TOPIC: PLATYHELMINTHES:GENERAL CHARACTERISTICS(IV)

LECTURE NO:25
B.SC PART 1
ZOOLOGY(HONS.)-PAPER I-GROUP A
CHAPTER 7
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Class- Cestoda (Gr., *kestos*- girdle + *eidos*- form) - The Cestoda, commonly called tapeworms, is segmented, ribbon like parasites usually found as adults in the small intestines of vertebrate animals. Unlike the other classes, they have no digestive tract, they can absorb predigested nutrients from the host's intestine. The body consists of a long chain of segments, each with its own reproductive system. The anterior end is a knob-like holdfast called a scolex, equipped with suckers and often hooks for attachment to the host's intestine. In general, tapeworm infections are not as medically serious as trematode infections, but some tapeworms can be lethal.

Endoparasitic flatworms, called tapeworms.
Body segmented, elongate, flat, ribbon-like.
Tegument with microvilli

Scolex (head) with suckers, or hooks, or both.
No alimentary canal.
No sense organs.
Each mature segment or proglottid monoecious, with male and female organs.
Life cycle complicated involving one or more intermediate hosts.
Embryos with hooks.

Class- Cestoda classified into two subclasses:

A. Subclass - Cestodaria

Body unsegmented, leaf- like, without scolex and strobila (monozoic or body undivided).
Only one set of monoecious reproductive system.
Larva lycophore with 10 hooks.
Subclass – Cestodaria divided into two orders.

Order - Amphilinidea

No suckers.
Pharynx protrusible.
Male genital pore and vegina situated posteriorly.
Uterus coiled.
Endoparasitic in coelom of primitive fishes. Example: *Amphilina*.

Order- Gyrocotylidea

An anterior sucker and a posterior rosette- shaped adhesive organ present.
Eversible proboscis at the anterior end.

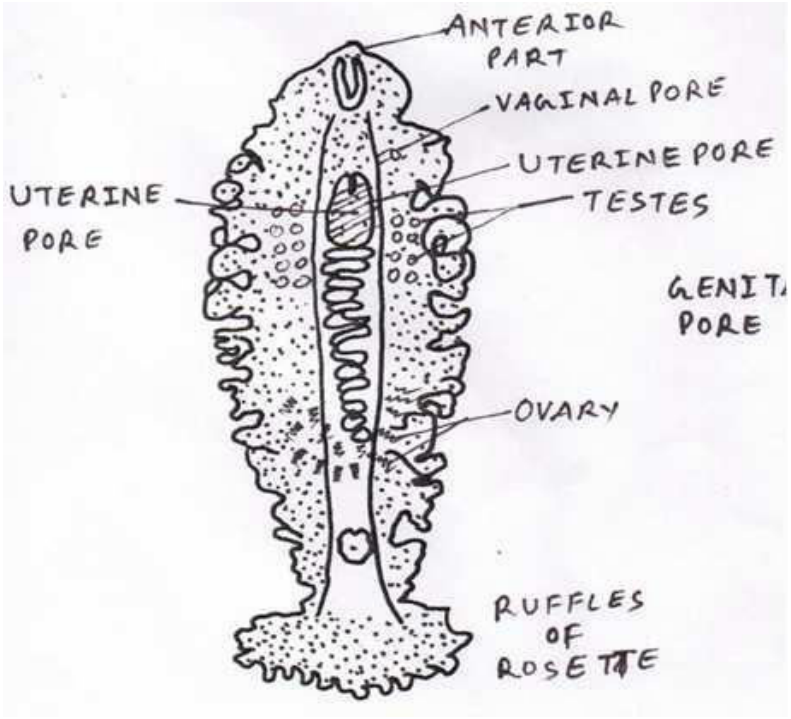

Fig.11 Gyrocotyle

Endoprasites in chimaeroid fishes.

Example: *Gyrocotyle (Fig11).*

B. Subclass - Eucestoda

Body long, ribbon- like.

Divided into scolex, neck and strobila with many proglottids (polyzoic).

Mostly with several sets of monoecious reproductive organs.

Larvae with six hooks.

Class- Eucestoda classified into eleven orders:-

Order - Proteocephalidea

Scolex with 4cup- shaped suckers.

Ovary bilobed.

Utrus branched.

Vitellaria scattered.

Parasitic in freshwater fishes, amphibians and reptiles. Example: *Proteocephalus, Ophiotaenia.*

Order - Tetraphyllidea

Scolex with 4 leaf - like bothria.
Testes anterior to ovaries.
Vitelline glands scattered.
Parasitic in intestine of elasmobranches fishes.

Example: *Phyllobotheium.*

Order - Disculicepitidea

Scolex with large cushion- like pad at anterior end.
Female gonopore, anterior to male gonopore.
Testes numerous.
Uterus lobed.
Endoparasites of Selachii.
Example: *Disculiceps.*

Order - Lacanicephaloidea

Scolex divided by a transverse groove.
Upper disc- like lower with 4 suckers.
Vitellaria as two lateral bands.
Intestinal parasites in elasmobranch fishes. Example: *Lecanicephalum, Tetragonocephalum.*

Order - Pseudophyllidea

Scolex with 2 to 6 bothridia.
Testes numerous.
Ovary bilobed.
Vitellaria follicular.
Parasitic in freshwater fisher (teleosts).

Example: *Dibothriocephalus, Haplobothrium.*

Order - Trypanorhyncha

Scolex with 2 to 4 bothria and 4 spiny tentacles.

Vitellaria in continuous layer in cortical parenchyma.

Parasitic in

elasmobranch fishes.

Example:

Tetrachynchus.

Order - Cyclophyllidea (=Taenioidea)

Scolex with 4 large deep suckers and hooks.

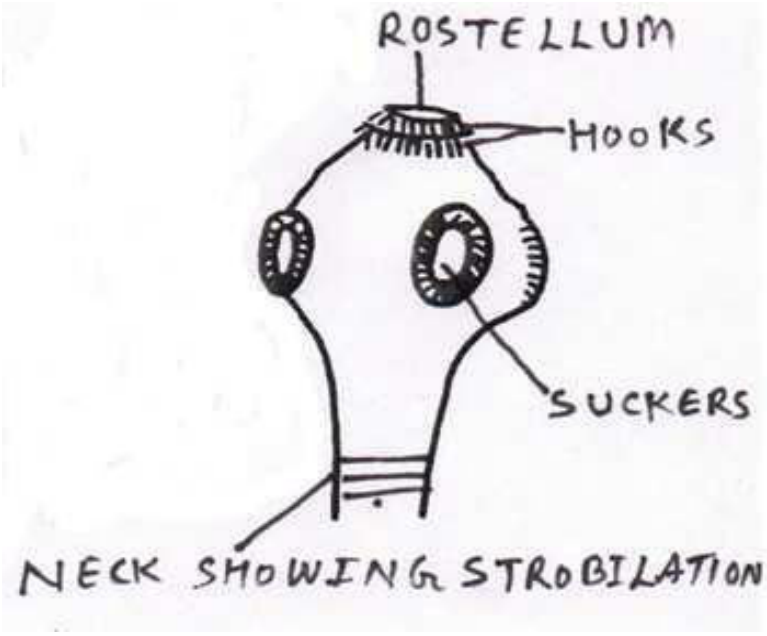

Fig.12 Head Region

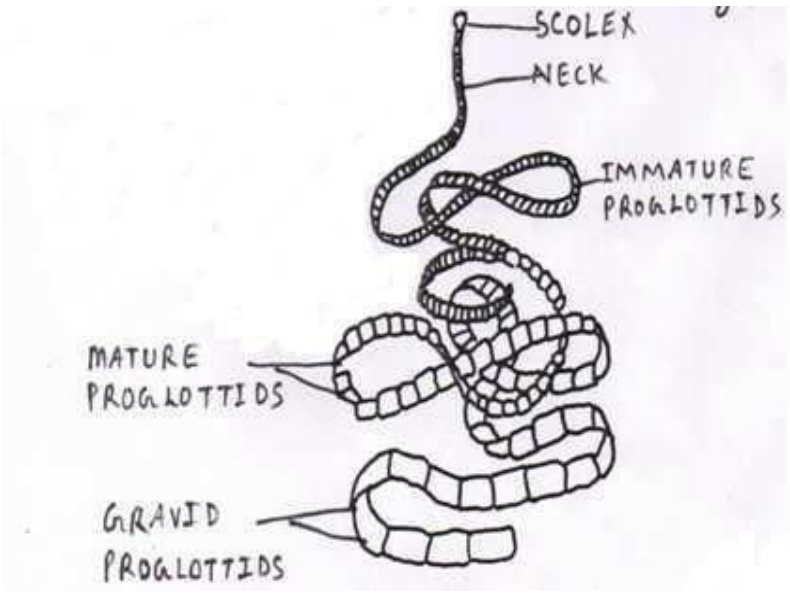

Fig 13 Teania Solium

Ovary lobed.
Uterus blind.
Vitellaria follicular.
Parasitic in amphibians, reptiles, birds and mammals.
Example- *Taenia (Fig.13, 14), Moniezia, Echinococcus (Fig.14), Dipylidium, Hymenolepsis.*

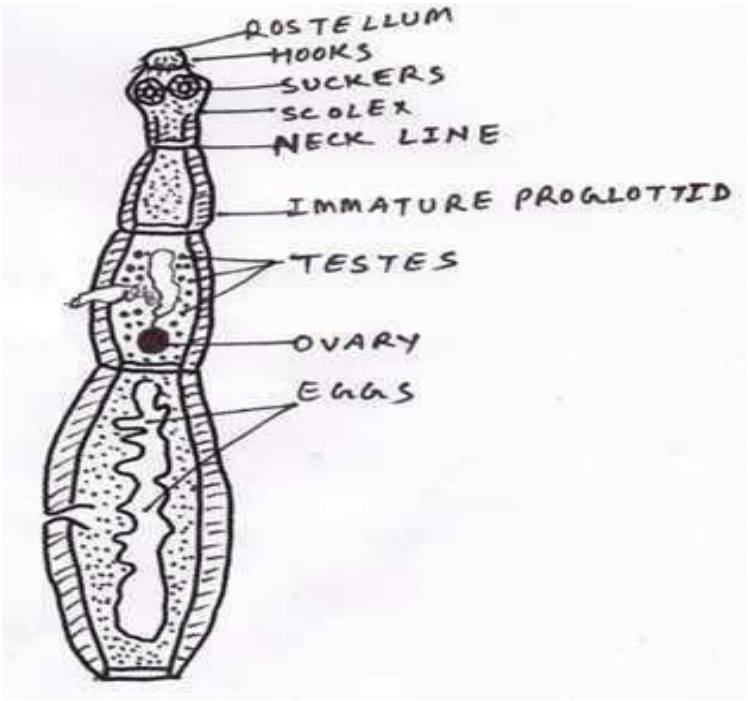

Fig.14 Echinococcus Granulosus

Order - Aphoridea

Scolex with 4 suckers.
Rostellum armed.
No external segmentation.
Ootype absent.
Vitallaria absent or present.
Sex ducts and genital apertures absent.
Parasites in freshwater
fishes of Japan. Example:

Nematoparataenia,
Gastrotaenia.

Order - Nippotaeniidea

No scolex but well- developed erminal sucker.
Proglottids few.
Vitellaria few.
Parasites in freshwater
fishes of Japan. Example:
Nippotaenia,
Amurotaenia.

Order - Caryophyllidea

Scolex without ture suckers or bothria.
Eggs non- embryonated when laid.
Parasites in fishes.

Example: *Caryophyllaeus, Archigetes, Glaridacris*.

Order- Spathebothridea

Scolex without suckers or bothria.
Testes are medullary.
Ovary median.
Parasites in
primitive fishes.
Example:
Spathebothrium.