A-19: Some characteristics of bacterial diseases of freshwater ornamental fish

D C Hettiarachchi, C H Cheong
(*Ceylon Grain Elevators ltd., Colombo 15*)

Bacterial fish disease outbreaks in fresh water ornamental fish hatcheries and farms, reported during the period January 1993 to February 1994 in Sri Lanka were investigated. Twelve fish species belonging to 11 genera were involved. Gross external and internal lesions of the diseases were recorded. Samples were plated on selective (*Aeromonas, Pseudomonas* and TCBS-thiosulphate citrate bile sucrose) agar media and non-selective (blood and nutrient) agar media. Both, API 20E, API GP test strips and conventional identification procedures were followed for characterization of the isolates. Following identification, 14 selected antibiotics were tested for their effectiveness against all the isolates using disc diffusion method.

A. hydrophila was involved in 78.26% of the total (23) disease outbreaks while *Vibrio* sp. was involved in the rest. Eroding fins, haemorrhagic lesions on the skin, at the base of tail fin, sloughing scales, haemorrhagic intestine and visceral organs were among the lesions due to *A. hydrophila* infections. In addition to the above, erythemic peritoneum, erratic swimming and blindness among the survivors also observed in the *Vibrio* sp. affected fish. All isolates of *A. hydrophila* were resistant to the tested antibiotics of the families tetracycline and penicillin, trimethoprim, trimethoprim+sulfamethoxazol and streptomycin.

Antibiotics of the family quinolones (norfloxacin and flumequine), nitrofurantoin and gentamicin proved to be the most efficacious on *A. hydrophila* isolates. All *Vibrio* sp. isolates were sensitive to the 14 antibiotics tested except colistin and streptomycin.

It is clear from the present study that *A. hydrophila* and *Vibrio* sp. are the major bacterial agents causing diseases in freshwater ornamental fish in Sri Lanka and the range of antibiotics against *A. hydrophila* is narrower while that of *Vibrio* sp. is still wider.