Lip Avulsion

EMPHASIS:
Lip avulsion in dogs and cats may occur secondary to bite wound trauma, or occasionally by automobile trauma. Most or all of the lower lip and ventral mandibular skin becomes detached from the mandibles. Although this injury has a garish and disfiguring appearance, the prognosis with proper surgical repair is actually quite optimistic. In this paper, we will describe the technique.

PREOPERATIVE DIAGNOSTICS:
1. Physical examination.
3. Mandibular radiographs if a fracture is suspected.

PREOPERATIVE CARE:
1. Indwelling cephalic catheter.
2. Intravenous anesthetic induction protocol (Ketamine/Valium, Propofol, etc.)
3. Endotracheal intubation and inflate cuff.
4. Isoflurane inhalant anesthesia to effect.

Figure 1: This schematic drawing depicts: 1A) This rostral view shows the lower lip avulsion from the gingival tissue rostral to the incisors. 1B) This drawing depicts the lip avulsion from a lateral view.
5. Lead II ECG and pulse oximetry monitoring during prep and surgery.

6. Clip and prepare the mandibular skin and lower lip. The oral cavity may be lavaged with chlorhexidine solution.

**SURGICAL TECHNIQUE:**

1. Debride all devitalized portions of the gingiva and lip.

**AXIOM:** If sutures are placed through devitalized or questionable tissue, dehiscence is likely.

2. Lacerations of the lip margin should be repaired first, using simple interrupted monofilament sutures.

3. Using monofilament zero-gauge suture, place 4 to 6 mattress sutures, through the full thickness of the lip, around an incisor, and back through the full thickness of the lip, through a stent at the skin surface (See Figure 1).

**AXIOM:** The sutures should encircle the incisor as far ventrally as possible (i.e. at the level of the mandibular bone surface), tunneling under the gingiva.

**AXIOM:** If necessary, holes can be drilled in the mandible, between the incisors, to pass the suture through.

**AXIOM:** Place the sutures such that, when they are tied, there will be no tension on the subsequent gingival closure.

---

**DIMENSIONS IN SURGERY**

*continued from page 15*

**Figure 1:** This schematic drawing depicts: 1C) This dorsal view shows the avulsed tissues in relation to the other oral structures. 1D) This view shows the placement of 4 monofilament non-absorbable mattress sutures. The sutures penetrate the stent initially, then through the full thickness of the lip, then circles the ventral aspect of the incisor, back through the full thickness of the avulsed lip and finally exiting the stent. 1E) This view shows the sutures that were pulled tightly and were tied on the stents reapposing the lip to the mandibular surface.

**Figure 2:** This schematic drawing depicts the closure of the labial and gingival mucosal defect in the region between the incisors. Accurate interrupted sutures close the defect securely.
DIMENSIONS IN SURGERY

continued from page 16

AXIOM: The entire repair is dependent on these sutures. If these fail, or are insufficiently secure, dehiscence of most or all of the primary mucosa-to-gingival closure is likely.

4. Using 3-0 monofilament absorbable simple interrupted sutures, reappose the gingiva to the lip mucosa (See Figure 2).

5. Place stented sutures as described above, through the left and right sides of the mandibular skin, slightly below the lip, passing the sutures around the teeth.

6. Close the lip mucosa to gingiva on the left and right sides, using 3-0 interrupted monofilament absorbable sutures (See Figure 3).

7. If warranted, a Penrose drain can be placed in the ventral intermandibular space. We have found that most patients do not require this.

8. At the surgeon’s discretion, an esophagostomy tube or PEG tube may be placed. Usually this is not necessary, provided the patient is kept on a liquid or gruel diet.

POSTOPERATIVE CARE:

1. Post-operative antibiotic treatment, if warranted.

2. Pain management using oral, injectable or transdermal analgesics.
DIMENSIONS IN SURGERY
continued from page 18

3. Elizabethan collar until the sutures are removed.
4. Suture removal 2 weeks postoperatively.

PROGNOSIS:
Excellent healing is achieved in the great majority of patients regaining a normal or near normal result. Partial dehiscence is not unusual, so forewarn the owner that some patients may require follow up resuturing of one or more portions of the incision.

AUTHOR’S NOTE
If you have any questions concerning this paper, additional references, surgical supplies or sources of products mentioned or used in this protocol, please FAX us at 1-310-479-8976. We will answer your questions promptly.

Coming Attractions
Ulnar Ostectomy is the most frequent procedure performed for curvature deformities of the front limb. In next month’s Dimensions in Surgery article, we will discuss the technique.

See you then!

A Free Continuing Education Service Available:

• To obtain a free bound book containing recent “DIMENSIONS IN SURGERY” articles, merely mail your business card to us, and on the back write: “YEARLY SUMMARIES.”

• Mail Your Card To:
Larry Lippincott, Scott Anderson, and Phil Gill
1736 South Sepulveda Blvd.,
Suite A
Los Angeles, California 90025.

• We will send you a binder containing the “DIMENSIONS IN SURGERY” articles from the past two years, indexed and ready for quick office reference.

• Please be patient with the mailing of your articles.

• All first time “YEARLY SUMMARIES” requests received after January 2003 will receive the last two years’ articles in one bound book.

• 24 of the most requested articles from the first three years of publication are still available and are contained in the Practical Guide For Small Animal Surgery book which can obtained from the SCVMA office.