

Nematodes

Cylindrical, unsegmented & tapering at both ends.
Female > Male.

Enterobius vermicularis (Oxyuris)

(Names: Pin, seat, thread worm)

World wide.

Adult in lumen of **cecum & appendix** from which adult female migrate to rectum.

It can be seen by naked eye as white thread female \pm 1cm. Male \pm 0.5cm, with coiled end.

Ectopic enterobiasis

Majority \rightarrow asymptomatic.

Clinical presentation pruritus ani perianal excoriation.

Female when invade vulva & vagina \rightarrow **vaginitis**, usually accompanied by insomnia, anorexia, loss of weight & concentration.

Treatment

Albendazole, Mebendazole \rightarrow whole family.

Ascaris lumbricoides (round worm)

Commonest infection.

Found in **jejunum & upper part of ileum**.

Female \pm 20 cm, male \pm 10 cm.

Feed on semi digested food.

1. Adult worm

Light infection \rightarrow asymptomatic.

Heavy infection \rightarrow intestinal obstruction.

Migrating adult: to bile duct - jaundice

2. Larvae: Loeffler's syndrome (imp) Pneumonia, cough with **bloody** sputum, Eosinophilia, urticaria

Diagnosis

Eggs in **stool**.

Larvae in sputum.

Adult may pass with stool.

Treatment

Albendazole, Mebendazole.

Trichuris trichiura (Whip worm)

World wide, common in poor sanitation.

Coexists with **Ascaris** because similar requirement.

Adult live in **large intestine** especially **caecum & appendix** - in heavy infection the whole length of large intestine affected.

Male & female worm have narrow anterior portion penetrate the intestinal mucosa.

Light infection \rightarrow asymptomatic.

Heavy infection \rightarrow abdominal pain, **bloody** diarrhea. **Rectal prolapse** in children is a **common complication**.

Diagnosis

Egg in **stool** characterized by its **barrel shape with mucoid plugs at each pole**.

Treatment

Albendazole

Ancylostoma duodenale & Necator americanus (hook worms)

Common cause of **anemia**.

Found in small intestine mainly **jejunum**.

Its **buccal capsule** (mouth) lined with hard **hooks**, triangular cutting plates & **anticoagulant glands**.

Adult worm:

Light infection \rightarrow asymptomatic.

Heavy infection \rightarrow epigastric pain, vomiting, **hemorrhagic enteritis**.

Protein loss: hypoproteinaemia edema.

Anemia: microcytic hypochromic.

Larvae:

Ground itch \rightarrow site of entry.

Migration \rightarrow cough with **bloody** sputum, **pneumonia**, eosinophilia, urticaria.

Diagnosis

Eggs in **stools**. occult blood (+).

Treatment

Albendazole, Mebendazole.

Strongyloides stercoralis

Tropical region world wide.

Fatal opportunistic in **immuno-compromised** host.

It is **smallest** pathogenic nematodes \pm 2.5mm.

Adult live in **mucous** membrane of duodenum **jejunum** rarely m.m. of bronchus.

Cutaneous little reaction on penetration.

Severe **dermatitis** at perianal region in case of external autoinfection.

Migration: same as hook worms.

Intestinal: **inflammation of upper intestinal** mucosa, diarrhea, upper abdominal pain colicky in nature.

Disseminated strongyloidiasis \rightarrow **immunodeficiency**, uncontrolled diarrhea - granulomatous changes - necrosis - perforation - peritonitis - death.

Diagnosis

Rhabditiform larvae diagnostic stage in **stool** or duodenal aspirate.

Treatment

Albendazole, Mebendazole.