Pinworm (Enterobius Vermicularis)

Pinworm, or Enterobius vermicularis, is a nematode (roundworm), which is a common intestinal parasite in humans. Ingestion of its eggs leads to enterobiasis in humans, which can go undetected, but can lead to intense night-time pruritus. This is because females exit the digestive system to lay eggs in the perianal area. The standard treatment for enterobiasis albendazole or mebendazole.

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Pathophysiology

Nematode (Roundworm)
Knee-toad with Roundworms

Pinworm is a nematode, or roundworm, and is one of the most common parasitic infections in the world.

Ingestion of Eggs
Ingesting Eggs

Infection occurs through the ingestion of the eggs from pinworm. This typically involves fecal-oral transmission through contaminated hands, foods, or sometimes water.

Intestinal Infection
Intestines Infected with parasites

After ingestion of the eggs, a 4-6 week incubation ensues and patients develop intestinal infection of adult pinworms. This infection is called enterobiasis and is asymptomatic in 1/3 of individuals.

Anal Pruritus
Anal Prairie-dog

The most common symptom of enterobiasis is intense anal pruritis; this occurs because the adult pinworms exit the digestive system to lay eggs around the infected host's anus at night. This pruritus can be seen around the perineum and anus, and can be described as tickling, tingling or even painful.

Diagnosis

Scotch Tape Test
Scotch Tape with eggs

Diagnosis of pinworm infection is done via the scotch tape test, where transparent adhesive tape is applied to the patient's anal area. This tape is then removed and viewed under low-power microscope to look for pinworm eggs.

Treatment

Albendazole
Abe-Bond

The primary treatment for pinworm is albendazole, which works to inhibit glycogen metabolism in worms, starving them to death. This drug only kills adult worms, and must be re-administered (after eggs hatch and mature) to fully eradicate infection. Mebendazole, another bendazole drug, may also be used in the treatment of pinworm.

Pyrantel Pamoate
Pirate Pomeranian

Pyrantel pamoate is used as a second-line treatment against pinworm, and works by causing neuromuscular blockade in the parasite.

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