

Spring Viraemia of Carp

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Description of Disease

Spring Viraemia of Carp (SVC) is a contagious viral disease of fish which affects most species of carp, tench, pike, orfe and wels catfish. There is evidence to suggest that goldfish can also be affected by the disease. The disease is usually observed during the Spring and the outcome depends on the general condition of the fish, the water temperature, and any secondary bacterial infections. At low water temperatures (less than 10°C) the fish immune response is reduced and the disease is usually fatal. As temperatures rise the ability of the fish to survive increases and continuous rearing at 20 to 22°C should be protective. All ages are susceptible but the most severe losses occur in juvenile to yearling fish. Mortalities can range from 10 - 100%, and fish surviving an outbreak may still carry the virus, occasionally excreting it without necessarily showing any signs of infection. SVC is widespread in several countries in mainland Europe. There have been a number of cases in mainland Britain, but it

has not occurred Northern Ireland to date.

Clinical Signs

The infection is characterised by dark body colouration, popeye, pale gills and a swollen abdomen. Sometimes pin-point haemorrhages can be observed in the skin, and there can be a thick mucoid cast trailing from an inflamed and protruding vent. Affected fish breath weakly and are lethargic although some may display sporadic hyperactivity. The fish can lose equilibrium and swimming can be uncoordinated. It is important to note that not all of the signs may be present, particularly during the earliest and very late stages of a disease outbreak.

Post-Mortem Findings

On gross post-mortem examination peritonitis and enteritis are evident. Pinpoint haemorrhages and ecchymoses are visible on the internal organs, brain, skeletal muscle and the internal wall of the swim bladder. The internal organs can also be oedematous.

Diagnosis

Presumptive diagnosis is based on the clinical signs but as these are not always present, the diagnosis is confirmed by laboratory isolation and serological identification of the virus.

Treatment and Control

There is no known cure for SVC, but fish held at temperatures above 18°C have a greater chance of survival, 20 - 22°C is the optimum. Disinfection of ponds, sterilisation of equipment, decontamination of eggs by iodophor treatment, and stocking with fish known to be free from the virus are all advisable. Vaccines are available and should be used in the summer or autumn to prevent acute disease in the spring. Vaccination is more effective above 20°C. Temperature control is not usually practical in large open ponds. Fish have an increased susceptibility to disease when they are stressed, so the risk of disease and mortalities can be significantly reduced by keeping stress to a minimum wherever possible.

Dealers should quarantine newly acquired stock for at least 2 weeks, and mixing fish from different sites should be avoided. Any unusual mortalities should be investigated by an appropriate laboratory.

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