

Preliminary study of Infectious Spleen and Kidney Necrosis Viral (ISKNV) disease in Asian sea bass (*Lutes calcurifer*) using histopathological method in Sri Lanka

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Infectious Spleen and Kidney Necrosis Viral (ISKNV) disease is causing mass mortality in both marine and freshwater fish. Detection of this disease is crucial due to confusing clinical manifestations with many other bacterial and viral diseases. Pathology is one of the old and promising method for confirmatory diagnosis. The present study was carried out to confirm the presence of ISKNV in the cultured marine fish: Asian sea bass by histopathological method. Twenty moribund fish samples of sea bass with the mean weight of 60 ± 20 g were collected from cultured ponds in Trincomalee and Chillaw. Fish were selected based on the clinical signs suspected for ISKNV such as dark coloured fish with apathy, abnormal swimming, loss of appetite, pale gills and petechial hemorrhages in the operculum, mandible, fin base and abdomen. Spleen, Kidney, Liver, Gill and Brain samples were fixed in 10% neutral buffered formalin (NBF) for histopathological analysis. The formalin-fixed tissues were processed routinely, embedded in paraffin wax, cut at 4 μ m, and stained with Hematoxylin and Eosin (H&E). Postmortem finding of the study documented the presence of pale liver, pale gills, splenomegaly and fin rot. Degenerative and necrotic lesions in the kidney (mainly tubular epithelia) were observed in 15 fish (75%). Inflammatory cell (granulocytes, macrophages and lymphocytes) aggregates were observed in 10 fish (50%), while 17 fish (85%) showed degeneration, necrosis and vacuoles in hepatocytes with basophilic intracytoplasmic inclusion bodies. Inflammation of the gills were also observed in 10 fish (50%). This is the first study reporting the presence of ISKNV in the cultured marine fish: Asian Sea bass in Sri Lanka. Further studies are needed to determine the pathogenesis and pathology of ISKNV in different species of fish.

Keywords: Asian Sea Bass, Infectious Spleen and Kidney Necrosis Virus, Histopathology, Hematoxylin and eosin stain