Trichuriasis (Whipworm)

Trichuriasis is a parasitic disease caused by infection of the large intestine by *Trichuris trichiura* (also known as the human whipworm), which is an intestinal parasitic nematode. Adult whipworms mainly live in the caecum, but can be seen throughout the colon and rectum. The three main soil-transmitted helminth infections are ascariasis, trichuriasis, and hookworm. Children living in poverty in developing countries are often infected by at least one and, in many cases, all three soil-transmitted helminths.[1]

**Life cycle**[2]

- Eggs are passed with the faeces. The eggs develop in soil and become infective after 15 to 30 days.
- Humans are the only known host. After ingestion via soil-contaminated hands or food, the eggs hatch in the small intestine and release larvae that mature into adults. The adults attach to the wall of the caecum and the ascending colon.
- The female adult worm starts to produce eggs 60 to 70 days after infection, and sheds between 3,000 and 20,000 eggs per day.
- The adult worm usually reaches 3-5 cm in length and has a lifespan of 1-3 years.

**Epidemiology**

- Trichuriasis is common worldwide (the third most common roundworm parasite of humans).
- The most affected regions are rural areas with poor sanitation and tropical climates, including Southeast Asia, Africa, the Caribbean, and Central and South America. Prevalence rates are as high as 80% in these regions.[1]
- The main risk factor for infection is ingestion of eggs from soil contaminated with faeces.
- Trichuriasis mainly affects children, who may become infected if they ingest soil contaminated with whipworm eggs.

**Presentation**

- Mild infections (fewer than 100 worms) are often asymptomatic but may present with lower abdominal discomfort, flatulence, and diarrhoea or constipation.[3]
- Inflammation at the site of attachment from large numbers of whipworms results in colitis, presenting with bloody diarrhoea, abdominal pain, iron-deficiency anaemia and, in severe infestations, rectal prolapse.
- Long-standing colitis resembles inflammatory bowel disease, including chronic abdominal pain and diarrhoea, as well as impaired growth, anaemia of chronic disease, and finger clubbing.

**Investigations**[2]

- Stool examined for ova and parasites reveals the presence of typical whipworm eggs. Eggs may be difficult to find in light infections.
- FBC: often shows eosinophilia and, rarely, anaemia.[4]
- Examination of the rectal mucosa by proctoscopy can occasionally demonstrate adult worms.

**Management**

- Oral treatment with mebendazole for three days is often used in symptomatic infections.
- Albendazole is an alternative for treatment.
Complications

- Rectal prolapse.
- Malnutrition.
- Heavy infections may cause anaemia.
- Prolonged infections may lead to growth and developmental delay in children.

Prognosis

Full recovery is expected with treatment.

Prevention

- Improved facilities for disposal of faeces have decreased the incidence of whipworm.
- Hand washing before food handling, and avoiding ingestion of soil by thorough washing of food that may have been contaminated with egg-containing soil.

Further reading & references

- Parasites A-Z; Centers for Disease Control and Prevention
- Trichuriasis; DPDx, Centers for Disease Control & Prevention

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. Patient Platform Limited has used all reasonable care in compiling the information but makes no warranty as to its accuracy. Consult a doctor or other healthcare professional for diagnosis and treatment of medical conditions. For details see our conditions.

Author: Dr Roger Henderson
Peer Reviewer: Dr Adrian Bonsall

Document ID: 13563 (v2)
Last Checked: 06/11/2014
Next Review: 05/11/2019

View this article online at: patient.info/doctor/trichuriasis-whipworm
Discuss Trichuriasis (Whipworm) and find more trusted resources at Patient.
Ask your doctor about Patient Access

- Book appointments
- Order repeat prescriptions
- View your medical record
- Create a personal health record (iOS only)

Simple, quick and convenient. Visit patient.info/patient-access or search ‘Patient Access’