Case Report

RECURRENT ORAL FIBROSARCOMA IN A DOG – A CASE REPORT

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ABSTRACT

A three-year-old male dog was presented with a mass in the oral cavity. Upon examination of the oral cavity revealed a soft and pink mass on the hard palate. Surgical excision was performed under general anaesthesia. Based on the histopathological examinations the case was diagnosed as fibrosarcoma. Recurrence of the tumour occurred within two months at the same site on the hard palate and was reoperated for surgical excision. Animal made an uneventful recovery.

Key words: Fibrosarcoma, oral cavity, dog, oral tumors

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Oral fibrosarcoma (OFSA) is a malignant, infiltrating, mesenchymal tumour of the oral cavity primarily affecting middle aged medium to large breed dogs (Martano *et al.,* 2018). Oral tumours represent 6 - 7 per cent of all malignant tumours in dogs and among them oral fibrosarcoma accounts for 8-25 per cent (Liptak and Laseelles, 2012). The diagnosis is often made late in the course of the affection, due to the frequent caudal location of the tumour in the oral cavity**.** The major setback in the treatment of canine OFSA is the high local rate of recurrence (up to 57 percent), whereas metastasis occurs in 10 - 14 per cent of affected dogs (Martano *et al*., 2018). Wide surgical excision is the mainstay of treatment. An aggressive treatment approach is always warranted to cure OFSA, but the ability to control local affection still represents the major challenge. A three year old male dog was presented to Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli with a history of mild bleeding from the oral cavity. Upon oral cavity examination, it revealed halitosis, bleeding, ptyalism and a mass was located on the center of the hard palate which was soft, firm, smooth edged about 3 cm in size (Fig. 1). Radiography of the thorax revealed no

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metastasis and skull revealed no involvement of maxillary periosteum.

Surgical excision was performed under general anaesthesia. The dog was premedicated with Inj. Atropine sulphate at the dose rate of 0.02 mg/kg body weight intramuscularly, Inj. Xylazine at the rate of 1 mg/kg body weight intramuscularly and induction with Inj. Diazepam 0.25 mg/kg body weight and Inj. Ketamine 5 mg/kg body weight intravenously. Perioperative analgesic Inj. Tramadol 2 mg/kg body weight was administered intravenously. The mass was excised carefully without perforating the hard palate. Bleeding points were arrested using bipolar electrocautery (Fig. 2). Post operative fluid therapy, Tab. Mox 250 mg (Amoxycillin) at the dose of 15 mg/kg body weight for 5 days, Tab. Tramadol 50 mg at the dose of 2 mg/kg body weight for 2 days and oral Zytee gel (Choline salicylate and benzalkonium chloride) was prescribed as a topical application for a week. The excised mass was fixed in 10 per cent formalin then subjected to routine histopathological processing. The paraffin embedded tissue was cut into 4 micron thick sections and later stained with hematoxylin and eosin.

Upon histopathological examination of the tumour mass, it revealed bundles or whorl pattern of arrangement of neoplastic cells. Neoplastic cells were spindle to oval in shape and had indistinct cell borders. The cytoplasm was eosinophilic and nucleus was plumpy, oval to elongate and hyperchromaticin nature (Fig. 3).

Martano *et al.* (2018) reported that fibrosarcomas in dog are frequently seen on gingiva of the maxilla, hard and soft palate and the chances of invasion of underlying bone is around 72 per cent. The present paper reports the oral fibrosarcoma was located on the hard palate without any bony involvement. According to Frazier *et al.* (2012) and Sarowitz *et al.* (2017) oral fibrosarcoma is characterized by high recurrence rate upto 57 per cent and distant metastases are less common accounting for10-35 per cent. This is in accordance with the present case where there was no metastasis.

The dog had recurrence of the tumour mass at the same site on the hard palate after 2 months with approximately 2-2.5 cm in size (Fig. 4) and was reoperated for surgical excision with a wider surgical margin and sutured using polyamide 1-0 in a simple interrupted pattern. This recurrence might be due to the location of tumour and also difficulty in accessing the safest surgical margins to limit local recurrence. Most authors report that atleast 1 cm of macroscopically normal soft tissue or bone surrounding the tumour should be removed to prevent recurrence but this may not always possible to achieve depending on the location of the tumour. Riggs *et al.* (2018) in their study concluded that wide-margin surgical excision should be considered as the gold-standard treatment for dogs with oral SCC or FSA. On further follow up of the case, it was observed that there was no recurrence of the tumour till 6 months.

Frazier *et al.* (2012) reported that the survival time in dogs after surgical excision of oral fibrosarcoma ranges from 7.0 to 12.2 months with local recurrence rates of 32-57 percent. Gardner *et al*. (2015) concluded that

Fig 1. Tumour mass on the hard palate

Fig 2. After surgical excision

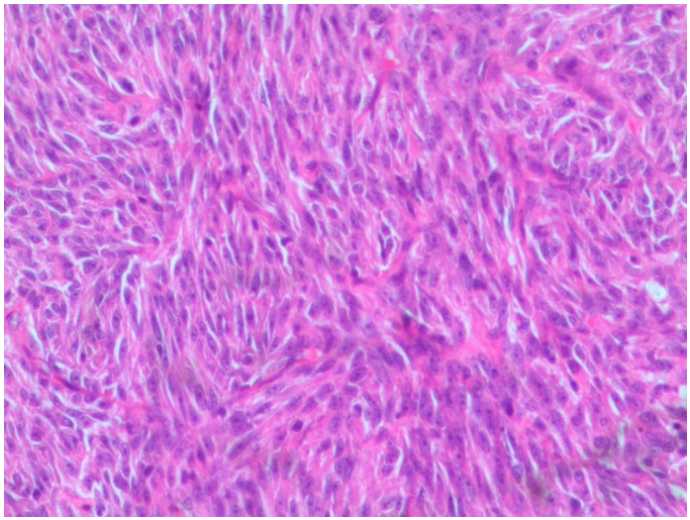

Fig 3. H&E Staining – Neoplastic cells arranged in bundles or whorl pattern

Fig 4. Recurrence of the tumour mass at the same site

treatment of canine oral fibrosarcoma with a combination of surgery and radiation therapy provided the longest median survivals. Martano *et al.* (2018) who studied the changes in the prognosis of oral fibrosarcoma over 30 years and concluded that in spite of histopathological diagnosis of a low-grade tumour, an aggressive treatment is warranted for the complete cure of OFSA, but the ability to control local disease still represents the major challenge.

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