# **VIRAL DISEASES**

## Inflammation of swim bladder (I.S.B.)

A viral disease of carp fish with high mortality rate, all ages are affected transmitted also throw water and sail (mixed infection).

### **Clinical symptoms:**

Two forms of the disease present:

#### **Acute form:**

- No response of the fish
- The head upside down or one side parallel to the surface of the water.
- The abdomen is swollen.
- Congestion of the anus and exophthalmia.
- Scales lifted away from the body wall

#### **Chronic form:**

- 20% of the spawner's fish affected.
- General weakness inflammation of the intestine.
- Sometime curvature of vertebral column.

### P.M. examination

#### In both cases:

- Inflammation of the swim bladder enlargement of the distal part of the swim bladder filled with gases.
- Bad swimming, ulceration and hyperemic swine bladder.
- Liver pale, fatty degeneration, enlargement of the skin.
- Blood examination shows increase of ESR and decrease in Hb monocyte increase 10%-16%.

#### **Treatment:**

- Injection of the spawner with antibiotics.
- Methylene blue 3 gm/kg. Food for 15 days. Within interval of 2 days. (3 days treatment + interval 2 days for 3 times). For spawners.
- For fingerling 20-30 mg/each one for 15 days.

## **Spring Viremia of Carp (SVC):**

Also called infectious dropsy of carp, an infectious disease characterized by dermal ulceration, ascites and ulceration of the organs.

#### **Causative agent:**

**Rhabdo virus carpio**, bullete shape. The virus isolated 1971 (Fiyon et.al.) only carp is affected.

### **Clinical Symptoms:**

- The sudden change in temperature.
- Fish grouped at the outlet of ponds.
- Dark black coloration of skin.
- Hemorrhage on the skin and gill.
- Loss of coordination and exophthalmia.
- Swolling of the abdomen due to ascites.
- Inflammation of the intestine, peritonitis.
- Hemorrhage of the internal organs.
- All ages affected for one time.
- Sometimes mixed infection with BHS.

### **Treatment and control:**

No treatment, only prophylactic measures must be taken. Selection of resistant fish and no entry of affected to the ponds.

## **Carp Pox: DNA virus**

Viral disease with incubation period of 1-2 years, fish of 2 years affected no relation with human pox. Stress factors like bad nutrition, high fish population increase infection.

## **Clinical Symptoms:**

- Presence of flat epithelial tumor on the skin and fins.
- These accumulate with each other and form layers covering the body.
- Affect two fish shows soften of the bones deformation of the vertebral column.
- Mainly no mortality but bad and Tate production.

## **Treatment and control:**

- Good sanitary measurements.
- Prevent overcrowding.
- Add CaO 40-50 kg/ Donem to increase Ca.
- The disease is not transmitted to human being.
- Fish can be marked after treating with high current of water to reduce the skin tumor layers.