



# AQUAPLAN DISEASE INFORMATION LEAFLET

## FURUNCULOSIS

### BACKGROUND

- Furunculosis is a significant systemic bacterial disease caused by a gram negative, non-motile, rod shaped, bacterium *Aeromonas salmonicida*.
- *A. salmonicida* subsp. *salmonicida* causes 'typical' furunculosis in marine and freshwater farmed salmonids.
- Atypical strains are included in three subspecies, *masoucida*, *achromogenes* and *smithia* causing ulcerative diseases in a range of species such as goldfish, flatfish, carp, eel and salmonids.
- With the possible exception of South America and New Zealand, *A. salmonicida* infections have been reported globally.
- Furunculosis was first reported in Ireland in 1914.

### CLINICAL SIGNS

- In a chronic outbreak affected fish become darker in colour, lethargic and anorexic with reddening of the fin bases.
- In an acute outbreak there may be no external signs of infection apart from mortality.
- Internally there is widespread haemorrhaging of the viscera, a pale liver, soft kidney and a swollen spleen.
- Classical signs such as the boil-like furuncle are not observed frequently and mainly occur in the acute stage of infection.



## DIAGNOSIS

- Histopathological examination reveals colonies of bacteria in many organs including the heart, kidney and spleen.
- Culture of the pathogen on suitable culture medium results in small, circular, raised colonies of *A. salmonicida*, which often produce a brown diffusing pigment.
- Culture of the pathogen should be followed by antibiotic sensitivity testing.

## CONTROL

- Horizontal transmission (through the water and infected fish) and the presence of asymptomatic carriers, play important roles in the spread of the disease.
- Vaccination is an effective form of control, but unvaccinated stocks remain vulnerable where the water supply contains wild fish. There are several commercially produced vaccines available.
- Antibiotic treatment is effective, although resistance is observed and sensitivity testing is required. [All antibiotic treatment requires veterinary supervision and a prescription].

## WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling and grading when furunculosis is suspected or confirmed.
- As furunculosis 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 pens/tanks daily. Mortalities should be disposed of in accordance with current Animal By-Products Regulations.
- If the vet notices a change in the nature of the infection and suspects a more virulent disease is emerging or alternatively, if the disease is suspected 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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