



CASE STUDY

Oral Squamous cell carcinoma in a Dog

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ABSTRACT

A 6 years old male German Shepherd was presented with the history of slowly growing mass in the oral cavity and drooling of saliva while chewing. On clinical examination a small nodule was observed in the upper vestibular cavity over the epithelial surface of inner side upper lip. It was removed electrosurgically and send for histopathological examination which diagnosed it as squamous cell carcinoma. Radiograph of head and chest was taken to rule out metastasis. There was no recurrence afterwards.

Keywords: squamous cell carcinoma, oral, gingival, dog

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INTRODUCTION

The literature about oral neoplasms dates back several decades. Oral tumours are not uncommon in dogs as 7% of all tumours are located in the oral cavity (Priester, 1980). Oral neoplasms are the fourth most common cancer overall in dogs (Hoyt and Withrow, 1984). Oral tumours are usually discovered in a late stage because the mouth is not regularly checked by the owner or veterinarian. Squamous cell carcinoma is the second most common oral tumour in dogs after Acanthomatous ameloblastoma and fibrosarcoma (Hoyt and Withrow, 1984). It appears as a solitary grey-white to pink nodular tumour with an irregular and ulcerated surface (Borthwick *et al.*, 1982; Richardson *et al.*, 1985; Quigley *et al.*, 1972). Squamous cell carcinoma is mostly located in the gingiva of the mandible (Brodey, 1960; Dubielzig, 1982; Todoroff and Brodey, 1979; Head, 1976). The tumour frequently invades bone, with a metastatic rate of 20%. The metastatic risk depends on the location of the primary tumour: the rostral oral cavity has a low metastatic rate and the caudal tongue and tonsils region having a high metastatic risk. The prognosis is good, particularly for rostral locations. Metastasis to the regional lymph nodes is reported in up to 10% of dogs, metastasis to the lungs has been reported in 3% to 36% of dogs. Squamous cell carcinoma is mostly diagnosed in the Golden and Labrador Retriever, German Shepherd and Jack Russell. The aim is to present a case of Squamous cell carcinoma in oral cavity of a German Shepherd dog.

HISTORY

A 6 years old male German Shepherd was presented to the polyclinic, Indian veterinary research institute, Bareilly, UP, India, with the history of slowly growing mass in the oral cavity and drooling of saliva while chewing.

CLINICAL EXAMINATION

On clinical examination a small nodule was observed in the upper vestibular cavity over the epithelial surface of inner side of upper lip on the left side (Fig. 1). All the vital parameters were in normal range. No visible change was observed in the x ray of chest. Based on the history and clinical signs it was diagnosed as tumour which was confirmed as squamous cell carcinoma on histopathological examination of the surgically excised mass. Radiograph of head was taken after confirmatory diagnosis to rule out metastasis to the underlying maxillary bone.

SURGICAL TREATMENT

Pre-operative, the patient was complete off feed and off water for 6 hours. The patient was premeditated with Atropine sulphate (0.04 mg/ kg s/c). Anaesthesia was induced with intravenous combination of Ketamine hydrochloride (10 mg/ kg) and Diazepam (0.5 mg/kg) mixture and anaesthesia was maintained with same. The dog was placed in right lateral recumbency. The area around the tumour was prepared for aseptic surgery. Pre-operative, antibiotic therapy consisted of intravenous Amoxycillin (15 mg/kg) and NSAID consisted Meloxicam (0.2 mg/kg).

The Electrosurgical incision was given around the growth. The mass was held with Allis tissue forceps and dissection was continued till the whole mass separated out from the base. The area was cleaned with normal saline soaked gauze and the edges were stitched with 2-0 PGA. One suture broke through the wound edge was observed on the third day .The wound was left to heal as such and complete healing was observed on the 14 day. The excised sample was submitted for histopathological diagnosis, which revealed that the tumour was squamous cell carcinoma.

Amoxicillin-Clavulanate potassium (12 mg/kg given orally twice a day for four days) was started next day morning and Meloxicam (0.2 mg/kg given orally twice a day for three days) was started next day morning.

DISCUSSION

Approximately 85 to 90% of all oral cancers are squamous cell carcinomas (SCCs) in humans (Funket *al.*,2002) whereas they account for approximately 20% of oral tumours in dogs (Brodey,1960). Malignant tumours of the oral cavity are one of the most common cancer types in the dog, representing approximately 6% of all malignant neoplasms (Dornet *al.*,1968). It has been reported that most SCCs are locally invasive and these tumours are slow to metastasize (Dhaliwalet *al.*, 1998) . In the present case the metastasis to the underlying bone and to the lung was ruled out by radiographical examination. Intra-oral squamous cell carcinoma in dogs and humans can arise from lips, gingiva, tongue, tonsils or buccal mucosa (Brodey,1960; Todoroff and Brodey, 1979). The most common site of intra-oral carcinoma is tongue in humans whereas the most common site for canine SCC is the gingiva (Gardner, Todoroff and Brodey, 1979). In the present case, SCC was present on the mucosa on inner side of the upper lip near the mucosal-gingival junction (fig. 1). The present case was observed in male German Shepherd which supports the statement that Male dogs have a 2-4 times greater risk compared to female dogs and GSD are among the high risk breeds to develop SSC including other breeds like Golden and Labrador Retriever and Jack Russell. 6. Thought, the healing was little delayed than the routine scalpel surgical technique, the most important reason to remove the mass electrosurgically was that this procedure ensure as surgical field free of haemorrhage and for an easy access to vestibular cavity.

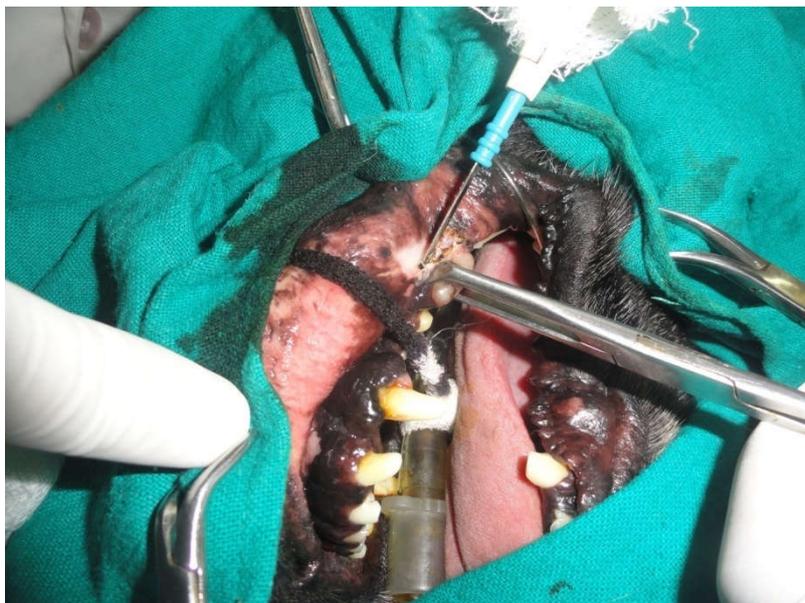


Fig. 1: Electrosurgical removal of Squamous cell Carcinoma from the oral cavity of a dog

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