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## Successful surgical management of an oral tumor in a GSD dog

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#### Abstract

A seven and a half year old male German Shepherd Dog was presented to the surgery unit of Veterinary Clinical Complex, CVSc, Rajendranagar, Hyderabad with the history of dysphagia, halitosis, hypersalivation, dehydration and an enlarged mass in the oral cavity. Up on physical examination, a cauliflower like large gingival growth was found on the right maxillary region, which had been growing since few months, along with enlarged prescapular lymph nodes. Bleeding was noticed from the mass. Radiographic examination along with haemato-biochemistry was performed. Further diagnostics were carried out by using Fine Needle Aspiration Cytology (FNAC) and the mass was diagnosed as Malignant Fibrosarcoma. Radiographs of thorax and abdomen were further taken to rule out the metastasis and nothing was found. Electrocautery was used to excise the tumor and a part of the maxilla was chiselled out. Further the incision was closed using simple interrupted suture pattern. Animal was found to be active and healthy on 10<sup>th</sup> post operative day of surgery.

**Keywords:** Fibrosarcoma, GSD Dog, maxilla, surgical resection

#### Introduction

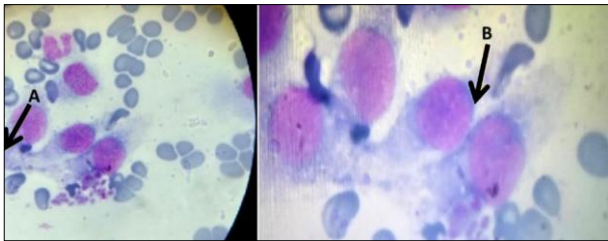
The third most frequent oral tumor in dogs is canine oral fibro sarcoma which is a malignant, infiltrating, mesenchymal tumor that affects the oral cavity (Maratano *et al.*, 2018) [6]. Malignant oral tumor incidence is increased in dogs older than 8 years. Oral fibrosarcoma in dogs is characterized by a high rate of recurrence, which can occur in up to 57% of cases (Lascelles *et al.*, 2003) [4]. They pose a major health risk due to their propensity to aggressively invade the bone and lymph nodes around them. It will be necessary to biopsy the afflicted tissue in order to make the diagnosis because they may appear clinically similar to other oral tumors. Chemotherapy and radiation therapy do not work on fibrosarcomas. Removal of the tumor and timely treatment of symptoms improve the prognosis. Incisional biopsy choice is based on the owner's decision whether to treat or to not treat, in cases where there is doubt regarding the malignancy of the lesion, or when treatment modalities other than surgery are preferred (Birchard and Carothers, 1990; Liptak J M and Lascelles, 2012) [2, 4]. Dental radiographs will reveals extent of bone resorption has occurred. Pre-operative chest radiographs, computed tomography (CT) or magnetic resonance imaging (MRI) may be recommended.

#### Case presentation

A 7 ½ yr old male german shepherd dog was referred to the Veterinary clinical complex college of Veterinary science, Rajendranagar, Hyderabad showing clinical signs like inappetance along with reduced water intake since few days, halitosis and hypersalivation and on physical examination a cauliflower like large gingival mass in the right maxillary region (fig. 1) with part of maxilla bone being involved was found along with swelling of right prescapular and mandibular lymph nodes. On clinical examination of the dog, rectal temperature was found to be 102 F, heart rate - 110 bpm, respiratory rate -28 breaths per min and skin tentative time was 2 secs respectively, both conjunctival and buccal mucous membranes were pale pink.



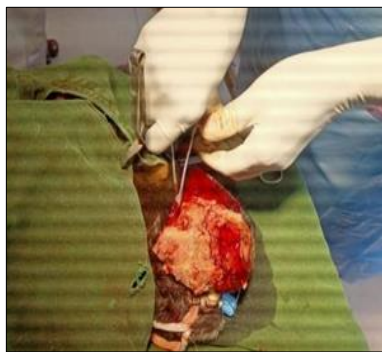
**Fig 1:** Large cauliflower like gingival mass in the right maxillary region



**Fig 2:** Fibroblast seen in the tumor mass on cytological examination (FNAC)



**Fig 3:** a. Ventro- rostral view of head denoting the oral tumor, b. X-ray of thorax and abdomen (Lateral) revealing no metastasis



A. Resection of tumour



B. Chiselling involved maxilla bone with Hammer and chisel



C. After removing tumor and involved bone

**Fig 4:** Surgical resection of tumor mass was performed along with the involved maxilla bone being chiselled out



**Fig 5:** Immediately after surgery



**Fig 6:** 3 months post surgery

**Diagnosis and Treatment**

Fine needle aspiration cytology (FNAC), revealed scanty cellular smear showing mostly neutrophils and occasional atypical cells with vacuolated cytoplasm and eccentrically placed hyper chromatic nuclei with RBCs on the background. Positive for atypical cells suggestive of fibrosarcoma (malignant) (Fig. 2). On hematological examination erythrocytosis, leucopenia was revealed. On radiographic examination revealed oral tumor growth at anterior part of the maxilla and no malignancy. (Fig. 3). Hepatic and Renal function tests were performed and were within the normal ranges. Surgical resection of the tumor mass and the arresting of capillary bleeding were performed with the help of electrocautery. Tumor involving anterior portion of the maxilla bone was chiselled with bone chisel and hammer. Surgical area was irrigated with metranidazole and the surgical wound was closed with simple interrupted sutures pattern with 2-0 vicryl suture material. (Fig. 4&5).

**Post operative care**

Inj. Ceftriaxone: 20 mg/kg intramuscularly for 7 days, Inj. Meloxicam: 0.2 mg/kg intramuscularly for 3 days, Oint. interbran -maxima: topical application, Lignocaine jelly topical application if pain persists. Diet: Fed with liquid diet for few days. Animal was found to be active and healthy on 10<sup>th</sup> post-operative day of the surgery. Prognosis was good (Fig.6).

### Case discussion

Fibrosarcomas are malignant, infiltrating, mesenchymal tumors affecting the dogs oral cavity and are the third most common oral tumors in dogs. The development of fibrosarcoma is usually noticed in the middle to old aged dogs (Lascelles *et al.*, 2003)<sup>[4]</sup>. Growth of these oral tumors has a significant risk to the health and wellness of the animal. It has become even more challenging to treat these oral tumors as it has a chance of recurrence in the future. The prognosis was good in this case of oral fibrosarcoma because surgical treatment was implemented with the involved maxilla bone also removed along with tumor.

**Conflict of interest:** Authors have no conflict of interest in this study.

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