Common Dermatological Problems in Athletics

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Skin Cancer
Figure 7. Cancer in 15- to 29-years-olds by primary site (SEER Site Recode) U.S., SEER 1975-2000
The Facts

- Most common form of cancer
  - 1 million new cases each year
  - 1/5 Americans will develop
- More than breast, prostate, lung & colon combined
- Melanoma – most serious SC –
  - 2nd most common CA ages 15 – 29
- 90% of non-melanoma's from UV exposure
Figure 8. Cancer in 15- to 29-year-olds by primary site (SEER Site Recode) U.S., SEER 1975-2000
Problem is Sunlight

- UVA – 320nm – 400 nm
  - 95% of all UV
  - Deeper penetration
    - Causes more damage

- UVB – 290nm – 320 nm
  - Cause burns and tanning
What is your Type?

- I – Pale white Skin – Always Burns never Tans
- II – Burns Easily: tans minimally
- III – White (Average) Moderate burner, tans gradually to light brown
- IV – Beige or lightly tanned, burns minimally, always tan to moderate brown
- V – Moderate brown or tanned – rarely burns, tans to moderately brown
- VI – Dark brown or black, never burns deeply pigmented
Have you Ever?

- Had a blistering sunburn as a child or teen?
  - Chances of skin Cancer has doubled

http://www.webmd.com
Have you Ever?

- Had five or more sunburns at any age?
  - Chances for Melanoma – the deadliest form of skin cancer – DOUBLES
Evaluation

Easy as A, B, C, D, E
Asymmetry

- Draw an imaginary line thru the middle of the blemish. Is it uniform or is it asymmetrical in appearance?

http://www.medicinenet.com/skin_cancer
Border

- Are the Borders blurred or irregular?
Color

- Is the blemish color not uniform, are there other pigments?

http://www.medicinenet.com/skin_cancer
Diameter

- Is the mole larger than the size of a pencil eraser?
Elevation/Evolving

- Is the blemish or mole elevated in appearance?

http://www.medicinenet.com/skin_cancer
Basal Cell Carcinoma

- Most common form
- Easily treated

http://www.webmd.com
Squamous Cell Carcinoma

- More apt to spread than Basal Cell

http://www.webmd.com
Melanoma

- Deadliest form of skin cancer
- 3% of cases, 75% of the deaths
- Early detection is key
- More prone if you
  - Previous skin Cancer
  - Fair Skin

http://www.webmd.com
**Treatment**

- **Curettage & Desiccation**
  - “scoop” out with a curette

- **Surgical Excision**

- **Radiation/Chemo**

- **Cryosurgery**

- **Moh’s Surgery**
  - Microscopically controlled surgery
Prevention

- Minimize Sun Exposure
  - 10AM – 4PM
- Protective Clothing
- Sunscreen SPF 30
  - Apply liberally and often
- Body Check
Self Examination
AVOID TANNING BOOTHs!!!

- Don’t be suckered by tanning booth Vitamin D Claims
- AAD Position Statement
  - 11/1/2008
  - Unprotected exposure to UV either natural or sun beds* – known carcinogens
  - D deficient discuss w MD
Acne

- 85% 12yo – 24yo
  - Can linger into the 30’s
  - May also see it in 40’s & 50’s
- Caucasians affected more
Causes

- Release of Androgen @ Puberty
  - Increase size of sebaceous glands
  - Leads to increase in sebum

- Heredity

- Hormone Levels
  - During pregnancy
  - Use of BCP
  - 2-7 days prior to Menstrual Cycle
Other Causes

- **Drugs**
  - Androgens – Steroids
  - Lithium – Used for Bipolar Disorder
  - Barbiturates

- **Stress**

- **Pollution**

- **Environmental factors**

- **DIET is NOT a RISK**
  - Chocolates, fatty foods are not problems
Treatment

- **Topicals**
  - Benzoyl Peroxide – kills the bacteria
  - Salicylic Acid – unclogs pores
  - Tretinon (Retin-A) – promotes healthy sloughing of skin
Drug Therapy

- **Antibiotics** – 4-8 weeks before improvement
  - Tetracyline, E-Mycin
- **Isotretinoin** – Accutane
  - 16 – 20 week dosage
  - Blood work
  - Side Effects: itchy skin, nose bleeds, photosensitivity, decreased night vision, **depression**
Personal Hygiene

- DON’T PICK or POP
- Gentle cleansing no more than 2x/day
- Noncomedogenic cosmetics – they don’t clog the pores
- Avoid tanning booths and sun – tanning only hides the problem
Hidradentitis Suppurativa
Pediculosis
Head Lice

- Spread by head-to-head contact
- Not as frequently
  - Sharing of belongings
  - Hats, scarves, towels, brushes, bedding
- Do not survive off body
  - 1 – 2 days
  - Needs to feed off of blood
  - Nits need body T near scalp
OTC Treatment

- **Pyrethins with Piperonyl Butoxide**
  - A-200, Pronto, R & C, Rid, Triple X
  - Kill only live lice not nits, retreat 9 – 10 days
  - Do not use if allergic to Ragweed or Chrysanthemums
  - Lice could be resistant

- **Permethrin Lotion 1%**
  - Synthetic pyrethroid
  - Not approved for those >2 years old
RX Treatment

- **Malathoin Lotion 0.5% (Ovide)**
  - Pediculicidal & partial ovicidal
  - Must be 6 yrs + to use
  - Flammable, may irritate eyes

- **Lindane Shampoo 1%**
  - Use as last resort
  - Toxic to Brain and CNS if accidentally swallowed
  - Avoid elderly, infants, those >110 lbs

- Follow directions on bottle and those from your Health Care Provider
Supplemental Measures

- Wash dry clothing & bedding used over last 2 days
  - Hot water and hot dryer setting, >130°F to kill

- Dry clean or put in sealed plastic bag for 2 weeks

- Soak combs, brushes in 130°F water for 5-10 minutes

- Vacuum areas – Routine is ok
  - Remember they will die in 1-2 days
Pubic Lice

- Crabs – adult resembles a small crab
- Found worldwide and all races and levels of society
- Spread though sexual contact
  - Most common in adults
- If found in children
  - May Indicate ABUSE
Male & Female
Treatment of Pubic Lice

- Same as head lice
Molluscum Contagiosum

- Viral infection form the Molluscipox genus
- Small white, pink, or brown pitted papules
- Benign in nature
- May last 6 – 12 months of longer
- Immunosuppressed have harder time fighting this
Spread

- Skin to skin contact
- Sharing towels
- Autoinoculation
Treatment

- No known cure
- Minor surgery to remove
  - Curettage
- Topical Agents
  - Imiquimod cream
  - Tretinon
Prevention

- Wash hands
- Avoid contact sports
  - Cover clusters with gas permeable dressing
  - May need to remove
- Avoid swimming
  - Drainage could float to top and infect
Fungal Problems
Tinea Pedis

- Common problem 70% of population may have it during life
- Found
  - Floors, gyms
  - Socks, clothing
- Person to Person
- Right environment
  - Warm & Moist
Treatment

- Keep it clean and dry
  - Use medicated powders
- Antifungal medication
  - Lamisil
- Oral Antifungals – 3 week dosage
  - Terbinafine, Fluconazole
- NO topical corticosteroids
  - May exacerbate the condition
Tinea Corpus

- Need 72 hours of topical therapy to wrestle
Tinea capitis

- Must have 2 weeks of systemic antifungal therapy to wrestle
Prevention

- Good personal hygiene
  - Shower w/ own bottled soap and water
  - Don’t share towels
  - Daily cleaning of practice gear

- Mat Cleaning
  - After every practice
  - Use of approved cleaners
  - Launder mop heads
Herpes Gladitorum

- From Herpes Simplex – 1
- Skin – skin contact
- Lesions appear ~ 8 days
- Clusters in appearance on trunk or face
## Treatment

<table>
<thead>
<tr>
<th>Medication</th>
<th>Recurrent Outbreak (5 - 7 Days)</th>
<th>Prophylaxis (1 mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyclovir</td>
<td>400 mg TID</td>
<td>BID</td>
</tr>
<tr>
<td>Valacyclovir</td>
<td>125 mg BID</td>
<td>BID</td>
</tr>
<tr>
<td>Famciclovir</td>
<td>500 mg BID</td>
<td>Daily</td>
</tr>
</tbody>
</table>
FIGURE. Methicillin-resistant *Staphylococcus aureus* in the leg of an evacuee from Hurricane Katrina — Dallas, Texas, September 2005

Photo/P Hicks, Children's Medical Center of Dallas
Risk Factors

**HA-MRSA**
- Current or Recent hospitalization
- Extended Care Facility Resident
- Invasive procedures
- Recent or long-term antibiotic use

**CA-MRSA**
- Young age – immune system not fully developed
- Contact Sports
- Sharing towels/athletic equipment
- Diminished immune system
- Living in crowded or unsanitary conditions

MRSA Strain Characteristics Were *Initially* Distinct

<table>
<thead>
<tr>
<th></th>
<th>MRSA in Healthcare</th>
<th>MRSA in the Community</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prevalent genotypes (U.S.)</strong></td>
<td>USA100, USA200</td>
<td>USA300, USA400</td>
</tr>
<tr>
<td><strong>Antimicrobial resistance</strong></td>
<td>Multiple agents</td>
<td>Few agents</td>
</tr>
<tr>
<td><strong>SCC\textit{mec} (genetic element carrying \textit{meca} resistance gene)</strong></td>
<td>Types I-III</td>
<td>Types IV, V</td>
</tr>
<tr>
<td><strong>PVL toxin gene</strong></td>
<td>Rare</td>
<td>Common</td>
</tr>
</tbody>
</table>
Why more virulent???

- Does not appear to be from PVL’s
- $\alpha$-type phenol soluble modulins (PSMs)
  - Novel peptides expressed more in CA-MRSA
  - Kill phagocytic cells - the neutrophils
    - Rendering the Body defenseless
- More research still needed for other causes
Community-Associated MRSA: CDC Population-Based Surveillance

Definition

- MRSA culture in outpatient setting or 1st 48 hours of hospitalization AND patient lacks risk factors for healthcare-associated MRSA:
  - Hospitalization
  - Surgery
  - Long-term care
  - Dialysis
  - Indwelling devices
  - History of MRSA
Outbreaks of MRSA in the Community

- Often first detected as clusters of abscesses or “spider bites”

- Various settings
  - Sports participants
  - Inmates in correctional facilities
  - Military recruits
  - Daycare attendees
  - Native Americans / Alaskan Natives
  - Men who have sex with men
  - Tattoo recipients
  - Hurricane evacuees in shelters
Factors that Facilitate Transmission

- Contaminated Surfaces and Shared Items
- Frequent Contact
- Antimicrobial Use
- Compromised Skin
- Cleanliness
CA-MRSA Infections are Mainly Skin Infections

<table>
<thead>
<tr>
<th>Disease Syndrome</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin/soft tissue</td>
<td>1,266 (77%)</td>
</tr>
<tr>
<td>Wound (Traumatic)</td>
<td>157  (10%)</td>
</tr>
<tr>
<td>Urinary Tract Infection</td>
<td>64   (4%)</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>61   (4%)</td>
</tr>
<tr>
<td>Bacteremia</td>
<td>43   (3%)</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>31   (2%)</td>
</tr>
</tbody>
</table>
Management of Skin Infections in the Era of CA-MRSA

- Obtain material for culture
- I&D should be routine for purulent skin lesions
- No data to suggest molecular typing or toxin-testing should guide management
- Empiric antimicrobial therapy may be needed
- Alternative agents have +’s and –’s: More data needed to identify optimal strategies
- Use local data for treatment
Bottom Line to Minimize Risk

- Listen to your Mother
- Shower after workouts
- Hand Hygiene
- Keep out of the sun
  - Use proper SPF
  - Avoid Tanning Salons

"I've got itchy scalp, sweaty palms and stinky feet."
Keep it clean

- Routine cleaning
- Use EPA approved cleaners
- Follow established guidelines
  - Cleaning/drying wrestling mats
  - Cleaning/drying equipment
Don’t let this happen to you !!!

York Dispatch, The (PA)

November 19, 2008

Wrestlers file suit against York College over herpes
Thank you