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Pathological, microbiologic and molecular investigation of granulomatous lesions in 10 species of ornamental fish in Ahvaz

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Abstract

In the present study thirty pieces of ten species of ornamental aquarium fish (Amazon molly fish, guppy, oscar, angel, zebra fish, macro, neon tetra, gold fish, tiger barb and gourami) that were moribund with symptoms of chronic disease (300 fish in total) were examined. Sampling was done from grossly positive organs (with granular lesions in viscera). In total, out of 300 examined samples, granulomatous lesions were observed in the intestine and viscera in 46 cases (12%). The most granulomatous lesions were observed in gourami, goldfish and neon tetra. No lesions were observed in guppy and zebra fish. The highest percentage of lesions was recorded in the spleen and liver, respectively. Also, the spleen was found to be the most infected organ of fish to tuberculosis lesions. Finally, using PCR method, 1 isolates were identified as *Mycobacterium marinum*, 3 isolate as *Mycobacterium chelona* and 3 isolates as *Mycobacterium fortuitum*. In this study, no infection to *Ichthyophonus* was detected. Based on the results of PCR with specific primers for *Ichthyophonus hoferi*, the presence of the specific gene for this organism was not proven in any of the samples. This study showed that fish tuberculosis infection exists in aquarium fish in Iran.

Key words: Granulomatosis, Ornamental fish, Ahvaz, Mycobacterium, Ichthyophonus

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