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Surgical management of unusually large trichoblastoma with an unusual predilection site in a dog

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Abstract

A seven year old Labrador male dog was brought with the history of having a mass in the right limb for the past six months. Clinically a firm, spherical tumour was seen just above the caudal aspect of right elbow joint. Under general anaesthesia the tumor was surgically removed and Histopathologically it was confirmed as trichoblastoma.

Keywords: dog, limb, trichoblastoma, surgical management

Introduction

Canine trichoblastoma is a benign cutaneous tumour derived from the remnants of the primitive hair germ of embryonic follicular development. It most commonly located on the head and neck (Mauldin and Kennedy, 2016) [5] and most of the tumors are 1 to 2 cm in diameter (Ali, *et al.*, 2015) [1]. The present report records a case of unusually large trichoblastoma with an unusual predilection site above the right elbow joint of a dog and its successful surgical management.

Case History and Observations

A seven year old, intact, male Labrador dog was presented with the history of having a mass in the right limb for the past six months which gradually increased in size. Clinical examination revealed a solitary, exophytic, spherical, firm, non-ulcerated tumour in the caudal aspect of the right limb just above the elbow (Fig.1). There was no palpable peripheral lymph node enlargement. Thoracic radiographs showed no evidence of pulmonary metastasis. All the biochemical and haematological parameters were within the normal range. Based on the history, clinical examination and radiographic observations the case was suspected for cutaneous tumor and surgical removal was decided upon and the animal was prepared for aseptic surgery.

Treatment and discussion

The dog was premedicated with atropine sulphate @ 0.04 mg/kg body weight s/c and xylazine hydrochloride @ 1 mg/kg body weight i/m. General anaesthesia was induced with Ketamine Hcl and Diazepam @ 5mg and 0.5 mg/kg body weight i/v. An elliptical incision was made at the base of the tumor and the mass was excised by blunt dissection after ligating the blood vessels. The subcutaneous tissue and skin were sutured by following the standard operating procedure. Post operatively the animal was given Inj. Intacef @ 25 mg/kg b.wt for 5 days and Inj. Melonex @ 0.2 mg/kg b.wt. for 2 days and the wound was dressed with povidone iodine solution daily. The skin sutures were removed on eighth post operative day and the animal recovered uneventfully. There was no recurrence of tumor till six months of post surgery.

On gross examination, the tumor was round, firm, grey white with haemorrhages and had the dimensions of 12.5 x 10.5 x 9.5 cm (Fig.2). The tissue sample was preserved in 10 per cent formalin for histopathological examination. Histologically, neoplastic foci consisting of well demarcated multiple lobules contained neoplastic basaloid cells with abundant stroma and arranged in ribbon pattern (Fig.3). The neoplastic cells had spherical to oval vesicular with prominent nucleoli and scanty to few mitotic figures were seen. Based on the hisathological examination, the tumor was suggestive of trichoblastoma.

Trichoblastoma is a benign neoplasm presumably derived from trichoblastic epithelium. Trichoblastomas occur in dogs older than 5 years of age and breeds apparently at increased

risk include poodles and setters (Marlene, 2013) [4]. It is usually present as a solitary, firm, alopecic, nodular that is dome shaped or polypoid (Yoon *et al.*, 2014) [6]. Typical features of trichoblastoma are slow growing, freely moveable within/beneath the skin, firm, usually solitary and most commonly located on the head and neck (Gross *et al.*, 2005) [3] and most of the tumors are 1 to 2 cm in diameter but much larger lesions may occur rarely (Ali, *et al.*, 2015) [1]. In the present case, a large sized trichoblastoma situated just above the caudal elbow was remarkable. Histologically trichoblastoma is classified into ribbon, trabecular, granular cell, spindle cell or clear cell types. Most cases are a mixture of these patterns with a predominance of ribbon epithelial aggregates surrounded by fibrous stroma (Gross *et al.* 2005) [3], (Campos *et al.* 2014) [2]. In the present case, the neoplastic foci was arranged in ribbon pattern. Hair follicle tumours generally present as benign, solitary masses and have a good prognosis following surgical resection (Marlene, 2013) [4] as observed in the present case.



Fig 1: Trichoblastoma above the right elbow joint of a dog

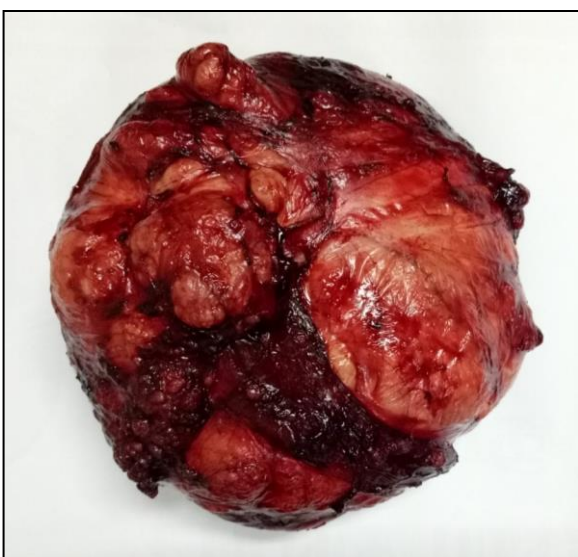


Fig 2: Dog-Trichoblastoma- Well demarcated multiple lobules of gray white color with haemorrhages

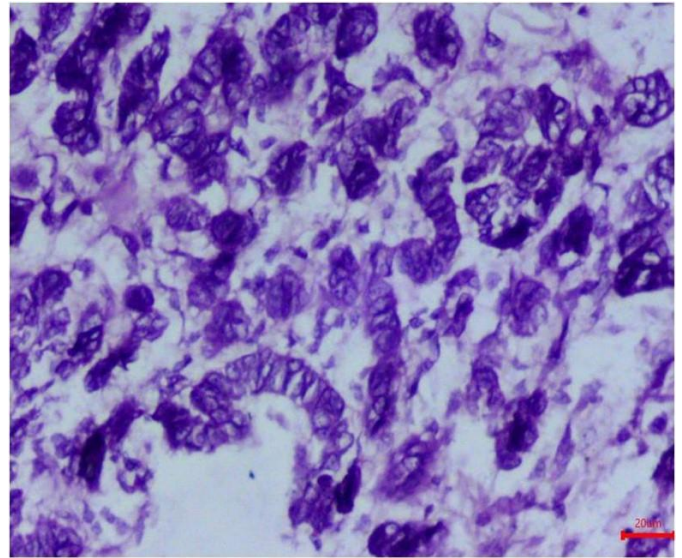


Fig 3: Dog-Trichoblastoma- The neoplastic cells were arranged in ribbon type (Scale bar H&E 20µm)

Conclusion

A case of unusually large trichoblastoma with an unusual predilection site above the right elbow joint of a dog and its successful surgical management is reported.

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