Skin Conditions in Athletes: The “Down and Dirty for Athletic Participation

Craig A. Voll, Jr. PhD, LAT, ATC, PT
Great Lakes Athletic Trainers Association
49th Annual Meeting and Symposium
Thursday Mach 9, 2017
Wheeling, IL
Conflict of Interest

• There is **NO** conflict of interest in this presentation.
• The purpose of the presentation is NOT to promote goods or services to participants.
• The views expressed in these slides and in the today’s discussion are an account of my personal experiences dealing with skin conditions in my role as an athletic trainer.
Introduction

• Skin infections are associated with time loss in sports

• Health and safety of the athlete is our primary concern
  – Protection of other athletes, coaches and support personnel is a secondary concern

• Recognizing common skin infections enables ATs to make appropriate decisions regarding Tx and RTP decisions
Objectives

• At the end of this presentation, participants will be able to:
  – Discuss the differences between common bacterial, fungal and viral skin infections seen in the athletic population
  – Identify the differences between a bacterial, fungal and viral skin infections
  – Identify the appropriate treatment for common bacterial, fungal and viral infections seen in the athletic population
  – Discuss return to play implications for bacterial, fungal and viral infections seen in the athletic population
Today’s Agenda

• Is it infected?
• Folliculitis/Abscess
• MRSA (Methicillin Resistant Staph Aureus)
• Impetigo
• Tinea (Ringworm)
• Herpes Simplex
• Molluscum Contagiosum
• Warts
• Eczma
• Others
The Difficult

• Things change and mutate
• Unfortunately lesions you will see often do not present in textbook form
• This can make identification difficult
Is it infected???
Is It Infected???
Cardinal Signs of Inflammation
General Wound Care

- Observe for Fever, Redness, Warmth, Swelling, Drainage
- Drain and Debride as appropriate
- Cleanse thoroughly
- Keep clean & dry
- Cover and use topical ATB initially
- Oral ATB for obvious infection
Bacterial Infections

- Collectively known as *Pyoderma*
- Caused by common bacteria: *Staphylococcus aureus* and *Streptococcus*
- These conditions are characterized by infected *purulent* (causes pus) lesions to the skin
Bacterial Infections

• Folliculitis
• Boil (furuncle)
• Impetigo
• Acne Vulgaris - most common
Cellulitis, Folliculitis & Boils, Oh My!
Cellulitis

- Infection of dermis and subsequent tissue layers
- Erythema, warmth, edema, and pain
- Culture not helpful
- Usually Strep, some staph
- Elevate, compresses
- Oral ATB’s
Cellulitis
Folliculitis

- Superficial infection of the hair follicles
- Small red pustules
- Occurs in areas of occlusive barriers ie kneepads, headgear, or close shaven areas
- Rx: Oral ATB’s, and Topical scrubs
Folliculitis
Pseudofolliculitis Barbae

- “Razor Bumps”
- Common in African-American males
- Result of close shaving and ingrown hairs, and inflammation
- Not infectious
- Rx: Remove ingrown hairs, Electric razors, or hydrating shaving gels
- Steroids?
Boils (Furuncle)

- Infected hair follicle that becomes an abscess
  - Walled off collection of pus
- Red, hot, swollen, and painful
- Rx: incision & drainage
- Hot compresses for early lesions
- Oral ATB’s with cellulitis
Impetigo

- Common & Contagious
- Strep or Staph
- Small vesicles that rupture
  - Honey Colored
- Yellow crust then forms
- Erythema and induration rare
- Minimal pain
- Spread easily
- Face is most common location
Impetigo Treatment

- Mupirocin (Bactroban) topical ointment
- Oral ATB’s – Keflex or Zithromax
- Topical: Warm soapy scrubs to remove crusts
- If not improving may need to consider MRSA
- RTP: All lesions Scabbed and dry, & Oral ATB’s for 72 hours
Methicillin-Resistant Staphylococcus Aureus--MRSA

- Originally only in hospitals
- Now common in the community
- Can be lethal
- Transmission: skin to skin, clothing, towels, and equipment
- More common in those with previous ATB use
MRSA

• Reported in almost all sports, but more common in FB, Rugby, Wrestling
• Presents as folliculitis, cellulitis, or abscesses.
• Non-healing wound 3-4 days in otherwise healthy individual is considered MRSA until proven otherwise
• Often mistaken for spider bites
• Usually remains localized
MRSA--Treatment

• Incision & Drainage or Debride—Send Cultures
• Dressing changes
• Antibiotics often not necessary
• Used for large lesions, fever, cellulitis
• Antibiotics
  – Clindamycin,
  – Bactrim
  – Tetracycline
MRSA—Return to Play

- No play with systemic symptoms
- Infection localized—may cover for some sports
- When lesions are dry and scabbed over—OK to play
- Documented MRSA—Wrestling
  - 10 days of ATB Rx, or all lesions scabbed, whichever occurs last
MRSA--Prevention

- Educate Staff & Athletes
- Enforce Hand Washing
- Shower/Scrub after Workouts
- Use Soap Dispensers, not bars
- Don’t share personal items, ie towels
- Wash and dry clothes/equipment
- Report all skin lesions
- Perform proper wound care/coverage
- Disinfect equipment, showers, etc.
- Use ATB’s appropriately
Fungal Infections

• Tinea Corporis
  – “Ringworm”
• Tinea Pedis
  – “Athlete’s Foot”
• Tinea Versacolor
Tinea Infections

- Infection of the skin caused by a group of fungi
- Fungus infections grow in warm, dark environments
- Common in Wrestling
- Usually itchy
- Rarely painful
- Many individuals are susceptible, others are relatively immune
Tinea Corporis (Ringworm)

- A fungal infection of the skin found on the body
Ringworm Treatment

• All tinea infections except for scalp can be treated with topical creams (Lamisil)
• Oral Meds for resistant infx, or scalp infx
• Study on HS Wrestlers in OH used oral meds to prevent tinea
  – Reduced Infx rate from 67% to 3%
  – 3 doses before season and 3 doses mid-season

Brickman, CJSM, ‘09
Tinea & Return to Play

• Oral or Topical RX for 72 hours on skin and 14 days on scalp (NCAA)

• Prevent spread by early diagnosis, early treatment and covering all suspicious lesions
Tinea Pedis (Athlete’s Foot)

- Dry, cracked skin
- Common between 1st/2nd toes
- Itchy
- Red
- c/o burning
Tinea Versicolor (TV)

• Circular lesions that appear either lighter or darker than adjacent unaffected skin
• Most common warm weather related skin problem
• Common located on the back and chest
Conclusions

• There is more to athletic training than just orthopedic injuries
• Understanding the pathology of the condition will help you understand the signs and symptoms
• Pay attention during your General Medical Course
  – Knowing what you are looking for is extremely important
    • Because we deal with these types of conditions far less than orthopedic injuries
Herpes Gladiatorum

- Herpes Simplex virus type 1 (HSV-1)
- Skin to skin contact (not on mats)
- Maybe 20-40% college wrestlers infected
- Grouped vesicles on red base
- Recurs @ same site often- a lifetime infection
- Prodromal symptoms common
  - May itch, burn, or be painful
Herpes Gladiatorum
Herpes Risks

- Ocular herpes
- Encephalitis
- Meningitis
- Team Outbreak
- Recurrent infections
- Limit practice time
Herpes Treatment

- Treatment may shorten course & reduce transmission
- Acyclovir 400 mg tid x 5 days $10 (90 day supply)
- Valacyclovir 500 mg bid x 5 days $8 a pill
- Prophylaxis is usually beneficial for wrestlers with frequent outbreaks
Herpes—Return to Play

• NCAA Guidelines
  – All lesions dry and scabbed over
  – Rx for 10 days for primary episode
  – Rx for 5 days for recurrence
  – May not cover and wrestle with communicable lesions before the written Rx period has elapsed
  – Release form should be completed in most cases by physician
Molluscum Contagiosum

- Viral Infection
- 2-5 mm lesions
- Umbilicated, flesh-colored, dome-shaped, papules
- Not on palms or soles
- Easily spread
- Treated with curettage, or cryotherapy
HPV (Warts)

- Viral Infection
- May resolve spontaneously
- Treated with cryotherapy or salicylic acid topically
Eczema

- Most common skin disease
- Allergic type rash
- Erythema, scale, possible blisters
- Topical Steroids, Lubricating Lotions, Antibiotics if infected
Paronychia

- Infection of proximal and lateral nail fold
- Drainage is the key to resolution
• A decision must be made whether the athlete will be allowed to return to participation
• The health and safety of the athlete is the primary concern
• Protection of the other athletes, coaches, and personnel is the secondary concern
• High contact sports require proper protection if the athlete is to return to participation
Athletic Participation and Skin Infection Decisions

- Common sense should prevail
- Use NCAA guidelines
- Following infections are considered hazardous according to NCAA recommendations
  - Fungal
  - Herpes
  - Impetigo
Name that Skin Funk!
Treatment/Care - Fungal

• Use anti-fungal cream/powder
• Can also use oral meds in cases with common outbreak/extended time period
• Covered with non-permeable dressing for athletic participation
• An athlete with outbreak must have been on meds for 3 days prior to competing in NCAA wrestling event, lesions crusted and covered
Name that Skin Funk!
Treatment/Care - Herpes

• At first onset of noticeable outbreak participant must be withheld from participation

• No return to activity until all lesions have a hardened crust

• Anti-viral meds (valtrex, acyclovir, zovirax) may be used

• An athlete with outbreak must have been on meds for 5 days prior to competing in NCAA wrestling event, lesions crusted and covered

• No new lesions for 72 hours
Name that Skin Funk!
Treatment/Care - Impetigo

• At first onset of noticeable outbreak participant must be withheld from participation
• No return to activity until all lesions have a hardened crust
• Once crusted over the lesion may be covered by a nonpermeable dressing
• An athlete with outbreak must have been on meds for 3 days prior to competing in NCAA wrestling event, lesions crusted and covered
• No new lesions for 48 hours
Thank You!
Questions??
**Resources/References**

- Google Images
- **CA-MRSA Infection Incidence and Care in High School and Intercollegiate Athletics**; Tim Braun, Leamor Kahanov, Kathleen Dannelly, Christine Lauber; American College of Sports Medicine, August 2016; 1530-1538