
SURGICAL CORRECTION OF HEPATOID GLAND ADENOCARCINOMA IN AN EIGHT-YEAR-OLD MALE DOG

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ABSTRACT

Hepatoid gland adenocarcinoma are malignant tumors seen in the perianal region in dogs, mostly affecting sexually intact male dogs between 7 and 14 years of age. The surgical removal of such a tumour was performed in a male dog of eight-year age under general anaesthesia. The histopathological findings revealed cells with moderate degree of anisocytosis and anisokaryosis and multifocal infiltration of inflammatory cells predominantly neutrophils. Based on histo-pathological observation the mass was diagnosed as hepatoid gland adenocarcinoma. Complete removal of the tumour mass and appropriate wound care lead to an uneventful recovery.

Keywords: Hepatoid gland adenocarcinoma, Perianal neoplasm, Dogs

INTRODUCTION

Hepatoid gland adenocarcinomas (HGA) are malignant tumours arising from the circum anal glands, which are modified sebaceous glands (Venugopal *et al*, 2014). These glands occur only in Canidae and are referred to as hepatoid glands because

morphologically the cells resemble hepatocytes and account for 3-7 percent of all perianal neoplasm in dogs, mostly affecting sexually intact male dogs between 7 and 14 years of age. (Simeonov and Radostin, 2008). This report presents clinical and pathological findings of HGA and its surgical correction in an adult male dog.

CASE HISTORY AND OBSERVATIONS

An eight-year-old intact male non-descript dog was presented to Veterinary Dispensary, Maikavu with a localised swelling on the right dorsolateral perianal region below the tail base (Fig.1).

The swelling was noticed two years before, but progressively increased in size over the last three months. The animal was active and had normal appetite. Physiological parameters were within normal limits. It showed dyschezia. Animal evinced pain on palpating the mass. The mass was firm, circumscribed, ulcerated and bleeding. The rectal wall, deep perianal tissue and regional lymph nodes were not involved. Chest radiograph was found



Fig. 1 Swelling on the right dorsolateral perianal region

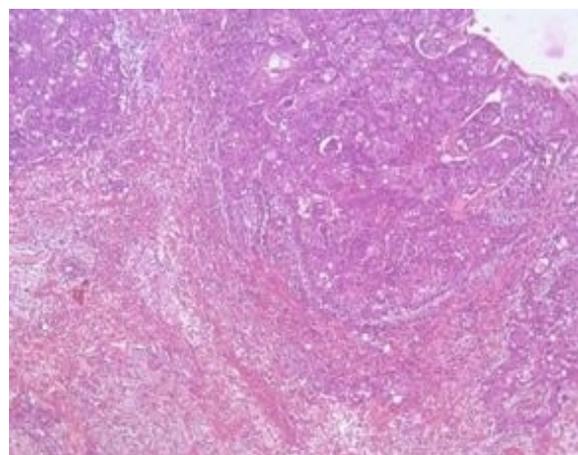


Fig. 2 Islands and cords of neoplastic cells within the dermis. (H&E 10X).

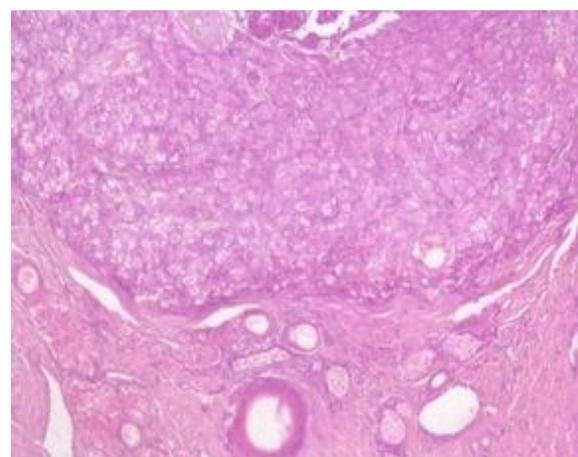


Fig. 3 Round to polygonal shaped cells with eosinophilic granular cytoplasm and moderate degree of anisocytosis and anisokaryosis. (H&E 40X).



Fig. 4 After surgery



Fig. 5 Fourth post-operative day

unremarkable. Per rectal examination revealed no involvement inside the rectum and so perianal neoplasia was suspected.

Histopathology: On gross examination, the mass was irregular, partially covered by skin and 6cm x 5.5cm x 2.5 cm in dimension. The mass appeared pale on cross section. On histopathological examination, the mass was covered with keratinised squamous epithelium with ulcerated areas and in the dermis there were islands and cords of

neoplastic cells of varying size separated by fibrous capsule (Fig.2). The cells were round to polygonal in shape with eosinophilic granular cytoplasm and round to oval nucleus with visible nucleoli (Fig.3). Some of the cells exhibited sebaceous differentiation with clear cytoplasm. Moderate degree of anisocytosis and anisokaryosis was observed. Multifocal infiltration of inflammatory cells which were predominantly neutrophils could be observed. Based on histopathological observation the mass was diagnosed as hepatoid gland adenocarcinoma.

TREATMENT AND DISCUSSION

The presenting signs in this case were similar to those reports by Aronson (2003). As the mass was felt circumscribed and non-invasive, surgical resection was opted. Castration was also done as an increased androgen receptor expression has been demonstrated in perianal tumours (Pisani *et al.*, 2006). Surgical resection of the mass was done under general anaesthesia. An elliptical type of skin incision was put with wide margin from the tumour mass. Dissected the subcutaneous tissue. Bleeding was arrested. The mass was resected leaving normal tissue on all the borders. The feeding vessels of the tumour were ligated and the dead space was closed with 2-0 polyglactin 910. The skin was apposed by interrupted sutures using nylon 2-0 (Fig.4). Orchiectomy was done on the pre scrotal site. Post operatively, ceftiofur sodium was administered at the rate of

2.2 mg/kg BW s/c and was continued for five days. Skin sutures were removed on the 9th post-operative day (Fig.5) and the animal had an uneventful recovery.

SUMMARY

A case of HGA in an adult dog, its clinical and pathological manifestation is documented.

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