

Taenia saginata

Class: Cestoda

Family: Taeniidae

Synonym: *Cysticercus bovis*

Common name: beef tapeworm, 'beef measles'

Final host: man.

Intermediate host: cattle.

Predilection site: small intestine (definitive host); muscle, liver, kidney (intermediate host).

Morphology, Gross:

The adult tapeworm is found only in humans and ranges from 5.0-15.0 min length. The scolex, exceptional among the species of *Taenia*, has neither rostellum nor hooks.

In bovine animal the mature cysticercus, *C.bovis*, is greyish white, oval, about 0.5-1.0×0.5 cm long, and filled with fluid in which the scolex is usually clearly visible. As in the adult tapeworm, it has neither rostellum nor hooks.

Microscopic:

The uterus of the gravid proglottid has 15-30 lateral branches on the each side of the central stem in contrast to that of *T. solium* with only 7-12 lateral branches. Gravid proglottid may contain around 100 000-200 000 eggs, each being approximately circular with a smooth thick shell, and measuring 30-50×20-30µm.

Diagnosis:

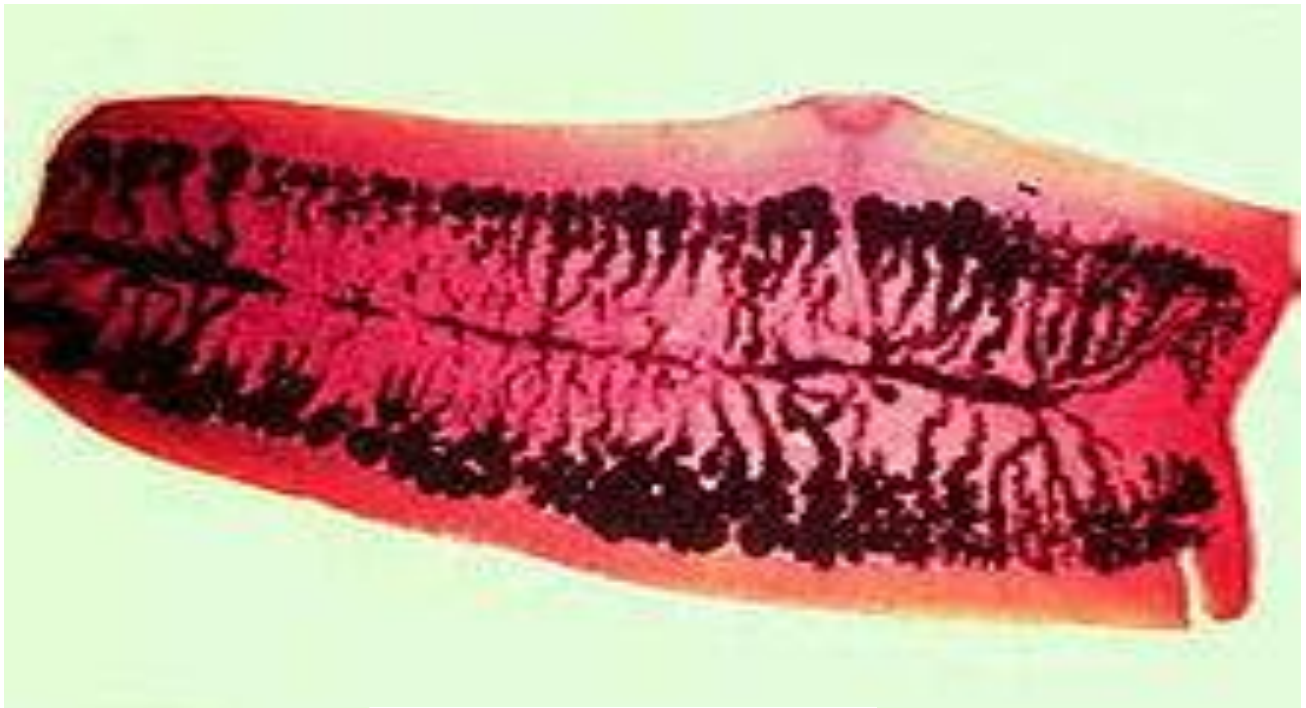
- 1- Postmortem examination.
- 2- Immunoserological tests.
- 3- In human, the presence of tapeworms is recognized by the passage of proglottids and/or eggs in faeces.



Adult worm of *Taenia saginata*



scolex of *Taenia saginata*



Gravid segment of *Taenia saginata*

Taenia solium

Class: Cestoda

Family: Taeniidae

Common name: Human pork tapeworm

Final host: man

Intermediate host: pig, wild boar, rarely dog and man

Predilection site: small intestine (final host); muscle (intermediate host).

Morphology, Gross:

The adult tapeworm is 3-5 m long with a scolex, typically Taeniid, having a rostellum with four suckers and armed with two rows of 22-32 hooks, while the uterus of the gravid segment has 7-13 lateral branches. Adults can survive in human for many years.

Microscopic:

Mature proglottids:

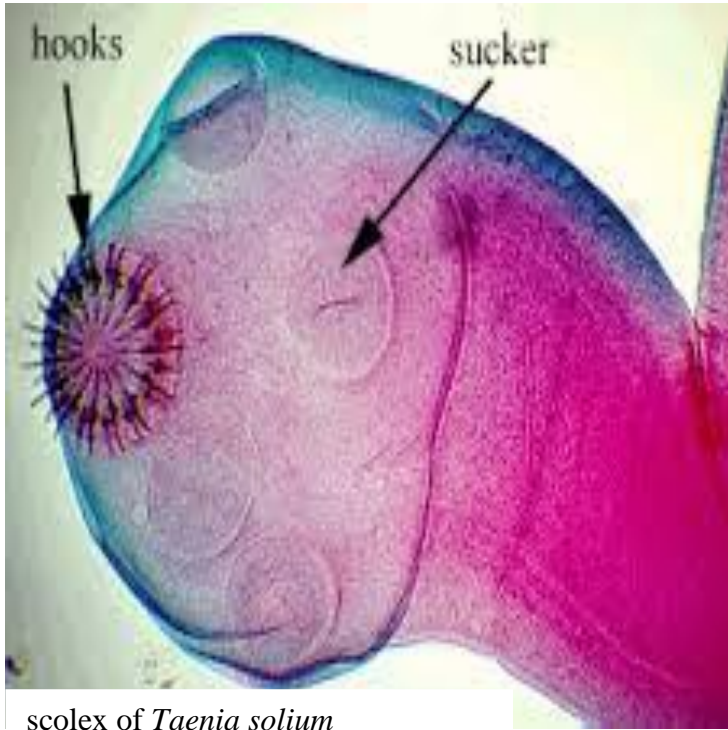
These are present in the middle regions of the body and squarish in shape. These are provided with male and female reproductive organs making them hermaphrodite. A mature proglottid is a complete reproductive unit and produces eggs which are fertilized by its own sperms (self-fertilization) or by those of other mature proglottids (cross-fertilization)

cysts are milky white and have a scolex bearing a rostellum and hooks similar to the adult.

Diagnosis:

- 1- Meat inspection in pigs.
- 2- In human the diagnosis of cerebral cysticercosis depend primarily on the detection of cysticerci by CAT (computerised axial tomography) scanning techniques, and on the finding of antibodies to cysticerci in the cerebrospinal fluid.

Cestodes
Lab6



scolex of *Taenia solium*

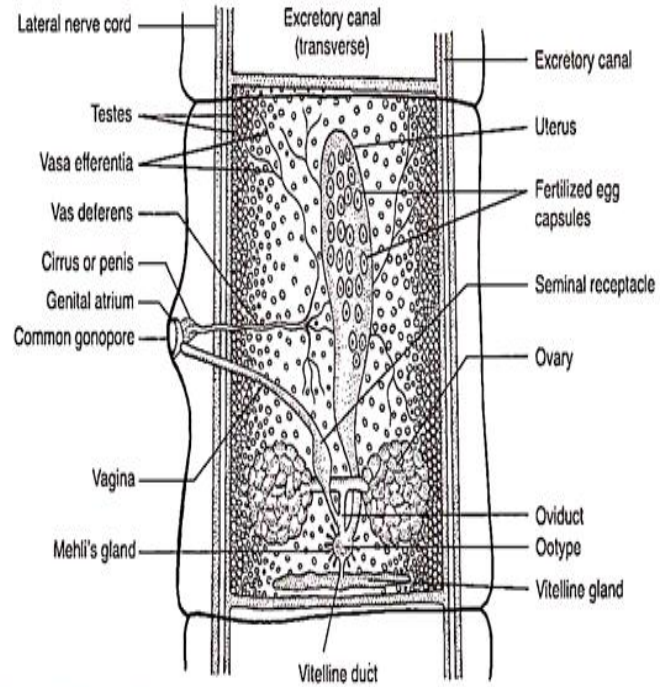


Fig. 7.3: *Taenia solium*. Reproductive structures in a mature proglottid

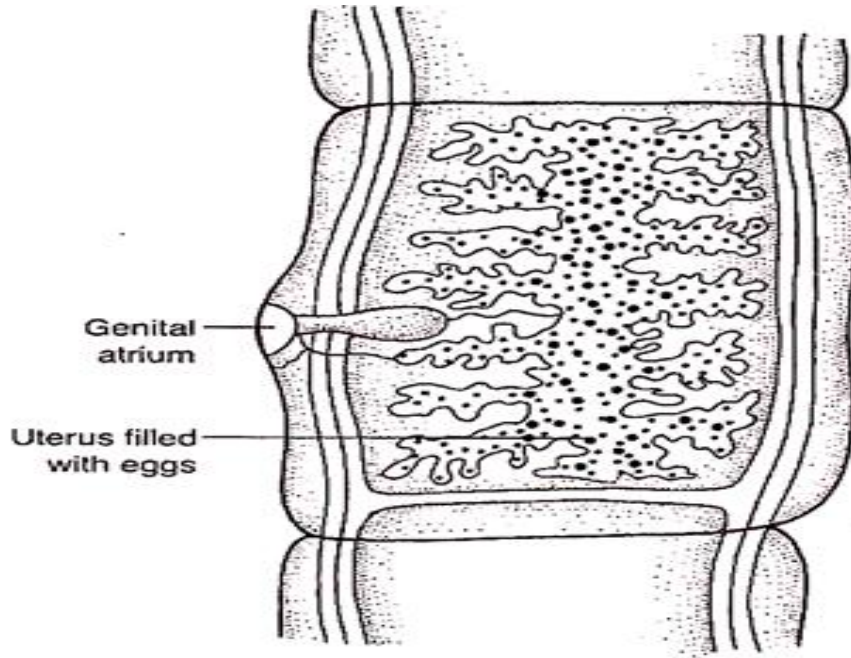


Fig. 7.4: *Taenia solium*. A gravid proglottid showing branched uterus