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**Question**: **1)** Write down the life cycle of Enterobius vermicularis?

**Answer:** Enterobius Vermicularis is causes a pinworm infection Enterobiasis disease.

**Life Cycle of Enterobius Vermicularis:-**

🡪The life cycle of enterobius vermicularis Is basically belong to humans.

🡪The infection is acquired by ingesting the worm eggs through contaminated water or food.

🡪The eggs hatch in the small intestine, where the larvae differentiate into adults and migrate to the colon.

🡪The adult male and female worms live in the colon, where mating occurs.

🡪At night, the female migrates from the anus and releases thousands of fertilized eggs on the perianal skin and into the environment.

🡪Within 6 hours, the eggs develop into embryonated eggs and become infectious.

🡪Reinfection can occur if they are carried to the mouth by fingers after scratching the itching skin.

**Question# 2):** Describe pathogenesis of Ascaris?

**Answer: Pathogenesis of Ascaris:-**

🡪The major damage occurs during larval migration rather than from the presence of the adult worm in the intestine

🡪The principal sites of tissue reaction are the lungs, where inflammation with an eosinophilic exudate (Increase level of Eosinophil cells and accumulation of fluid inside the floral cavity of lungs) occurs in response to larval antigens.

🡪Because the adults derive their nourishment from ingested food, a heavy worm burden may contribute to malnutrition, especially in children in developing countries

🡪Most infections are asymptomatic

**Ascaris pneumonia:-**

Ascaris pneumonia can cause fever, cough, and eosinophilia (Increase level of Eosinophil cells) can occur with a heavy larval burden.

🡪Abdominal pain and even obstruction can result from the presence of adult worms in the intestine

**Question# 3):** Explain the transmission and life cycle of Entamoeba histolytica in detail?

**Answer: Transmission of Entamoeba Histolytica:-**

The Entamoeba Histolytica is transmitted through oral fecal rote by means of contaminated food or water.

🡪Worldwide distribution presents every where

🡪The host of Entamoeba Histolytica is only human beings

🡪Infection causes when it mature cyst inside the large intestine.

**Life Cycle of Entamoeba Histolytica:-**

🡪Cysts come to the stomach through oral rote. The cysts are resistance to the stomach environment and passes to the small intestine.

🡪Inside the small intestine each cysts divide to produce eight trophozoites.

🡪These trophozoites will then move to the colon of the large intestine. In large intestine these trophozoites will starts colonization.

🡪Then it can cause infectious diseases.

**Question# 4):** How will you diagnose Trypanosome Cruzi inside a laboratory?

**Answer: Lab Diagnosis of Trypanosome Cruzi:-**

Acute disease is diagnosed by demonstrating the presence of trypomastigotes in thick or thin blood smear of the patient's blood.

🡪Both stained and wet preparations should be examined, the latter for motile organisms

Because the trypomastigotes are not numerous in the blood, other diagnostic methods may be required, namely;

1. **Staining:-**

A stained preparation of a bone marrow aspirates or muscle biopsy specimen (which may reveal amastigotes).

1. **Culture media:-**

Culture of the organism on special medium

**Question# 5):** Enlist Leishmania species names. Summarize the clinical findings of all species of Leishmania?

**Answer:-** **Species of Leishmania:-**

* Leishmania Donovani
* Leishmania Tropica
* Leishmania Mexicana
* Leishmania Braziliensis

**Clinical finding of Leishmania Donovani:-**

Symptoms begin with intermittent fever, weakness, and weight loss

🡪**Splenomegaly**: 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.

**Clinical finding of Leishmania Tropica, Mexicana and Braziliensis:-**

🡪The initial lesion of cutaneous leishmaniasis is a red papule at the bite site, usually on an exposed extremity and this enlarges slowly to form multiple satellite nodules that coalesce (make big mass) and ulcerate (make a hole)

🡪There is usually a single lesion that heals spontaneously in patients with a competent immune system.

🡪However, in certain individuals, if cell-mediated immunity are week or does not develop, the lesions can spread to involve large areas of skin and contain enormous numbers of organisms, treatment are must for the individual.

🡪Leishmania Braziliensis cause a disease called mucocutaneous leishmaniasis. It 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 (cause perforation) destroy nasal cartilage but not adjacent bone.

🡪These lesions heal slowly in those individual who are immune competent.

**-: THE END:-**