Wound Care & Infection

Greg McDonald

July 2011

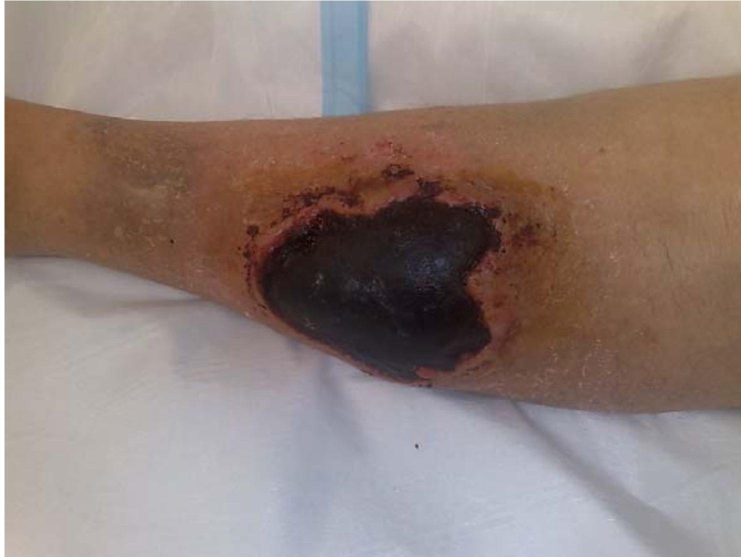
Learning objectives

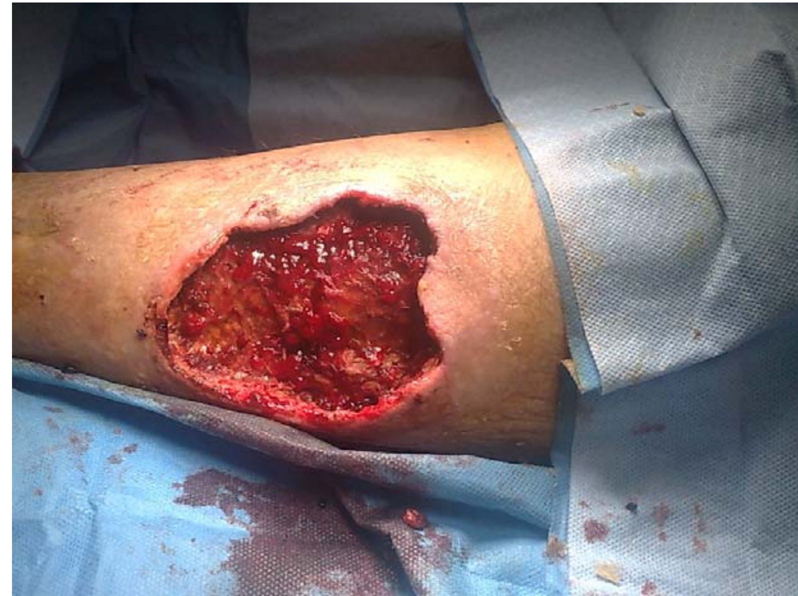
- Management of particular wounds
- Antibiotic prophylaxis
- Treatment of skin infections

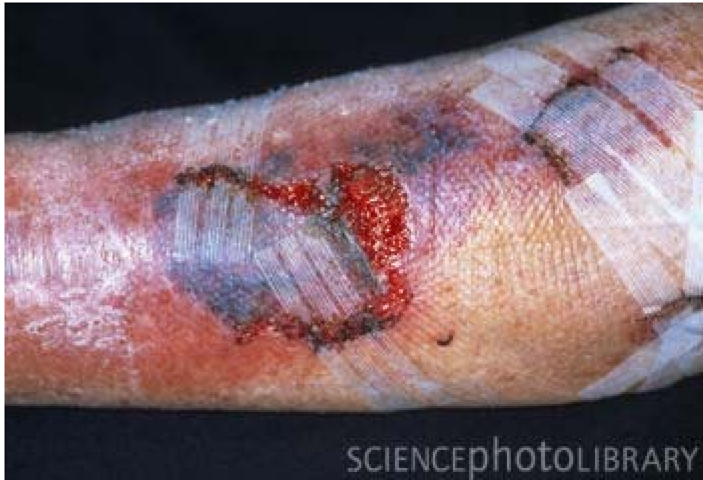
Wounds

- Flap lacerations
- Scalp lacerations
- Glue

Shin lacerations



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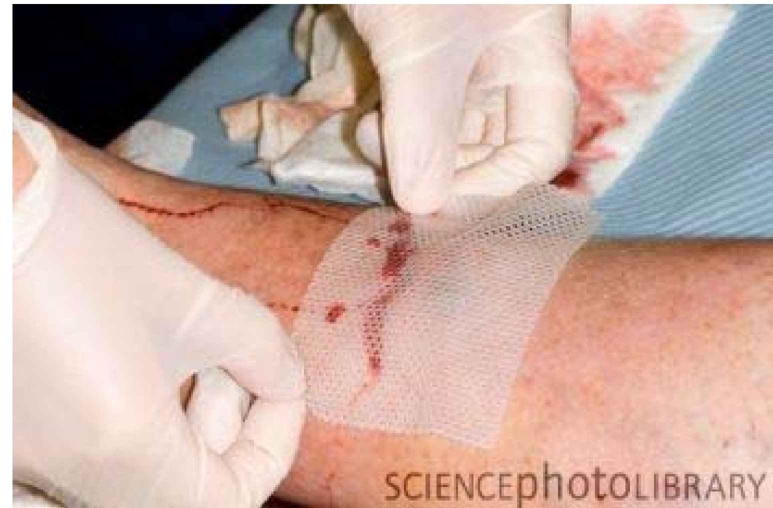
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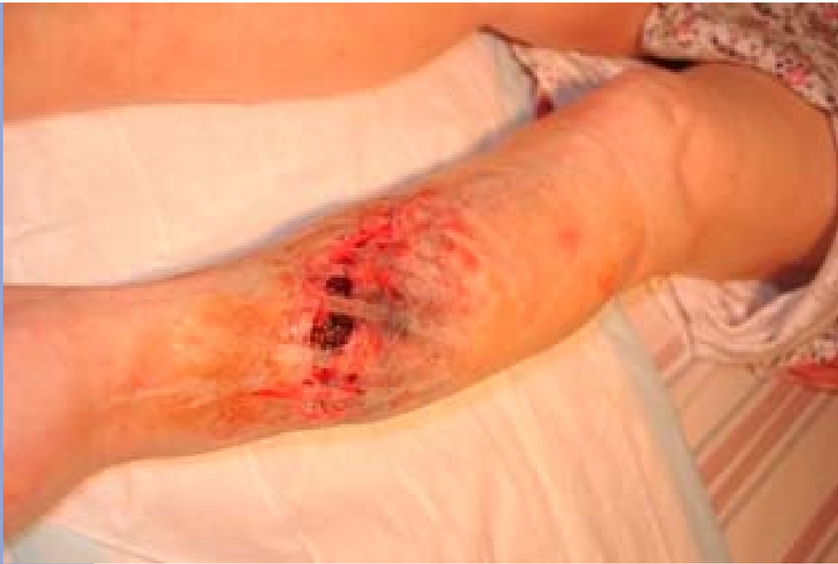
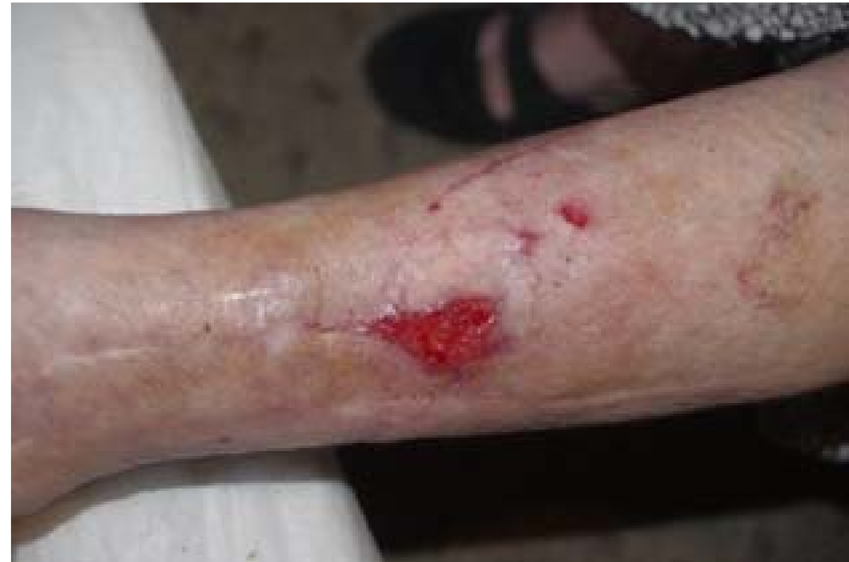




What's best?

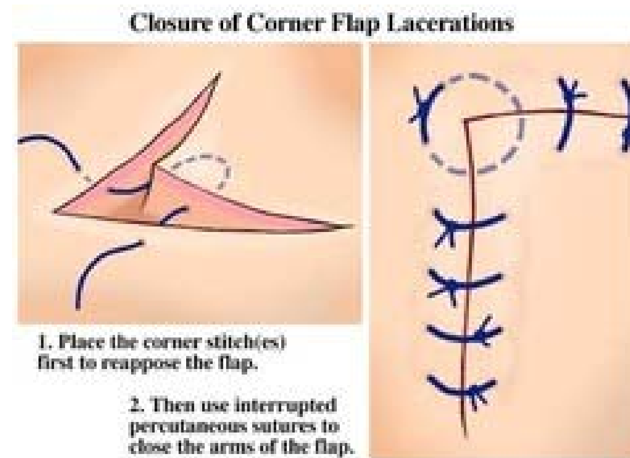
- Hard to know BUT…..DANGER IF…..
- Elderly; thin skin
- Shallow flap
- Distally based flap (inverted V)
- Compromised healing – DM; steroids; vascular disease
- Contused; haematoma
- Contaminated; open > 8 hours

Shin lacerations

- Primum non nocere
- Anatomical approximation usually fails SO
- Loose apposition
- Minimal fixation – Mepitel; Jelonet
- Moist dressing (NS / Betadine gauze) then Kerlix or combine
- Rest / Elevate ± Admit
- ± Antibiotics
- ± Delayed closure

Corner Stitch

- But, if you want to suture a flap laceration…..



Scalp lacerations

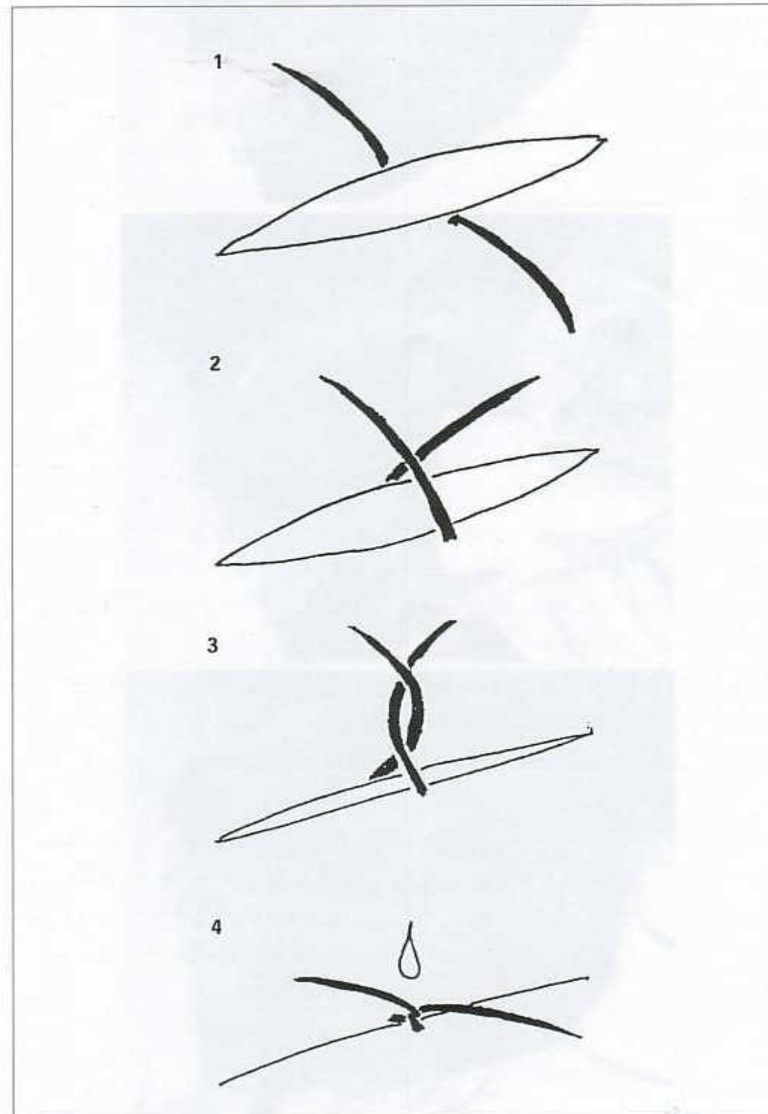
- Suture
- Glue
- HAT trick (Hair Apposition Technique)
- Staples

How to do the HAT trick?

- Perform wound irrigation and a meticulous examination.
- Twist together 3-7 strands of hair on one side of the wound.
- Do the same on the other side of the wound.
- Interlock these two hair bundles in a 360-degree revolution. Do not tie a knot.
- Secure the intertwined hair bundles by applying a few drops of a tissue adhesive (tie to side?).
- Repeat as needed to close the length of the laceration.
- The hair will unravel on its own after a week.

Figure 1.

Hair apposition technique. 1. Choose 4 to 5 strands of hair in a bundle on either side of the scalp laceration. 2. Using artery forceps, cross the strands. 3. Make a single twist to appose wound. 4. Secure with a single drop of glue.



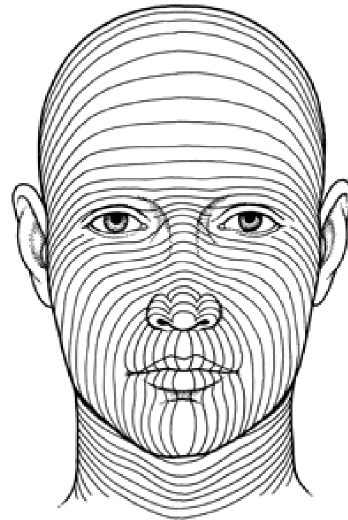
Contraindications to HAT Trick

- Scalp lacerations more than 10 cm
- Grossly contaminated wounds
- Active bleeding from the laceration
- Significant wound tension
- Hair strands less than 3 cm in length

Cyanoacrylate Glue

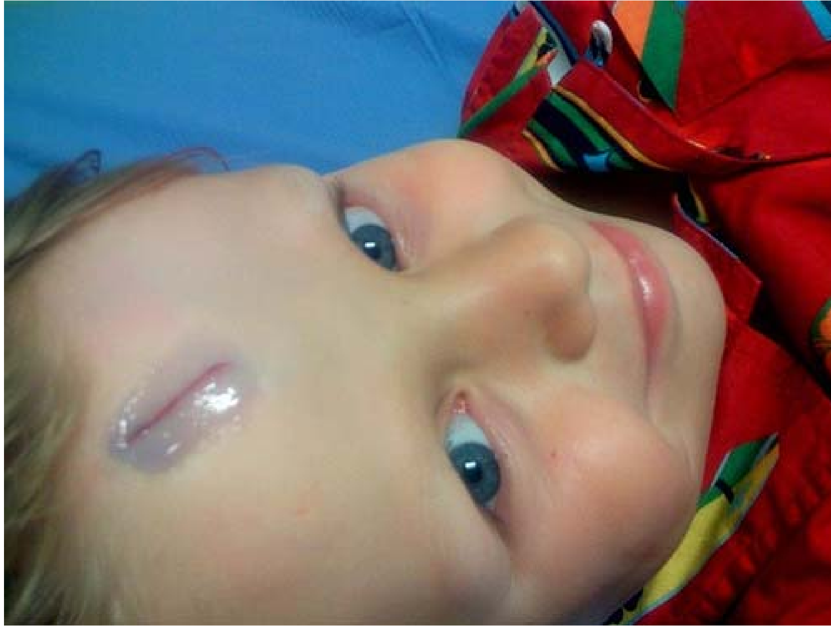
Use it where

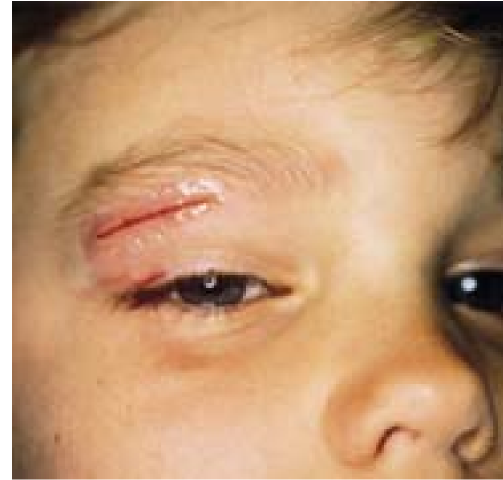
- It doesn’t matter much (scalp)
- Alternatives difficult (kids)
- Outcome acceptable - *Langer’s lines*



Cyanoacrylate Glue

- Suitable wound: short - <5cm long; straight; clean; minimal tension - <0.5cm gape; little movement; (??eyebrow)
- Different versions of glue – "much of a muchness"
- Still need good alignment and to hold the wound ~ 30secs after application (?Leukosan strips)





Wound Infection / Prophylaxis

- Wound open >8 hours
- Contaminated, contused or crushed wound
- DM; steroids; immuno-compromised
- Vulnerable sites – hand / foot; cartilage; tendon; joints
- Specific causes
  - Bites – humans / animals
  - Marine
  - Penetration through thongs / sneakers

Wound toilet

- First principle is thorough irrigation
- NS + iodine (10:1); 19g needle (or splash shield) + 20ml syringe. Hold close to wound
- Bowl; gauzes
- Use > 100mls for contaminated wound
- Clean visible blood / debris with gauzes
- + Tetanus prophylaxis

Specific "bugs"

- Staph and Strep still account for >90% of wound infections
- Fluclox / diclox or cephalexin still adequate
- Current guidelines suggest adding metronidazole to cover anaerobes or using amoxil / clavulanate alone
- ?visibly dirty wounds or dirty environment

Special situations - Bites

- TO CLOSE OR NOT TO CLOSE
- Dog bites – pasteurella multocida
- Cat bites and cat claws – as above

  NB Not "Cat scratch disease" (bartonella)
- Human bites – staph; strep; anaerobes

  ALL → amoxil / clavulanate. Can give stat IMI procaine penicillin first.
- Established infection – metronidazole + ceftriaxone

Special situations – Water borne

- Fresh or brackish water / mud - aeromonas
  → ciprofloxacin
- Salt water (e.g.> oyster cuts) - vibrio → doxycycline (or 3rd generation cephalosporins or ciprofloxacin)
- Coral cuts – often strep pyogenes; maybe marine organisms → di/flucloxacillin. If strongly suspect strep. use penicillin IV alone or oral amoxicillin
- Rubber soles - pseudomonas → cipro.

Skin infections

Cellulitis –

- Strep pyogenes ("spontaneous"; including erysipelas) – fever; rigors; malaise ~24/24 → redness; pain; LNs

  → Ben Pen / oral amoxil
- Staph aureus – usually wound / ulcer prior → flucloxacillin OR cephazolin + probenecid / oral cephalexin
- Diabetics – everything → amoxil / clavulanate

PLUS Don't forget HITH AND

Give it two days!

COMMENTS / QUESTIONS