

## FACIAL HEMANGIOSSARCOMA IN A BLUE-FRONTED AMAZON PARROT (*Amazona aestiva*)

[*Hemangiossarcoma facial em papagaio verdadeiro (Amazona aestiva)*]

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**ABSTRACT** - Here we describe the first case report of an hemangiosarcoma in a male Blue-fronted amazon parrot (*Amazona aestiva*). The mass was localized near the inferior portion of the right orbit. A fine needle aspiration biopsy (FNAB) was performed and a presuntive diagnosis of hemangioma/hemangiosarcoma was established. Further histopathological evaluation revealed a mesenchymal neoplasm composed basically by well formed vascular channels lined by pleomorphic endothelial cells. Thus, the final diagnosis was a well-differentiated cutaneous hemangiosarcoma.

Keywords: Hemangiossarcoma, birds, Amazon parrot, Pathology.

**RESUMO** – Aqui se descreve o primeiro caso de hemangiossarcoma em um macho de Papagaio verdadeiro (*Amazona aestiva*). A massa estava localizada próxima a porção inferior da órbita direita. Uma aspiração utilizando agulha fina foi realizada e o diagnóstico presuntivo de hemangioma/hemangiossarcoma foi estabelecido. Em seguida, a avaliação histopatológica revelou uma neoplasia mesenquimal composta, basicamente, por canais vasculares bem formados alinhados com células endoteliais pleiomórficas. Desse modo, o diagnóstico final foi de hemangiossarcoma cutâneo bem diferenciado.

Palavras-Chave: Hemangiossarcoma, pássaros, papagaio verdadeiro, patologia.

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## INTRODUCTION

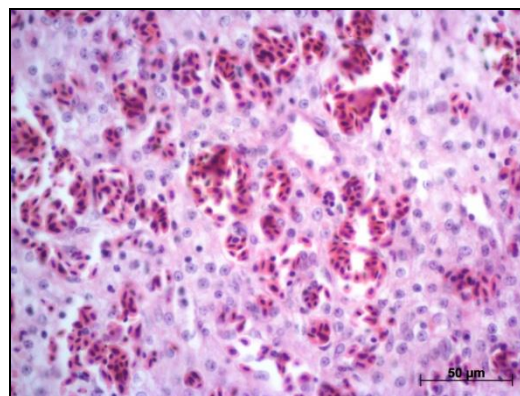
Hemangiosarcoma also known as angiosarcoma or malignant hemangioendothelioma is a malignant neoplasm. Is characterized by pleomorphic endothelial cells aligned on multiple collagen trabeculae that forms blood-filled vascular spaces of variable sizes (Maxie, 2007). It is locally invasive and multicentric tumor that tends to present with inflammation and necrosis. It may occur primarily in the skin or as a result of metastasis from a visceral primary source, and is commonly found in adult and old animals (Jones et al., 1997; Reavill, 2001; Maxie, 2007). Here we describe the first case report of an hemangiosarcoma in a blue-fronted amazon parrot (*Amazona aestiva*).

## CLINICAL REPORT

An 15-year-old, 320g captive male *Amazona aestiva* was presented for examination after a progressive facial enlargement localized near the inferior portion of the right orbit. On physical evaluation, a mass presumably extending into subcutaneous, measuring 1,5 x 0,8 cm, adhered to deep tissues, firm, warm, reddish, and non-ulcerated was noted in aforementioned region. Clinically, the animal was anorexic and depressed. Samples for cytopathologic examination were obtained by fine needle aspiration biopsy (FNAB) from 2 different areas using a fine needle (22G1 ¼") and a 10 ml syringe. Previously to cytological examination, the animal was sedated with an subcutaneous administration of ketamine HCl (25 mg/Kg IM,). The collected material was spread on histological slides, air-dried, methanol fixed, and stained with Giemsa. The smears were highly cellular and composed predominately by erythrocytes, heterophils and lesser amounts of monocytes. A presuntive diagnosis of hemangioma or hemangiosarcoma was stated. After routine anesthetic procedures (atropine sulfate 0,02 mg/kg IM, ketamine HCl 20mg/kg and midazolam 4 mg/kg IM) and local antiseptis, the animal was submitted to a excisional biopsy in order to remove the mass. The lesion was not completely removed during surgery due to the deep adherence to the underlying tissues which in turn could compromise postoperative recovery.

The tumor was fixed in 10% neutral-buffered formalin, trimmed, routinely processed and embedded in paraffin. Routine histological sections 4µm in thickness were stained with

Hematoxilin and Eosin (HE) in order to achieve a definitive diagnosis. Histologically, the mass were restricted to dermis, highly cellular and had an expansible growth. The neoplastic cells were plump to fusiform and aligned on collagen trabeculae that formed an anastomosing meshwork of blood-filled channels of variable size. The cells were moderately pleomorphic with and eosinophilic discrete cytoplasm, oval nuclei, and distinct nucleoli (Figure 1). The vascular spaces were not completely enclosed by endothelial cells, and blind-end trabeculae could be observed. Some vessels were filled by adherent thrombi. Rare mitotic figures could be seen. Based on those findings, the final diagnosis was well differentiated cutaneous hemangiosarcoma. Finally, the animal died two weeks after the procedure due to surgical complications such uncontrollable nasal bleeding and difficulty feeding.



**Figure 1.** The mass present cells were plump to fusiform and aligned on collagen trabeculae that formed an anastomosing meshwork of blood-filled channels of variable size. The cells were moderately pleomorphic with and eosinophilic discrete cytoplasm, oval nuclei, and distinct nucleoli (HE, 40x).

## DISCUSSION

In psittacines birds the neoplasm has been described in *Melopsittacus undulates* (Freeman et al., 1999), *Pionus* spp., *Agapornis* spp., *Psittacus erithacus* (Reavill, 2004), *Primolius auricollis* (Reavill, 2001), *Nymphycus hollandicus* (Sledge et al., 2006), *Amazona ochrocephala oratrix* (Hanley, 2005), *A. farinosa* (Rossi, 1998), *A. amazonica* (Mickleby et al., 2009), and also already described in *A. aestiva* (Godoy et al., 2009).

In avian, the most common affected anatomic areas are the skin of peripheral beak region and cloaca, neck, dorsum, hind and forelimbs (Campbell, 1986; Reavill, 2001; Schmidt et al.,

2003). Some internal organs such liver, bones, and ovary can also be affected (Rossi, 1998; Hanley, 2005; Mickley et al., 2009). Surgical excision of cutaneous tumors in domestic birds is usually curative with a good prognosis if no metastases are present (Bauck, 1997; Maxie, 2007). Grossly, the tumor mass can present as erythematous areas with black spots due to the inflammatory process associated with multiple necrotic foci which can lead to follicle loss (Campbell, 1986; London & Vail, 1996). Clinically ill birds can present lethargy, anorexia, weight loss, edema, dyspnea, petechial hemorrhage, and anemia. The last two signs are secondary to trauma of the neoplastic mass (Latimer, 1994).

Definite diagnosis based on cytology can be very difficult to impossible since the smears contain only blood and rarely pleomorphic neoplastic endothelial cells (Campbell, 1986). Despite this, a presuntive diagnosis of hemangiosarcoma can be readily made based on FNAB. However, histopathological analysis is considered the definitive diagnostic method allowing differentiation between vascular neoplasms, hematomas, filariasis, cutaneous cysts and *Poxvirus* infection in birds.

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