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Paper Clinical Medicine

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QNo# 01

Answer:-

Hydronephrosis :-

Hydronephrosis is the swelling of a kidney due to a build up of urine.

When urine can't drain from a kidney and builds up in the kidney as a result.

This can occur from a blockage in the tubes that drain urine from the kidney (ureters) or from an anatomical defect that doesn't allow urine to drain properly.

Hydronephrosis can occur in one or both kidneys.

Usually due to partial obstruction to the outflow of urine.

Causes of Hydronephrosis :-

Hydronephrosis isn't a disease. Instead, it can be due to internal and external conditions that affect the kidney and urinary collecting system.

One of the most common causes of hydronephrosis is acute unilateral obstructive uropathy. This is the sudden development of an obstruction in one of your ureters.

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which are the tube that connect your kidney to your bladder -

The most common cause for this blockage is a kidney stone, but scarring and blood clots can also cause acute unilateral obstructive uropathy.

⇒ A kink in the ureteropelvic junction, which is where the ureter meets the pelvis of the kidney.

⇒ An enlarged prostate gland in men, which can be due to benign prostatic hyperplasia (BPH) or prostatitis.

⇒ Pregnancy which cause a compression due to a growing fetus.

⇒ Tumors in or near the ureter.

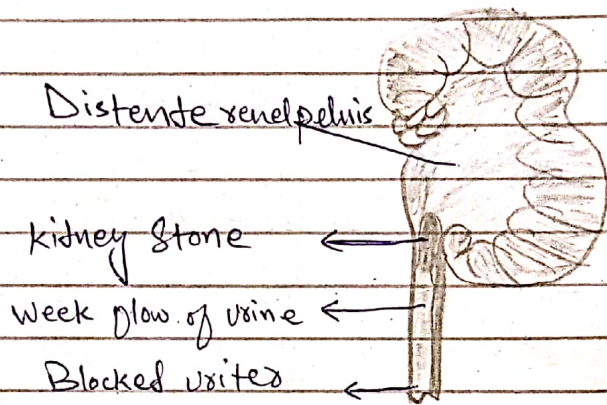
⇒ A narrowing of the ureter from an injury or birth defect.

Diagnosis of Hydronephrosis is

- ① Symptoms and Signs
- ② IVP
- ③ RGP
- ④ Ultrasound
- ⑤ Cystourethrogram

- ⑥ Delayed empty
- ⑦ Cystoscopy
- ⑧ Urine culture
- ⑨ Isotope renography.

Diagram of Hydronephrosis



Pathophysiology of Hydronephrosis

Due to the etiological factors



Obstruction of the urine flow



Fluid backs up into the kidney



Causing dilation of renal pelvis



Result in barotrauma / Pressure trauma

Types:-

- Pelvic type
- Renal type

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→ Pelvic type.

The most common type both the pelvis & calyces are equally dilated.

Treatment of Hydronephrosis

Treatment for Hydronephrosis primarily focuses on getting rid of whatever is blocking the flow of urine.

The treatment option your doctor chooses for you will depend on the cause of your obstruction.

- ① U.T.I Antibiotic Therapy
- ② Prompt drainage
- ③ corrected to the cause
- ④ Relief of lower tract obstruction
- ⑤ Nephrectomy (tumor or nonfunction kidney).

Question # No # 02

Answered Tuberculosis (TB) :-

Tuberculosis TB is an infectious disease caused by a bacterium, called Mycobacterium tuberculosis.

TB Types :-

- ① Active TB
- ② Latent TB

② Miliary TB

* Active TB :-

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 TB to others by airborne transmission of infectious particles coughed into the air.

Active TB is contagious and causes symptoms.

* Latent TB :-

Latent TB doesn't cause symptoms and isn't contagious.

Latent TB occurs when a person has the TB bacteria within their body, but the bacteria are present in very small numbers and do not develop disease. They are kept under control by the body's immune system.

* Miliary TB :-

Miliary TB causes general active TB symptoms in addition to other symptoms in addition to other symptoms.

Depending on their body parts involved.

For example

If your bone marrow is affected, you may have a low red blood count or rash.

Miliary TB is a rare form of active disease that occurs when TB bacteria find their way into the bloodstream. In this form the bacteria quickly spread all over the body in tiny nodules and affect multiple.

Pathophysiology of Tuberculosis -

- Ghon Tubercle ulcers and Releasing cheesy material into Bronchi
↓
- Bacteria then become airborne resulting in further spread of infection.
↓
- Ulcerated tubercle heals and becomes scar tissue
↓
- Infected lungs become inflamed
↓
- Further development of Pneumonia and Tubercle formation
↓
- Unless the process is arrested it spread downwards to the hilum of

of lungs and latex extends to adjacent lobes

Question # NO#03

Answer :-

Formation of kidney stones:-

The kidney stone form when your urine contains more crystal-forming substances such as calcium, oxalate and uric acid than the fluid in your urine can dilute. At the same time your urine may lack substances that prevent crystals from sticking together, creating an ideal environment for kidney stones to form.

Types of kidney stones :-

① Calcium Oxalate Stones :-

The most common type of kidney stone is calcium oxalate stone is the most common type of kidney stone. Kidney stones are solid masses that form in the kidney when there are high levels of calcium oxalate, cystine, or phosphate and too little liquid.

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② Calcium Phosphate Stones

Calcium Phosphate is a minor component of up to 30% of calcium oxalate stones as well. The cause of calcium phosphate stones is often obscure but most often related to a high urine pH. Some patients with calcium phosphate stones may have incomplete renal tubular acidosis.

③ Struvite Stones :-

Struvite stones are a type of hard mineral deposit that can form in your kidneys. Stones form when minerals like calcium and phosphate crystallize inside your kidneys and stick together. Struvite is a mineral that's produced by bacteria in your urinary tract.

④ Uric Acid Stones

Uric Acid stones are one of four major types of kidney stones, which are hard masses of crystallized minerals that form in kidney or urinary tract.

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Cystine Stones

Cystine stones are caused by a hereditary genetic disorder called cystinuria that can lead to excessive amounts of the amino acid cystine collecting in the urine. This can result in the formation of stones in the kidneys, bladder, and ureters, which transport urine from the kidneys of the bladder.

Diagnosis: Silent kidney stones, those that cause no symptoms, are often found when an x-ray is taken during a health exam. Other people realize they have a stone when sudden pain occurs while the stone is passing. In this case, medical attention is needed.

When a person has blood in the urine (hematuria) or sudden stomach or side pain, tests like an ultrasound or a CT scan diagnose stone.

A CT scan is often used in the ER when a stone is suspected. It is used because it can make a quick exact diagnosis.

Question No # 04

Answer :-

Goiter :-

Is the abnormal enlargement of your thyroid gland. Your thyroid gland is a butterfly shaped gland located at the base of your neck just below your Adam's Apple.

Two main Types.

① Colloid Goiter (Endemic) :-

A colloid goiter develops from the lack a mineral essential to the production of thyroid hormones. People who get this type of goiter usually live in areas where iodine is scarce.

② Nontoxic (sporadic) :-

The cause of nontoxic goiter is usually unknown, although it may be caused by medications like lithium is used to treat mood disorders such as a hormone and thyroid function is healthy.

Causes of Goiter :-

The most common cause of goiters worldwide is a lack of iodine in the diet. In the United States, where the use of iodized salt is common, a goiter is more often due to the over or underproduction of thyroid hormones or to nodules in the gland itself.

Diagnosis of Goiter r

Doctor may discover an enlarged thyroid gland simply by feeling your neck and having you swallow during a routine physical exam.

Diagnosing a goiter

A Hormone test r

Blood test can determine the amount of hormones produced by your thyroid and pituitary glands. If your thyroid is underactive, the level of thyroid hormone will be low.

At the same time the level of thyroid-stimulating hormone.

② An antibody Test:

Some causes of a goiter involve production of abnormal antibodies. A blood test may confirm the presence of these antibodies.

③ Ultrasonography:

A wand like device transducer is held over your neck. Sound waves bounce through your neck and back, forming images on a computer screen.

④ A Thyroid Scan:

During a thyroid scan, a radioactive isotope is injected into the vein on the inside of your elbow. You lie on a table with your head stretched backward while a special camera produces an image screen.

⑤ A Biopsy

During a fine-needle aspiration biopsy, ultrasound is used to guide a needle into your thyroid to obtain a

a tissue or fluid sample for testing.

Treatment:

Your doctor may recommend:

* Observation:

If your goiter is small and doesn't cause problems, and your thyroid is functioning normally, your doctor may suggest a wait and see approach.

* Medications:

If you have hypothyroidism thyroid hormone replacement with levothyroxine (Levothyl, Synthroid, Tirosint) will resolve the symptoms of hypothyroidism as well as slow the release of thyroid-stimulating hormone from your pituitary glands often decreasing the size of the goiter.

* Surgery:

Removing all or part of your thyroid gland (Total or partial thyroidectomy) is an option if you have a large goiter that is uncomfortable or causes difficulty breathing or swallowing, or in some cases. Surgery is also treatment for thyroid cancer.

* Radioactive iodine :-

In some cases, radioactive iodine is used to treat an overactive thyroid gland. The radioactive iodine is taken orally and reaches your thyroid gland through your bloodstream destroying thyroid cells. The treatment result is diminished size of the goiter but eventually may also cause an underactive thyroid gland.

Question # No # 05

Answer :-

Atelectasis :-

Your airways are branching tubes that run throughout each of your lungs. When you breathe, air moves from the main airway in your chest (sometimes called your windpipe), to your lungs. The airways continue branching and get progressively smaller until they end in little sacs called alveoli.

Your alveoli help to exchange the oxygen in the air for carbon dioxide, a waste product.

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from your tissues and organs - in order to do this, your alveoli must with air.

When some of your alveoli doesn't fill with air called atelectasis.

Symptoms:

- Trouble breathing
- Sharp chest pain, especially when taking a deep breath or coughing
- Rapid breathing
- Increased heart rate.
- Blue-coloured skin lips fingers nails

② Bronchiectasis

Is a condition where the bronchial tubes of your lungs are permanently damaged, widened, and thickened. These damaged air passages allow bacteria and mucus to build up and pool in your lungs. This result is frequent infections and blockages of the airways.

Causes

- Chronic daily cough
- Coughing up blood
- Abnormal sound or wheezing in the chest with breathing.
- Shortness of breath.

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- ⇒ Chest pain
- = coughing up large amount of thick mucous every day.
- = Weight loss
- = Fatigue
- = Change in the structure of fingernails.

Symptoms:

- = Trouble breathing
- = Sharp chest pain, especially when taking a deep breath or coughing
- = Rapid breathing
- = Blue skin, lips, fingers, nails.

Pneumonia:

Is an infection that inflames the air sacs in one or both lungs. The air sacs may fill with fluid or pus (purulent material) causing cough with phlegm or pus, fever, chills and difficulty breathing. A variety of organisms, including bacterial, viruses and fungi cause pneumonia.