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## Lip avulsion in a cat and its surgical treatment

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#### Abstract

Mandibular lip avulsion due to a fight in a 3 year old male cat was presented with difficulty in the movement of the lower jaw during prehension and mastication. Under general anaesthesia, the surgical site was prepared aseptically. Debridement was done before apposition of the lower lip with mandibular symphyseal tissue. The animal showed an uneventful recovery without any further complications after 14 days.

**Keywords:** Lip avulsion, surgery, cat

#### Introduction

Soft tissue injury of the maxillofacial region is common in dogs and cats and is typically a result of trauma. Bilateral rostral lower lip avulsion is particularly common in cats (Saverino and Reiter, 2018) [1]. Lip avulsion treatment is basically done to restore the normal function of the oral cavity by repairing the damaged skin and occlusion. To achieve ideal lip avulsion recovery, thorough debridement of necrotizing tissue and sufficient lavage is required (Sanchez *et al.*, 1988, Das *et al.*, 2015) [2, 3]. Wound dehiscence is the most common complication of lip avulsion (Saverino and Reiter, 2018) [1].

#### Case history

A 3 year old non-descript male cat was brought to the Department of Veterinary Surgery & Radiology, OUAT, Bhubaneswar with a history of fighting resulting in an avulsion of the mandibular lip (lower lip). On physical examination, the mandibular lip was avulsed, and had difficulty in prehension and mastication in spite of his desire to eat and drink. The patient could not close the mouth spontaneously. No other abnormalities associated with trauma were observed on examination. The cat was diagnosed with bilateral lower lip avulsion (Fig.1).

#### Surgical Treatment and Results

Upon thorough general physical examination, the cat was anesthetized with a mixture of Xylazine HCl at 1 mg/kg and Ketamine HCl at 10 mg/kg which was administered intramuscularly to sedate the patient. Meloxicam was administered at the rate of 0.2 mg/kg intramuscularly as a preemptive analgesic prior to surgical intervention anticipating painless recovery. After inducing general anesthesia, the patient was positioned in dorsal recumbency. The wound was debrided and thoroughly cleaned using normal saline and povidone iodine 10% solution. The mandibular lip was repositioned with slight traction as mild soft tissue contraction was observed. Repositioned was done ensuring obliteration of dead space and secured by applying horizontal mattress sutures anchoring the mucous membrane of lower lip with mandibular symphyseal mucous connective tissue using trulon 2/0 (Fig.2). Post-operative care was continued with antibiotics, Ceftriaxone @ 20 mg/kg intramuscularly with supportive therapy (normal saline and 5% dextrose) for five consecutive days. Betadine ointment was applied twice daily to avoid infections. Solid food was restricted for two weeks and only semi solid food and fluids were given orally. After 14 days, sutures were removed and it was evident that the mandibular lip was adhered to the mandible securely.

#### Discussions

Lower lip avulsions usually occur when a force is applied directly to the lower lip. The most common complication seen in mandibular lip avulsion was wound dehiscence. It is also a very painful condition and creating stress to the animals (Saverino and Reiter, 2018; Sahu *et al.*, 2019; Satapathy *et al.*, 2022) [1, 4, 5]. If the tissues are properly handled, debrided and lavaged prior to wound closure then most of the lip avulsions will heal uneventfully.

Otherwise, infection, abscess formation, necrosis, and dehiscence may be seen. Failure to achieve tension-free closure will undoubtedly result in partial or full dehiscence, especially in the lower lip area where gravity and the bilateral lateral labial frenula create a more ventral pull on the tissues (Swaim, 2012) [6]. In this present case study, no further complications were observed, and seen movement of lower jaw without any difficulty and pain during prehension and mastication.



**Fig 1:** Appearance of avulsed lower lip (Before reconstruction)



**Fig 2:** Repositioned of avulsed lower lip (after reconstruction)

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