Sports Dermatology

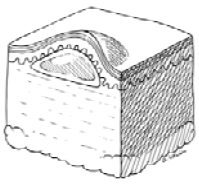
Chapter 12

Objectives

- Describe the etiology, clinical presentation, treatment and return to play guidelines for common sports related dermatology

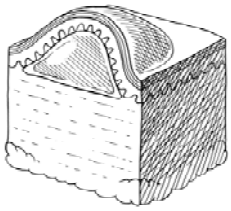
Common Types of Lesions

- Vesicles
  - Small, fluid-filled blister < 10mm
  - Examples: empetigo, herpes labialis, herpes gladiatorum



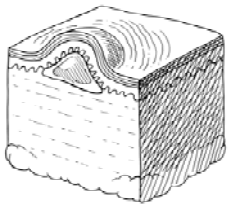
Common Types of Lesions

- Bullae
  - Thin-walled sacs of fluid > 10mm
  - Example: blister



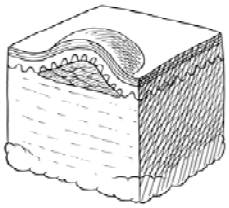
Common Types of Lesions

- Pustules
  - Small, inflamed, pus-filled blister-like lesions
  - Acne mechanica, acne, furuncles (boils)



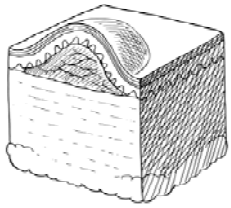
Common Types Lesions

- Papules
  - Solid, round bumps < 5mm
  - Examples: warts, molluscum contagiousum



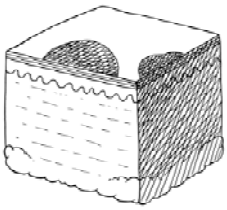
Common Types Lesions

- Nodules
  - Solid, raised bumps > 10mm
  - Examples: late stages of acne mechanica, furuncles



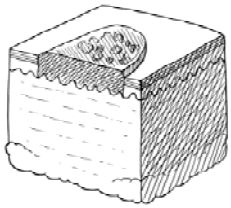
Common Types Lesions

- Macules
  - small, flat (nonpalpable) spots or blemishes
  - Example: tinea versicolor



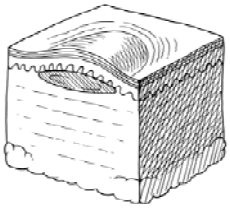
Common Types of Lesions

- Plaques
  - Broad, raised (palpable) area on the skin
  - Example: psoriasis



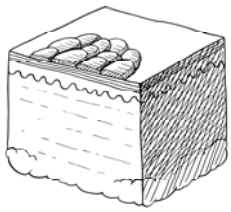
Common Types of Lesions

- Wheals
  - Circumscribed lesions of inflamed skin
  - Examples: urticaria, hives



Common Types of Lesions

- Scales
  - Excess epidermis forming small flakes
  - Examples: Eczema, tinea pedis



Common Sports Dermatology

- Etiology
  - mechanical trauma
  - infection
    - bacterial
    - viral
    - fungal
  - local inflammatory reactions
  - environmental exposure
  - other

Mechanical Trauma

- Abrasions
- Lacerations
- Blisters
- Calluses
- Acne mechanica
- Talon noir

Mechanical Trauma: Blisters

- Etiology
  - Tender vesicles or bullae filled with clear or serous fluid
  - Occur most frequently on the feet and hands
  - Caused by a combination of moisture and friction
  - Usually precipitated by hot spot

Mechanical Trauma: Blisters

- Prevention
  - Wear absorbent socks or two pairs of socks
  - Lubricating the skin
  - Applying moleskin to a friction area

Mechanical Trauma: Blisters

- Treatment
  - When possible, the roof of blister should be left intact
  - Large blisters that may tear – the blister should be drained using a sterile needle and syringe or a scalpel
  - Once drained or punctured, must be treated as open wound

Mechanical Trauma: Blisters

- Treatment
  - Cover blister with donut pad with lubricating gel or antibiotic ointment
  - Other products:
    - Second-skin
    - Moleskin
    - Bioclusive dressing

Mechanical Trauma: Calluses

Mechanical Trauma: Calluses

- Etiology
  - Thickened areas of skin that develop in response to chronic friction
  - Usually asymptomatic unless they become overly large or a blister develops under the callus

Mechanical Trauma: Calluses

- Prevention
  - Reduce friction by wearing protective layer
  - Keep calluses filed to prevent excess growth or blisters

Mechanical Trauma: Calluses

- Treatment
  - Soak
  - Apply salicylic acid
  - File using pumice stone or callus file

Mechanical Trauma: Acne Mechanica

- Etiology
  - Papules or pustules that may transition to nodules
  - Caused by combination of:
    - Pressure
    - Friction
    - Heat
    - Occlusion
  - Occurs commonly under protective equipment

Mechanical Trauma: Acne Mechanica

- Etiology
  - Most common sites include:
    - Forehead
    - Chin
    - Shoulders
    - Upper back
  - Sometimes referred to as sports acne or football acne

Mechanical Trauma: Acne Mechanica

- Prevention
  - Wear absorbent t-shirt under protective equipment
  - Remove perspiration soaked clothing and shower immediately after practice

Mechanical Trauma: Acne Mechanica

- Treatment
  - Will usually resolve on its own at the end of the season
- Return to play
  - Does not preclude an athlete from participation

Mechanical Trauma: Talon Noir (Black Heel)

- Etiology
  - Caused by constant stopping and starting
  - Lateral shearing causes bleeding within small capillaries
  - Commonly seen in tennis basketball athletes
  - Presents with rows of dots along posterior or posterolateral heel

Mechanical Trauma: Talon Noir (Black Heel)

- Treatment
  - Not necessary
- Prevention
  - Proper fitting shoes and gloves
- Return to Play
  - No restrictions

Infectious Skin Disorders

Infectious Skin Conditions

- Bacterial
- Viral
- Fungal

Bacterial Skin Infections

- Community acquired methicillin-resistant staphylococcus aureus (CA-MRSA)
- Impetigo
- Furuncles and carbuncles
- Folliculitis

CA-MRSA

- Used to occur only in the hospital settings
- Now becoming more common in the general community
- Staph infections that are resistant to β lactam antibiotics (penicillin group and cephalosporins)

CA-MRSA

- Etiology
  - Presents with a small pimple like lesion
  - often mistaken for an insect bite
  - Usually occurs at the site of a previous wound (abrasion, laceration)
  - Can quickly progress to large, painful lesion
  - Often treated in the hospital, depending on the severity

CA-MRSA

- Prevention
  - Wash hands thoroughly with soap & water or an alcohol-based hand cleaner before and after treating a wound
  - Individuals should shower immediately after activity
  - Do not treat individuals with open wounds in a common whirlpool or tub
  - Individuals should not share towels, razors, athletic clothing, or equipment

CA-MRSA

- Prevention
  - Athletic clothing and towels should be properly washed after each use
  - Facilities and equipment should be kept clean
  - Refer all individuals with active skin lesions that do not respond to initial therapy
  - Proper first aid procedures should be followed when treating all wounds

CA-MRSA

- Prevention
  - Individuals with suspicious lesions should be referred for a bacterial culture to establish a diagnosis
  - All skin lesions should be covered before participation in a sports activity

CA-MRSA

- Treatment
  - Antibiotics (often require hospitalization for IV antibiotics)
  - Repeated occurrences within the same person or team warrants a nasal swab test to identify a potential carriers

CA-MRSA

- Return to Play
  - No published guidelines yet established
  - Many physicians are using the guidelines from NCAA wrestling rules

Impetigo

- Etiology
  - Caused by staph virus
- Clinical Presentation
  - Presents with honey colored crusted lesions
  - Occurs most commonly on the face and other exposed areas
  - Particularly common in wrestlers, swimmers, & gymnasts

Impetigo

- Treatment
  - Debridement with hydrogen peroxide
  - 7-10 days of antibiotics
    - Localized lesions treated with topical antibiotics
    - More extensive lesions treated with systemic antibiotics

Impetigo

- Return to Play
  - Athletes may return to pl when:
    - Lesions are dried
    - After completing 5 days of antibiotics
    - They have no new lesions within the last 48 hours

Impetigo

- Return to Play
  - Active lesions (moist, weepy) can not be covered to allow participation
  - Dried lesions can be covered with a non-permeable dressing to allow participation

Furuncles & Carbuncles

- Furuncles (boils)
  - Infected hair follicle (similar to folliculitis, but infection is deeper in the hair follicle)
  - Presents as tender, red nodule

Furuncles & Carbuncles

- Carbuncles
  - Clusters of boil

Furuncles & Carbuncles

- Treatment
  - Warm moist compresses 3 x day 10 min each
  - Allow boil to come to a head
  - Do NOT “pop” boil
  - Once pus pocket is opened, clean & dress wound
  - If the warm compresses do not bring the boil to a head, a physician may need to lance the lesion

Furuncles & Carbuncles

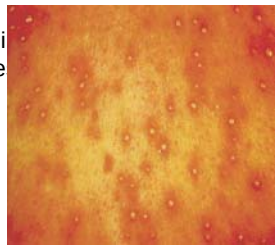
- Return to Play
  - Furuncles & carbuncles are not contageous
  - Playing with active lesion can cause further tissue damage
  - Can return after 5 days of antibiotics if there are no new lesions within the past 48 hrs

Folliculitis

- Etiology:
  - *Staphylococcus aureus* infection in hair follicles
  - May occur following shavin
  - May occur following exposure to hot tub

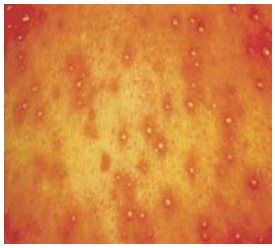
Folliculitis

- Clinical Presentation
  - Papules and pustules i and around hair follicle



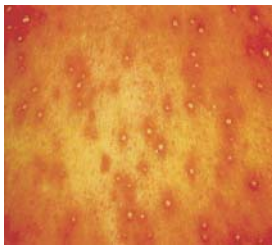
Folliculitis

- Treatment
  - nothing
  - OTC acne meds
  - topical or systemic antibiotics



Folliculitis

- Return to Play
  - Athletes can play with active folliculitis



Viral Skin Infections

- Herpes simplex virus (HSV)
- Molluscum contagiosum virus (MCV)
- Human papilloma virus (HPV)

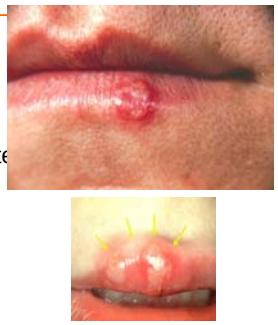
The spread of viral skin infections requires direct skin contact with an infected person

Herpes Simplex Virus (HSV)

- Two types of HSV
  - HSV-1
    - Herpes labialis
    - Herpes gladiatorum
  - HSV-2
    - Genital herpes
- The HSV virus can go dormant in the neural ganglia – return later

Herpes Labialis

- Etiology
  - Caused by HSV-1
- Clinical presentation
  - Single vesicle or cluste of vesicles
  - Prodromal symptoms
    - Burning
    - Tingling



Herpes Labialis

- Treatment
  - OTC ointments
    - Abreva
    - Carmex
  - Oral antivirals
    - Acyclovir
    - Famciclovir
    - Valacyclovir

Herpes Labialis

- Prevention
  - Antivirals can be used to prevent return of lesions during season

Herpes Labialis

- Return to Play
  - Athletes with direct skin-to-skin contact are not allowed to participate with active lesions
  - Lesions must be crusted
  - No new lesions within past 3 days
  - At least 5 days of antivirals

Herpes Gladiatorum

- Etiology
  - Caused by HSV-1
  - Occurs in area of existing open wound

Herpes Gladiatorum

- Clinical Presentation
  - Clustered vesicles with erythematous base
  - May also report prodromal symptoms
  - Occurs most frequently on head, face, and extremities
  - Medical emergency if it spreads to the eyes

Herpes Gladiatorum

- Treatment
  - Oral antivirals
- Return to Play
  - Same as that for herpes labialis

Molluscum Contagiosum

- Etiology
  - Caused by molluscum contagiosum virus
- Clinical presentation
  - Dome shaped papules with a center dimple
  - Can be individual papules or groups of papules

Molluscum Contagiosum

- Treatment
  - Removal of lesions
    - Curettage
    - Laser
    - Cryotherapy
    - Salicylic acid

Molluscum Contagiosum

- Return to Play
  - Athletes can return once lesions have been removed
  - Wound area must be covered with gas-permeable dressing

Warts

Plantar Warts

- Etiology
  - Caused by Human Papilloma virus (HPV)
- Clinical Presentation
  - Found on the soles of the feet
  - Can occur within a callus
  - Grow into the foot rather than on the surface
  - Appear to have little seeds within the core of the wart

Warts

- Treatment
  - Donut pad to dissipate weight bearing forces
  - Wart can be pared down
  - OTC wart removal meds (salicylic acid)
  - Cryotherapy
  - Excision

Warts

- Prevention
  - Wearing shower shoes or other types of shoes in both showers and locker rooms
- Return to Play
  - No restrictions

Fungal Skin Infections

Fungal Skin Infections

- Etiology
  - Caused by dermatophytes
  - Occur within warm, moist areas
- Specific types of dermatophyte infections are named according to their location
  - Tinea capitas – head
  - Tinea pedis – foot
  - Tinea cruris – groin
  - Tinea unguium – finger and toe nails
  - Tinea corporis – all other areas

Tinea Pedis

- Clinical Presentation
  - Scaly, peeling area between the toes
  - Vesicular lesions on th midfoot

Tinea Pedis

- Treatment
  - Topical anti-fungal powders or creams
    - Tinactin (powde
    - Mycelex (cream)
    - Lotrimin (cream)
    - Lamisil (cream)

Tinea Pedis

- Treatment
  - Topical anti-fung meds should be applied at least 2 cm onto to health skin

Tinea Pedis

- Prevention
  - Wearing shoes in showers and locker rooms
  - Keeping feet dry
- Return to Play
  - No restrictions

Tinea Cruris

- Clinical Presentation
  - Large, round, scaly plaqu with pustules and papules along the edges
  - Most commonly occurs in proximal medial thighs, inguinal folds, and buttocks
  - May occur secondary to tinea pedis

Tinea Cruris

- Treatment
  - Topical antifungal meds
- Return to Play
  - No restrictions

Tinea Unguium

- Clinical Presentation
  - White patch under the nail
- Treatment
  - Will not respond to topical antifungals
  - Must use oral meds
- Return to Play
  - No restrictions

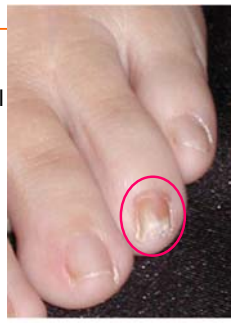


Figure 10.6 Tinea Unguium

Tinea Corporis (ringworm)

- Also referred to as tinea gladiatorum
- Clinical Presentation
  - Circular, erythematous plaque with a raised edge and central clearing
  - May itch
  - May be confused with psoriasis (although psoriasis lesions do not have central clearing)
  - Occurs most often on head, neck, and arms

Tinea Corporis (ringworm)

Figure 10.7 Tinea Corporis

Tinea Corporis (ringworm)

- Treatment
  - Topical antifungals for mo cases
  - Extensive cases may require oral meds
  - Meds should be taken for 2 weeks after lesions are gone

Figure 10.7 Tinea Corporis

Tinea Corporis (ringworm)

- Prevention
  - Shower immediately after practice or competition
- Return to Play
  - Must have been on anti-fungal meds for at least 72 hours
  - Lesions must be covered

Figure 10.7 Tinea Corporis

Tinea Versicolor

- Etiology
  - Caused by malassez furfur organism
- Clinical Presentation
  - Macules or patches o hypopigmented or hyperpigmented skin
  - Most commonly affects back, trunk, abdomen, and arms

Tinea Versicolor

- Treatment
  - Topical antifungal meds
    - These creams must b left on for extended periods
  - Oral antifungals
  - Return to Play
    - No restrictions

Inflammatory Skin Conditions

Eczema or Dermatitis
Psoriasis

Inflammatory Skin Conditions: Dermatitis

Inflammatory Skin Conditions: Psoriasis

Environmental Skin Conditions

Environmental Skin Conditions: Frost Nip

Environmental Skin Conditions: Frost Bite

ABCDs of Skin Cancer