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## Basal cell adenoma in dog: A case report

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### Abstract

Basal cell adenoma is a benign epithelial tumour, frequently involving glandular structures. Reported cases of basal cell adenoma also involve parotid gland. This case report highlights the occurrence of basal cell adenoma in a skin tumour of a six years old male Labrador dog. Growth measuring 13×10 cm was present over left scapular region since last 6 months. Surgical excision of growth was done under standard anaesthetic protocol. Excised mass was subjected for histopathological examination for analyzing the nature of tumour. Histopathology revealed presence of basal cell adenoma in the dog.

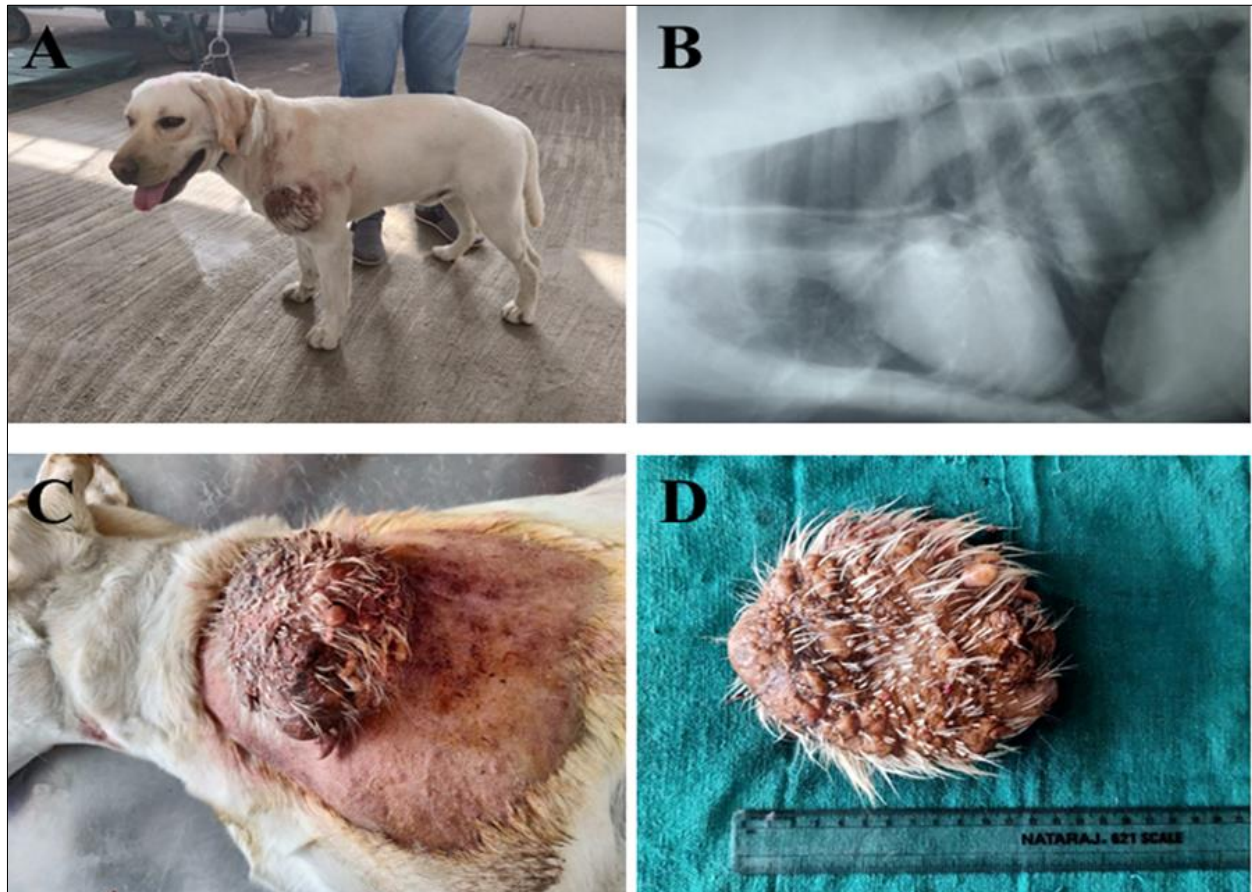
**Keywords:** basal cell adenoma, dog, histopathology, adenoid basal cells

### Introduction

The skin of animals constantly exposed to physical and chemical agents which incites neoplastic changes. Among all neoplasms reported in dogs, 30% are reported to arise in the skin (Kaldrymidou *et al.*, 2002) [3]. A retrospective study of canine cutaneous tumours reported the occurrence of basal cell tumors in 11.97% cases having a mean age of 7.8 years (Pakhrin *et al.*, 2007) [5]. Basal cell adenoma is a benign epithelial tumour, usually involving glandular structures. Rarely, reported cases of basal cell adenoma also involve parotid gland (Kanaujia *et al.*, 2015). Basal cell tumors represent perhaps 5% to 10% of skin neoplasms of dogs. They are supposed to originate from pluripotent or primary germ cells of the skin and their histologic appearances are quite varied (Jeong *et al.*, 2001) [2]. Generally it is a benign tumour in which outer palisaded cells bear a resemblance to basal cells of the epidermis. Histologically they represent several patterns *viz.* garland or ribbon like, adenoid, cystic, medusoid and squamous variety. They usually arise from basal cells of the epidermis, are common in dogs and cats but rare in other animal species. Primarily, they are located on head and neck region and large tumours often superficially ulcerated (Jang *et al.*, 2004) [1].

**Case history and clinical observations:** The present study highlights the presence of basal cell adenoma in a skin tumour of dog. A six years old male Labrador retriever was presented with large growth over left scapular region since last 6 months. There was not any significant change in the feeding behaviour of the animal and dog is in fairly good health. Growth was not ulcerated or painful. It measured 13 cm in length and 10cm in width, covered with scanty hairs and had conical appendages all over it. Lateral radiograph of shoulder region revealed no attachment of growth with underlying bone. Thoracic radiograph was taken to rule out metastatic nature of the neoplasm. No metastasis was observed in the thoracic radiograph (Fig.1).

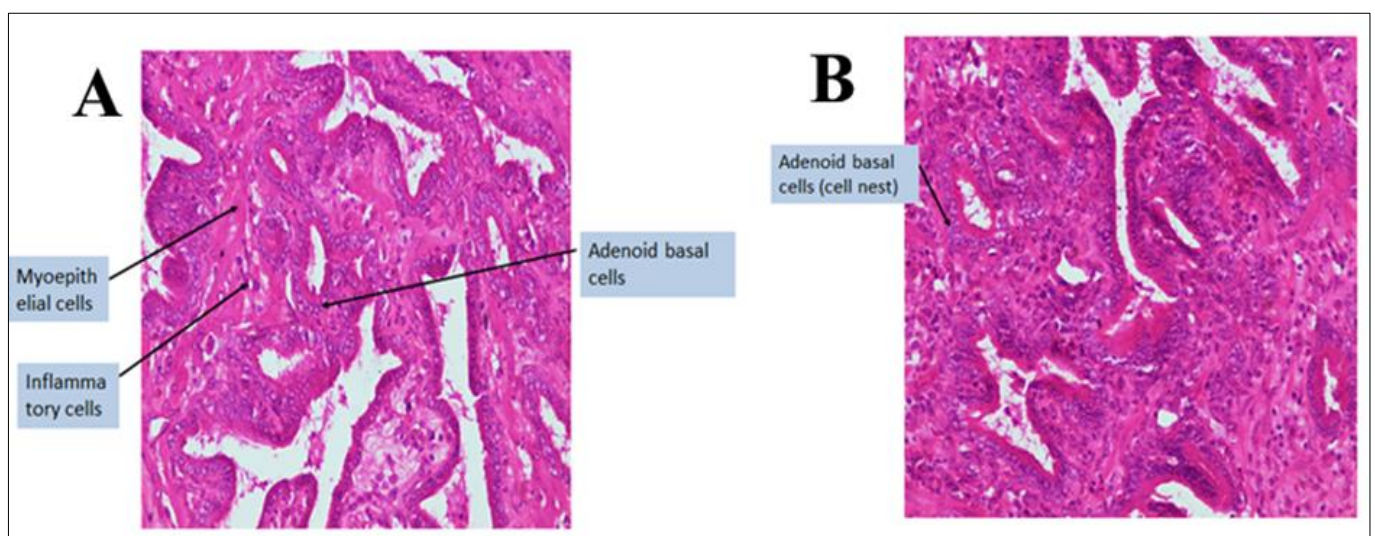
**Surgical correction:** Surgical excision of the growth was done under standard anaesthetic protocol using atropine sulphate @ 0.04mg/kg body weight (IM) followed by diazepam @ 0.5 mg/kg body weight (IV) as pre-anaesthetics. Thiopental sodium @ 10 mg/kg body weight (IV) was used as an induction as well as maintenance agent. The mass was soft having rubbery consistency and there was seepage of sero-sanguinous fluid upon excision. After excision muscles and subcutaneous tissue was sutured with absorbable Polyglactin 910 (Vicryl®) suture material in simple continuous pattern. Skin was sutured with non-absorbable nylon suture (Ethilon®) in horizontal mattress pattern. Postoperatively antibiotic and anti-inflammatory was continued for 5 days along with antiseptic dressing of surgical wound. Cutaneous sutures were removed after 7 days postoperatively. Animal had uneventful recovery.



**Fig 1:** A) Dog having tumorous growth over left scapular region, B) Thorax radiograph showing no signs of metastasis, C) Growth with scanty hairs and conical appendages, D) Growth measuring 13 cm in length and 10 cm in width.

**Histopathological examination:** Excised mass was subjected for histopathological examination for analyzing the type of tumor. Histopathology revealed presence of anastomosing basaloid cell nests in dermis. These nests contain eosinophilic basement membrane-like material at the centre and surrounded by neoplastic basal cells. The neoplastic growth forms adenoid structures in the dermis and were surrounded

by hypocellular stroma containing myoepithelial cells and few inflammatory cells. Histopathological findings were suggestive of basal cell adenoma of skin in a dog, which is of basal cell origin forming glandular-like structures (Fig.2). The cutaneous tumour reported in this study was benign in nature, which in agreement with the findings of Pakhrin *et al.*, (2007) [5].



**Fig 2:** A) Photomicrograph showing presence of adenoid basal cells, myoepithelial cells and inflammatory cells, B) Photomicrograph showing presence of cell nest of adenoid basal cells

**Conclusion**

Animals suffers from variety of cutaneous neoplasms. Their surgical excision ensures the cosmetic outcome however

histopathological examination of the tumorous growth confirms the nature of growth. No recurrence of the growth was observed 8 months postoperatively.

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