Parasitic Diseases of Fish III

Velvet Disease

- Velvet disease is a fish disease caused by the **dinoflagellate** parasites of the Class Flagellata.
- In freshwater fish Velvet is caused by either *Oodinium pilularis* or *Oodinium limneticum*, in marine fish by *Oodinium ocellatum.*
- Oodinium is special kind of protozoa as it is a plant unit.

Velvet Disease

Symptoms

- Scratches against hard objects
- Fish is lethargic
- Loss of appetite and weight loss
- Rapid, labored breathing
- Fins clamped against the body
- Fine yellow or rusty colored film on the skin
- In advanced stages, skin peels off

Velvet Disease

- **Treatment:**
  Since Oodinium are plant-like, it should not be treated with medications used in the case of infestation by animal-like protozoan.

  Sera Oodinopur
  Sera Aqutan
  During the treatment with sera Oodinopur check the concentration of copper in the water (it should not exceed 0.3 mg/L). All invertebrates should be removed from the aquarium.

  Malachite Green
  Copper sulphate
  Bicillin – 5
  Basic Violet K

Other protozoan diseases:

- Hexamitiosis
- Cryptobiosis
- Coccidiosis cyprini
- Trichdiniosis
- Apiosomosis
- Oodiniosis

HELMİNTH DİSEASES

Dactylogyrosis (Gill fluke)

- Dactylogyrosis is a parasitic disease caused by species of genus dactylogyrus, affecting the fresh water & marine water fishes characterized by respiratory manifestation.

Dactylogyrosis (Gill fluke)

- The disease caused by the genus Doctylogyrus.
- The genus belongs to monogenetic trematodes.
- There are several recognized species from Dactylogyrus, which they parasitized on freshwater and marine fish. These species are *D.vastator, D.extensus*, *D.anchoratus*, *D.lamellatus* etc.).
- All Dactylogyridae are oviparaus with no uterus. They known as gills flukes because of most are located on the gills of their host.

Dactylogyrosis (Gill fluke)

Clinical and pathological signs:

- Infected fish become restless and collect in large number at water inlet.
- The gills are pale, sometimes mosaic-patterned & covered with mucus.
- Dark coloration can appear among the diseased fishes.
- At the point of attachment of the parasites there is destruction of the epithelium & disruption of tissues.
- The edge of the gill has grayish coloration & appears clotted & the opercula appear to be somewhat opened. Hyperplasia and necrosed of the gills may occur.

- The diseased fish is treated with:
- a. Sod. Chloride
- b. Mebendazole
- c. Acetic acid
- d. Formalin

Diphyllobothriasis (Fish Tapeworm Disease)

- The cestode *Diphyllobothrium latum* (the fish or broad tapeworm), the largest human tapeworm.

- Several other Diphyllobothrium species have been reported to infect humans, but less frequently; they include *D. pacificum*, *D. cordatum*, *D. ursi*, *D. dendriticum*, *D. lanceolatum*, *D. dalliae*, and *D. yonagoensis*.

Diphyllobothriasis

- The disease is dangerous in one year old carp and stops the development of young fish.
- Many parasites inflate the abdomen of the fish.

- **When the abdominal cavity is opened, parasites are easily seen in the intestinal wall.**

Sanguinicolosis

- *Sanguinicola* is a trematode living in the gill arteries of fish.
- Also known as **bloodworm disease.**
- The most important types are *S. inermis, S. armata, S. intermedia*

Sanguinicolosis

- Mature parasites live in bulbus aorta and gill vessels.
- The released eggs, through the blood circulation come to gills, heart muscle, liver and kidneys. Parasite is sometimes found in other organs.
- A large number of eggs make obstruction inside gill vessels and capillaries and cause die due to thrombosis.

Sanguinicolosis

- Cap-shaped appearance is very characteristic.

Other helminth disease of fish:

- Diplozoosis
- Khawia sinensis
- Caryophyllosis
- Triaphorus

Other helminth disease of fish:

- Liguosis
- Bothriocephalosis
- Diplostomatosis
- Philometrosis
- Acanthocephalosis
- Piscicolosis