

NOTE

Calcification of the bulbus arteriosus associated with multiple pathologies in an oscar (*Astronotus ocellatus*)

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Abstract

Pathological study of an adult oscar, *Astronotus ocellatus*, demonstrated the presence of extensive mineral precipitates in the bulbus arteriosus wall. Myocardial calcification, nephrocalcinosis, ovarian calcification, hepatocellular adenoma and degenerative changes of the liver and skeletal muscle were also seen.

Descriptions of spontaneous calcification of the bulbus arteriosus in fish are scarce with only a couple of notable reports in wild brown trout (Prior et al., 1968) and farmed rainbow trout (Heidel et al., 1997). The oscar is a large cichlid, very popular in the aquarium trade; it is also regarded as a food fish and a sport fish in several countries (Fury and Morello, 1994; Serrano-Martínez et al., 2015).

A nine year old oscar maintained in an aquarium showing signs of emaciation and lethargy was submitted for pathologic assessment due to poor prognosis, initially presumed to be related to systemic mycobacteriosis. The fish was euthanised and necropsied. The tissue samples were fixed in 10% neutral buffered formalin, embedded in paraffin wax, sectioned and stained with hematoxylin-eosin, periodic acid-Schiff (PAS), Ziehl-Neelsen or Von Kossa methods

for general histopathology, acid-fast bacteria, lipofuscin and calcified deposits respectively.

The gross postmortem internal changes included focal deposition of chalky material in the wall of the bulbus arteriosus. The liver presented dark colouration with small brownish foci and a non-encapsulated pale nodule measuring about 1 cm in diameter, with homogeneous cut surface.

Histopathological analysis demonstrated the presence of mural and protruding luminal basophilic precipitates in the bulbus arteriosus (Figure 1). Myocytes of the ventricular stratum spongiosum contained fine granular basophilic precipitates. In kidney tubular and interstitial tissues, basophilic precipitates and granuloma formation around the mineral deposits were found. Lamellar calcium depositions were seen