



## Case Report

### Epulis in a Cow and Its Surgical Management

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#### ABSTRACT

In the present study epulis (tumour of the periodontal ligament, a structure that holds the teeth) was recorded in an eight year old female cow. The oral cavity was occluded by a large mass and interfering with normal mastication. Animal was restrained in lateral recumbency under xylazine sedation. The mass was removed surgically under 2% lignocaine hydrochloride was infiltrated around base of the tumor. For control of haemorrhage, gauze soaked in tincture benzoin was applied in the cavity for 2 minute and later dressed with gauze of povidone iodine. Postoperatively, the animals were administered broad-spectrum antibiotics which consisted of injection of oxytetracycline 1500 mg intramuscularly for 5 days and meloxicam 50 mg intramuscularly for 3 days. Fluid therapy which consisted of ringer's lactate 3 litres and 5% dextrose normal saline 3 litres was given intravenously for 3 days. Alternate day dressing was performed with spirit and povidone ointment. The postoperative course was uneventful.

**Key words:** 2% lignocaine hydrochloride, Cow, Epulis, Mastication

#### INTRODUCTION

Epulis is a benign local exophytic growth of the oral mucosa, derived from the periodontal ligament or connective tissue, occur commonly in dogs and rare in domestic cats (Verstrate *et al.*, 1992; Bruijn *et al.*, 2007). Reports of neoplasms in oral cavity of zoo animals are sporadic (Catsro *et al.*, 2011). There are reports of Fibrous epulides (gingival hyperplasia) in domestic animals (Abd El-Aal *et al.*, 1991, Youssef and Ahmed 1992, Shukla *et al.*, 2010). There are few reports of Fibrous epulides in camels, that, indicating it is rare in this species (Ramadan and El Hassan 1980). They vary in size from incidental masses to large masses several centimeters in size and interfering with normal mastication (Head *et al.*, 2002). In the present study epulis (tumour of the periodontal ligament, a structure that holds the teeth) was recorded in an 8 year old female cow.

#### Case history and observations

An eight year old cow was presented to the Pashudhan Aarogy Chal Chikitsa Ekai, Nasirabad, Ajmer, Rajasthan, India with the history of oral cavity was occluded by a large mass (Fig. 1) and interfering with normal mastication and difficulties in swallowing food. Animal was restlessness and off feed. Oral inspection revealed kidney shape proliferative mass on gingival

involving the lower left incisor and canine teeth (Fig. 2). All the physiological and clinical parameters within normal range at the time of presentation such a temperature 101°F, pulse rate 65 per minute, heart rate 55 beat per minute and Respiratory rate 22 breaths per minute.

#### Surgical management

Cow was kept off feed for 24 hours prior to surgery. The operation was performed in lateral recumbency. The surgical site was prepared for aseptic surgery. After aseptic preparation of site, xylazine was administered at the dose rate of 0.03 mg/kg bw intravenously. Pre-operative systemic haemostatic adrenochraome 10 ml intramuscularly was administrated. The mass was excised (Fig. 3) surgically under 2% lignocaine hydrochloride was infiltrated around base of the tumor. For control of haemorrhage, gauze soaked in tincture benzoin was applied for 2 minute and later dressed (Fig. 4) with gauze of povidone iodine. Postoperatively, the animals were administered broad-spectrum antibiotics which consisted of injection of oxytetracycline 1500 mg intramuscularly for 5 days and meloxicam 50 mg intramuscularly for 3 days. Fluid therapy which consisted of ringer's lactate 3 litres and 5% dextrose normal saline 3 litres was given intravenously for 3 days. Alternate day dressing was performed with spirit and povidone iodine. The postoperative course was uneventful (Fig. 5).



**Fig. 1:** Oral cavity was occluded by large tumors mass.



**Fig. 4:** A sterile antiseptic dressing and protective bandaging after excision of epulis.



**Fig. 2:** Oral inspection revealed kidney shape proliferative mass on gingival involving the lower left incisor and canine teeth.



**Fig. 5:** In present study cow recovered after surgery.



**Fig. 3:** The kidney shape epulis was surgically resected by a scalpel blade.

## DISCUSSION

Neoplasm may occur anywhere in cattle. The ultimate goal of treatment of tumor is complete cure. Surgery remains the best way to treat most tumors while some are too large and deeply situated and complete removal is not possible. Reoccurrence of epulis was not reported in previous study as well as in present study. Epulis is benign tumor originated from derived from the periodontal ligament or connective tissue. Several morphological forms of epulides were classified in dogs (Bruijn *et al.*, 2007), histologically distinguished Viz: fibromatous, acanthomatous, ossifying, and giant cell epulis. Microscopically they are characterized by a dense well vascularized stroma populated by expansile mass of stellate fibroblasts surrounded by variable amounts of densely packed fibrillar collagen, resembling the periodontal ligament. Mitotic figures are rare. It is considered a peripheral odontogenic neoplasm, indistinguishable clinically from fibrous hyperplasia (Brown *et al.*, 2007; Jones *et al.*, 1997). In a recent retrospective study of 52 cases of cat epulis, fibromatous was the most common type corresponding to 57.7% of all cases (Bruijn *et al.*, 2007; Castro *et al.*, 2011). In present study microscopic examination was not performed. The present paper describes surgical management of epulis in cow and no reoccurrence of growth was reported in this case upto last six months. Complete cure and no occurrence of cancer could be due to surgical removal of

most cancerous tissue by surgery. On the basis of current finding, it could be stated that epulis could be treated successfully by surgical removal without involving of chemotherapy.

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