TOPIC: PLATYHELMINTHES:GENERAL CHARACTERISTICS(III)

LECTURE NO:24
B.SC PART 1
ZOOLOGY(HONS.)-PAPER I-GROUP A
CHAPTER 7
DATE:3RD JULY 2020
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B. Class- Trematoda (Gr. *Tremta*- hole + *eidos*- form) – The class Trematoda, commonly called flukes, are unsegmented parasitic flatworms that usually parasitize a snail as an **intermediate** host (in which they reproduce asexually) and a human or other vertebrate as a **definitive** host (in which the worms mate and lay eggs). Many species have other hosts between these two, such as fish or frogs. Trematodes usually have a pair of suckers for crawling and clinging to the host's tissues. Many humans are infected with blood flukes, liver flukes, lung flukes, and other trematode parasites of great medical importance.

1 Ecto- or endoparasitic flatworm, called flukes.

Body unsegmented, dorso-ventrally flattened, leaf like.

Tegument thick but without cilia and rhabdites.

Suckers and sometimes hooks present.

Alimentary canal with anterior mouth, simple pharynx and two main branches.

Three pairs of longitudinal nerve cords.

Mostly monoecious (Hermaphrodite).

Development direct (in ectoparasites) or indirect (in in endoparasites) with alternation of hosts.

Life history simple or typical.

Ovary single and testis two too many.

Class- Trematoda divided into three orders:-

1.Order - Monogenia

Mostly ecto-parasitesim cold blooded aquatic vertebrates.

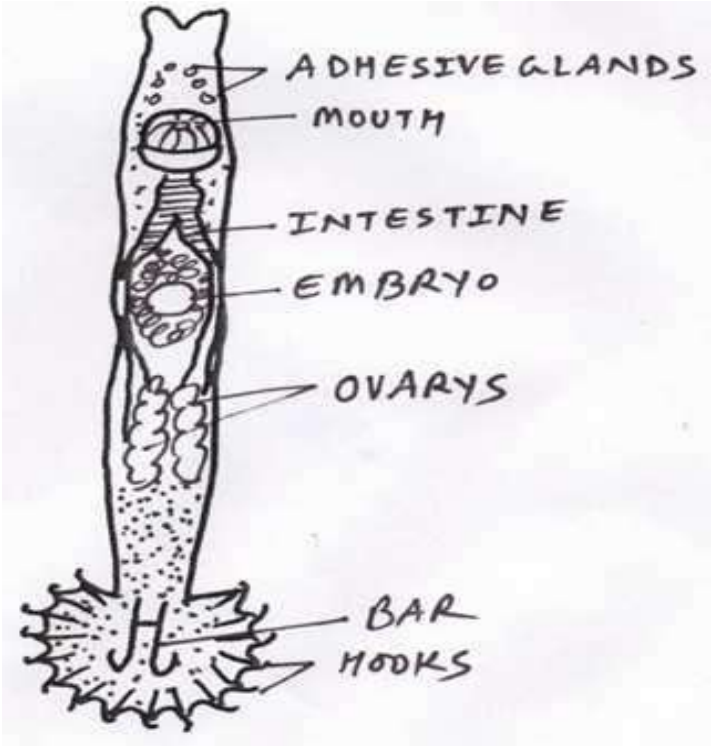

Fig.5 Gyrodactylus

Posterior adhesive organ or opisthaptor with suckers armed with hooks or spines.

Excretory pores two, situated anteriorly on dorsal side.

Vagina one or two.

Uterus small with a few shelled eggs.

Only a single host in life cycle.

Free swimming ciliated larva called onchomiracidium.

One host in life cycle.

E.g. Gryodactylus (Fig.5), Dactyogyrus, Polystoma, Diplozoon

2. Order - Digenea

Mostly endoparasites in vertebrates and invertebrates.

Two suckers, oral and acetabulam, both devoid of hooks.

Single posterior excretory pore.

No vagina.

Uterus long with numerous shelled eggs.

Life cycle complex with numerous larval stages in two to three intermediate hosts.

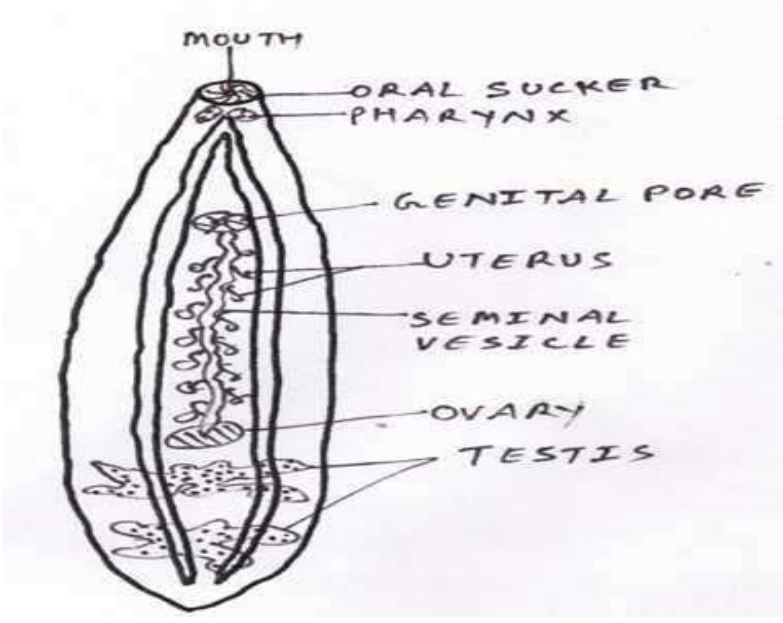

Fig.6 Opisthorchis Sinensis

Larval forms reproduce asexually before metamorphosis.

One to more intermediate hosts in life cycle.

Examples: Bucephalus, Fasciola hepatica (Fig.9), Fasciola gigantica (Fig.8) Param- phistomum, Paagonimus, Schistosoma (Fig.7), Opisthorchis (Clonorchis, Fig.6).

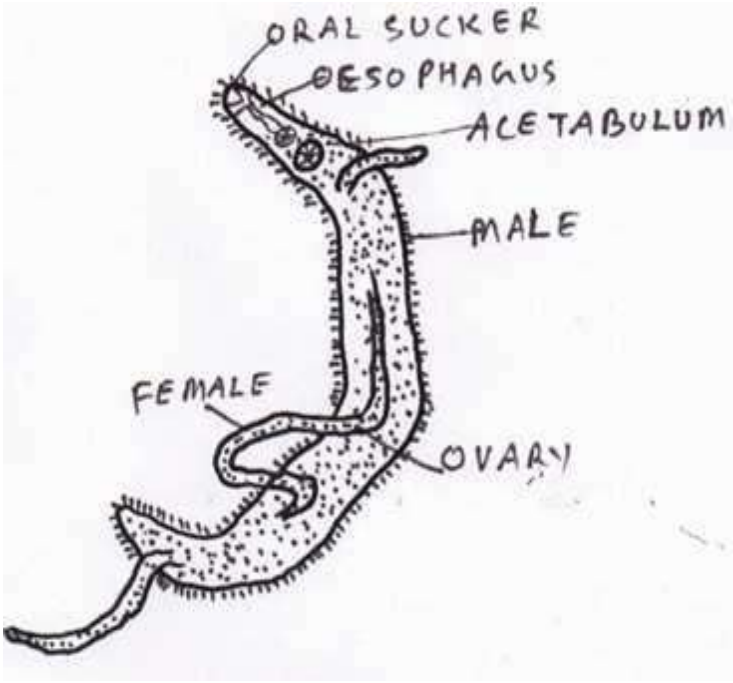

Fig.7 Schistosoma

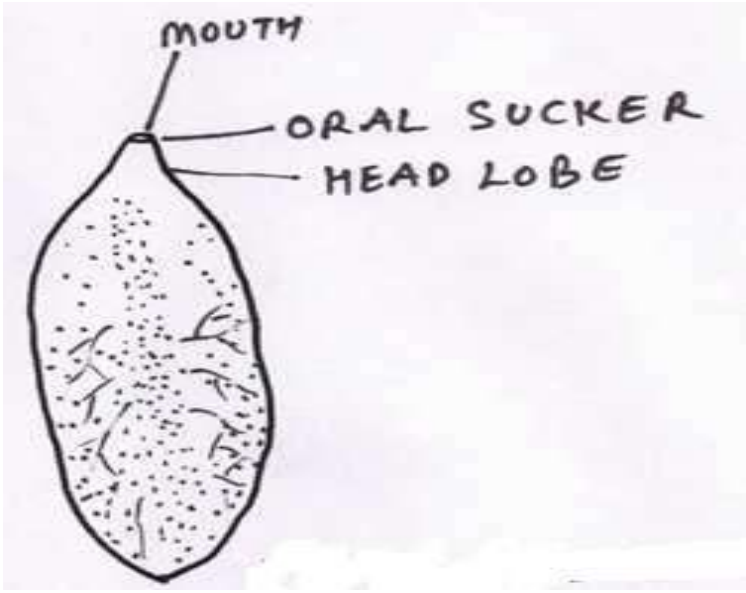

Fig.8 Fasciola Gigantica

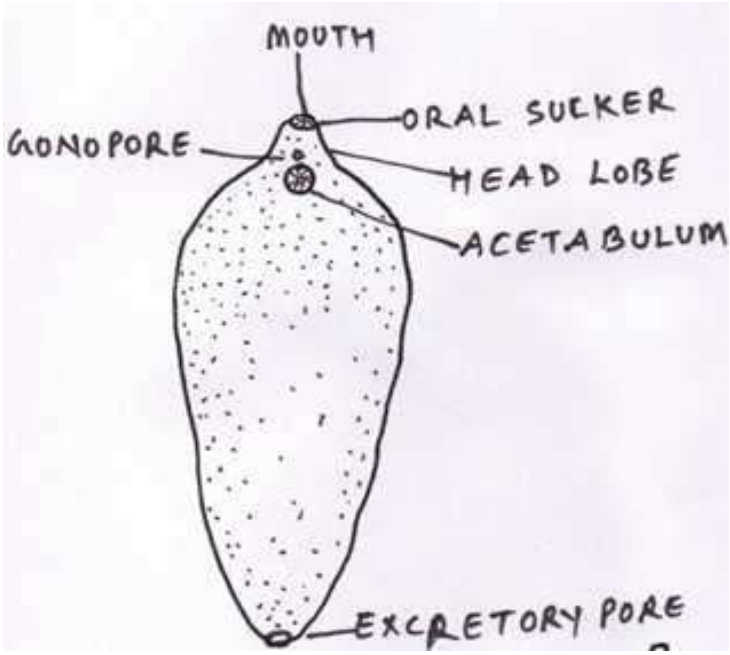

Fig.9 Fasciola Hepatica

3.Order - Aspidocotylea

Oral sucker absent.
Large ventral sucker subdivided into several suckers without hooks.
Anterior end without paired adhesive structures

Only one testis in male system.

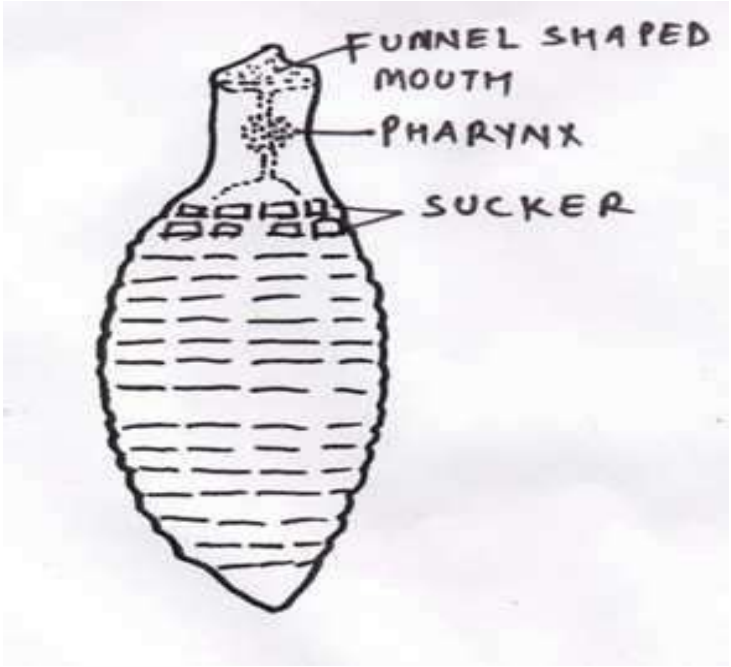

Fig.10 Aspidogaster

Endoparasites in gut of fishes and reptiles.
Nephridiopore single.
Life cycle simple.
Example: Aspidogaster (Fig.10), Cotylapsis, Stichocotyle.