

AQUAPLAN DISEASE INFORMATION LEAFLET

RICKETTSIOSIS

BACKGROUND

- Rickettsiosis is caused by a gram-negative, obligate intracellular bacterium, *Piscirickettsia salmonis*.
- The bacterium occurs globally in a variety of fresh and salt water species including a number of salmonid species.
- Rickettsiosis has been found in Atlantic salmon in Ireland and was first described here in 1993.
- The disease occurs in late summer and autumn in Ireland and mortalities can reach up to 10% in the most severe cases.

CLINICAL SIGNS

- Affected fish are generally lethargic, dark in colour and swim near the surface.
- Fish may be anorexic or anaemic and show respiratory problems and may also exhibit haemorrhages and lesions of the skin.
- Internally, the kidney is swollen and the spleen enlarged with haemorrhages occurring on the swim bladder and viscera.
- The body cavity is usually filled with a bloody fluid.
- Diagnostic ring-shaped, cream-coloured lesions are present on the livers of chronically infected fish.
- In acute cases, death may be the only gross sign of disease.



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DIAGNOSIS

- An initial diagnosis of rickettsiosis can be made from gross pathology in which the cream coloured ring-shaped nodules are diagnostic.
- This is supported by the histopathological examination of tissue sections.
- Confirmation of the diagnosis requires isolation and/or serological or molecular identification of the causative organism.

CONTROL

- *Piscirickettsia salmonis* is sensitive to a variety of antibiotics including oxytetracycline.
- However, the use of medicated feed to control intracellular pathogens such as *P. salmonis* is problematic as antibiotic levels may not reach sufficient concentrations within the host cells in vivo. (All antibiotic treatment requires veterinary supervision and a prescription).

WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling and grading when rickettsiosis is suspected or confirmed.
- As rickettsiosis is not listed under Council Directive 2006/88/EC, control of the disease is a matter for the operator and the retained veterinary practitioner.
- Strict biosecurity measures should be implemented around the infected site.
- Remove moribund and dead fish from infected cages/tanks daily.
- If the vet notices a change in the nature of the infection and suspects a more virulent disease is emerging or alternatively, if a disease is detected in a new host species, you should contact the Fish Health Unit of the Marine Institute. If you suspect the presence of a listed disease you should also notify the Marine Institute.



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