What Is Your Diagnosis?

Author(s):
Published By: Association of Avian Veterinarians
DOI: http://dx.doi.org/10.1647/2013-074

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne’s Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.
alkaline phosphatase and c-Kit expression. Neither the germinal epithelium nor sex-cord stromal elements (Sertoli and Leydig cells) of normal testicular tissues (chicken) revealed any immunoreactivity to any of the markers used to evaluate the mynah tissue. Furthermore, the neoplastic cells failed to react with histochemical stain, although the colloidal substances appeared pale. The histopathologic diagnosis in this bird was a Sertoli cell tumor with splenic metastasis. In a previous case, a Sertoli cell tumor was diagnosed in a pigeon (Columbia livia) on histopathologic examination.¹ To compare findings of the present mynah case with those of the pigeon with the Sertoli cell tumor, the immunohistochemistry panel was used in the testicular tissue samples of that pigeon. In the pigeon case, only a few (3%–5%) neoplastic cells had conspicuous positive staining for calretinin; however, similar to findings in the common mynah case, results were negative for placental alkaline phosphatase or c-Kit expression.

**Discussion**

In captive and free-ranging birds, the occurrence of testicular tumors has been reported to be 3 times more common than ovarian and oviductal neoplasms.² The inoculation against subgroup J avian leukosis virus may have a potential role in the development of testicular tumors in birds.³ To our knowledge, this is the first report of a Sertoli cell tumor in a common mynah.

Both interstitial and Sertoli cells in normal canine testicular tissue may express calretinin in their cytoplasms and nuclei, whereas the germ cells show no reaction to this marker. Calretinin is considered a specific and reliable marker for differentiation of sex cord–stromal tumors in humans, but its expression is demonstrated in all types of canine testicular neoplasms, including germ cells tumor (seminoma) and sex cord–stromal tumors (Sertoli cell and Leydig cell tumors).⁴ As opposed to the neoplastic cell reaction in the avian cases, the normal germ cells of testicles of control chickens, like human testicular tissue, are negative for calretinin. Therefore, this marker may be upregulated only for primordial or neoplastic germ cells with lesser degrees of differentiation and high proliferation rates, but not for cells in developmental phases of maturation. Normal Leydig cells and spermatogonia of canine testicles express c-Kit in their cytoplasm, and canine Leydig cell tumors express positive immunolabeling for c-Kit, whereas c-Kit labeling is negative for Sertoli cell tumors.⁵

The findings in this case demonstrate that immunohistochemistry may be a reliable method to designate the types of avian testicular tumors, especially those that are poorly differentiated.

This case was submitted by Omid Dezfolian, DVM, PhD, Mehdi Cheraghchibashi, DVM, and Seyed Mostafa Peighambari, DVM, MSc, PhD, from the Department of Pathobiology, School of Veterinary Medicine, Lorestan University, Khorramabad, Iran (Dezfolian); and the Department of Avian Diseases, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran (Cheraghchibashi, Peighambari).

**References**