

Medically Important Helminthes.

1) Taenia solium

classification

Phylum - Platyhelminthes

class - cestoda

Genus - Taenia

Species - solium

Habit / Habitat

It is worldwide in distribution. Infection is very common among those eating raw pork. Adult worms live in the small intestine (upper jejunum part of human)

Morphology

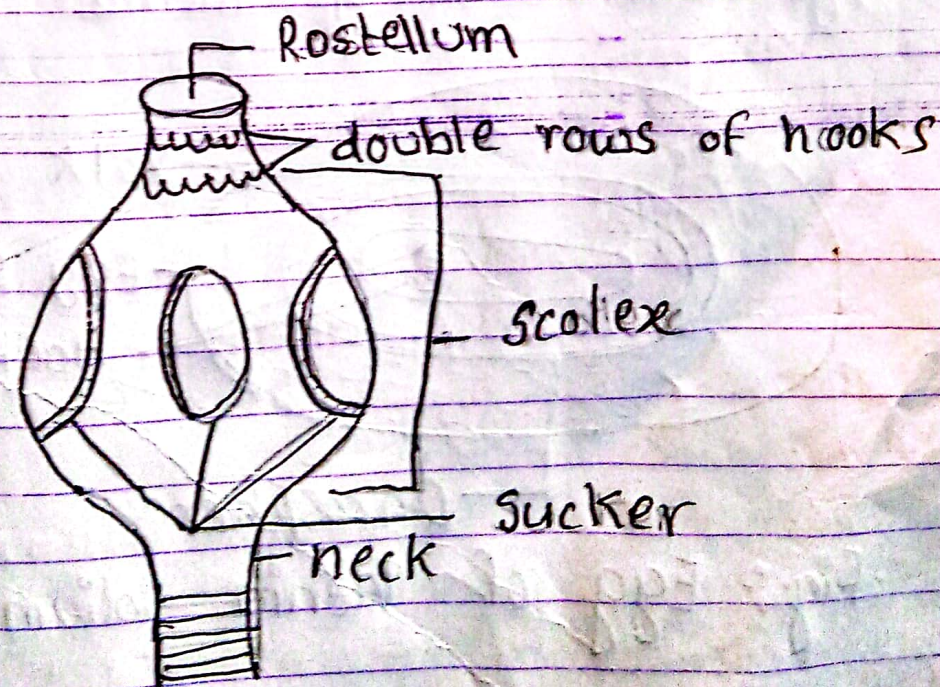


Fig: scolex

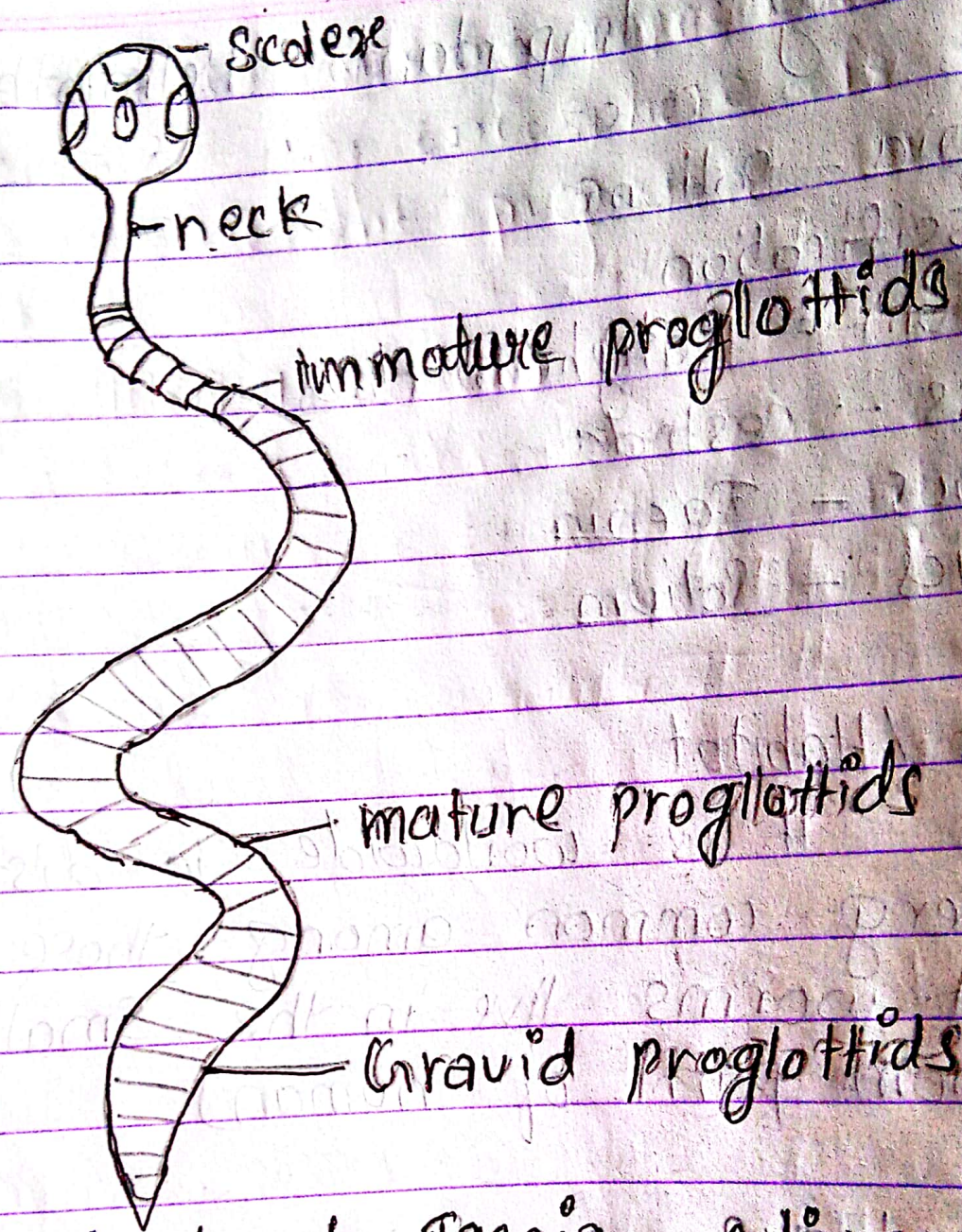
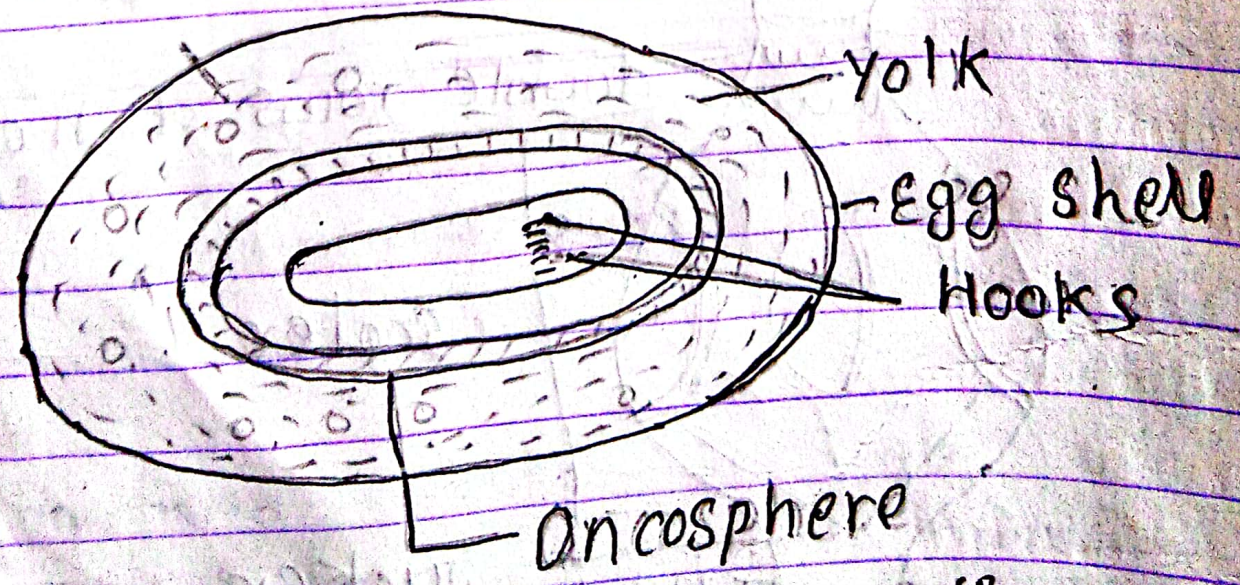


Fig:- External str. of Taenia solium



Adult worms measures about 2-5 m in length. Its body is differentiated into 3 parts.

1) Scolex

It measure about 1mm in diameter

It contain 4 circular suckers. The tip of the scolex is called rostellum. Rostellum is circulated by double rows of hooks.

2) Neck

It is short and narrow part. It measure about 5-10 mm in length. It is the site for the formation of proglottids.

3) Proglottids

The body of tapeworm is divided into 8-90 of segments called proglottids. On the basis of maturity of reproductive organ, proglottids are of three types.

i) Immature proglottids

Reproductive organ are not mature.

ii) Mature proglottids

Reproductive organ are mature and fertilization occurs in this proglottids.

iii) Gravid proglottids

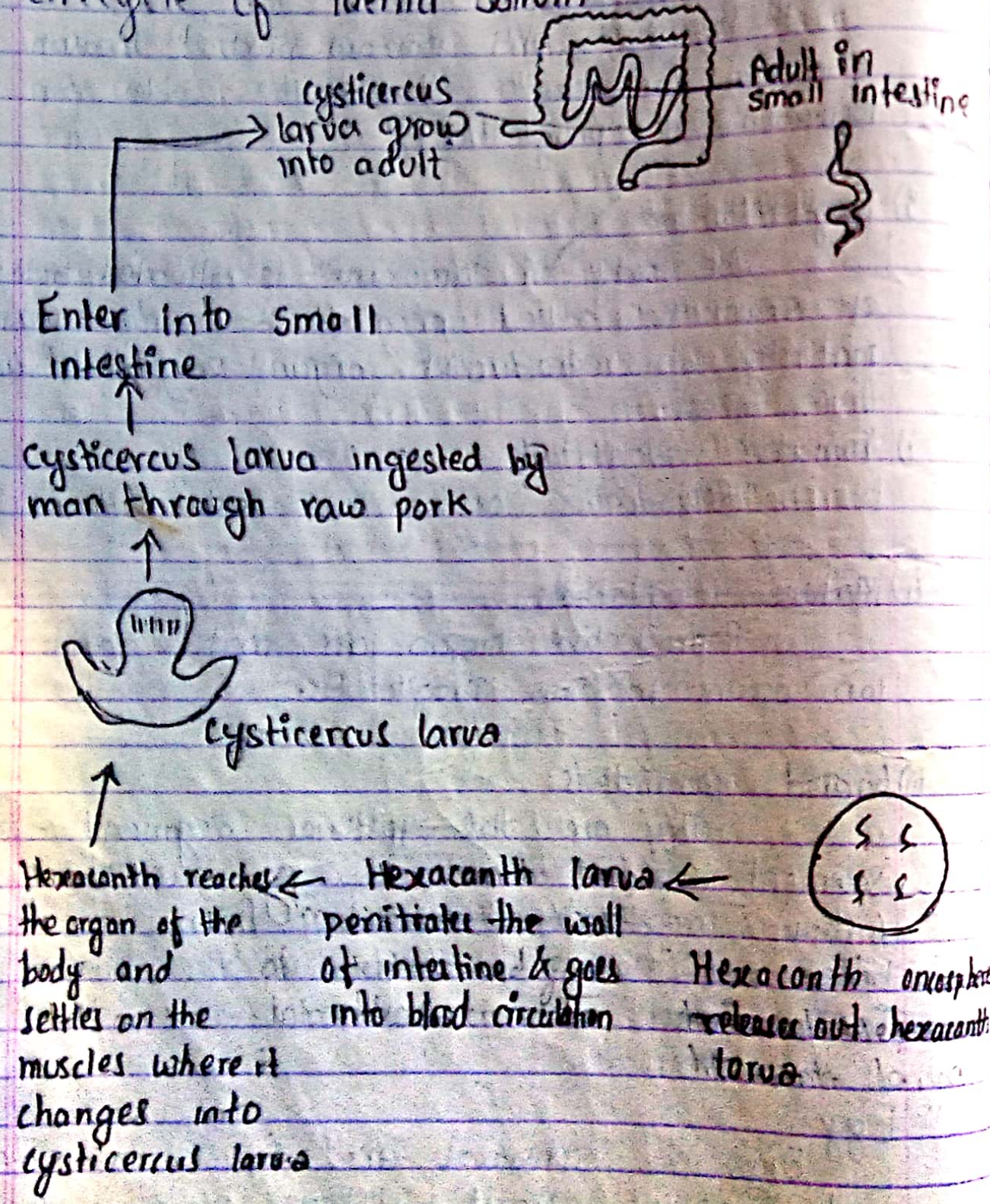
They are the posterior segment. Each segment contain fertilized eggs in their uterus. Gravid proglottids separate from the parents body and passes outside of the host through faecal matter.

Egg

Eggs are spherical and brown in colour and measures about 31 mm in diameter.

Egg Oncosphere contain 3 pairs of hooklets.
 Eggs containing an oncosphere is the infective stage to the pig.

Lifecycle of Taenia Solium



Immature proglottids separate from the worm and passes out of the body of human through stool

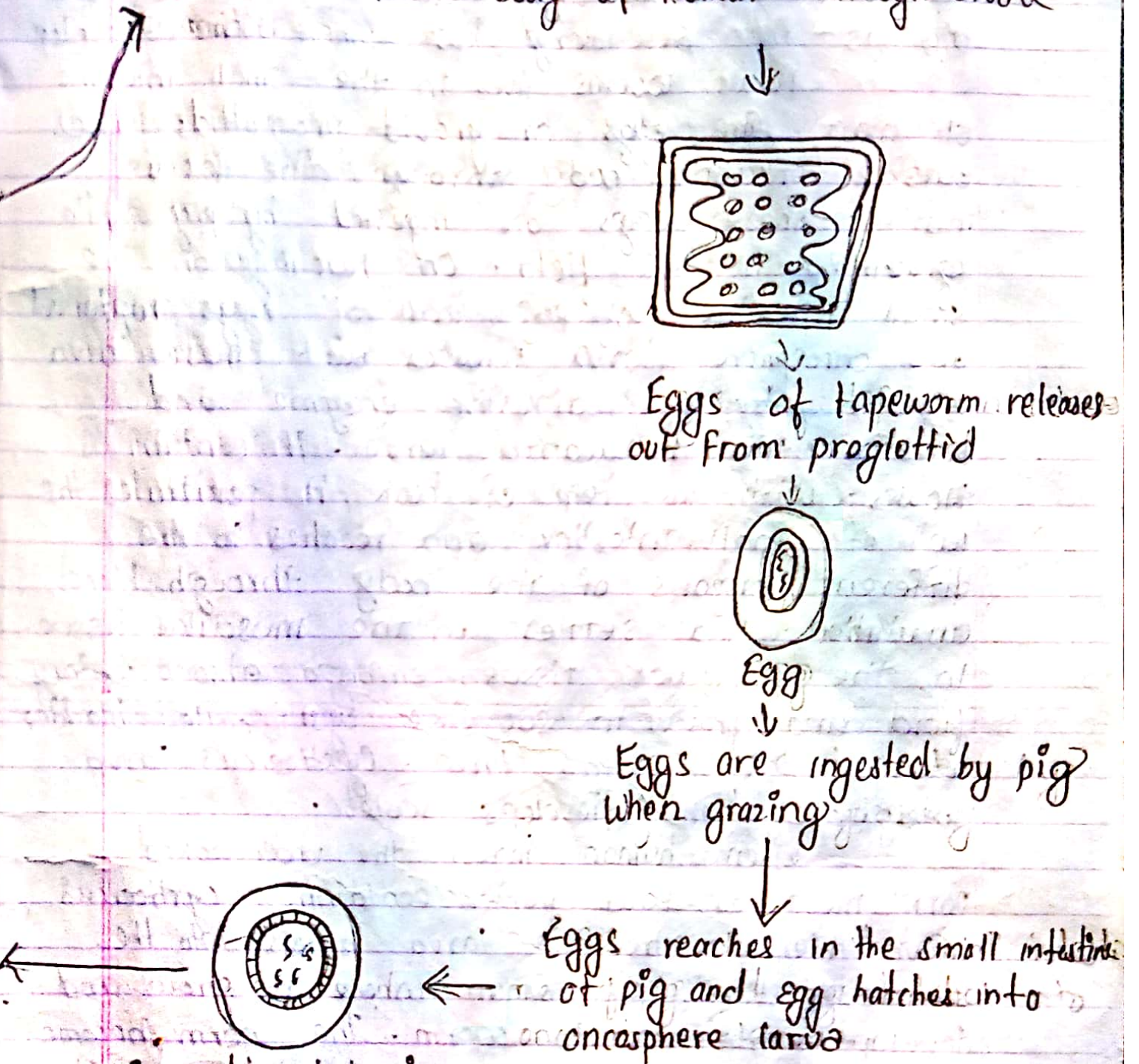


Fig - lifecycle of Taenia Solium

It is a digenetic parasite. Man is the primary host where adult worms lives and pig is the secondary host where larva develops.

Adult worms lives in the small intestine of man. The eggs or gravid proglottids passes outside of the body through the faeces matter. These eggs are ingested by pig while grazing in the field. On reaching on the small intestine of pig, wall of eggs ruptured and oncosphere larva releases out. These larva digested by the digestive enzyme and releases the hexacanth larva. It contain 6 hooks. with the help of hook, it penetrates the wall of small intestine and reaches to the different organs of the body through blood circulation. And settles in the muscular tissue. In the muscular tissue, embryo absorb watery fluid and grow in sac like cyst called bladder worm or cysticercus larva. Cysticercus larva invaginates and develops scolex.

When human ingest the under cooked pork meat or raw pork containing cysticercus larva then cysticercus larva enters into the small intestine of human where it grow and develops into adult worm. The worm becomes sexually mature in 2-3 months and start to produce egg. These egg passes outside through gravid proglottids along with faeces. In this way life cycle of Taenia solium is completed.

Mode of infection

- Human gets infection by eating raw or poorly cooked pork having cysticercus larva.

Symptoms

- Vague abdominal discomfort, chronic indigestion.
- Anaemia and intestinal disorders.
- diarrhoea

Treatment

→ Mepacrine

→ Dichlorophen

→ Camoquine

→ Yomensan

Preventive measures

- Avoid of eating raw and uncooked meat or pork
- Proper sanitary control of sewage disposal.
- Effective treatment of infected, individual to prevent infection of the intermediate host.