A PROJECT ON LIFE CYCLE OF TAENIA SOLIUM

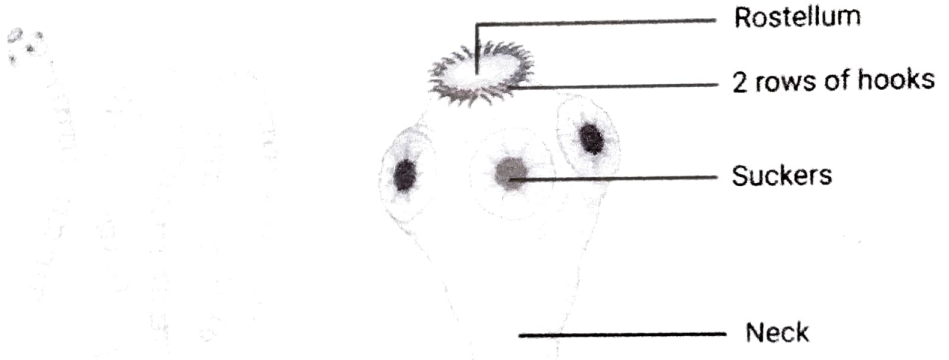
(Submitted for partial fulfilment of B.Sc 1st sem Zoology Honours curriculum of D.U.)

TO,

The department of Zoology

N.N Saikia College, Titabar

Taenia solium- Classification, Habitat, Structures, Body wall



Adult *Taenia solium* Scolex

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CERTIFICATE

This is to certify that "Bikash Chutia" student of class BSc 1st semester "Zoology" has successfully complited their zoology project on "Life cycle of taenia saleium" under the guidance of "Miss Mitali Chetia" I found her sencerity during the entire period of her experiment. I cwish her bright future.

Dept of Zoology
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INTRODUCTION

Taenia solium or pork tapeworm is an endopara site of man. The life cycle. Taenia Solium is indirect. It passes through pigs, as intermediate hosts, into human as definitive host. Disease due to the tapeworm Taenia Solium. Occurs in two forms: taeniasis and Cysticercosis. Taeniasis is the intestinal infection with adult tapeworms. It is a mild disease, but of significant public health importance as it plays a crucial role in the transmission of cysticercosis, a serious disease cysticercosis, a serious disease. Cysticercosis is the infection with the Larval stage (cysticerci) of the tapeworm. Inside the body; cysticerci can develop in a number of tissues, those that located in the central nervous system cause neurocysticercosis the most severe from the disease.

AIM: To study the life cycle of Taenia solium.

MATERIALS: Note book, Pen, Pencil and Scale, Text book.

TAENIA SOLIUM IS PLATIHELMENTHIS

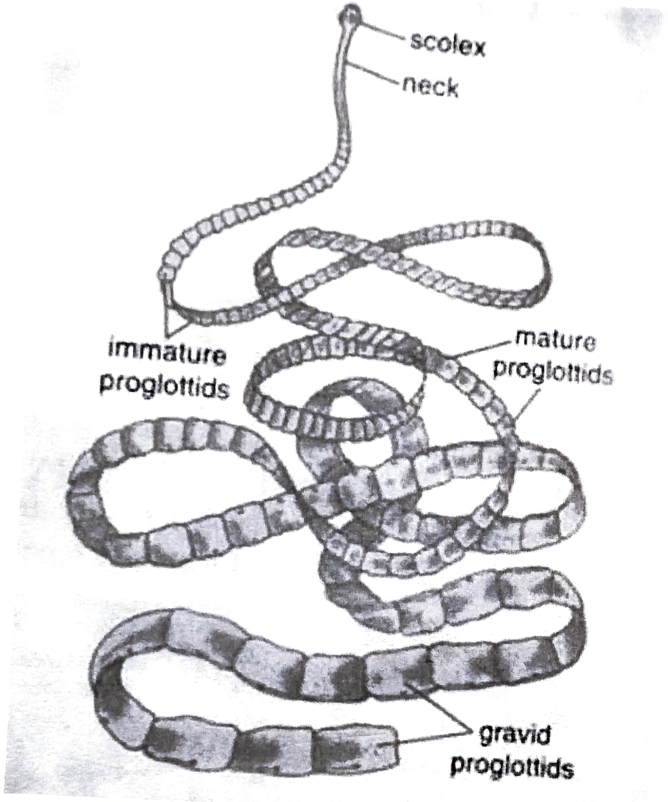
Taenia solium is a tapeworm species of class cestoda of phylum platyhelmenthes, it is commonly called pork tapeworm. The organisms belonging to phylum platyhelmenthes have a dorsoventrally flattened body, hence are called flatworms. Flatworms are bilateraly symmitrical, triploblastic and acoelomate animal with organ level of organisation. For example, Taenia (Tapeworm), Fasciola (Liver fluke). Platyhelmenthes are acoelomate that are characterized by having three germ layers (ectoderm, mesoderm & endoderm). They are found in marine, fresh water and even damp terrestrial environments. So, Taenia Solium is platyhelmenthes.

Features of Phylum platyhelmenthis —

- Firstly, they are parasites and free living.
- The symmetry of the organism in this phylum is bilateral.
- They have three germ layers and are known as triploblastic organisms.
- As they don't have cavities in them so recognized as acoelomates.
- They lack cilia and have a soft covering over their body.

- Platyhelmenthes lack segmentation so no segments can be seen in them and are dorsoventrally flattened

TAENIA SOLIUM



TAENIA SOLIUM CLASSIFICATION

Phylum ——— Platyhelmenthes
Class ——— Cestoda
Sub-Class ——— Eucestoda
order ——— Taeniadea
Family ——— Taenidae
Genus ——— Taenia
Species ——— Solium

HABITAT:-

Taenia solium is found nearly worldwide. Because pigs are intermediate hosts of the parasite. completion of the life cycle occurs in regeons where humans live in close contact with pigs and eat under cooked pork.

STRUCTURE:-

Taenia Solium cysticerci are fluid-filled cystic structures consisting of a thin bladder wall and parenchymatous portion containing a single invaginated scolex surrounded by a convoluted spiral canal. The hooks of the armed scolex may be visible in tissue sections

BODY WALL:-

The body wall of Taenia solium consists of outer tegument and inner basement membrane Basement membrane includes both the musculature and the packing material called parenchyma Taenia

consists of two types of muscles namely longitudinal and circular muscles.

CHARACTERISTICS:

I) Taenia Solium is better known as the pork tapeworm. It is usually opaque white in colour but creamish, yellowish or grayish colouration is also common.

II) Body is 1 to 5 meters long and flattened like a ribbon or tape.

III) It has a 1 to 2 mm size head.

IV) Scolex has two rows of hooks and rounded mobile cone that is the rostellum.

V) The neck of the tapeworm is short and thin and unsegmented.

VI) Near the neck the proglotid contain the male sexual organ. In the middle of the tapeworms length the proglotids contain the female sexual organ in the terminal position.

TAENIA SOLIUM ARE PARASITIC:

It is a tapeworm that uses humans as its definitive host and pigs as the intermediate or secondary host. It is transmitted to pigs through human feces that contain the parasite eggs and contaminate their fodder. Humans can become infected with these tapeworms by eating raw or undercooked beef (T. Sagenata) or pork.

people with taeniasis may not know they have a tapeworm infection because symptoms are usually mild or nonexistent.

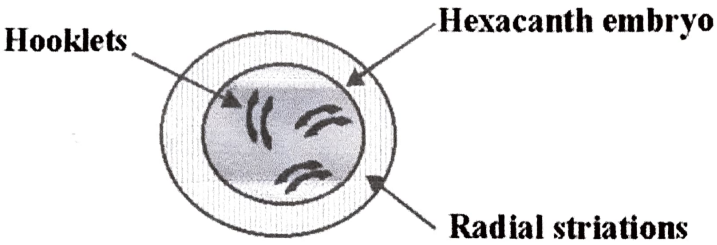
Taenia Solium tapeworm infections can lead to cysticercosis, which is a disease that can cause seizures, so it is important seek treatment

Human:- Taenia Solium completes its life cycle in humans are the definitive or primary host. Taenia Solium cysticercosis results from humans acting as accidents intermediate hosts for the parasite.

Pig:- Taenia Solium is found nearly world wide because pigs are intermediate hosts of the parasite completion of the life cycle occures in regions where humans live in close contact with pig and eat undercooked pork

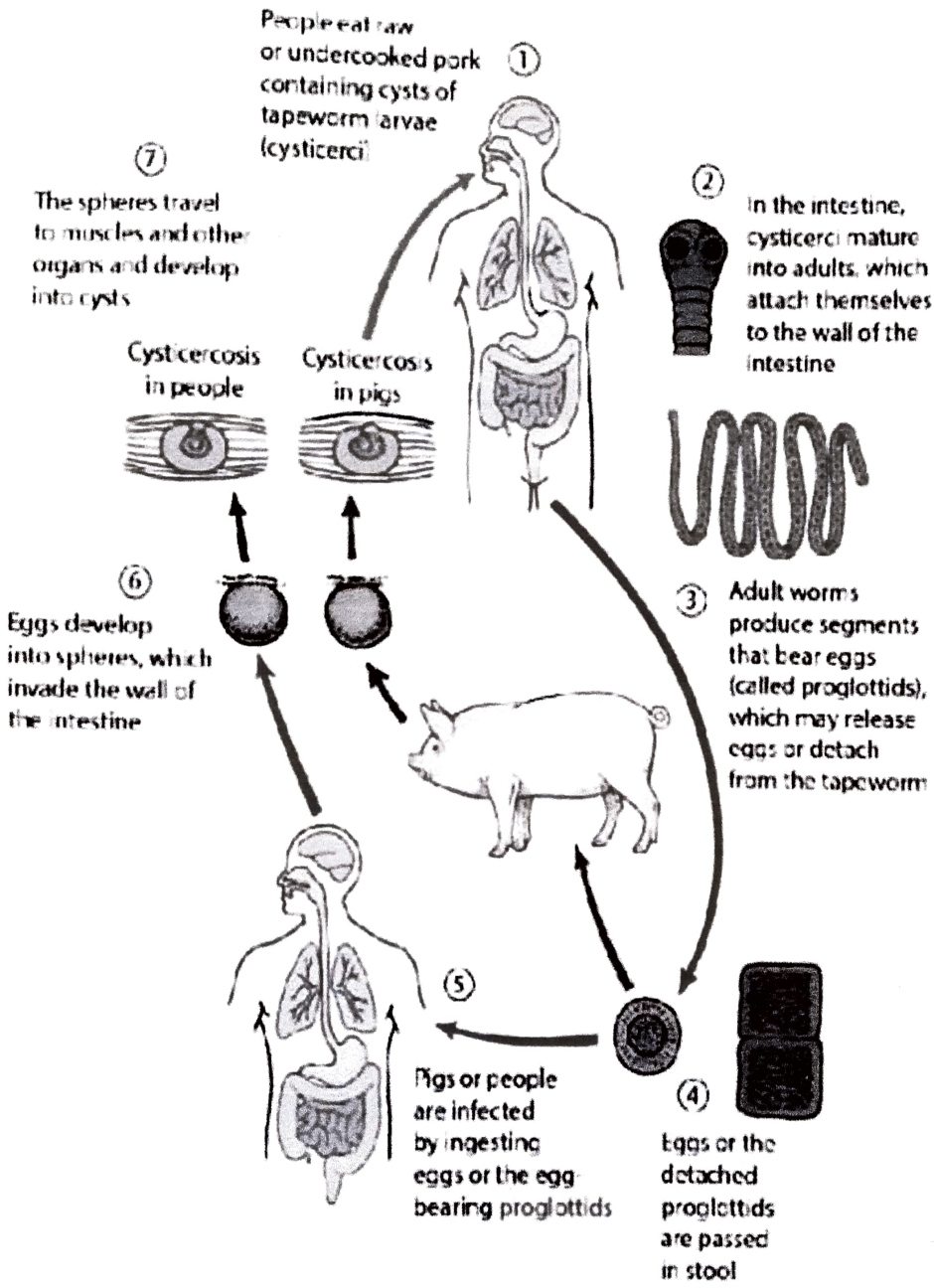
TAENIA SOLIUM EGGS:-

Taenia species



Tapeworm eggs passed in the faeces with the tapeworm carrier are infective for pigs. Each egg is round, brown in colour, measure 40-50 um in diameters. Each eggs consists of two shells. The outer shell is thin, transparent and represent the remnant of yolk mass. Eggs are may also infect human if they are ingested by a person, causing infection with the larval parasit in the tissues.

TAENIA SOLIUM LIFE CYCLE :-



Life cycle of Taenia Saleum:-

Infected humans excrete eggs or gravid proglotids in their faecal matter can the parasite from the gastro intestinal tract to nearly vegetation in the form of eggs or gravid proglottids. Pathogenecity of Taenia Saleum in human tapeworm infection may occures in the intestine by the adult tapeworm large cysticercosis. Taenisis is acquired by human by ingestion of cysticerci. Larva under cook pork. The larva resides in the intestine matures and releases a learning segments which are release along with feces

Taeniasis is usually a symtomatic. A symtomatic when the tapeworm are fully develop in the intestine. It may leads to abdominal discomfort anemia indigestion diarrhea or constipation. cysticercosis develops when the proglottids or AIDS are ingested and developing larva migrate to different parts of body and from cysts in tissues. This happens in pig but can also affect humans. Humans are infected with tapeworm by ingestion of under to cook meat of an infected intermediate hosts or by drinking contaminated water and eating under cook vegetables infected with tapeworm eggs.

TAENIA SOLIUM DISEASE:-

Cysticercosis:-

Viable cysticerci in most organs cause minimal or no tissue reaction but dying cysts in the central nervous system antigens that elicit an intense tissue response. Thus symptoms often do not appear for year after infection.

Diagnosis:-

Intestinal Infection with Taenia Solium worm can usually be deagnosed by microscopic examination of stool samples & identification of ova & proglottids. However the ova are indistinguishable from those of Taenia Saigenata and Taenia asiatic.

PREVENTION & CONTROL:-

1. Avaidance of eating raw or insufficiently cooked pork.
2. Infection of pork for cysticerci
3. proper sanitation facilities.
4. proper hand hygiene.
5. Treatment of infected person.
6. Avaidance of food contaminated with eggs of Taenia Saleium.

CONCLUSION

This survey points to a focal distribution of taeniases / cysticercosis and suggests that human cysticercosis is rather acquired due to close contact with Taenia Solium carrier and self infection, than through infection from the environment.

Reference :-

* writer name —

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* https://www.study.and scores.com