Mortality in juvenile rainbow trout caused by acute viral diseases in Mashhad suburb area, Province of Khorasan Razavi

Objective: Fish virology is a relatively new area in science. Viral diseases of economically important cultured fish have received the greatest attention. Fish viruses have a wider, but specific temperature tolerance in fish cell cultured at lower temperature. Infectious hematopoietic necrosis is an acute rhabdovirus infection of salmonids that produces high mortality in fry and fingerlings at water temperature \( \leq 10 \)°C. IHN is a serious disease of several species of juvenile Pacific salmon revealed in fresh water. Method & Materials: In winter, high mortality rate occurred among juvenile rainbow trout (3-6 gr weight) in two Rearing Center in the Mashhad suburb area. Fish were lethargic, exophthalmic, dark in color and showed behavioral changes such as loss of appetite and hypo activity. Wet slide from skin and gills and bacterial culture from blood, kidney and liver on blood agar had been taken. Fish were checked internally and segments from gills, liver, kidney and spleen, fixed in 10\% formalin solution and H&E stain carried out. Results & Conclusion: Bacterial sampling and culture from blood, kidney and liver on blood agar was negative. Wet slide from gills and skin did not show any parasite infestation. In kidney: Histopathological changes showed, sever hyperemia, necrotic changes in tubules and hematopoietic elements of the kidney and increasing in inflammatory cells. Kidney tubules had cytoplasmic vacuoles, piknotic nucleus and intra nucleus inclusions. In liver: hyperemia, intra nucleus inclusions, hepatocyte necrosis and fibrin in hepatocytes were observed. In muscle: increasing in inflammatory cells and hemorrhage were observed. Spleen showed sever hyperemia. Considering to clinical signs, age, season, mortality and histopathological changes it seems that Infectious hematopoietic necrosis (IHN) virus, one of the most important pathogens plaguing the trout industry in the world, is responsible for mortality.

Keywords: Histopathology, IHN, Rainbow trout

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