

SURGICAL MANAGEMENT OF PERIANAL ADENOMA: A CASE REPORT OF TWO DOGS

Abstract

Aneight and five years old intact male dogs presented with the history of straining, licking and scooting in the perianal region. This was noticed about five and two months respectively, prior presentation. Clinical examination revealed a circumscribed mass of 2 cm diameter in the Rottweilderdog and 7 cm in the non-descript dog in the perianal region. Haemato-biochemical parameters showed relativeneutrophillia and anemiawhereas survey radiography of lateral thorax revealed no metastasis. Surgical resection of the mass was done under general anesthesia. Histopathology revealedthe growths as perianaladenoma. There was no reoccurrence, during the three months follow up of both dogs post surgery.

Keywords: *Dog, Perianal adenoma, surgical management.*

Introduction

Perianal region of the dog is frequently affected with three types of glandular tumours; apocrine gland tumour of anal sacs, circumanal, perianal or hepatoid tumours and anal gland tumours. The incidence of perianal adenoma is about 9-18% of all skin tumors and accounts for the third most prevalent tumour in male dogs (Bray, 2011). The most commonly affected breeds are Cocker Spaniel, Pekingese, Beagle, Siberian husky, Bulldog and Samoyed (Turek and Withrow, 2007). There can be reduction in re-occurrence up to 95% of adenomas and hyperplasia cases after castration at the time of surgical excision (Brodzki *et al.*, 2021). The present study reports the occurrence of perianal adenoma in intact Rottweiler and non-descript dog and their surgical management.

Case Presentation

An eight years old non-descript intact male dog weighing 8 kg and a five years old intact Rottweilderdog, weighing 22 kg were brought with history of swelling in the perianal region since last five months and two months, respectively. The dog had the history of constant straining, licking and scooting on the perineal region. The mass was reported to have increased gradually from initial peanut size. On clinical examination, the dogs were apparently healthy with slightly pale mucous membrane but all vital parameters were within normal range. Hematology revealed relative neutrophillia and anemia. Palpation of perianal growth in Rottweiler revealed sessile, circumscribed mass of 2 cm in diameter (Fig. 1A) However, it was firm, encapsulated round mass of 7 cm in diameter in the non-descript dog (Fig. 1B) on the lateral side of the anus. Chest radiography was negative for metastasis.

The dogs were anaesthetized with balanced anaesthetic protocol with pre-medication using atropine at 0.04 mg/kg IM and Midazolam at 0.2 mg/kg IM. Induction was done with propofol at 4 mg/kg IV. Maintenance of anaesthesia was done with Isoflurane at 1-2 % with oxygen with flow rate of 50 ml/kg. The surgical site was aseptically prepared and an anal plug was placed to prevent intra-operative contamination. A circular incision was made

around the tumor mass and fascia separated. The masses were resected and blood vessels were ligated using polyglactin 910 (Fig.2). Skin was opposed using interrupted horizontal mattress. Pre-scrotal castration was carried-out in both dogs.

Resected masses were sent to histopathology laboratory, where it was confirmed as a hepatoid gland tumor or perianal adenoma. There was presence of neoplastic cells arranged in cords pattern which resembled hepatocytes. The neoplastic cells were polyhedral with centrally located ovoid, vesicular nucleus; enclosing acentrally placed nucleoli with eosinophilic cytoplasm. Single cell layer thickened basaloid cells were also present in the periphery. These cords are separated by interlobular stroma, with abundant inflammatory cells and congested blood vessels (Fig. 3 A-C)

Post operative medication with ceftriaxone with sulbactam at 5mg/Kg body weight and Meloxicam as analgesic at 0.2mg/kg body weight intramuscularly was administered for five days in both cases. Sutures were removed on 14th post operative day. The dogs showed uneventful recovery. Three months post operative follow-up, that revealed non-reoccurrence in both cases.

Discussion

Hepatoid gland tumor/ Perianal adenoma is slow-growing benign tumour that develops from sebaceous gland cells in the perianal region. Petherino *et al.* (2004) stated that testosterone stimulates the tumorous cells. Castration was done to prevent reoccurrence in both cases, this might have contributed to the positive outcome obtained in this case report. The surgery was done immediately to minimize chances of metastasis, however, Hayes and Wilson (2008), recommend easy excision one or two months post-castration, as the mass shrinks due to low level of testosterone. The growth appeared as single, however, Shelley (2002) documented numerous masses, diffuse, relatively flat sheets of sebaceous tumour cells, or any combination of these. Although, benign lesions were rarely adherent to surrounding tissues, however, they may ulcerate and become infected (Jakab *et al.*, 2009). Faecal incontinence may be seen postoperatively if tumour occupies more than half the circumference of anal sphincter (Goldschmidt and Shofer, 2004). No such complication was seen in the present study up to three months of follow up. The tumours could be removed using cryotherapy if size is small as reported by Liska and Withrow (1978). Tozon *et al.* (2010) also reported that, hepatoid adenoma and epithelioma can effectively be removed using electro-chemotherapy with 93.9% success rate.

Conclusion

Perianal adenomas have excellent prognosis if surgically removed, however, their malignant equivalent has worse prognosis due to challenges with local reoccurrence and metastasis.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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Fig. 1: Photograph showing small (A) and large (B) round growth/mass in perianal region

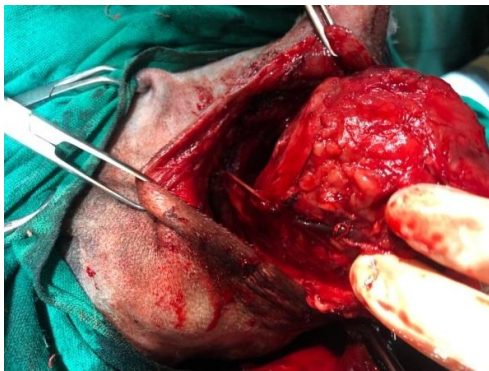
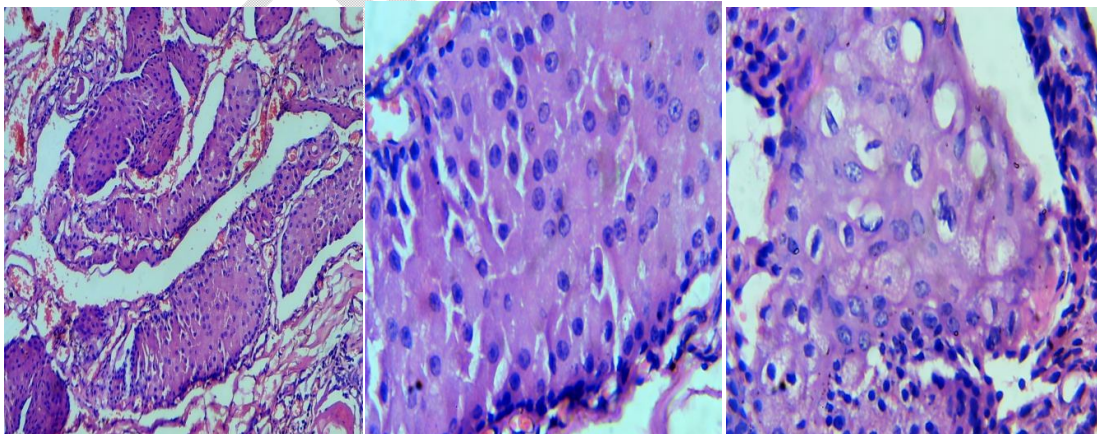


Fig. 2: Photograph showing surgical excision of round mass



A

B

C

Fig. 3: Photomicrograph showing presence of neoplastic cells arranged in cords pattern which resembled like hepatocytes. The neoplastic cells were polyhedral and centrally located ovoid, vesicular nucleus, centrally placed nucleoli and eosinophilic cytoplasm.