

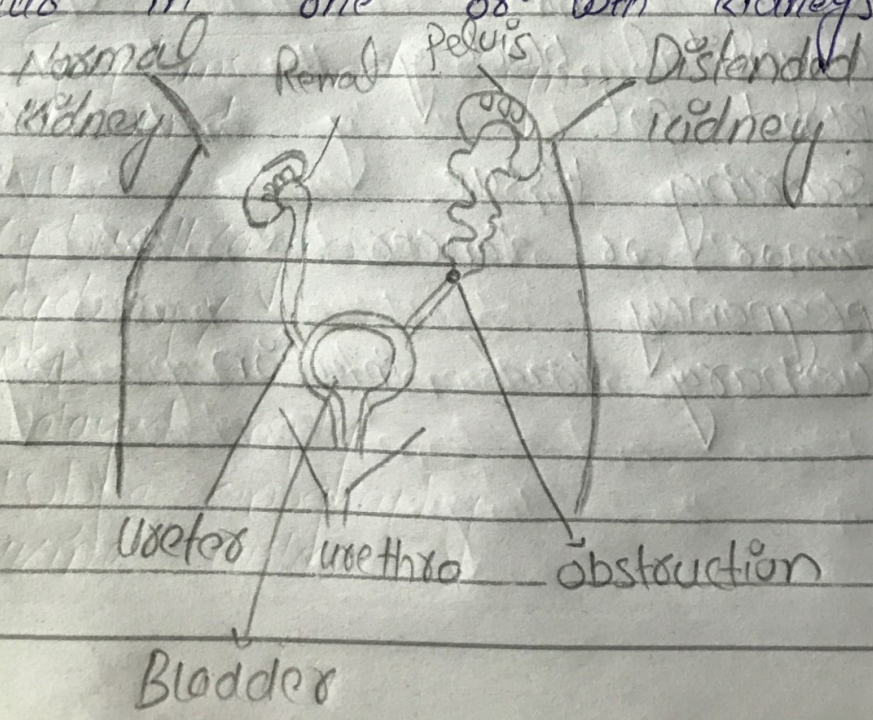
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Question ①

Hydronephrosis :-

Hydronephrosis is the swelling of kidney due to the build-up of urine. It happens when urine cannot drain out from the kidney to the bladder from a blockage or obstruction. Hydronephrosis can occur in one or both kidneys.



Hydronephrosis may or may not cause symptoms. The main symptoms is pain, either in the side or pain, abdomen, or groin. Other symptoms can include pain during urination, other problems with urination, a urge or frequency, incomplete urination. These symptoms depend on the cause and severity of urinary blockage.

Causes :-

Hydronephrosis is usually caused by another underlying illness or risk factor. Causes of hydronephrosis include, but are not limited to the following illnesses or risk factors.

- => Kidney stone
- => Congenital blockage
- => Blood clot
- => Scarred tissue
- => Tumor or cancer
- => pregnancy
- => urinary tract infection.

pathophysiology :-

Hydronephrosis is caused by obstruction of ureters before the renal pelvis. The obstruction causes dilatation of the nephron tubules and flattening of the lining of the tubules with in the kidney with in turn causes swelling of the renal calyces.

Type of hydronephrosis :-

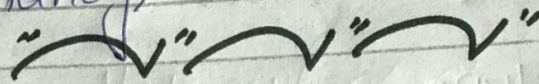
- => pelvic type
- => Renal type
- => pelvorenal type : most common type, both the pelvis & calyces are equal dilated.

Diagnosis :-

- => Symptoms and Signs
- => ultrasound
- => IVP
- => cystourethroalgym
- => cystoscopy
- => RFP
- => Delayed empty
- => Isotope renography
- => urine culture.

Treatment :-

- Depend on the causes, site, duration, and degree of kidney damage.
- => U.T.I Antibiotic therapy
 - => prompt drainage
 - => corrected to the causes
 - => Relief of lower tract obstruction
catheter drainage, urinary diversion, indwelling pigtail instead catheter
 - => Nephrectomy (tumors or nonfunction kidney)



Question (2)

Tuberculosis :-

Tuberculosis (T.B), infectious disease that is caused by tubercle bacillus *Mycobacterium tuberculosis*. In most form of the disease, the spread slowly and widely in the lungs, causing the formation of hard nodules or large cheese-like masses that break down the respiratory tissue and form cavities in the lungs.

Type of tuberculosis :-

- These are three types of TB.
- ① Active TB disease
 - ② Miliary TB
 - ③ latent TB infection.

① Active TB Disease :-

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

- => A person with active pulmonary TB disease may spread to others by airborne transmission of infection particles coughed into the air.
- => Active TB is contagious and causes symptoms.

Miliary TB :-

Miliary TB is a rare form of active disease that occurs when TB bacteria find their way into the blood stream. The bacteria quickly spread all over the body in tiny nodules and affect multiple organs at once. This form of TB can be rapidly fatal.

Latent TB Infection :-

- of those who infected with TB do not develop overt diseases. They have no symptoms and their chest x-ray may be normal. ^{Many} ~~these~~
- => There is an ongoing risk that the latent infection may escalate to active disease.
 - => The risk is increase by the other illness such as HIV or medication which compromise the immune system.
 - => The united state employs a strategy of preventing therapy or treatment of latent TB infection.

pathophysiology of TB

- => The tubercle bacilli are ingested by alveolar macrophages
- => The majority of these bacilli are destroyed or inhibited.
- => A small number may multiply intracellularly and are released when the macrophages die.
- => This process of dissemination primes the immune system for a systemic response.

- => A small number of tubercle bacilli enter the blood stream and spread throughout the body.
- => The tubercle bacilli may reach any part of the body, including areas where TB disease is more likely to develop (such as the brain, larynx, lymph node, lung, spine, bone or kidney.)



Question (3)

Formation of kidney stone :-

- kidney stones form when the urine contains the crystal forming substance.
- => Such as calcium, oxalate and the uric acid.
- => The fluid in the urine can dilute.
- => At this same time, urine may lack substance that are the prevent crystal from sticking together.
- => An ideal environment for kidney stones to form.

Types of Stone :-

Calcium Stone :-

Calcium Stone may also occur in the form of calcium phosphate. This type of stone is more common in metabolic conditions. Such as renal tubular acidosis. It may also be associated with certain medication used to treat seizures. Such as topiramate.

Struvite stones :-

Struvite stone form the response to a urinary tract infection. These stones can grow quickly and become quite large. Sometimes with few little warning.

Uric acid stones :-

Uric acid stones can form in the people who lose too much fluid because of chronic malabsorption. Those who eat a high protein diet. Certain genetic factors also may increase your risk of uric acid stones.

Cystine Stone :-

These stone form in the people with a hereditary disorder called cystinuria that causes the kidneys to excrete too much of a specific amino acid.

Diagnosis

Those kidney stone that cause no symptoms are often found when an x-ray is taken due to the during a health exam.

- => They have a stone when sudden pain occurs while the stone is passing.
- => when a person has blood in the urine or sudden stomach or side pain, tests like an ultrasound or a CT scan may diagnose a stone.
- => These imaging test tell the doctor how big the stone is and where is it located.
- => A CT scan is often used in the ER when a stone is suspected. It is used because it can make a quick and exact diagnosis.

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Question (4)

Goiter :-

A goiter is an typically painless, but a large one can make swallowing or breathing difficult.

A goiter is an abnormal enlargement of the thyroid gland, which is a butterfly shaped organ located at the base of your neck.

The thyroid gland release hormones that help control in the metabolism and other importance processes in all the your body.

Having a goiter doesn't always mean that the thyroid is malfunctioning. It can produce a normal amount of hormones.

Types of Goiter :-

Goiters have many causes. As the result there are different types.

Colloid Goiter :-

A colloid goiter that develops from the lack of iodine, the mineral of the production of thyroid hormones.

Nontoxic :-

The cause of nontoxic goiter is due to the usually unknown, it may be caused by medication like lithium.

=> Nontoxic goiter doesn't affect the production of thyroid hormone, and thyroid function is healthy.

Toxic Nodular or Multinodular Goiter :-

=> This type of goiter forms the one or more small nodules as it enlarges. The nodules produce their own thyroid hormones, causing hyperthyroidism. It generally forms as an extension of a simple goiter.

Goiter Causes :-

Graves disease :-

In this condition your immune system mistakenly attack your thyroid gland causing it to produce too much of its hormones. This can cause your thyroid gland to swell.

Hashimoto's thyroiditis :-

The autoimmune system disease damage your thyroid, causing it to produce too little of its hormones. This can also result in a goiter.

Thyroid Cancer :-

Cancer of the thyroid gland can enlarge the organ.

Pregnancy :-

During pregnancy women produce hormone that can cause the thyroid gland to grow.

Goiter Diagnosis :-

To diagnosis a goiter, your doctor may simply feel your neck and ask you to swallow while monitoring your response.

Hormone Test :-

Hormone level in the blood test can reveal whether your thyroid gland is working properly.

Antibodies Test :-

This blood test measure abnormal antibodies that are produced if you have a predisposition to autoimmune thyroid disease.

Ultrasound :-

This imaging test lets your doctor see the size of your thyroid gland and determine whether it contain any nodules.

Thyroid Scan :-

These imaging test provide information about the size and function you thyroid gland.

MRI or CT Scan :-

These Imaging Test may be used if your goiter is very large or has spread into the chest.

Treatment :-

Radioactive iodine :-

This treatment, taken by mouth can shrink the size of your goiter.

Medications :-

If you have hypothyroidism medication to treat of these condition shrink a goiter. Medication to reduce your inflammation may be used if you have thyroiditis.

Surgeries :-

Surgical removal of your thyroid is an option if your goiter grows too large or doesn't respond to medication therapy.

Question (5)

Atelectasis :-

Atelectasis is the collapse or closure of a lung resulting in reduced or absent gas exchange. It is usually unilateral, affecting part or all of one lung.

=> partial or complete collapse of lungs is called atelectasis.

=> may involve entire lung, a lobe, a segmental.

Risk factors :-

Anesthesia, foreign bodies in the airway, lung disease. The airway pressure caused by mass or fluid, pooling bed rest.

Symptoms :-

- => Trouble breathing
- => pleurisy (chest pain with inspiration)
- => cough
- => fever.

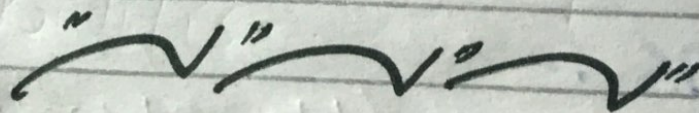
Obstructive :-

-
- => Most common type
- => Result from blockage of airway.
- => It is the consequences of complete obstruction of the airway.

Non obstructive :-

- 1) passive
- 2) compressive
- 3) catarrhal
- 4) Adhesive

In these form of acetyctosis are able down up the bronchial tree. Because there is no obstruction, bronchoscopy is not therapeutic.



pneumonia :-

pneumonia is a inflammatory condition of the lung affecting primarily the small air sack known as alveoli. Symptoms typically include some combination of productive or dry cough, chest pain, fever and difficulty breathing.

Causes :-

Bacteria, virus, aspiration

Risk Factors :-

cystic fibrosis, COPD, sickle cell disease, asthma.

Chest x-ray for lobar pneumonia

consolidation confined to one or more lobes of lungs.

Clinical diagnosis :-

- ⇒ History
- ⇒ Signs & Symptoms
- ⇒ chest x-ray
- ⇒ CT

Etiological diagnosis :-

- ⇒ Gram's stain and culture of sputum
- ⇒ Blood culture
- ⇒ Serology
- ⇒ Bronchoscopy.

- ⇒ Adequacy of respiratory function
- ⇒ Bronchodilators
- ⇒ chest pain - analgesics.

Complication :-

possible complication include :-

- ⇒ Acute respiratory distress syndrome
- ⇒ fluid around the lung
- ⇒ lung abscesses.
- ⇒ sepsis, which may lead to organ failure.

Bronchiectasis :-

Bronchiectasis is a condition where the bronchial tube of your lungs are permanently damaged, widened and thickened. These damage air passage allow bacteria and mucus to build up and pool in your lungs this result is frequent infection and blockage of the airways.

Causes :-

- ⇒ An abnormal functioning Immune System
- ⇒ Inflammatory bowel disease
- ⇒ Autoimmune disease.
- ⇒ HIV

Symptoms :-

Symptom of bronchiectasis can take month or even year to develop. Some typical symptoms include.

- chronic daily cough
- coughing up blood
- shortness of breath
- weight loss
- chest pain
- fatigue

Diagnoses :-

- Clinical.
- Radiology: chest x-ray: may be non specific mild disease
- sweat test to screen for CF

Treatment :-

- Eliminate cause
- Improve tracheo bronchial clearance
- Control infection
- Reverse airflow obstruction
- chest physical therapy
- Bronchodilators.