Sideline Wound Care

Erin E. Shaffer, DO, ATC
Objectives

• Know what supplies you should have on the sideline to facilitate care of athletic wounds

• Recognize the different stages of wound healing and be able to integrate this into your clinical decisions

• Be able to treat wounds that happen during athletic activities on the sideline including when to return the athlete back to activity
What to have with you

- Consent form
- Sterile gloves/gauze
- Local anesthetic
  - Lidocaine without epi
  - Bupivacaine .25% - .50%
- 25, 27, 30-g needle
- Syringe (5-10ml)
- Cleansing/Irrigating supplies
  - 60 ml syringe
  - 18-g needle
  - Splash shield
  - Sterile Saline
- Sterile drape
- Suture materials
  - Suture
  - Needle driver
  - Forceps
  - Scalpel
  - Steri strips/Adhesive glue/Stapler
- Dressings
- Sharps container
- Sunscreen
- Aloe vera
Evaluation of Injury

• Where is the wound?
  – Is the wound over a joint?

• Amount of blood loss
  – Symptoms of lightheadedness, pallor

• Injury to muscles/nerves
  – Numbness, weakness
    • Two point discrimination
## History of Injury/Athlete

<table>
<thead>
<tr>
<th>Injury</th>
<th>Athlete</th>
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<tbody>
<tr>
<td>• Mechanism</td>
<td>• Any blood thinners</td>
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<tr>
<td>• Timing</td>
<td>• Latex allergy</td>
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<td>– Likely recently if on the sideline</td>
<td>• Drug/anesthetic allergies</td>
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<tr>
<td>• Foreign body</td>
<td>• Tetanus UTD</td>
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</tbody>
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UPMC Pinnacle
Hemostasis

• PPE
  – Gloves, masks
• Direct pressure
• Products
  – QR powder
  – electrocautery
  – Silver nitrate
  – Ferric Subsulfate 20% (Monsel’s solution)
  – Aluminum chloride
Wound healing

1. Inflammation
   - Macrophages, Neutrophils
2. Tissue formation/proliferation
   - Begins within hours
   - Re-epithelialization, granulation
3. Tissue remodeling
   - Second week of healing
   - Continues after two weeks
Types of Wounds
Abrasions

- Superficial skin wound
  - Epidermis from dermis
- Examples:
  - Road rash, turf burn, mat burn
- Cleanse abrasions: saline vs tap water, sterile water, antimicrobial soap, chlorhexidine solution, hydrogen peroxide (controversial)
- Cover with sterile dressing
  - Hydrocolloid dressings
Lacerations

• Neurovascular status
• Anesthesia
  – Lidocaine
  – Bupivacaine
• Followed by exploration, cleaning
  – Irrigate: 60 ml syringe, 18 gauge needle, splash shield
• Sutures
Laceration Repair

• Primary closure
• Delayed primary closure
• Secondary intention

• What resources are available
• Horizontal mattress: tissue under tension
• Simple interrupted: quick
• Subcuticular: tissue under low tension, cosmetic repair
• Staples: scalp, no cosmetic concerns
Goals of Repair

- Hemostasis
- Approximate tissue
- Cosmetic
Mechanical Skin Trauma

• Blister:
  – Separation of epidermis from dermis secondary to friction
    • <1 cm protective covering
    • >1 cm drain, leaving epidermis intact
  – Best treatment prevention

• Chafing:
  – Repetitive friction
Burns

- Radiation, Thermal, Chemical
- UV –Sunburn
  - Increased risk of skin cancer
  - Water/Snow
    - Reflective
  - Prevention
    - Hats, Clothes with UV protection, Sunscreen SPF 15 or greater
    - Providers should be following similar guidelines
- Treatment:
  - Mild sunburn: Aloe Vera, silver sulfadiazine
  - Severe sunburn: non-adhesive bandage, pain medications
  - Stay hydrated
Return to play

• Abrasions/Blisters/Chafing: Immediately
  – Needs to be covered, no bleeding

• Lacerations: Concern for wound dehiscence, extensive repair
  – If they return immediately, cover with protective dressing
  – Hemostasis achieved, sturdy dressing
  – They must understand worsening of laceration if definitely repaired

• Burns:
  – Severity/type of burn
Specific Sport Considerations
Wrestling

• Bleeding time
  – Not included in injury time (1 min 30 seconds) in NCAA
  – Referee determines amount of bleeding time
    • Can suspend a match for continuous bleeding

• Check your associations guidelines
Ice Hockey/Figure skating

• Ice skates – sharp blades
  – Arterial lacerations
    • Clint Malarchuk 1989
      – Carotid a. + jugular v.
    • Richard Zednik 2008
      – Carotid a.

• High intensity – concern for placing athletes back in to competition
Baseball/Softball/Field Hockey/Lacrosse

• High velocity athletic balls
• Can cause skin abrasions/lacerations
References


• Google Images


Questions?