

Sideline Wound Care



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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

Injury

- Mechanism
- Timing
 - Likely recently if on the sideline
- Foreign body

Athlete

- Any blood thinners
- Latex allergy
- Drug/anesthetic allergies
- Tetanus UTD

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:

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



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Questions?