Tinea Corporis in Athletes

Background

1. General info
    - Also known as Tinea gladiatorum
    - Wrestling mats do not play a major role in transmission
    - Systematic disinfection of mats does not decrease infection rates

Pathophysiology

1. Pathology of disease
    - Trichophyton tonsurans (40%)
    - Trichophyton rubrum (40%)
    - Microsporum canis (14%)
    - Transmitted by close skin-to-skin contact
2. Incidence, prevalence
    - 24-77% of wrestlers infected
    - 2003-2004-accounted for 22.1% of skin infections in men's NCAA wrestling
    - Asymptomatic athletes act as reservoirs for infection
3. Risk factors
    - Crushed and abraded skin - "mat burns"
    - Excessive sweating
    - Occlusion of skin by clothing

Diagnostics

1. History
    - Pruritic, burning lesions
    - Redness
    - Scaling
    - May be asymptomatic
2. Physical examination
    - Location: primarily on head, neck, upper extremities
        - Rarely affects lower extremities
    - Atypical presentation of tinea corporis
        - Well demarcated, erythematous, scaling plaques
        - Not ring-shaped
    - Athletes with severe inflammatory reaction may present with a kerion
        - Fluctuant abscess located on scalp
        - Associated with tinea capitis
3. Diagnostic testing
    - Diagnosis by inspection
    - Laboratory evaluation
        - Culture lesion
        - Direct microscopic visualization of fungal hyphae
            - KOH added to scraping from lesion

Differential Diagnosis

1. Nummular eczema
2. Pityriasis rosea
3. Granuloma annulare

4. Psoriasis
5. Subacute cutaneous lupus erythematosus
6. Allergic contact dermatitis
7. Atopic dermatitis

Therapeutics

1. Acute treatment
    - Infection may exclude competition-wrestling
    - Other sports allow participation in practices if lesions are covered
    - Topical antifungal for 1 week with concurrent oral antifungal medication
        - May then compete safely
    - Continue treatment for 2 weeks after lesions disappear
    - Topical antifungals
        - Ketoconazole cream applied BID for 2-4 weeks
    - Oral antifungals indicated for extensive disease, immunocompromised, and topical treatment failure
        - Fluconazole 150 mg PO weekly x 4-6 weeks
        - Itraconazole 100 mg PO daily x 2 weeks
        - Terbinafine 250 mg PO daily x 2 weeks
        - Griseofulvin 500 mg PO daily (microsize) x 2-6 weeks
2. Long-term care and prevention
    - Fluconazole 200 mg PO weekly
    - Itraconazole 300 mg PO bimonthly
        - Monitor liver enzymes in patients with pre-existing hepatic abnormalities

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1. A minimum of 72 hours of topical therapy is required for skin lesions
2. A minimum of 2 weeks of systemic antifungal therapy is required for scalp lesions
3. Wrestlers with extensive and active lesions will be disqualified
    - Activity of treated lesions can be judged either by use of KOH preparation or a review of therapeutic regimen
    - Wrestlers with solitary, or closely clustered, localized lesions will be disqualified if lesions are in a body location that cannot be "properly covered"
4. The disposition of tinea cases will be decided on an individual basis as determined by the examining physician and/or certified athletic trainer

Prevention

1. Early detection and treatment as relapses are common
2. Skin inspections before competitions
3. Athlete hygiene
    - Shower after every practice/game
    - Thorough drying after showering after each practice/game
    - Wear sandals in showers
    - Launder clothing and gear
    - Do not share equipment, especially head gear

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