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## TRICHURIS TRICHURA

### 45.1 INTRODUCTION

*Trichuris trichura* have a unique shape because of which they are also called as whip worm. The worm resides in the caecum and colon of the infected hosts.



### OBJECTIVES

After reading this lesson, you will be able to:

- describe the morphology of *trichuris trichura*
- explain the life cycle of *trichuris trichura*
- discuss the pathogenicity of *trichuris trichura*
- explain the laboratory diagnosis of *trichuris trichura*

### 45.2 MORPHOLOGY

The male worm measures 30-40 mm in size and the female worm measures 40-50 mm in size. The anterior two thirds are long and slender. This end penetrates the mucosa and the posterior one third remains out in the lumen of the colon. In the males the terminal end has a copulatory spicule. No spicule is seen in the female worms.



Fig. 45.1



**Notes**

The ova are barrel shaped and measure 50 μm × 25 μm. There is a mucus plug at the poles.

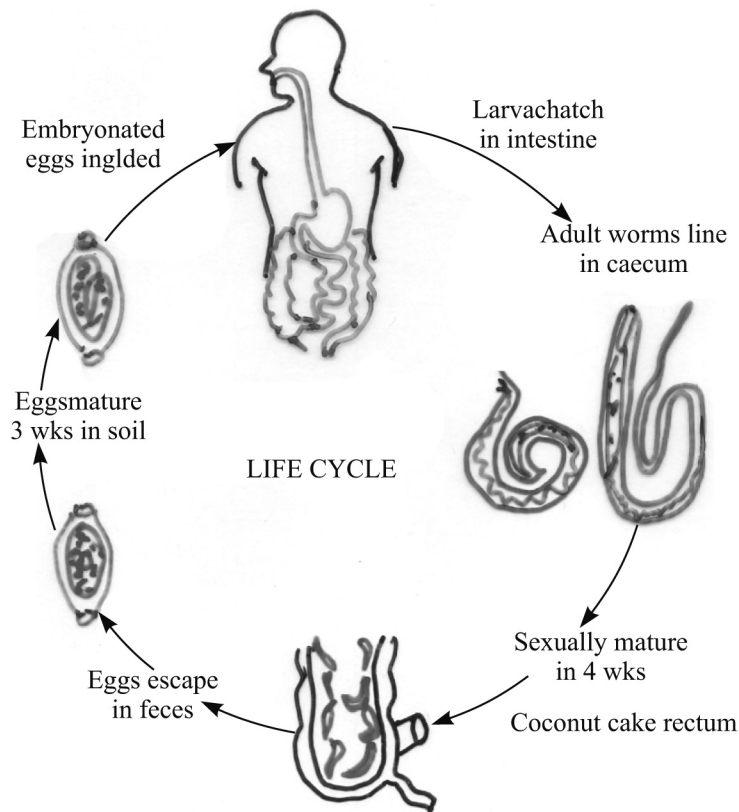
They are bile stained. They float on concentrated salt solution s

The ova contains an unsegmented ovum.

**45.3 LIFE CYCLE**

The gravid female passes ova in the stools after sexual reproduction. The ova matures in the soil in three weeks.

The embryonated ova is ingested through contact of hands with soil or vegetables containing the embryonated ova.



**Fig. 45.2**

The larva hatches in the intestine. The larva reaches the caecum and colon and mature into adult worms. The female worm becomes gravid after sexual reproduction and lays eggs thus completing the life cycle. The female produces 5000-20,000 eggs/day. Children between 5-15 years have the highest prevalence and have a higher worm load than adults.

**45.4 PATHOGENECITY**

The worm infestation is mostly asymptomatic. It may cause a bloody diarrhea also called as trichuris dysentery syndrome. It may cause iron deficiency anaemia, growth retardation.

There may be rectal prolapsed in some cases. On endoscopic examination the rectum gives a coconut cake appearance.

Patient also develops significant eosinophilia.



Notes

**45.5 LABORATORY DIAGNOSIS**

The demonstration of ova in the stools or detection of adult worm establishes the laboratory diagnosis.

Eosinophilia may be seen in the infected hosts.



**INTEXT QUESTIONS 45.1**

1. Whip worm is also called as .....
2. The ova of whip worm is ..... shaped
3. The larva matures into adult worm in ..... & .....
4. Whip worm produces bloody diarrhea known as ..... syndrome



**WHAT HAVE YOU LEARNT**

- Trichuris trichura have a unique shape because of which they are also called as whip worm
- The worm resides in the ceacum and colon of the infected hosts.
- The gravid female passes ova in the stools after sexual reproduction and the ova matures in the soil.
- The worm infestation is mostly asymptomatic and it may cause a bloody diarrhea also called as trichuris dysentery syndrome
- Demonstration of ova in the stools or detection of adult worm established the laboratory diagnosis.

## MODULE

Microbiology



Notes

Trichuris Trichura



### TERMINAL QUESTIONS

1. Discuss the morphology and pathogenicity of *Trichuris trichura*.
2. Discuss the life cycle of *Trichuris trichura*.
3. Draw a labeled diagram of ova of *Trichuris trichura*.



### ANSWERS TO INTEXT QUESTIONS

#### 45.1

1. *Trichuris trichura*
2. Barrel
3. Cecum & colon
4. *Trichuris* dysentery