

Quadrant II – Notes

Programme: Batchelor of Science (First year)

Subject: Zoology

Paper Code: ZOC 101

Paper Title: Diversity of Non-Chordates and Cell Biology

Unit: 4

Module Name: Life History of *Taenia solium*

Module No: 18

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NOTES

Life history of *Taenia solium*

Taenia solium also known as pork tapeworm is a digenetic endoparasite. It is cosmopolitan in nature. Body is long, narrow, dorsoventrally fattened, 3-5 meters long.

Life history of *Taenia solium* is completed in 7 stages:

1. Copulation and fertilization: *Taenia solium* reproduces by self-fertilization. It can occur between same or between different proglottids.
2. Capsule formation: Zygote and yolk cells gets surrounded thin shell, forming capsule.
3. Fertilized eggs
4. Development: Included cleavage and morula formation and formation of hexacanth and onchosphere.
5. Infection of secondary host: onchospheres is released from the body of the body of the host through its faeces. Because of coprophagous feeding habit of Pigs onchospheres gets transferred to pigs through hosts stool. Once onchosphere

reaches its intestine hexacanth is released which then travel throughout pig's body and gets deposited in muscle tissue.

6. Development of bladderworm: Hexacanth larva develops into bladderworm with inverted prosclex. Bladder worm do not develop further in pigs.
7. Infection to the primary host: people who eat pork get infected by *Taenia solium* by eating raw or imperfectly cooked meaty pork. Once inside human intestine prosclex everts out and gets attached to intestine. The neck begins to produce proglottids by budding.

Disease and treatment:

Taenia solium causes taeniasis which is characterized by symptoms like nausea, abdominal pain and nervous disorders, leading to the acute weakness, anaemia due to indigestion and eosinophilia. Cysticercosis is fatal infection of *Taenia solium*.

Drugs such as Camoquin, Quinacrine, carbon tetrachloride, antiphon, Yomesun, Dichlorophen, etc., are used for extermination of taenia from human intestine. Scolex is detached from the host's intestine by surgery. Preventive measures against infection of *Taenia solium* include proper cooking, sterilization of nightsoil and personal hygiene.

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