

Abstract:

In this study some (maid) *Liza klunzingeri* mortalities in Bandar Abbas were studied based on causative agents in these fishes in 2009-2010. The range of length was between 8 to 18 cm and the weight between 15 to 20 gr. Moribund fishes showed clinical signs such as changing in body coloration, exophthalmia, abnormal swimming behavior, belly up, disorientation, ventral and operculum haemorrhage. In order to detection of causative agents of mentioned mortality, some diagnosis methods were employed such as ecological methods, virology, histological and serological methods. Some important ecological factors, planktons population and some pollution indicators such as BOD, COD were investigated. In histopathology study of the brain and retina showed severe vacuolation in these tissues. Lesions were different from fish to fish. Necrotic lesions seem much less severe in the eye compared to the brain and less in vacuolation. The vacuolation was also observed in the optic nerve. The immunofluorescent antibody test (IFAT) was negative and showed no viral antigen and apparently all slides were without any antibody- antigen complex. In pathogenicity test challenging with the brain-homogenate was carried out on Guppy as susceptible fish. A few challenged fishes showed the same clinical and behavioral signs with infected Maids, and mortality was low. In some fishes abnormal and neural behaviors were observed and some of them showed ventral swelling. In histopathological study, brain lesions (necrosis and vacuolation) were detected. Vacuolation was also observed in granular layer of retina in some cases. Despite the negative result of the IFAT test, pathological observations showed VNN infection. All observed vacuolations in these fishes and Maids were similar and further vacuolation in the granular layer of the brain and retina is pathogenomic and a typical symptom of VNN disease. Finally, these results showed that causative agents of mentioned mortality in *Liza klunzingeri* could be considered as multidiscipline factors. Also VNN disease could be considered as one of the most important reasons of *Liza klunzingeri* acute mortality and it could be approved with comprehensive studies and more researches in future cases.

Key words:

Liza klunzingeri, mortality, planktons, Viral Nervous Necrosis (VNN), vacuolations, IFAT