

Mortality due to septicaemia in *Poecilia reticulata* (Guppy): Investigation of the causative agent and treatment

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Septicaemia due to bacterial infections is one of the major causes of fish mortality and a major health problem in keeping ornamental fish. This study was carried out during year 2006 to investigate the causative agent of a disease in brood stocks of *Poecilia reticulata* (Guppy) reared at commercial level, that exhibited the signs of septicaemia, and to establish a suitable treatment. Affected fish also showed lethargy, loss of appetite and loss of body condition together with emaciation.

After external examination of skin and gills for ectoparasites, samples were aseptically collected from the kidney and liver of ten moribund guppy females for bacteriological investigations. A Gram-negative, motile rod was isolated in pure culture and an array of biochemical tests were carried out to identify the organism and the results revealed that the organism responsible for septicaemia belonged to the species *Aeromonas sobria*. Antibacterial sensitivity test (ABST) was carried out and a treatment trial was conducted with three antibiotics, neomycin sulphate (20mg/kg BW for 10 days), cotrim (300mg/kg BW for 14 days), and chloramphenicol (500mg/kg BW for 14 days), that were found to be effective against the pathogen. For each treatment, three hundred and twenty diseased brood female fish were selected randomly from infected tanks. Out of four groups of affected fish, three groups were fed with medicated feed while the other group was kept as the control. For each treatment and control four replicates were used. Mortality of fish was recorded against each treatment. Data were statistically analyzed using SAS 6.12 program. The CRD and Dunnett's method were used to analyze the data set and differentiate the significant means respectively. A significant difference (P0.05) was observed in the mean survival of fish treated with neomycinsulphate (87.5%), cotrim (82.5%), and chloramphenicol (82.5%) and among the treatment means against the control (42.5%). According to the Dunnett's test the best treatment is neomycin sulphate (2mg/kg BW for 10 days).

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