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Reconstructive management of mandibular lip avulsion in cat

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Abstract

Mandibular lip avulsion in male cat was presented for surgical management to the Department of Veterinary Surgery and Radiology, Veterinary Collage, Kamdhenu University, Anand. After thorough examination of cat adequate lavage and debridement were performed before reap position of the lip. Apposition in the avulsed lip submucosal tissue was fixed to the labial mucosa using monofilament absorbable (2-0 polydioxanone) suture by simple continuous method under general anesthesia, however small part of lower lip avulsed after 5 days, which was managed by tension band wiring along with routine medicinal management.

Keywords: Mandibular lip avulsion, tension band wiring

Introduction

Soft tissue injury of the maxillofacial region was common in dogs and cats [1]. An avulsion was the partial or complete tearing away of skin and underlying tissue. Lip avulsion often occur due to orofacial traumatic injury and bite wound in dogs and cats [1]. Bilateral rostral lower lip avulsion was common in cats [2]. This occurs due to caudally or laterally directed forces against the gingiva and labial mucosa [2]. Avulsion may vary from severe bilateral to slight unilateral tissue detachment [3]. Variation in degree of severity can be seen based on the amount of force acted upon [1]. Careful and judicious tissue assessment and debridement should be performed before suturing to maximize preservation of healthy tissue [4]. Wound dehiscence and infection are most common complication of lip avulsion injury [4].

Case Description

A 12-month-old male cat was presented at Department of Veterinary Surgery and Radiology, Veterinary Collage, Kamdhenu University, Anand suffering from mandibular skin avulsion from 4 days due to traumatic injury. Upon admission, a complete physical examination was performed. Cat was alert and active but had mandibular lip avulsion which leads to difficulty in prehension and mastication. Temperature, respiratory rates and pulse were within the normal range. No other abnormalities associated with trauma observed on examination. The patient was diagnosed with bilateral mandibula/lower lip avulsion.

Materials and Methods

Affected patient presented to Department of Veterinary Surgery and Radiology for surgical management. Lip avulsion was treated with simple continuous suture technique by using monofilament absorbable (2-0 polydioxanone) suture material.

Surgical treatment and Results

Cat underwent anesthetic induction utilizing butorphanol at a dosage of 0.2 mg/kg intramuscularly (IM), coupled with sedation via xylazine administered at a rate of 1 mg/kg and ketamine at 30 mg/kg. Subsequently, the anesthesia was sustained through a regimen involving ketamine and midazolam. Following meticulous aseptic preparation of the surgical site adequate lavage and debridement are performed. Avulsed lips were meticulously approximated utilizing monofilament absorbable (2-0 polydioxanone) suture material, specifically polyglactin 910, employing a simple continuous suture pattern.

Additionally, sutures were placed within the interdental spaces and around the teeth to ensure proper anchorage of the sutures. Postoperatively oral administration of meloxicam @ 0.2 mg/kg, amoxicillin/clavulanic acid @ 22 mg/kg and chlorhexidine mouthwash were recommended for five days. However small part of sutured avulsed skin was separated after 5 days of surgery. That was again sutured with intraosseous tension band and wiring.

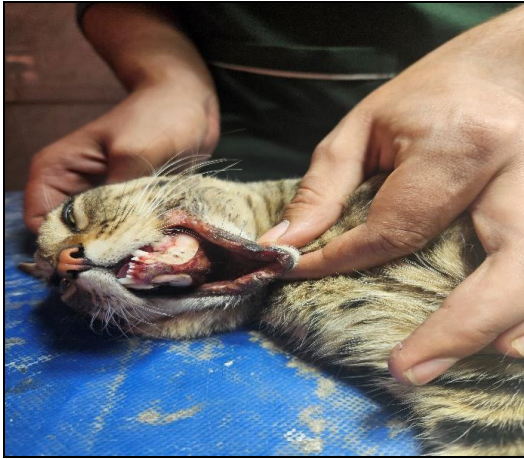


Fig 1: Bilateral mandibular skin avulsion



Fig 2: Debridement of avulsed skin

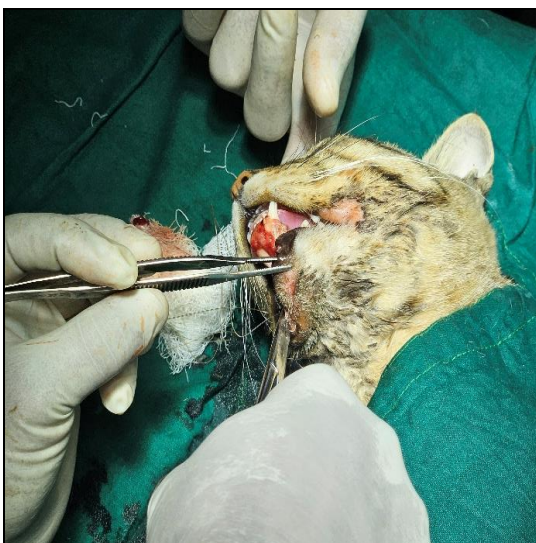


Fig 3: Suturing of mandibular skin

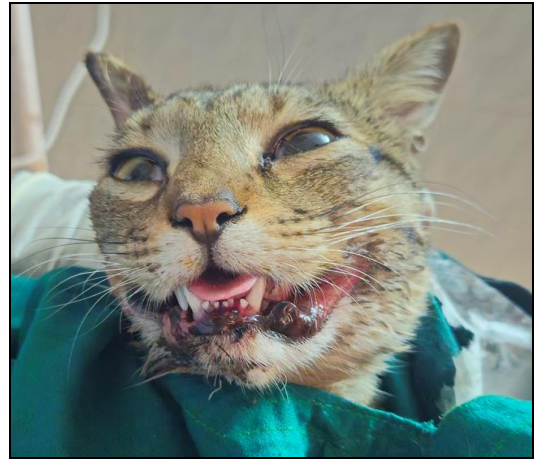


Fig 4: Final closure of mandibular skin after surgery



Fig 5: Intraosseous tension band wiring did after reoccurrence

Conclusion

Mandibular lip avulsion is rare in cat and it mainly caused by accidental injuries. Surgical management provide better result at fresh injuries, but delayed presentation of such injuries were mostly resulted in to post operative complications, whereas extra care and management required to recover such cases postoperatively.

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