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BS MLT 4TH SEMESTER

SUBMITTED TO MAM HUMA IMTAIZ

DATED 25TH JUNE, 2020

QUESTION 1 : Write down the life cycle of Enterobius vermicularis ?

Answer : life cycle of Enterobius vermicularis :

- **Human** are the host .
- Infection occurs by ingesting eggs.
- The larva hatches from the eggs in the small intestine .
- The larva develops into Male and female worms .
- Fertilization occurs in the colon. After that Male die.
- Gravid female migrates nocturnally to the anus and lays eggs , after that female die.
- The eggs become infectious within 6 hours .
- The movement of female worm in the eggs causes itching.
- Scratching the area may result in retroinfection.
- The time period from ingestion of infected eggs to the ovideposition is approximately one month.

QUESTION 2 : Describe the pathogenesis of Ascaris ?

Answer : pathogenesis of Ascaris :

There are two phases in Ascaris .

- The blood _ lung migration phase of the larva :
During the migration through the lungs , the larva may cause a phenomenon .

The symptoms of the phenomena are low fever , cough , blood _ tinged, sputum, asthma . large number of worms may give rise to allergic symptoms .Eosinophilia generally present. These clinical manifestations is also called Loeffler , syndrome.

- **2 :** The intestinal phase of the adults . The presence of a few adult worms in the lumen of the small intestine usually produces no symptoms, but may give rise to vague abdominal pains are intermittent colic, especially in children. A heavy worm burden can result in malnutrition. More serious manifestations have been absorbed. Wandering adults may block the appendical lumen are the common bile duct and even perforate the intestinal wall . Thus complication Ascariis . such as intestinal obstruction, appendicitis, biliary Ascariis , perforation of the intestine. Cholecystitis, pancreatitis and peritonitis, etc. may occur , in which biliary ascariis is the most common complication.

QUESTION 3 : explain the transmission and lifecycle of entamoeba histolytic in details ?

Answer : Transmission of entamoeba histolytic :

- Transmission of Entamoeba histolytic from man to man is effected through its encysted stage and infection occurs through the ingestion of these cysts.
- Faecal contamination of drinking water , vegetables, and food are the primary causes .
- Eating of uncooked vegetables and fruits which have been fertilized with infected human faeces has often led to occurrence of disease.

Life cycle of entamoeba histolytic :

- Entamoeba histolytic passes its life cycle in only one host.
- The mature quadrinucleate cysts are the infective forms .these infective cysts are passed in the faeces of carriers.
- Man acquires the infection by ingestion of water and food containing these cysts .
- When the cyst reaches the caecum or the lower part of the ileum , the excystation occurs (due to lysis of cyst wall by trypsin in the small intestine).
- During this process , each mature cyst liberates a single amoeba with four nuclei, a tetranucleate amoeba which eventually produces eight metacystic trophozoites by division of nuclei by binary fission.
- The metacystic trophozoite ultimately lodges in the submucosal tissue of the large intestine, there normal habitat. Here they grow and multiply by binary fission.
- During growth, E histolytic secretes a proteolytic enzyme which causes destruction and necrosis of tissue leading to flask shaped ulcer .

- Sometime the triphozoite enter into deeper layer and may gain entry into deep layers into the radicals of portal vein to be carried away liver producing amoebic liver abscess.
- When the effect of the parasites on the host is toned down and there is increase in the tolerance of the host, the lesion start healing. The trophozoites, in the lumen of large intestine occurs excystation.
- These quadrinucleate cyst again pass into the faeces and continued there life cycle.

QUESTION 4 : How will you diagnose trypanosoma cruzi inside a lab ?

Answer : Diagnose trypanosoma cruzi in lab ;

- Diagnosis. During the acute phase of infection, parasites may be seen circulating in the blood.
- The diagnosis of chagas disease can be measured by observation of the parasites in a blood smear by a microscopic examination.
- A thick and thin blood smear are made and stained for visualization of parasites .

QUESTION 5 : Enlist leishmania species name , summarize the clinical findings of all species ?

Answer : leishmania species names :

- **Leishmania donovani.**
- **Leishmania tropica.**
- **Leishmania Mexicana .**
- **Leishmania braziliensis .**

LEISHMANIA DONOVANI CLINICAL FINDINGS :

- symptoms begin with intermittent fever, weakness, and weight loss

- Massive enlargement of the spleen is characteristic
- Hyperpigmentation of the skin is seen in light-skinned patients (kala-azar means **black sickness**)
- The course of the disease runs for months to years
- Initially, patients feel reasonably well despite persistent fever
- As anemia, leukopenia, and thrombocytopenia become more profound, weakness, infection, and gastrointestinal bleeding occur
- Untreated severe disease is nearly always fatal as a result of secondary infection.

Tropica , mexicana and braziliensis clinical findings :

- The initial lesion of cutaneous leishmaniasis is a red papule at the bite site, usually on an exposed extremity
- This enlarges slowly to form multiple satellite nodules that coalesce and ulcerate
- There is usually a single lesion that heals spontaneously in patients with a competent immune system

However, in certain individuals, if cell-mediated immunity does not develop, the lesions can spread to involve large areas of skin and contain enormous numbers of organisms.

- Mucocutaneous leishmaniasis begins with a papule at the bite site, but then metastatic lesions

form, usually at the mucocutaneous junction of the nose and mouth

- Ulcerating lesions destroy nasal cartilage but not adjacent bone

These lesions heal slowly.