Proceedings of the twelfth Annual Session of the Sri Lanka Association for Fisheries and Aquatic Resources, 29th June 2006, NARA, Colombo 15. (Abstract)

EFFECT OF ADMINISTRATION OF CHLORAMPHENICOL AND OXYTETRACYCLINE THROUGH IMMERSION ON HISTOLOGICAL STRUCTURE OF MAJOR HAEMOPOIETIC TISSUES OF KOI CARP, *Cyprinus carpio*

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Chloramphenicol and oxytetracycline are antibiotics used in aquaculture to treat bacterial infections in ornamental fish. The present study was aimed at evaluating effects of administration of chloramphenicol (2, 5, and 10 mg L^{-1} for 10 days) and oxytetracycline (20 mg L^{-1} for 3 and 10 days, 100 mg L^{-1} for 3 days) through immersion route on histological structure of the haemopoietic organs viz. head kidney, spleen and liver of Koi carp, *Cyprinus carpio*. Haemopoietic tissues of the control fish and the fish exposed to antibiotics were processed according to standard histological procedures and tissue structure of the organs was compared with the normal structure of the control fish.

Results showed that the ellipsoids of the spleen and sinusoids of the liver of the fish exposed to 10 mg L^{-1} chloramphenicol for 10 days undergo vacuolar degeneration. In addition, melanomacrophage centers were abundant in spleen and anterior kidney of these fish. However no prominent histopathological changes were observed in the fish treated with lower doses of chloramphenicol or oxytetracycline in comparison to the controls. Impression smears of the spleen of the fish exposed to different doses of oxytetracycline showed that percentages of large lymphocytes, lymphoblasts and macrophages were low in oxytetracycline exposed groups in comparison to those of the control fish. Results emphasize that prolong use of high concentrations of chloramphenicol could alter the histological structure of the heamopoietic organs of Koi carp thereby affecting the health of the treated fish.