CASE STUDY 2

History

A carp (*Cyprinus carpio*) and koi carp farm in Europe has started to experience low level mortalities in the early summer. The majority of the mortalities and moribunds are exhibiting skin lesions and ulcers (Figure 2) in all ages of fish.

Figure 2. Ghost koi exhibiting severe, haemorrhagic dorsal ulceration (Copyright H. Rodger).

Clinical signs

- Low level mortalities
- Moribunds and mortalities with skin lesions or ulcers
- Some fish exhibit swollen bellies and protruding scales
- Low numbers of fish with exopthalmus (pop-eye)
- Some fish are listless
- Internally moribund fish have blood tinged abdominal fluid

Differential diagnosis

- Carp erythrodermatitis (CE)
- Spring viraemia of carp (SVC)
- External parasitic infection

Methods for investigation

- Histopathology*
- Parasitology*
- Bacteriology*
- Virology*

* see “Sampling for Disease Diagnosis”

Findings

Parasitology: low level of *Gyrodactylus* sp. on the skin.
Bacteriology: achromogenic *Aeromonas salmonicida* isolated from kidneys and lesions.
Histopathology: bacterial colonies present in all visceral organs and focal necrosis and degeneration.
Virology: no fish pathogens isolated.

Diagnosis

Carp erythrodermatitis as caused by atypical *A. salmonicida*.

Action

a) Oral antibiotic therapy based on the antibiogram (antibiotic sensitivity) under veterinary supervision.
b) Improving the environmental conditions will also assist in reducing the impact of the disease.
c) Careful disinfection and frequent removal and disposal of mortalities.
d) Avoid moving any stock from site.
e) Consider vaccination for future generations.

References & further reading

Hoole, D. *et al*. (2001) Diseases of carp and other cyprinid fishes. Fishing News Books, Blackwell, Oxford.