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PAPER CLINICAL MEDICINE

SUBMITTED TO MAM MAHEEN

QUESTION No 1

what is hdronephrosis? write in detail it' causes pathophysiology, diagnosis and treatment

AINSWER 1

HYDRONEPHROSIS

→ hydronephrosis is the swelling of a kidney due to a build-up of urine

→ It happens when urine cannot drain out from the kidney to the bladder from a blockages or obstruction.

→ hydronephrosis can occur in one or both kidneys

PATHOPHYSIOLOGY

- Dilation of the renal pelvis and calyces
- Types of hydronephrosis
  - Pelvic type
  - Renal type
  - Pelvirenal type : most common type both the pelvis and calyces are equally dilated.

CAUSES

- one of the most common cause of hydronephrosis is Acute unilateral obstructive uropathy.
- The most common cause for this blockage is a kidney stone. but scarring and blood clots can also cause Acute unilateral obstructive uropathy. other include:-

↓

- A kink in the ureteropelvic junction where ureter meets the pelvis of the kidney
- an enlarged prostate gland in men which can be due to benign prostatic hyperplasia or prostatitis
- Pregnancy which can cause compression due to a growing fetus
- Tumors in or near the ureter
- narrowing of ureter due to injury etc.
- urinary Track infection or other cause inflammation of the urinary tract.

DIAGNOSIS OF HYDRONEPHROSIS

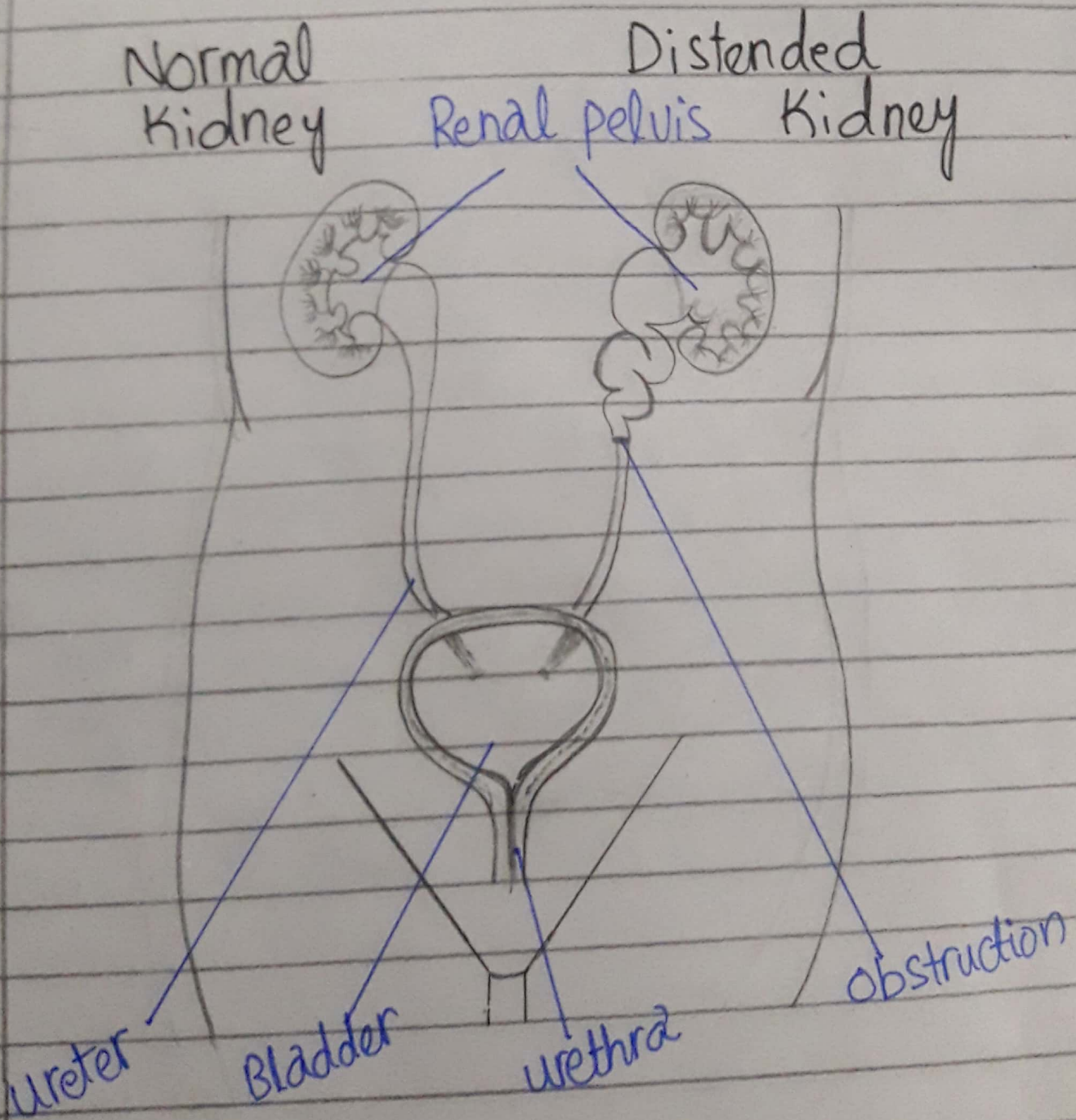
(1) Symptoms and signs
(2) ultrasound
(3) IVU
(4) Cystourethralgram
(5) Cystoscopy

(6) RGP
(7) Delayed empty
(8) Isotope renography
(9) Urine culture

TREATMENT OF HYDRONEPHROSIS

- depends on the cause site, duration and degree of kidney damage
- U.T.I Antibiotic therapy
- Prompt drainage
- Corrected to the cause
- Relief of lower tract obstruction. ↓
- Cather drainage, urinary diversion, indwelling pigtail ureteral catheter
- Nephrectomy.

Question # 1 :-



QUESTION 2

Explain in detail the types / categories of pathophysiology of tuberculosis

ANSWER

TUBERCULOSIS

- Tuberculosis is an infectious disease caused by bacterium called mycobacterium Tuberculosis
- effect any one at any age.

TYPES OF TUBERCULOSIS

Pulmonaly TB → effect lungs

→ EXTRA PULMONARY TB

* Abdominal TB
* Trabecular meningitis
skeletal
millaly
etc
TBs.

PULMONARY TB AND Its TYPES

→ Pulmonary TB caused by bacterium mycobacterium
→ Tuberculosis is contagious.
→ Spread easy from infected person to another person
→ TB can transmitted through air droplets from a cough or sneeze of an infected person.

EXTRA PULMONARY TB (TUBERCULOSIS)

→ TB lymphadenitis: Tuberculosis lymphadenitis is the most common type of extra pulmonary Tuberculosis involve the lymph nodes.

→ Extra pulmonary Tuberculosis occur within a location in the body other than lungs

→ occur in 15-20% of active cases, causing other kinds of Tuberculosis

→ most commonly occur in immunosuppressed persons or young children

GENITOURINARY TUBERCULOSIS

→ Second type of extra pulmonary Tuberculosis

→ effect any part of genitals or urinary tract.

→ most common site are kidneys

→ includes entire urinary tract and reproductive system.

ABDOMINAL TB
TUBERCULOSIS

→ Type of Tuberculosis effect the gut, the peritoneum, abdominal lymph nodes etc

→ more rarely the solid organs in abdomen (liver pancreas and spleen).

TUBERCULOSIS MENINGITIS

→ when membrane sullounding the brain and spinal cord are infected by bacteria

→ Tuberculosis meningitis is associated with a high frequency of neurologic sequelae.

SKELETAL TUBERCULOSIS

→ refers the tuberculosis involve The of the bones and joints
→ It is an ancient disease

CATEGORIES

Active Tuberculosis
LAtent Tuberculosis
mrllraly Tuberculosis

ACTIVE TUBERCULOSIS

→ Active Tuberculosis is a multiorgan disease
→ caused by infection (primaly Infection or as a reactivation of latent tuberculosis.
→ Tuberculosis bacteria become active and multiply in the body.
→ The most common form of Active TB (Tuberculosis) is lung disease,

but invade other organs so called extra pulmonary Tuberculosis

LATENT TUBERCULOSIS

⇒ Latent Tuberculosis doesn't show symptoms

⇒ A person suffering from latent Tuberculosis will have a normal chest x-ray and negative Sputum test

⇒ Therefore Tuberculosis Skin test performed

⇒ Someone has latent tuberculosis if they are infected with the Tuberculosis bacteria but don't signs of Active Tuberculosis disease and don't feel ill

→ required treatment as soon as possible to prevent developing Tuberculosis disease

MILIARY TUBERculosis

→ is a form of tuberculosis that is characterized by a wide dissemination in to the human body and by the tiny size of lesions (1-5 mm)

→ millary Tuberculosis is a potentially life threatening.

→ occur when large number of bacteria travel through the blood stream and spread throughout the body.

→ The appearance like millet seeds therefore called millary Tuberculosis

→ can be rapidly fatal.

PATHOPHYSIOLOGY :-

Pulmonary Tuberculosis

↓

Airborn

↓

lung → Through Blood

↓

Non specific pneumonitis

↓

Tubercle

↓ → caseous Neclosis

many remain dormant for many years

OR

PATHophysiology

Primary infection

↓

entry of microorganism through droplet Nuclei

↓

Bacteria transfer to Alveoli

↓

multiplication of bacteria

↓

Bacilli transported other part of body through blood stream and phagocytosis by neutrophilis and maclophage

Mycobacterium

↓

pulmonary Alveoli

↓

Alveolar Maclophages

↓

PATHOPhysiology

and

Pathogen & engolph the bacteria

↓

mycobacterium inhibit macrophages to forms phagolysosome remain protected inside the macrophages

Start replication inside macrophage

↓

primary infection occur

↓

cell mediated immunity get activated form granuloma

↓

TERMINUS BONE Focus

↓

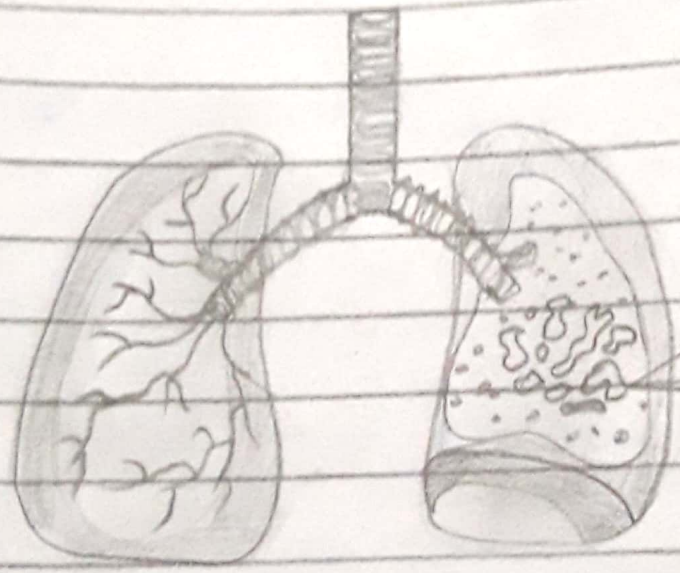
CONE COMPLEX

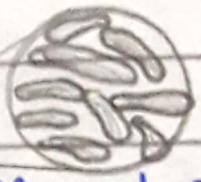
↓

LATENT Tuberculosis

Question # 2

LUNG Infected with tuberculosis (TB)





Mycobacterium tuberculosis

QUESTION NO 3

ANSWER:-

RENAL STONE FORMATION

→ Renal stones formed when your urine contains more crystal forming substances than the fluid in your urine can dilute.

→ At the same time urine may lack substances that prevent crystals from sticking together and creating ideal environment for kidney stones.

→ Nephrolithiasis → is a condition in which hard masses (kidney stones) form within urinary tract.

FORMATION Stone due To
↓ of-

→ due to calcium oxalate uric acid etc
→ The urinary concentration of substances that inhibit stone formation
→ kidney stones approximately 13 percent for men and 7 percent for women
→ Among adult approximately 80% consis predominately of calcium oxalate etc.

TYPES OF RENAL STONE

- calcium oxalate stones
- calcium phosphate stones
- struvite stones

uric Acid Stones
cysteine Stones

CALCIUM OXALATE STONE

→ most common type of kidney stones

→ kidney stones are solid masses that form in the kidney when there is high levels of calcium, oxalate, ~~cystine~~

→ some food contain high amount of calcium oxalate e.g beans, Beer, Chodate Spinach Coffee etc

→ when person having oxalate stone then avoid these foods

CAUSES

→ also cause pain in urination

SYMPTOMS

Pain when urinate
→ cloudy urine
→ foul smeling urine
→ nausea and vomitys etc

CALCIUM PHOSPHATE STONES

→ Calcium oxalate stones are obscure but most often related to a high urine PH
→ Some patients with calcium phosphate stones may have incomplete renal tubular acidosis.

→ these stones develop when you eat more sodium

CAUSE

cause sometimes by dehydration.

CAlcium Phosphate

SIDE EFFECTS

- nausea or vomiting
- decreased appetite
- constipation
- increase ulination etc

TREATMENT

drink water alot
cranberry betaine use
Antispasmodic medication

STRUVITE STONES

⇒ are a type of hald mineral deposit than can form in your kidney

⇒ Stones form when minerals like calcium and phosphate crystallize inside your kidney and stick together

Struvite Stone cause by bacteria in your urinary tract.

→ Sometimes Severe urine tracte infection and loss of kidney function

URIC ACID STONE

Uric acid stones are one of the four major types of kidney stones which include calcium oxalate, Calcium phosphate Struvite Stones Cystine Stones

SYMPTOMS

Pain in lower back sides abdomen or groin Blood in urine Nausea or Vomiting fever and Chills etc.

TREATMENT

highly effective treatment required by docter.

CYSTINE STONES

→ Type of stone kidney stone from a chemical called cystine.

→ This chemical also form condition cystinuria.

→ Improve by increase amount of water and diet Changes

SYMPTOMS

Nauseq, Blood in urine
Flank pain
Chronic or
Acute renal
failure etc

TREATMENT

→ go To doctor
→ more water

Changing diet
Reducing use of salt.
Proper medication

RADIOLOGICAL PROCEDURE FOR DIAGNOSIS

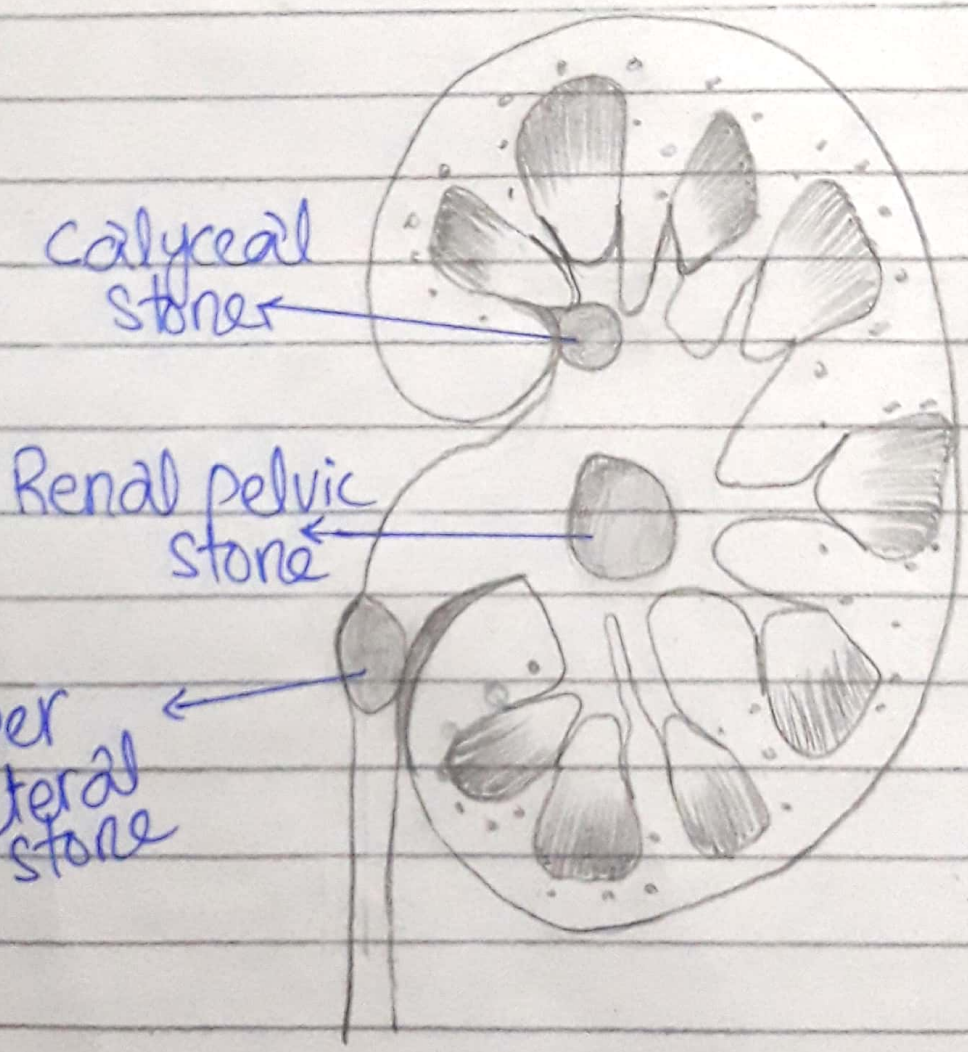
→ Two imaging tests to check for kidney stones are CT scan and an ultrasound

→ If first imaging test is not clear required second test. CT scan.

→ In past a CT scan use first imaging test for kidney stones

Question no # 3

Kidney Stone or Renal Stone



QUESTION NO 4

ANSWER

TYPES OF GOITER

- colloid goiter
- Non toxic goiter
  Toxic Nodular goiter.

Colloid goiter

The

→ This goiter develop from the lack of iodine

→ people get this type of goiter where iodine is scarce.

→ A large goiter is unresponsive to medical managment-

→ required proper

treatment

⇒ radioactive Iodine
antithyroid medication
Sometimes required
Surgery

NON Toxic goiter

⇒ The cause of non toxic goiter is usually unknown

⇒ A non toxic is a diffuse goiter or nodular enlargment of the tyroid gland that doesn't result from an inflammatory or neoplastic process and is not associated with abnormal tyroid function

Toxic NODULAR GOITER

→ A Toxic nodular goiter is a ~~ty~~ thyroid gland that contains ~~autono~~ autonomously functioning thyroid nodules with resulting hyper-thyroidism.

→ Toxic nodular goiter involves enlarged thyroid gland that contains a small rounded masses called nodules
→ Toxic nodular goiter arises from simple goiter and most often in elderly.
→ involve hyperthyroidism.

CAUSES OF GOITER

→ most commont cause is Iodine
→ In united states where the use of Iodized salt is common

a goiter is due to over or underproduction of thyroid hormones or to nodules in the gland itself.

→ Graves disease occur when thyroid produces more thyroid hormone than normal.

→ hashimoto's disese → thyroid doesn't produce enough.

→ thyroiditis also ~~called~~ cause goiter (inflammation of goiter)

→ Nodules :- Solid or fluid cyst appear on the thyroid causes swelling.

→ Thyroid cancer → cancer may effect the thyroid causes swelling on the side of gland

→ Pregnancy.

TREATMENT

MEDICATION

→ If person have a hypo-thyroidism medications is used to treat the goiter to shrink it

→ medications to reduce inflammation may use if person have thyroiditis

SURGERIES

→ Severe cases required surgeries if medication is not working.

→ Surgical removing called thyroidectomy.

RADIOACTIVE IODINE

→ People having multinodular goiters, RAI may be necessary

→ RAI Ingested orally ↓ Radioactive Iodine theraphy.

HOME CARE

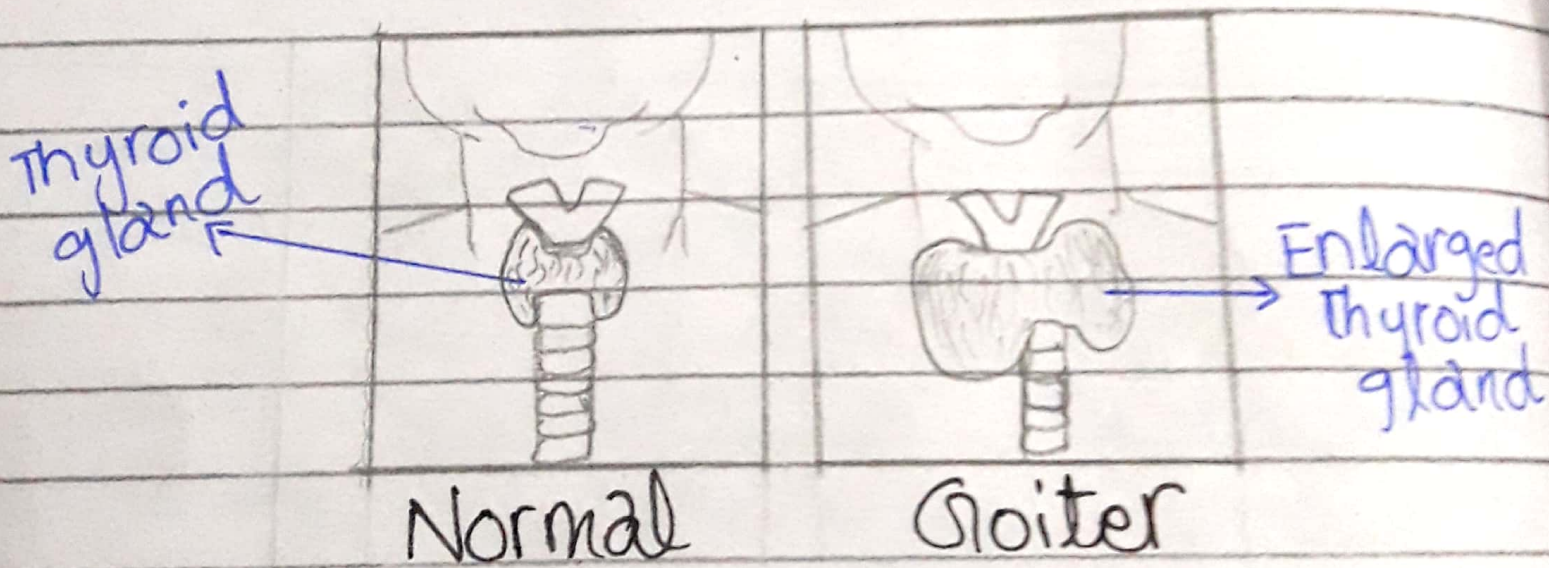
Depending on the type of goitel

→ need to increase or decrease Iodine intake depend on type of goitel.

→ If goitel is small doesn't cause any problems required no treatment.

Question # 4

Goiter



QUESTION 5

BRONCHIECTASIS

Abnormal and pelmanent dilation of bronchi

→ Bronchiectasis is the pelmanent dilation of bronchi and bronchules due to destruction of the muscle and elastic supporting tissue.

Etiology

→ Bronchiactasis is the result of Chronic Infection with resulting parenchymal destruction, fibrosis abnormal dilation of demaged bronchi.

→ long lasting bronchial obstruction

→ Congenital condition

→ cystic fibrosis

CLINICAL MANIFESTATION

- persistent or recurrent cough with purulent sputum.
- → haemoptysis
- → Episodic fever upper respiratory tract infection
- → Dyspnoea etc.

DIAGNOSIS

- clinical
- Radiology: chest XR
- CT scan
- sputum culture.
- Immunoglobulin.
- cilia function and structure
- sweat test etc

TREATMENT

- Eliminate cause
- Improve tracheo bronchial clearance
- control infection
- Antibiotics

Chest physical therapy etc.

ATELECTESIS

→ partial or complete collapse of lungs is called Atelectesis

→ may involve entire lung a lobe, a segment or be subsegmental

→ 5 mechanisms of Atelectasis

(1) obstructive
(2) non obstructive

RISK FACTOR

Anesthesia, foreign bodies in the airway, lung disease, mucus Plugging of the air way Pressure caused by mas or fluid

SYMPTOMS

Trouble breathing
Pleulisy
Cough
fever

OBSTRUCTIVE ATELECTASIS

→ most common type
→ Results from blockage of airways
→ It is the consequences of complete obstruction of the airway

NON OBSTRUCTIVE ATELECTESIS

→ Passive
→ Compressive
→ Cattrization
→ adhesive

In these forms of Atelectasis secretions are able drain up the bronchial tree. Because their is no obstruction bronchoscopy is not therapeutic.

PASSIVE ATELEC TESIS

- and most common form of Atelectasis
- leads to generalized collapse
- contact between parietal and visceral pleura is ~~not~~ lost due to pleural effusion

COMPRESSIVE ATELECTASIS

- Due to external compression of lung
- similar to relaxation Atelectasis but collapse is local rather than generalized.

ADHESIVE ATELECTASIS

- Caused by adhherance of the alveolar wall surfaces in the setting of surfactant deficiency
- lack of surfactant
→ Inactive surfactant cause alveolar Instability and collapse

CICATRIZATION ATELECTASIS

→ secondary to fibrosis
Etiologies include granulomatus disease necrotizing Pneumonia and radiation.

- Re expand of the lungs
- Percusion of the chest
- Bronchoscopy
- Postural drainage.

PNEUMONIA

→ Pneumonia is a lung infection Parenchyma
→ happens when an infection causes the air sacs in your lungs
→ pneumonia include cough which produce greenish yellow or bloody mucus
→ fever sweating and shaking chills
→ chest pain also cause by pneumonia
→ Consolidation is a pathological Process in which the Alveoli are v filled with a mixture of inflammatory exudate bacteria, WBC

CLASSIFICATION

(1) Type 1 (morphological Classification

- lobal pneumonia
- Bronchopneumonia

TYPE a CLINICALLY CLASSIFICATION

- Community - acquired Pneumonia (CAP)
- hospital acquired pneumonia (HAP)

lOBAR PNEUMONIA

The organism which cause lobal pneumonia are Streptococus pneumonia Staphylococcus aures.

MORPHOLOGICAL STAGES

- congestion
- Red hepatization
- Grey hepatization
- Resolution

BRONCHOPNEUMONIA

- Is a type of Pneumonia that causes inflammation in the Alveoli.
- suffer from trouble breathing because airways constricted
  → main cause is bacterial lung infection such as streptococus pheumoniae and hemaphilus influenza type b (Hib).

CHEST X-RAY FOR LOBAR PNEMONIA

consolidation confined to one or more lobes or segment of lungs

CLINICAL DIAGNOSIS

- history
- signs & symptems
- Chest x-ray
- CT

Etiological DIAGNOSIS

Gram's stain and

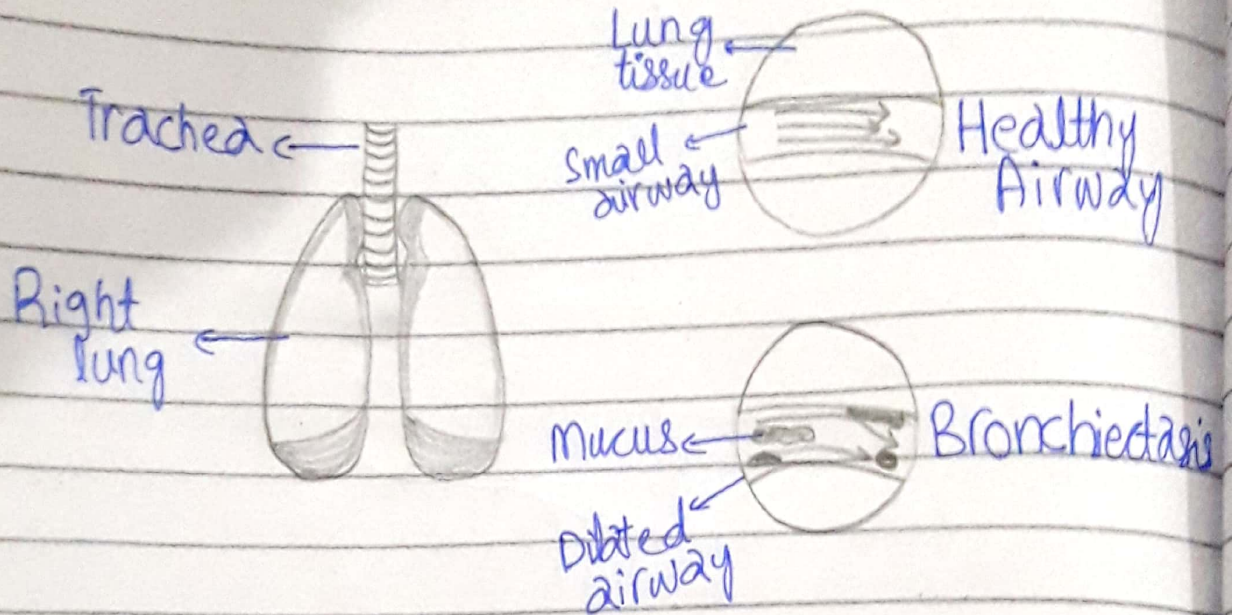
- Sputum culture
- Blood culture
- Bronchoscopy
- Adequacy of respiratory function
- Chest pain analgesics etc.

COMPLICATION

Acute respiratory syndrome
Pleural effusion
lung abscesses
sepsis.

Question # 5

Bronchiectasis



Pneumonia