

Taenia Solium

Life history of Taenia Solium :-

Taenia Solium is a digenetic parasite because it completes its life cycle within two hosts, one is

a) Primary host - human b) Secondary host - pig

Taenia Solium is a hermaphrodite animal because it carries both male and female reproductive system togetherly.

i) Eggs :-

- Each egg is roughly 30-45 μm in diameter.

- The eggs have a thin outer hyaline membrane.

- This membrane gives a thick protective layer called "embryophore".

- The embryophore surrounding the fully developed embryo of the egg called "oncosphere".

- The embryophore is yellow brown in colour.

ii) Fertilization :-

- Self fertilization take place.

- The eggs are fertilized in the oviduct and get surrounded with yolk and egg shells.

iii) Cleavage :-

- The first cleavage is unequal so that a large megamere and small micromere is formed.

- Micromere cell undergo repeated division and a solid ball of cell - morula is formed.

- The megamere forming an outer or peripheral layer of the embryo. So megamere ultimately formed and enveloped called 'embryophore'.

iv) Hexacanth larva :-

- The micromere developed into a hexacanth or oncosphere larva.
- Six hooks develop in the posterior part of the embryo.
- The whole structure containing the embryonic cell, embryophore and egg shells is called "oncosphere".

> Infection to the Secondary Host - Pig :-

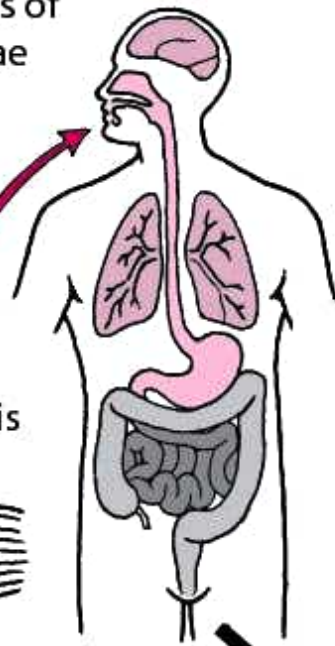
- Affected human releases oncosphere larva with the faeces.
- As secondary host pig, during eating, they take contaminated food with oncosphere larva.
- In the stomach of the pig the egg ~~at~~ shells and embryophore get digested as a result hexacanth ~~larva~~ embryo is released.
- The embryo with the help of its hook bores into the wall of the gut and reaches the blood stream.
Then it ~~reaches~~ reaches the voluntary muscles or tongue or any other muscular tissue via heart and become encysted.
- A large cavity filled with watery fluid is formed inside the cyst, it looks like a bladder like appearance.
- At one point in the bladder an invagination occurs, this invagination is called scolex.
- The embryo associated with scolex is called "Cysticercus larva" or "bladder worm". It doesn't develop further.

> Infection to primary host - human :-

- Pork meat infested with bladder worms is spotted in appearance if such imperfectly cooked meat is eaten, the bladder worms enter the body of human.
- The scolex is everted and attach itself to the wall of the intestine and develop the neck and buds ~~off~~ off proglottid. As a result, an adult tape worm is formed.

People eat raw or undercooked pork containing cysts of tapeworm larvae (cysticerci)

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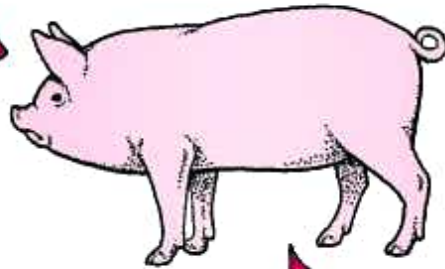


In the intestine, cysticerci mature into adults, which attach themselves to the wall of the intestine



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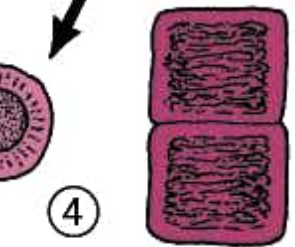
Adult worms produce segments that bear eggs (called proglottids), which may release eggs or detach from the tapeworm



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Pigs or people are infected by ingesting eggs or the egg-bearing proglottids

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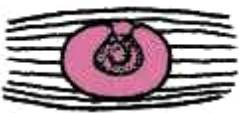


Eggs or the detached proglottids are passed in stool

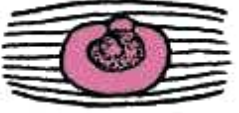
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The spheres travel to muscles and other organs and develop into cysts

Cysticercosis in people



Cysticercosis in pigs



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Eggs develop into spheres, which invade the wall of the intestine

