Facial Lacerations in Children

Management Guidelines
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The particular issues surrounding facial lacerations in children are;

1. Cosmetic result
    - doctor expertise
    - location on the face or involvement of facial structures
    - size and depth of wound
2. Patient co - operation for the wound repair
    - wrapping is only appropriate for short procedures
    - paediatric sedation or GA may be required
3. Suitable anaesthetic and analgesic options in the ED
4. Choice of suture material, glue, dressings

COSMETIC RESULT

The choice to proceed with repair in ED is influenced by the ED doctor's level of experience and expertise.

SCARRING

Scarring is largely a result of the patient's genetics and the area and direction of the wound. Parental expectations regarding different closure techniques should be discussed.

Remember to tell parents that the final aesthetic outcome won't be known for at least a year, and that the wound often looks worse during the first 3 to 6 months than at presentation due to thickening and raising of the edges.

During the first year, the wound should be protected from sunburn, and regular massage of the wound may be beneficial in achieving optimal cosmetic results.

Gentle massage can commence 2 to 3 weeks after the wound has healed, and can be done 2 to 3 times a day using any water-based moisturiser.

WHEN TO REFER

- All large, deep or irregular wounds
- All dog bites on the face - these will often require formal debridement, antibiotics and close follow up.
- Lip lacerations through the vermillion border
- Eyelid, ear, nose and peri-oral lacerations may require referral – discuss with a senior first.

LOCAL ANAESTHETIC ANALGESIA & SEDATION

Topical ALA (see separate protocol) in the wound is an excellent local anaesthetic and often preferable to local infiltration. Avoid on the tip of the nose or other extremities.

In certain instances, nitrous oxide can assist in sedation. (see Nitrous Oxide guideline) Lacerations near the mouth and nose areas however, may preclude the delivery mask being kept on the airway for the entire period.
In some instances deeper sedation with Ketamine may be appropriate but should always be discussed with the ED Consultant first. (see Ketamine guideline)

WOUND CLOSURE TECHNIQUES

SKIN GLUE

Dermabond and *Histoacryl*

Useful in superficial lacerations with clean, straight edges, **which can be approximated without tension.**

Apposition of the skin edges should be performed before applying the glue. This prevents the glue spilling into the gap and inhibiting good wound closure.

3 thin layers of glue should be applied to the apposed wound.

The additional use of *Steristrips* and a dressing like *Fixomul* may help prevent widening of the scar.

SKIN LINKS & STERISTRIPS

Useful in minor, superficial lacerations with clean straight edges with appose without any tension.

They often peal off requiring re-closure of the wound; the use of Benzco tincture can prevent this from occurring.

When these wound conditions are not met, the laceration should be sutured since wound dehiscence following failed glueing may result in a worse scar.

SUTURES

Wherever possible, non-absorbable sutures are used, as the cosmetic results appear to be better.

Where removal of sutures is likely to be a problem (eg. children < 2 years, or particularly uncooperative children), absorbable sutures may be advantageous.

The following table is a reasonable guide for use in the Emergency Department:

Suture Type	Examples	Size	Removal/Follow-up
Non-absorbable	Monofilament nylon (eg *Ethilon*) " polypropylene (eg. *Prolene*)	Scalp: 3/0 4/0	Removal at **5 days** to prevent "tracking" of the suture scar.
Absorbable	Monofilament (eg. *Monocryl*) Fast absorbing catgut	Face: 5/0 6/0	Follow up at **7 days**

INTRA-ORAL LACERATIONS

These injuries tend to heal very well due to the excellent blood supply in the mouth. Most lacerations require nothing more than the use of an antiseptic mouthwash (eg. *Perioguard*) for a few days.

Lacerations resulting in a large, raised flap or a large gap, should be referred to a plastic surgeon. Gum lacerations resulting in a large flap may require dental referral.

Most tongue lacerations spontaneously heal very well. However, very large flap lacerations may require repair by a plastic surgeon.