancer may be affect on thyroid gland which cause swelling on one side of gland. Thyroid cancer is common as benign formation of nodules.



②

## \* Diagnosis of goiter

① Blood tests  
test in and of which to  
can detect Level production antibodies.  
hormones increased response  
Blood changes production or injury

### \* Thyroid scan :-

show of the goiter  
The scan size

### \* Ultrasound :-

of neck, the size  
of goiter, produces images

### \* Biopsy :-

Small tissue samples Laboratory examination.  
is produce that taking  
in values the thyroid  
Samples sent to  
for

④

## Treatment of goiter

~~doct~~ doctor will decide on treatment causes of the size based on of goiter and condition

### \* Medications :-

or hyperthyroidism, if hypothyroidism medications to treat these condition may be enough to shrink the goiter

Medication reduce inflammation may be used have thyroiditis -

### \* Surgeries

surgical removes the thyroid known as thyroidectomy.

### \* Radioactive iodine

people with toxic multinodular goiters through your blood. In

where ~~may~~ ~~be~~ need to ~~increase~~  
or ~~decrease~~ ~~iodine~~  
intake.

Home Care

Depending on  
type of goiter  
may be need to  
increase or decrease  
your iodine intake at  
home

If a goiter small and  
do not cause  
any problem -

①

Ans

## Bronchiectasis :-

Abnormal and permanent of  
bronchi clinical consequences  
chronic and recurrent  
infection and pooling  
of secretions is  
dilated airways.

Bronchiectasis is the permanent  
dilation of bronchi and  
bronchioles due to destruction  
of muscle and elastic  
supporting tissue resulting  
from or associated with  
with chronic necrotizing  
infection. Bronchiectasis  
is secondary disease due  
to persistent infection  
or obstruction.

## Etiology

Bronchiectasis  
is the result of chronic  
infection with resulting  
parenchymal destruction,  
fibrosis, and abnormal  
permanent dilation of  
damaged bronchi.

- \* long lasting bronchial  
obstruction
- \* congenital or hereditary

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## Diagnosis of Bronchiectasis

- ① clinical
- ② Radiology : chest x ray  
may be non  
specific mild  
disease.

CT SCAN - bronchial thickening  
dilated bronchioles

- \* sputum culture.
- \* sweat test
- \* Lung function
- \* Bronchoscopy
- \* Immunoglobulin
- \* cilia function and structure
- \* Kartagener syndrome.

## Symptoms

- Trouble breathing
- pleurisy
- cough
- fever

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## (1) Atelectasis :-

→ ① most common type  
→ Results of airway blockage

→ Resorption atelectasis occurs when an obstruction prevents air from reaching distal airways -

→ mucous plugging foreign body neoplasm or inflammatory debris

\* → It is the consequences of complete obstruction of the airways.

## \* Non obstructive atelectasis

- ① passive
- ② compressive
- ③ catrization
- ④ Adhesive

In these form of atelectasis secretion are able to drain up the bronchial tree.

(5)

## \* Cicatization Atelectasis

→ secondary to fibrosis of lung parenchyma with subsequent late expansion.

## \* pneumonia :-

Pneumonia is an inflammation of the lung parenchyma

→ most common infectious cause of death

→ It is usually characterized by consolidation

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## classification

### ① Type 1

- ① Lobar pneumonia
- ② Broncho pneumonia

### Type 2

- ① community-acquired pneumonia (CAP)
- ② Hospital acquired pneumonia (HAP)

## Morphological stage

They are four morphological stages of pneumonia

- ① congestion
- ② Red hepatization
- ③ Grey hepatization
- ④ resolution

## Diagnosis

- ① History
- ② chest xray
- ③ CT
- ④ signs and symptoms



Ans

Tuberculosis :-

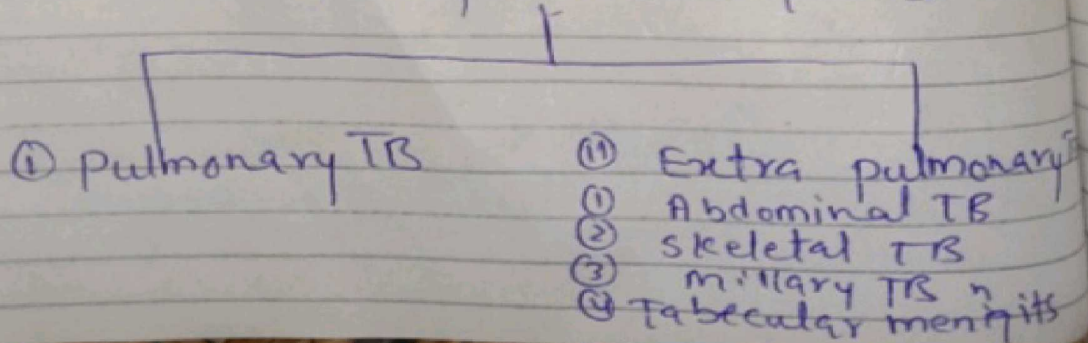
Tuberculosis is an infection disease caused by a bacterium, called Mycobacterium tuberculosis

It often affect the lung

TB is a contagious/ infection disease which mean that it spread from person to person usually through Air,

Tuberculosis is a public health world wide, including in the immune compromised patients.

Classification of TB



① other less common TB.

### Pulmonary TB type

It means when the bacterium Mycobacterium tuberculosis infection in valves the

Lungs - pulmonary TB occurs by breathing in air droplets from a cough or sneeze of infected person.

### \* Extra pulmonary TB

#### \* TB lymphadenitis

most common type of Extra pulmonary TB which are the lymph node in neck. But any lymph node can be affected.

#### \* Genitourinary TB :-

Genitourinary TB is second most common type of Extra pulmonary TB

③

It can affect any part  
or of the genital's  
tract.  
but the urinary kidney  
are common site -  
It usually spreads  
to the area from  
the lung  
through blood or  
~~top~~ lymph nodes

③ Abdominal TB

It is  
type of TB it affect  
gut the peritoneum  
abdominal lymph  
node.

④ Tubercular meningitis TB

when  
the membranes surrounding  
the brain and  
spinal cord  
infected the bacteria.

\* Skeletal TB

is TB or bone TB  
your bone that spreads  
and lymph nodes.

TB can be categorized into

- Active TB
- Miliary TB
- Latent TB

① Active TB

Active TB is an illness in which the TB bacteria are rapidly multiplying and invading different organs of the body.

Active TB is contagious and causes symptoms-

The most common Active TB is Lung disease-

② Latent TB :-

Latent TB occurs when a person has the bacteria with their body. But bacteria can be present in a small amount and do not develop disease-

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Latent can't cause  
and symptom  
and can't contagious

### \* Milliary TB

Milliary TB are rare from  
active disease that  
occur when TB  
bacteria find their  
way into bloodstream.

The milliary TB are  
rapidly fatal.

### pathophysiology of TB

→ Initial infection or primary Inf



Entry of micro organism through  
droplet nuclei



Bacteria is transmitted to alveoli through  
airways.



Deposition and multiplication of bacteria



Bacilli are also transported other part  
of body via bloodstream

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by neutrophilic and  
macrophages -

starts OR replication inside macrophages

primary infection occur

cell mediated immunity get  
activated.

surround the cell to  
form granuloma (3 weeks)

leads to necrosis of tissues

involve nearby lymph node

calcification of case  
complex.

(17)

Ans

Renal stone are one of the most common disorders of the urinary tract. Renal stone are about 12% to 15% present in men and about 5% are present in women of 70 age old person.

General terminology

Anuria complete obstruction of urinary secretion by the kidney.

polyuria:- passage of large volume of urine in a given period.

Oliguria of Diminished amount of urine secretion

Pyuria :- presence of pus in urine.



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Dysuria

painful and  
difficult urination.

Hematuria

Blood in urine

Renal failure

the condition  
in which the kidney  
is not working  
and function  
properly

Azotemia

Retention of  
nitrogenous waste  
products either  
through their kidney  
failure such  
as CHF.  
shock, hemorrhage is  
called Azotemia

Azotemia is biochemically  
abnormality that refers  
increase in blood urea  
and serum creatinine  
due to decrease  
GFR rate.  
Renal stone -



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## Formation of Renal stone

The urinary concentration of substances is high. forming crystal is high.

The urinary concentration of substance that inhibit stone formation.

The life time incidence of kidney stone is 15 percent for men and 7 percent for women.

## Type of Renal stones

### calcium oxalate stones

The most common type of Renal stone is calcium oxalate stones. These result when the urine contain low level of citrate and high level of calcium and

(20)

either acid oxalate or uric

② calcium phosphate stones

calcium phosphate kidney stones are cause by way of abnormalities in system of urine function.

③ struvite stone

More Common in women, struvite stone from result of certain type of urine tract infection.

~~type~~ ~~can~~ ~~cause~~

④ Uric Acid stones

more Common in men uric acid stone tend to occur in people who don't drink enough water or have high protein in animal

## ⑤ Cystine stones

stone  
a hereditary  
disorder  
Cystine stones-

Cystine  
caused by  
genetic  
called

## Diagnosing Kidney stone

- ① Blood test
- ② Urine test
- ③ ultrasound
- ④ Intravenous pyelogram
- ⑤ kidney ureter Bladder xray
- ⑥ Retrograde pyelogram
- ⑦ CT scan
- ⑧ MRI Scan