Case report

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

Abstract

Aneight and five-years-old intact male dogs presented with a history of straining, licking and scooting in the perianal regionforfive and two months, respectively. Clinical examination revealed a circumscribed mass of 2 cm indiameter in the Rottweilerdog and 7 cm in the non-descript dog in the perianal region. Haemato-biochemical parameters showed relativeneutrophilia and anaemiawhereas survey radiography of lateral thorax revealed no metastasis. Surgical resection of the mass was done under general anaesthesia. Histopathology revealedthe growths as perianaladenoma.There wasno reoccurrence on three monthsfollow-upin both ~~the~~ dogs.

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

Introduction

The perianal region of the dog is frequently affectedbythree types of glandular tumours;apocrine gland tumours of anal sacs,circumanal, perianal or hepatoid tumours and anal gland tumours.The incidence of perianal adenoma isabout 9-18% of all skin tumorsand accountsfor 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 areduction in re-occurrenceofup 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

Aeight years old non-descript intact male dog weighing 8 kg and afive years intactRottweilerdog, weighing 22 kg were brought witha history of growth in theperianal region since last five months and two months, respectively. The dogshad ahistory of constant straining, licking and scooting in the perineal region.The mass was reported to have increased gradually from theinitial peanut size. On clinical examination, the dogs were apparently healthy with slightly pale mucous membranesbutall vital parameters were within normal range.Haematology revealed relative neutrophilia and anaemia. Palpation of perianal growth in Rottweiler revealed asessile, circumscribed mass of 2 cm in diameter (Fig. 1A) whereas in non-descript it was firm in consistency, encapsulated and round mass of 7cm in diameter (Fig. 1B) onthelateral sideof the anus.Chestradiography was negative for metastasis.

The dogs were anaesthetized with abalanced anaesthetic protocol with pre-medication using atropine @ 0.04 mg/kg IM and Midazolam @ 0.2mg/kg IM. Induction was done with propofol @ 4mg/kg IV. Maintenance of anaesthesia was done with Isoflurane @ 1-2 % with oxygen with aflow rate of 50 ml/kg. The surgical site was prepared aseptically and an anal

plug was placed to prevent intra-operative contamination. A circular incision was made around the tumour mass and thefascia was separated in both ~~the~~ cases. Tumorous masses were resected and blood vessels were ligated using polyglactin 910no.1-0 (Fig.2). Skin was opposedwithaninterrupted horizontal mattressfollowed by pre-scrotal castration.

Resected masses were sent for histopathologywhich revealed it to be a hepatoid gland tumoror perianal adenoma.There wasthepresence of neoplastic cells arranged in cords patternswhich resembled l~~ike~~ hepatocytes. The neoplastic cells were polyhedral and centrally located ovoid, vesicular nucleus, centrally placed nucleoli and eosinophilic cytoplasm. Single-cell layer thickened basaloid cells were 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 broad-spectrumantibiotics and analgesics was done for five days in both t~~he~~ cases. Sutures were removed on the14th day. Both the dogs showed uneventful recovery. A three-month post-operative follow-up revealed no reoccurrence in both ~~the~~ cases.

Discussion

Hepatoid gland tumour/ Perianal adenoma is aslow-growing benign tumour that develops from sebaceous gland cells in the perianal region. Petterino*et al.*(2004) stated that testosterone stimulates the tumorous cells. Castration was done to prevent the reoccurrence in both ~~the~~ cases. The size of the mass may shrink after one or two months of castration due to low levels of testosterone making its removal easy(Hayes and Wilson, 2008). The growth might appear as single, numerous masses, diffuse, relatively flat sheets of sebaceous tumour cells, or any combination ~~of these~~(Shelley, 2002). Although benign lesions ~~are~~ rarely adherent to surrounding structures, they may ulcerate and become infected (Jakab *et al.*, 2009). Faecal incontinence may be seen postoperatively if thetumour occupies more than half ofthe circumference of theanal sphincter (Goldschmidt and Shofer, 2004). No such complication was seen in either of the operated cases in the present study till three months of follow-up.The tumours couldbe removed usingcryotherapy if thesize issmall (Liska andWithrow, 1978).Hepatoid adenoma and epithelioma can also be removed effectively using electro-chemotherapy with an overall success rate of 93.9% (Tozon*et al.*, 2010). Perianal adenomas havean excellent prognosisif surgically removed, however, their malignant equivalent has a worse prognosis due to problems with local recurrence and possible metastasis(Morris and Dobson, 2001).

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

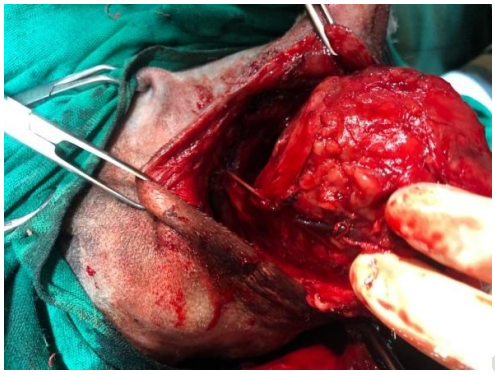
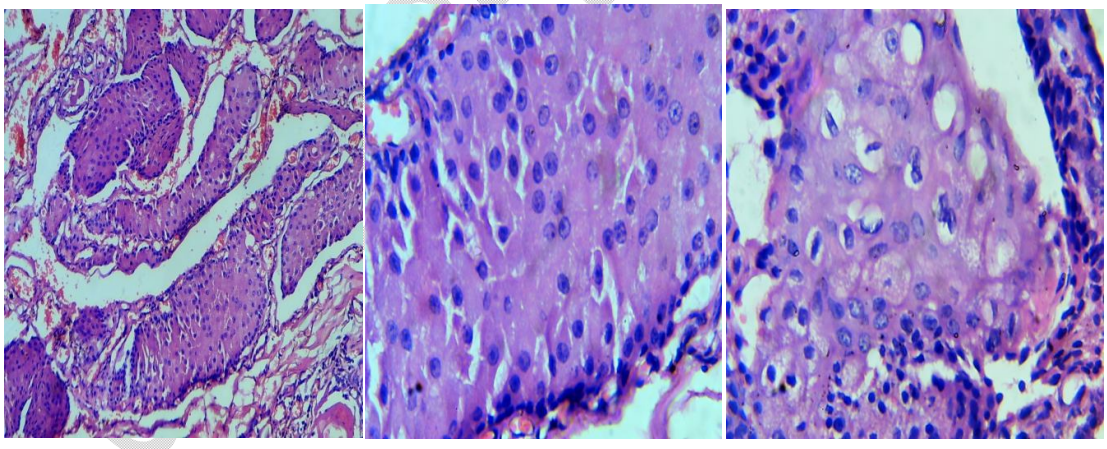


Fig. 2: Photograph showing surgical excision of round mass



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.