

VIRAL DISEASES IN FISH

Introduction - A virus is a microscopic organism that can only reproduce by inhabiting host cells and using the genetic material in the cells of a host.

Healthy fish that have a balanced diet and good water conditions have strong immune systems to fight off such infections.

Viral diseases in fishes -

- 1) Viral haemorrhagic Septicaemia (VHS)
- 2) Infectious pancreatic necrosis (IPN)
- 3) Spring viraemia of Carp (SVC)
- 4) Infectious haematopoietic necrosis (IHN)

Viral haemorrhagic Septicaemia (VHS)

- 1) It is first time discovered by Schaperclaus (1941) and later on confirmed by (Zwillenberg)
- 2) The virus is a member of the family Rhabdoviridae.
- 3) The disease becomes suddenly chronic causing very high mortality rate.
- 4) The growth rate of the fish decreases.
- 4) VHS is a deadly infection.
- 5) VHS is also known as Egtved disease and VHSV as Egtved virus.

Causative agent → VHS is caused by viral haemorrhagic septicaemia virus (VHSV)

Transmission - VHSV can be spread from fish to fish through water transfer, as well as through contaminated eggs.

## Symptoms -

- 1) Fish that become infected show following features - haemorrhaging of their internal organs, skin and muscle.
- 2) The kidney and liver are the most affected organs.
- 3) Bleeding in air bladder, kidney swelling, bleeding in gills and fins, liver discoloration etc. are important symptoms.
4. Fishes show abnormal movement and position in water.
5. Swollen eyes, general anaemic condition, reduced haemoglobin percentage, swollen belly, haemorrhages in the air bladder and in the muscles and intestine, pale gills etc.

Diagnosis - Virus can be isolated from cell cultures and confirmed immunologically by virus neutralization, immunofluorescence, ELISA, Immunoperoxidase staining or reverse transcriptase (RT-PCR) for detection of carrier fish.

## Treatment and control -

- 1) There is no effective treatment of VHS disease.
- 2) Infected or dead fishes should be immediately removed.
- 3) High stocking densities should be avoided.
- 4) fatty food should be avoided and vitamin food should be preferred.
- 5) Disinfected ponds with clean bottoms should be selected.