The OMFS Survival Guide

Managing Facial Wounds

Aims & Objectives

- Participants to understand and apply background knowledge on suturing techniques to closure of various wound types
- To understand important underlying structures that could be damaged and the assessment of these structures
- To be able to apply pre-existing knowledge of facial anatomy and how this relates to optimal wound closure
- To understand which wounds may need more extensive surgical treatment in theatre
- To be aware of simple measures for haemostasis

Components of a Good History of Presenting Complaint

- Where and what time did the injury occur?
- If alleged assault- any weapons used?
- Any police involvement?
- If a child- injury witnessed or unwitnessed? Time taken to present to ED/GP
- Any symptoms? E.g. facial weakness or numbness, active bleeding
- Check red flags of head injury- loss of consciousness, vomiting, amnesia
- Check red flags of C- Spine injury- numbness or tinging in hands/fingers
- Any other injuries?
- If may need theatre (extensive injury or child)- when did they last eat and drink?

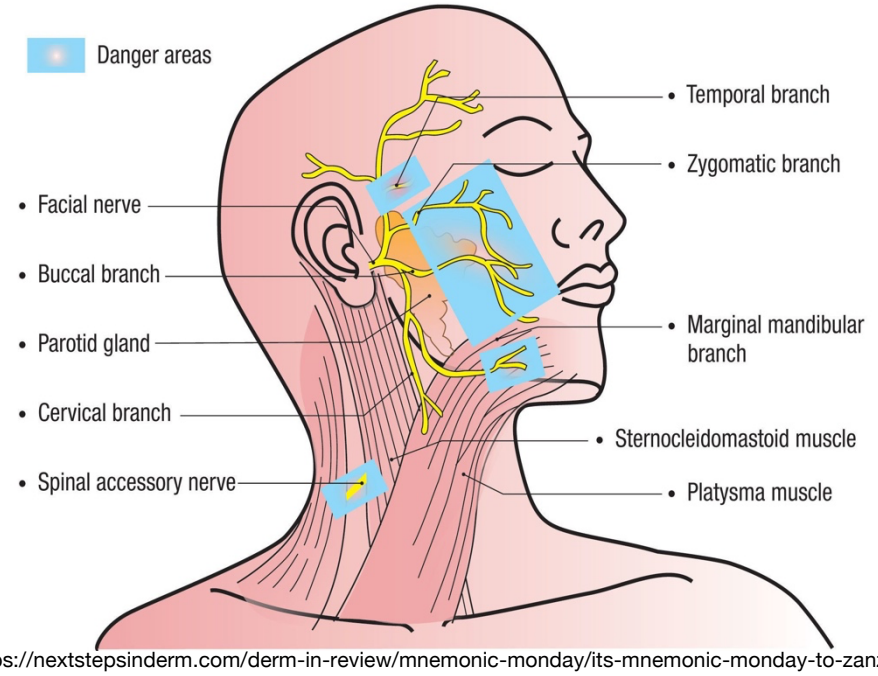
Components of a Good Medical and Social History

- Full past medical history
- Current prescribed medications and any over- the- counter medications
- Past surgical history
- Family history of conditions
- Smoking- current and past usage
- Alcohol- current and past usage
- Recreational drugs- current and past usage
- Occupation
- Living circumstances
- Systems review

- If unable to gain a good history, can look at previous admissions, GP records, contact family with consent

Examining a Facial Wound

- Always check observations in case of signs of hypovolaemia
- A-E
- Should do a full facial trauma examination in case of other underlying missed injuries
- Check the wound for contamination- check for glass or other foreign bodies by running some forceps down each side of the wound- you may hear/feel the foreign bodies
- Have a look at the base of the wound for any structures- e.g. parotid gland, nerve, arteries
- Check facial nerve function and no loss of sensation
- Check the parotid duct- see if you can milk it intra- orally
- Assess intra- orally- any teeth missing/ chipped



From: https://nextstepsinderm.com/derm-in-review/mnemonic-monday/its-mnemonic-monday-to-zanzibar-by-motor-car/

Investigations

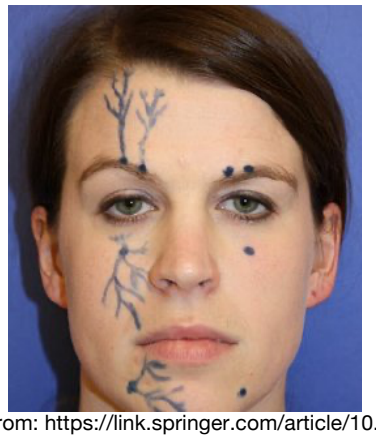
- Consider bloods if extensive wound (and if needs theatre)- FBC, U&Es, coagulation screen, group and save (or crossmatch if haemorrhaging).
- If suspecting foreign bodies- can order soft tissue X-rays
- Consider OPG, PA mandible or facial bones XRs if suspicion of underlying facial fracture

Treatment

- Indications for sutures are wounds that extend through the dermis (full thickness)

Local Anaesthesia

- Can use a combination of local infiltrations (if small wound) with regional blocks for larger areas.



From: https://link.springer.com/article/10.1007/s13671-012-0007-9

- Topical LAT gel can be used away from the eyes, mouth and extremities (e.g. ear) and is a good option for anxious adults and children to allow you to inject LA.
- Intra- orally can use topical xylocaine
- For children, can use an insulin syringe for injecting LA as it is smaller and isn't easily identifiable as a syringe.
- For children also consider using Entonox (if pt suitable) for analgaesia and anxiolysis- may aid with wound closure under LA

Haemostasis

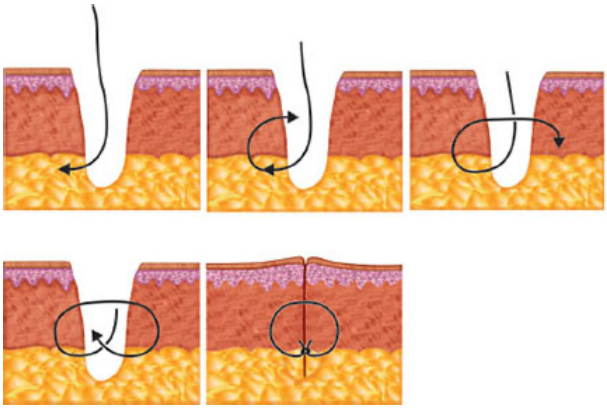
- The face and scalp have a rich blood supply and wounds can often bleed profusely.
- Always apply firm pressure first!
- Injecting LA with adrenaline can help induce vasocontriction and slow bleeding down.
- Can use adrenaline or tranexamic acod- soaked gauze to apply pressure with.
- If a small vessel and you can see, can attempt to tie off with a suture
- Can cauterise with the bipolar if you are competent using it
- **Do not use silver nitrate sticks on skin wounds- they can stain the skin**

Wound Debridement

- All wounds should be thoroughly cleaned and debrided to reduce risk of infection- irrigate with plenty of saline, If no foreign bodies, can scrub with saline- or betadine- soaked gauze or a surgical scrub brush.
- Animal/ human bites need a lot of scrubbing and irrigation.
- If the wound is old- scrub the edges of the wound with saline- soaked gauze until they bleed (for better healing). Or, can freshen up the edges of the wound with a scalpel.
- Remove any foreign bodies.

Wound Closure

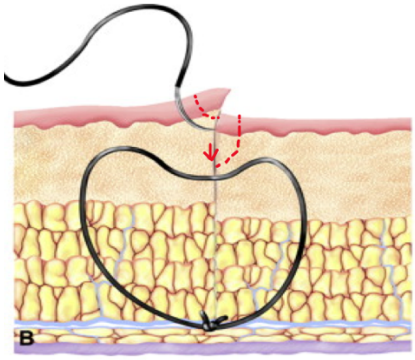
- **Deep sutures** to close the muscle and fat- without these the underlying structures will continue to pull apart and widen the scar. These should be an absorbable suture that is strong enough to take the tension off the skin (e.g. Vicryl 3/0 or 4/0).
- Knots should be buried so they don't interfere with the superficial layer. By the time you have placed these the wound should look like it doesn't need any further stitches as the edges should be well apposed.



From: https://www.jaypeedigital.com/book/9789351529415/chapter/ch6

- Wound edges should be everted- for cosmetic healing, when the skin heals fibrin contracts and pulls the edges inwards- if the edges are everted it will lie flat, if it is sutured flat it will contract and heal with a dent- like appearance.

- **Superficial Skin Sutures** should be placed using simple interrupted sutures with a non- resorbable material, e.g. 5/0 or 6/0 nylon.
- The edges of the wound should be in the same plane, however occasionally you may have one side lying proud to the other- this can be corrected by taking a superficial bite of the proud side and a deeper bite of the other one, to drag one side down.
- If child- use resorbable sutures for the skin so they do not have to return for them to be removed.



From: https://www.qub.ac.uk/schools/mdbs/Study/ClinicalAcademicTraining/Filestore/Filetoupload,1000951,en.pdf

Tissue Loss

- Close whatever you are able to
- Dress the open area with a moist dressing, e.g. jelonet and gauze
- Arrange for clinic F/U as the patient may need a secondary reconstruction with a local skin flap or skin graft.

Post- Operative Instructions

- Keep sutures dry
- Can apply chloramphenicol or Vaseline to sutures until they are removed
- If antibiotics given- finish the course
- Non- resorbable sutures should be removed 5-7d after placement
- Avoid massaging the scar for the first 12 weeks (may move around pigmented cells and worsen appearance of the scar)

Further reading:

General assessment of OMFS patients: https://www.amazon.co.uk/Call-Oral-Malliofacial-Surgery-2nd/dp/1909818585

NICE CKS on wound management:
https://bnf.nice.org.uk/wound-management/

Surgical Teaching videos on Youtube:
https://www.youtube.com/c/SurgicalTeaching

E- Face:
https://www.e-lfh.org.uk/programmes/oral-and-maxillofacial-surgery/