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Description of a hamartoma-type odontoma in angelfish (*Pterophyllum scalare*)

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Introduction: Twenty angelfish (*Pterophyllum scalare*) were remitted from an ornamental fish farm to be examined for single or multi-lobed masses with a diameter of 0.2 - 0.4 cm in the frontal region of the mouth, in both the maxillary and mandibular lips. The fishes did not show any other sign and no other lesions were observed.

Methodology: Mass sections were prepared for electron microscopy to demonstrate the presence of viral particles, and were also added to Leibovitz's L-15 medium (Gibco BRL) for virus isolation in monolayers of *epithelioma papulosum cyprini* (EPC) cells and bluegill fry (*Lepomis macrochirus*, BF-2) cells. The mass and other sections of internal organs were fixed in 10% buffered formalin and stained with hematoxylin and eosin for histologic examination. Samples from the presumed tumor area were collected for bacteriology and imprint smears, these last were stained with Gram's method and acid-fast stain.

Results: The tumors were spherical or semi-spherical, between 0.2 to 0.4 cm in diameter, with edematous appearance and a whitish, pink or reddish coloration. Histologically, the mass was surrounded by a hyperplastic stratified squamous epithelium, with numerous well-differentiated dental structures (denticles) that show variable differentiation stages (organization), which make up a compound odontoma. There were no external projections of the dental forms. Cell culture and electron microscopy did not show virus forms. There was also no growth of bacteria, and the imprints were negative.

Conclusion: In angelfish, tumors of similar macroscopic appearance to these have been described as lip fibroma or as ameloblastoma; however, this is the first case of a hamartoma-type odontoma in angelfish. Lesions were present in approximately 15% of a 300 fish population. Similar macroscopic and microscopic lesions in species other than *P. scalare*, have only been reported in two individual cases in long-finned clownfish (*Amphiprion ocellaris*). The analysis made suggests that this odontoma has its origin at cellular level, on a hereditary basis.

Keywords: odontoma, tumor, odontogenic, angelfish

Funding: This work was supported by Ciencia Básica CONACYT México grants 287537.