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Case Report

Ossifying Fibroma in a Canary (*Serinus canaria*)

Jamshid Razmyar, DVM, DVS, Omid Dezfoulian, DVM, DVS, and Seyed Mostafa Peighambari, DVM, MS, PhD

Abstract: A 1-year-old male canary (*Serinus canaria*, Jibber breed), with a protuberance on the left tibia was referred to the clinic. The bird was not able to use the affected foot to stand on its perch. The radiograph and surgery thereafter revealed a hard tissue mass, which was removed and diagnosed, on histopathologic examination, as an ossifying fibroma tumor. To our knowledge, ossifying fibroma has not been reported in birds so far, and this is the first known report of this tumor in birds.

Key words: ossifying fibroma, fibrous dysplasia, osteoma, osteosarcoma, giant cell tumor, cage birds, avian, canary, *Serinus canaria*

Case Report

A 1-year-old male canary (*Serinus canaria*, Jibber breed) with a protuberance on the left tibia was referred for examination. The bird was not using the affected foot while standing on its perch. A survey radiograph taken revealed radiopacity of the left tibia in the area of the protuberance. Although surgical treatment was offered, the bird was euthanatized at the owner's request. At necropsy, the target mass tissue and lungs, kidneys, liver, and gastrointestinal tract were removed and prepared for histopathologic examination. The bone was fixed in 10% formalin for 5 days and decalcified by using 2.5% nitric acid for 6 days, then several pieces from different parts of the bone and other tissue specimens were embedded in paraffin. Sections of 6-μm diameters were stained with hematoxylin and eosin.

In the transverse section of the involved bone, 3 distinct regions were noticed. The peripheral region consisted of periosteum and trabeculae of mature bone. The middle region consisted of immature trabeculae and the lesion itself in the central region (Fig 1a). The periosteum was well differentiated and composed of outer fibrous and inner osteogenic layers. In some areas, immediately beneath the inner periosteal layer, various zones of endochondral bone formation were evident. Peripheral trabeculae were formed from mature lamellar bone, with scant bone marrow, which had filled the spaces between them. The trabeculae in the middle region were thinner, and more cells (probably osteoblasts) were found in their surrounding area compared with cells in the peripheral trabeculae. The lesion, found in the central region, was well demarcated from the middle region and consisted of scattered irregularly spicules of the bone, with a fairly defined rim of osteoblasts (Fig 1b), which were embedded in a dense fibrous stroma. It appeared that the preexisting bone structure had been destroyed. The fibrous stroma was composed of proliferative spindle cells (resembling fibroblasts), collagen, and numerous vascular connective tissues. Proliferating cells lacked the anaplastic features of the osteosarcoma, and there was no evidence of metastases to other organs.

To make a more accurate diagnosis, an immunohistochemical technique was used. The CD68 marker (Clone PG-M1, Dako, Denmark) with a dilution of 1/100 was used to label the macrophages or suspected giant cells. With the exception of several mesenchymal cells that were individually scattered in stroma (positive internal control), the bone spicules were not labeled by the CD68 marker. Based on gross and microscopic examinations, as well as the immunohistochemical findings, the tumor was diagnosed as ossifying fibroma.

From the Department of Clinical Sciences, Faculty of Veterinary Medicine, University of Tehran, Tehran, P.O. Box, 14155–6453, Iran (Razmyar, Peighambari); and the Division of Pathology, School of Veterinary Medicine, Lorestan University, Khorramabad, Iran (Dezfoulian).