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Case Report

Histopathological diagnosis of eyelid tumor in Moustached wren (*Pheugopedius genibarbis* SWAINSON, 1838) (Passeriforme, Troglodytidae). A case report.

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A B S T R A C T

The aim of this work was to describe an eyelid neoplasm in wild birds, since the veterinary literature has little information concerning the aspects of the oncologic clinic in wild species. In the clinical exam, it was observed a single mass in the upper right eyelid of the *Pheugopedius genibarbis* a, with rough surface, cauliflower aspect, of dark-red coloration . For the histopathological diagnosis, an incisional biopsy of the lesion was done , with the fragment fixed in 10% buffered neutral formalin, processed by the method of inclusion in paraffin , cut to 4µm sections and stained with H&E . The histopathological findings revealed elongated dermal papillae covered by acanthotic epidermis, as well as thickness of the stratum spinosum . In the stratum spinosum, it was observed the presence of cells with vacuolated cytoplasm and nucleus slightly dislocated to the center of the cell, which increases in proportion when closer to the granular layer, an indication of hydropic degeneration, there were In the basal layer it is possible to notice the presence of the normal mitotic figures. Based on the macro and microscopic characteristics, that neoplasm was diagnosed as an eyelid papilloma.

INTRODUCTION

Proliferative cutaneous lesions are frequently found in the examination of birds. Cutaneous neoplasms have been observed in many species although, comparatively, little is known about the incidence of neoplasms of cutaneous location in wild species when compared to those of production or pet birds (FRASCA JR et al., 1999; FILIPPICH, 2004; GODOY et al., 2009).

Papillomas are frequently described in birds, reptiles and mammals. Among the birds, they are common in parrots and can occur in several locations in these animals (GODOY et al., 2009; SIQUEIRA, 2011). The lesions are usually benign and have a regression tendency, but under special conditions, they can turn into malignant tumors (CAMPO; JARRETT, 1986; CLAUS et al., 2007).

Eyelid neoplasms are relatively common in all species (MAGGS, 2008) and there are complications due to this neoplastic type besides cosmetic alterations. There is invariably the induction of irritation processes in the cornea, lagophthalmos, bleeding and the possibility of malignant evolution, compromising other ocular structures (BEDFORD, 1999), independent of its degree of histological malignancy, which may lead to poor eyelid closure with consequent ocular exposition and corneal ulcer (MONTIANI-FERREIRA et al., 2008).

Neoplasms have been more frequently found in wild birds kept in captivity in relation to those that are free (FILIPPICH, 2004), however, in Brazil, there are no

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studies showing the importance of this report. The objective of this paper was to describe an eyelid neoplasm in a wild species, as the veterinary literature has little information regarding the aspects of clinic and oncological pathology in these animals.

METHODOLOGY

A wild, free, adult bird of undetermined gender of the species *Pheugopedius genibarbis* was captured in the Zoobotanic Park of the Federal University of Acre with mist nests. The capture of the specimen was done under a license from IBAMA, SISBIO n. 23269-1 and the project was approved by the Committee of Ethics in the Use of Animals of the Federal University of Acre, under process - CEUA n. 23107.008809/2016-62 and protocol n. 08/2016.

The bird presented an increase of volume of dark-red coloration on the upper right eyelid. No pre-anesthesia was used (such as local anesthesia) (GUIMARÃES; MORAES, 2000). After the physical contention of the specimen, an incisional biopsy was made in this mass for histopathological analysis, and the bird was released on the same place of capture after veterinary care. The fragment collected was fixed in 10% buffered neutral formalin, processed by the method of inclusion in paraffin, cut to 4µm sections, stained with H&E and observed under light microscopy.

RESULT AND DISCUSSION

In the clinical exam it was observed an increase of volume on the upper right eyelid of the bird. Macroscopically, the excised mass was single, firm and solid, sessile, with a rough surface with cauliflower aspect and dark-red in coloration (Fig. 1A). No discomfort nor alteration in behavior was observed on the species due to the lesion. These clinical findings are in accordance to studies conducted by Blume et al. (2015), about a small cutaneous myxoma in a pintagol *(Sporagra magellanica* X *Serinus canaria)*. Due to the increase in size of the volume, surgical excision and histopathological analysis of the mass were done and a differential diagnosis was established between degenerative, inflammatory and neoplastic processes as described by Goldschimidt; Hendrick (2002).

In this study, the lesion was cutaneous and in the eyelid. Neoplasms in birds are usually found in practice in the same way regarding location and common categories as those found in pet animals, with variations in the distribution and morbidity (ORR, 2012). Many of the neoplastic lesions are described in the oral or cloacal mucosa, but can be seen in the conjunctive, nasal tear duct, bursa, esophagus, crop, proventriculus and ventricle (PHALEN, 1998; REAVILL, 2004). Regarding parrots, among the budgerigars, the most common sites for the location of tumors are the skin and the subcutaneous tissue (WERNER et al., 1998; GODOY et al., 2009). In parrots and cockatiels, it can occur in any body part (SIQUEIRA, 2011).

According to Fernandez; Dubielzig (2015), ocular and eyelid lesions are common in birds. However, there are few publications about eyelid and ocular neoplasms. Yet, a variety of malignant and benign neoplasms have been diagnosed both under the form of primary location and metastatic, affecting the eye, including medulloepithelioma, lymphoreticular tumors, melanomas and rhabdomyosarcoma (SCHMIDT et al., 1986; BRAS et al., 2005).

Neoplasms have been more commonly found in Psittaciformes (3,6%), especially in parakeets (*Melopsittacus undulatus*) (15,8%), parrots and cockatiels (5%) (MIDDLETON; JULIAN, 1983; GODOY et al., 2009; SIQUEIRA, 2011), followed by Galliformes (1,41%) and Anseriformes (0,89%), while Passeriformes present the lower incidence rate (0,46%) of any order (RATCLIFFE, 1933; FILIPPICH, 2004). Although the histological examination of the tissue may reveal a higher incidence in Passeriformes (MIDDLETON; JULIAN, 1983), the lack of information about neoplasms in a species or order does not necessarily reflect that they are resistant or sensitive, unless a great number of individuals are researched and monitored over a long period of time (FILIPPICH, 2004).

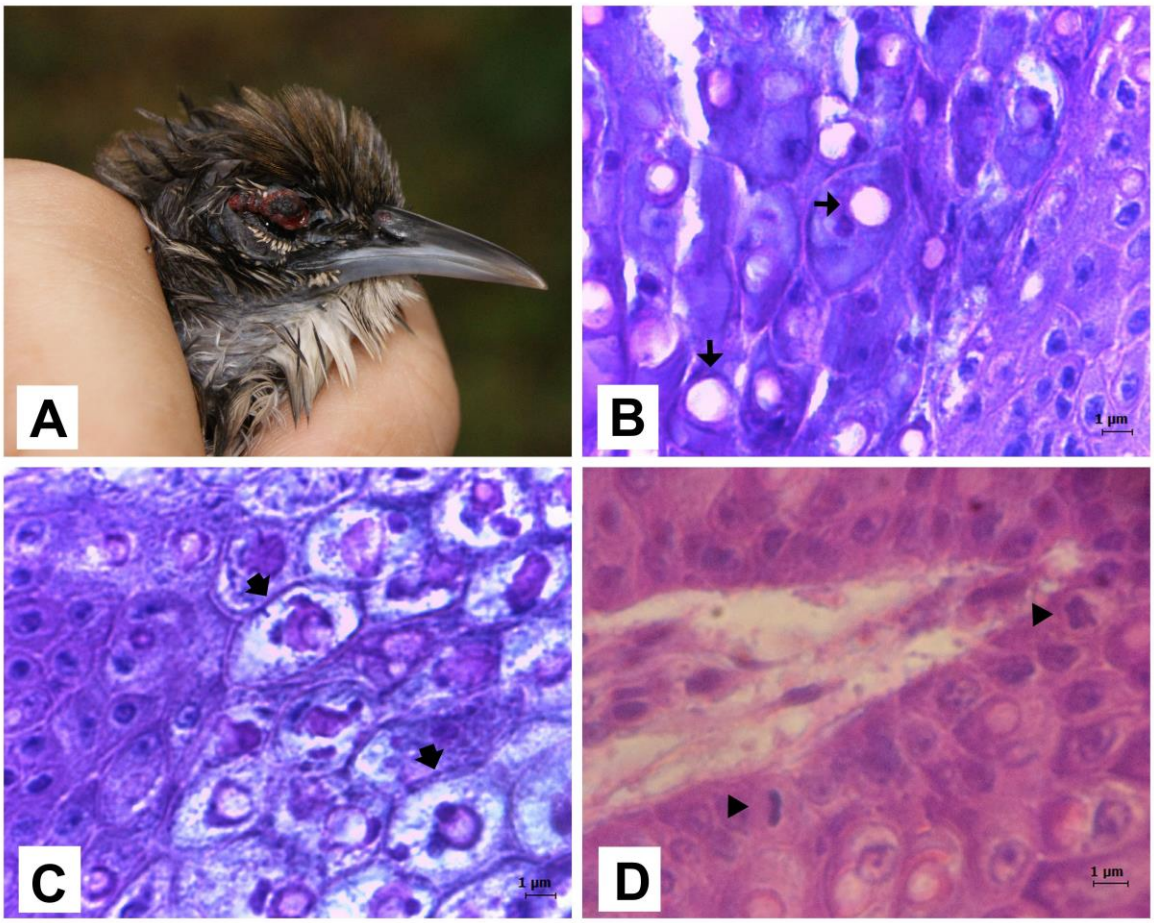
Microscopically, it is possible to visualize a great number of elongated dermal papillae covered by acanthotic epidermis, as well as thickening of the stratum spinosum. In the stratum spinosum, it was observed the presence of cells with vacuolated cytoplasm and the nucleus slightly dislocated to the center of the cell, which increases in proportion when closer to the granular layer, an indication of hydropic degeneration (Fig. 1B e 1C). It is possible to see, in the basal layer, normal mitotic figures, without any indication of malignancy (Fig. 1D), being these characteristics observed in papillomas.

Among the 253 procedures related to wild birds at the Wildlife Clinic of the Veterinary Hospital of the Federal University of Paraná, neoplasms corresponded to 4,95% of the cases (SANTOS et al., 2008), and could be either benign or malignant (SIQUEIRA, 2011). Papillomas are neoplasms histologically characterized by a hyperplastic epithelium over a base of fibrovascular stroma, associated to mitotic figures, generally in basal cells and scarce in the cells of the mucosal line (SUNDBERG et al., 1986; ANTINOFF; HOTTINGER, 2000).

It was not visualized in the epithelial cells of the papilloma the presence of inclusion corpuscles, indicative of the viral origin, and no molecular examinations were made to identify its infectious origin. Papillomas can be caused by non-infectious irritating

elements of persistent character or by species-specific DNA viruses belonging to the Papovaviridae family. The non-infectious variety is usually delimited, not occurring in other body parts (THEILEN; MADEWELL, 1979; MOULTON, 1990; WITHROW; MACEWEN, 1996).

Figure 1 – A – Macroscopic aspect of the lesion observed in the *P. genibarbi.* B – Microscopic aspect: thickening of the stratum spinosum with vacuolated cells (thin arrows) (100X HE). C – Detail of the cell with vacuolated cytoplasm, suggestive of hydropic degeneration (thick arrows) (100X, HE). D – Presence of normal mitotic figures in the basal layer (head of the arrows) (40X, HE).



Source: Author's collection.

It was not possible to determine the etiology of the neoplasm because only one specimen was analyzed and only one sample was collected. Also, only macroscopic evaluation and optical microscopy were done. The etiology of neoplasms in animals is essentially the same as in all species, although it is little reported. In them, it is believed that the chronological age is a predisposing factor for the appearance of either benign or malignant tumors (KOLLIAS JR, 1979). Together with respiratory diseases, tumors are the most common health problems and the leading cause of death in wild and exotic animals, especially in females (SIQUEIRA, 2011).

Neoplastic diseases are becoming more than a *post mortem* diagnosis due to an increase in knowledge and the improvement in the quality of wild bird medicine. The expectation of a better veterinary performance requires a better diagnosis/prognosis, which demands a better treatment. However, the information available related to the prognosis and therapy of specific neoplasms is limited in avian veterinary medicine. Thus, for each case or report published, which supplies this information, there is improvement in the level of care that the veterinarians can provide for the wild birds' clinic (REAVILL, 2004).

CONCLUSION

The histopathological findings are consistent with the histopathological diagnosis of papilloma located in the eyelid.

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