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Q1:

Ans: Hydronephrosis:

- Hydronephrosis is the swelling of a kidney due to a build-up of urine.
- It happens when urine can not drain out from the kidney to the bladder from a blockage or obstruction.
- Hydronephrosis occurs in one or both kidneys.
- Removing wastes material and fluid from the body is one of the main function of urinary tract, hydronephrosis occurs when there is either a blockage of outflow of urine or reflux (reverse flow of urine already in the bladder), that can cause the renal pelvis to become enlarged.

⇒ Symptoms of Hydronephrosis; ⁽²⁾

→ Hydronephrosis may or may not cause symptoms.

→ The main symptoms are.

↳ Pain, either in side ~~or~~ and back.

↳ Abdomen or groin

→ Other symptoms include.

↳ Pain during urination,
incontinence,

↳ Nausea ↳ fever

→ These symptoms depend on the cause and severity of urinary blockage.

⇒ Hydronephrosis caused by:

→ Hydronephrosis is usually caused by another underlying illness or risk factors.

→ causes of Hydronephrosis are not limited to the following illness.

* Kidney stone.

* Congenital blockage

* Blood clot.

- (3)
- * Scarring of tissues
 - * Tumor or Cancer
 - * Enlarged Prostate. (noncancerous).
 - * Pregnancy.
 - * Urinary tract Infection, or other diseases that cause inflammation of the urinary tract.

⇒ Diagnosis of HydroNephrosis:

- Ultrasound used to confirm a diagnosis
- X-ray also used.
- CT (Computerized Tomography).
- MRI
- Cystoscopy involve in diagnosis, that allows the doctor to look inside the bladder and Urethra.
- Blood and Urine test.

⇒ Treatment of HydroNephrosis: (4)

- Hydronephrosis can also be treated by addressing underlying disease or cause.
- Some causes can be resolved without surgery
- Infection can be treated with Antibiotics.
- Kidney stone can pass by itself or if severe enough ~~to~~ then require surgery to remove.
- In case of severe blockage, excess urine may need to be removed or either a catheter to drain from the bladder or a special tube called Nephrostomy.
- If kidney failure occurs, treatment will be needed with either dialysis or a kidney transplant.

Q:

Ans: Tuberculosis: (TB)

- TB is a disease caused by bacteria called Mycobacterium Tuberculosis.
- The Bacteria usually attack the lung but also damage other part of the body.

⇒ Types of TB:

- TB may be regarded in two categories, active disease or latent infection.

1: Active TB disease:

- A illness in which the TB is rapidly multiplying and invading different organs of the body.

Symptoms:

- ↳ cough
- ↳ Phelgm
- ↳ chest pain
- ↳ Weakness
- ↳ weightlost
- ↳ fever
- ↳ chills
- ↳ Sweating at Night

- ②
- A person with active pulmonary TB disease may spread TB to others by airborne transmissions.
 - If the patient is diagnosed with TB disease, be prepared to give a careful of every person with whom you have contact.
 - Multi-drug treatment is employed to treat active TB diseases.
 - The patient may be asked to take antibiotics.

2): Miliary TB:

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

3) Latent TB Infection. (7)

- Latent TB Infection do not develop overt disease.
- Having no symptoms.
- Chest X-ray may be Normal.
- The only manifestation of this encounter may be reaction to the Tuberculin Skin Test (TST).
- Latent Infection may escalate to active disease.

⇒ Pathophysiology of TB:

→ Inhalation of Mycobacterium leads to one of the four possible outcomes.

1) Immediate clearance of the organism.

2) Latent Infection

3) The ~~over~~ onset of active disease.
(Primary disease).

4) Active disease may years later.
(Reactivation Disease).

⑧
→ Among individuals with latent infection and no underlying medical problems, reactivative disease occurs in 5 to 10 percent of cases.

→ The Risk of activation is markedly increased in patients with HIV.

→ These outcomes are determined by interplay of factors attributable to both the organism and the host.

(9)

Q3: How kidney stones formed?

Ans:

→ Kidney stones formed when urine contains more crystal-forming substances, such as calcium, oxalate and uric acid, then the fluid in urine can dilute.

At the same time, urine may lack substances that prevent crystals from sticking together, creating an ideal environment for kidney stones to form.

⇒ Types of kidney stones.

→ There are five main types, each with its own cause.

1): Calcium Oxalate Stones:

→ Most common type of kidney stone.

→ This results when urine contains low levels of citrate and high levels of calcium and either oxalate or uric acid.

(17)

2) Calcium Phosphate Stones:

→ Caused by abnormalities in the way the urinary system functions.

→ Series of blood and urine tests to determine whether any urinary or kidney problems could be caused by this type of stone, which often caused simultaneously with calcium oxalate stones.

3) Struvite Stones:

→ Most common in women.

→ It forms as a result of certain types of urinary tract infections.

→ These stones grow quickly and become large, sometime occupying the entire kidney.

→ If its not treated then, cause,
↳ severe urinary tract infections.
↳ loss of kidney function.

④: Uric Acid Stone. ②

- common in men.
- Occure in those people who don't drink enough water, who have gout, or in those who had chemotherapy.

⑤: Cystine Stone:

→ 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 ~~to~~ ureters.

⇒ Imaging Tests To check for kidney stones.

1 → CT scan.

2 → Ultrasound.

→ CT scan use the first imaging test to check for stone, if not clear then need an ultrasound Test.

Q4:
Ans:

Goiter:

- A goiter is enlarged thyroid gland.
- Goiters are often harmless but symptoms can occur, and treatment may be required depending on the size and type of goiter.

⇒ Symptoms of goiter.

→ Throat symptoms of tightness, cough and hoarseness.

→ Trouble swallowing.

→ In severe cases: difficulty breathing, possibly with a high-pitch sound.

⇒ other symptoms:

→ Nervousness

→ Hair loss

→ Palpitations

→ Weight loss,

→ Hyperactivity

→ increased sweating

→ Heat sensitivity

→ Fatigue

→ Increased Appetite

⇒ Causes of goiter:

→ Goiter can be caused by a number of different conditions.

1: Iodine deficiency,

→ Major cause of goiter.

→ As ~~is~~ iodine is less commonly found in plants, vegan diets may lack sufficient, iodine.

→ Dietary iodine is found in:

↳ Seafood

↳ Plant food grown in iodine-rich soil

↳ Cow's Milk.

2: Autoimmune Disease:

→ Women over the age of 40 are greater risk of goiter.

3: Hyperthyroidism:

↳ When too much thyroid hormones are produced, result in graves disease and attacks on thyroid gland

(14)

⇒ Other Causes of goiter.

- Smoking → Hormonal changes
- Thyroiditis → Lithium
- Overconsumption of iodine
- Radiation therapy.

⇒ Treatment of Goiter:

- Preventable through Adequate intake of iodine.
- If the goiter is small and thyroid function is Normal, then treatment is not usually offered.

⇒ Diagnosis:

- Physical examination of Neck, palpating for the swelling.
- Ultrasound
- Radio-active iodine scan
- Fine-needle Aspiration.
- Goiter Surgery

(15)

⇒ Types of Goiter.

→ There several main types of goiter.

1 → Diffuse smooth goiter:

↳ Occurs when the entire thyroid swells.

2 → Nodular goiter:

↳ A lump develops on the thyroid.

↳ If many lumps develops, this is known as multinodular goiter.

↳ More common.

3 → Retrosternal goiter.

→ This type of goiter can grow behind the breastbone.

→ can constrict with windpipe, neck veins, or esophagus and

Sometimes required Surgery.

Q5:

(16)

Atelectasis:

→ Atelectasis is a complete or partial collapse of the entire lung or lobe of the lung.

→ It occurs when Alveoli within the lung becomes deflated or possibly filled with Alveolar fluid.

→ One of the most common respiratory complications after surgery.

⇒ Symptoms of Atelectasis:

→ There are no obvious signs or symptoms but if anybody have signs and symptoms, they may include

→ Difficulty Breathing.

→ Rapid, shallow Breathing.

→ Wheezing

→ Cough

(17)

⇒ Causes of Atelectasis:

- Mucus plug: Build up mucus in airway.
- Foreign body: Inhaled an object like a peanut into their lung.
- Tumor inside the airway.
- Injury → Pneumothorax
- Scarring of lung tissue.

⇒ Diagnosis of Atelectasis:

- CT scan,
- Oximetry,
- Ultrasound of thorax
- Bronchoscopy.

⇒ Treatment:

- Chest Physiotherapy
- Surgery
- Breathing treatment.

(18)

⇒ Bronchiectasis

→ A condition where the bronchial tube of lungs are permanently damaged, widened, and thickened.

→ These damaged air passages allow Bacteria and Mucus to build up and pool in lungs, result in frequent infections and blockages of the airways.

⇒ Causes of Bronchiectasis:

→ Abnormally functioning immune system.

→ Inflammatory Bowel disease.

→ Autoimmune disease

→ Chronic Obstructive Pulmonary disease (COPD).

→ HIV

→ Allergic Aspergillosis

→ Lung Infections.

(19)
⇒ Symptoms of Bronchiectasis:

→ chronic daily cough

→ Coughing up Blood.

→ Abnormal sound in chest while breathing,

→ Shortness of Breathing.

→ chest Pain

→ Fatigue

→ Mucus with coughing

→ ~~These~~ ^{Some} Symptoms takes months or year to develop.

⇒ Diagnosis:

→ Sputum test to check Mucus for virus, fungi or Bacteria.

→ Chest X-ray

→ Pulmonary function tests.

→ QuantiFERON blood Tests to find how well air is following into lungs,

→ Screening of CF.

(20)

⇒ Treatment of Bronchiectasis:

→ There is no treatment for Bronchiectasis but some treatment helps the patient to manage the condition.

→ Methods for clearing airways.

→ Pulmonary rehabilitation.

→ Antibiotics

→ expectorants

→ Oxygen therapy

→ Vaccination.

→ Bronchodilators.

(21)

⇒ Pneumonia:

→ Bacterial or Viral infection of the lung.

⇒ Causes of Pneumonia:

→ Viral infection

→ Chronic lung conditions.

→ Weak immune symptoms.

→ Drink excessive Alcohol.

→ Smoking

→ Swallowing or coughing problems.

⇒ Sign and Symptoms:

→ Fever → chills

→ Shortness of breathing

→ Rapid Breathing.

→ Phlegm

→ Chest pain when breathing or coughing.

(22)

⇒ Treatment of Pneumonia:

→ Antibiotics

→ Pain-relieving Medications.

→ Paracetamol

→ Drinking plenty of fluid.

→ Rest.

→ These were Home-based treatment.

→ Hospital-based Treatment are.

→ Antibiotics

→ Oxygen therapy

→ Intravenous fluid.

→ Physiotherapy.

⇒ Diagnosis:

1) Listen to the chest with a stethoscope.

2) Chest X-ray is usually taken.

3) Blood Test.

4) Sample of Sputum may be sent to lab for testing.