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## Carnassial tooth abscess (Dental Fistula) and its surgical management in five dogs

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### Abstract

Carnassial abscess or Dental fistula is a dental disease commonly associated with upper fourth premolar (Carnassial teeth) and first and second premolar teeth. This condition is commonly manifested with clinical signs of swelling and/or fistulous opening in the suborbital region. The present study was conducted in five dogs which were presented to the college of veterinary Science, Hyderabad, Telangana. Dental radiographs of the suspected carnassial teeth were obtained to confirm the diagnosis. After confirmation, it was decided to extract the carnassial tooth by sectioning the tooth using a crosscut carbide fissure bur attached to a contra angle hand piece. All the dogs were advised oral medication with Amoxicillin-Clavulanate at the rate of 20mg/Kg twice a day for ten days and had an uneventful recovery.

**Keywords:** carnassial tooth abscess, (Dental Fistula), surgical management, five dogs.

### Introduction

Carnassial abscess or Dental fistula is a dental disease commonly associated with upper fourth premolar (Carnassial teeth) and first and second premolar teeth. This condition is commonly manifested with clinical signs of swelling and/or fistulous opening in the suborbital region (Verstraete, 1999) [5]. The roots of 4<sup>th</sup> premolar tooth of the maxilla are directed to the maxillary sinus or “antrum”. In case of severe periodontal disease or tooth fracture, the bacteria gains access to the root via pulp cavity. Over time, the bacteria gains entry in to the maxillary sinus or “antrum” hence this condition is also called as “pus in the antrum”, which breaks out either on the oral mucosa over the tooth or on the skin under eye. (Naeini *et al.*, 2010 and Salvekar *et al.*, 2010) [3, 4].

### History and observations

Out of five dogs presented to the College of Veterinary Science, Hyderabad, two dogs were presented with the symptoms like suborbital swelling and three dogs were presented with suborbital draining tract (Fig.1). History also revealed that the dogs preferred to chew on only one side. It was decided to obtain the intra oral dental radiographs to confirm the diagnosis and treat accordingly.



**Fig 1:** Suborbital draining tract below the right eye and Dental radiograph showing periapical lucency of roots of carnassial tooth and molars. Furcational bone loss of the carnassial teeth.

### Materials and Methods

Under general anaesthesia, the dogs were intubated. The oral cavity was rinsed with 0.2% chlorhexidine solution and dental scaling was performed using ultrasonic dental scaler.

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Dental radiographs of the suspected carnassial teeth were obtained to confirm the diagnosis (Fig.2). After confirmation, it was decided to extract the carnassial tooth by sectioning the tooth in to two parts using a crosscut carbide fissure bur attached to a contra angle hand piece (Fig.2) and extracted using dental extractor in two separate pieces. Povidone iodine solution was used to flush the alveolar cavity and antrum.

Escape of the povidone iodine from the fistulous tract indicated adequate flushing. The fistulous tract was treated as an open wound. Radiograph of the site of extraction was obtained immediately after extraction to ensure that there were no remnants of tooth structures left over in the alveolar cavity (Fig.2).



**Fig 2:** Sectioning of the tooth using crosscut carbide fissure bur. Radiograph showing complete removal of the carnassial tooth.

**Results and Discussions**

Symptoms like suborbital swelling and suborbital draining tract in dogs with carnassial abscess were also reported by Verstraete (1999) [5], Fitch (2003), Eriksen (2007) [2], Bharathi *et al.*, (2008) [1]. Dental radiograph prior to extraction revealed apical rarefaction and furcational bone loss around the carnassial tooth. Similar changes were also seen in the first molar tooth. Reiter (2007), stated that prior to extraction of teeth, scaling and polishing of the teeth followed by rinsing the oral cavity with 0.2% chlorhexidine prevented calculi and other debris from contaminating the alveolar sockets and interfering with normal wound healing. Crosscut fissure carbide bur attached to contra angle hand piece facilitated sectioning of the tooth in to two fragments (Naeini *et al.*, 2010) [3] and their extraction using dental extractor. Escape of

povidone iodine from the fistulous tract opening indicated adequate flushing.

Immediate post operative dental radiograph of the carnassial region confirmed that no remnant fragments of the carnassial tooth were left behind in the alveolar cavity. In two dogs, the suborbital swelling subsided within 3 days after extraction and in dogs with fistulous opening, discharge subsided by the next day of extraction. The fistulous opening was found to be closed by the end of 10 days post extraction (Fig.3). The gingival ulcers present around the carnassial tooth prior to extraction completely healed and disappeared by 3<sup>rd</sup> to 5<sup>th</sup> day of carnassial tooth extraction. The gums around the carnassial alveolus were found to have obliterated the alveolar opening by 10<sup>th</sup> day of extraction (Fig.3).



**Fig 3:** Completely healed gums around the carnassials alveolus, complete closure of the suborbital opening on 10<sup>th</sup> day post extraction.

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