

COMMON SKIN INFECTIONS II

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FUNGAL INFECTIONS



Fungal Infections

- **Dermatophyte Infections**
- **Candidiasis**



Dermatophyte Infections

- Dermatophyte fungi are a group of closely related organisms capable of infecting keratinized tissue of the skin and its appendages
- 3 Genera
 - 1) Microsporum
 - 2) Trichophyton
 - 3) Epidermophyton



- **Disease produced by dermatophytes is referred to as Tinea or Dermatophytosis**
- **The archetypical lesion of Dermatophytosis is an annular scaly patch**
- **Presentation may vary from minimal inflammation to an exuberant eruption**



Clinical Features

- **Tinea Capitis**
- **Tinea Corporis**
- **Tinea cruris**
- **Tinea pedis**
- **Tinea manuum**
- **Onychomycosis**

Tinea Capitis

- Dermatophytosis of the scalp hair follicle
- Caused only by *Microsporum* and *Trichophyton* genera
- *M. canis* is the dominant organism worldwide but *T. tonsurans* is the most common cause in the US
- Primarily affect children



Clinical Variants – T.Capitis

- **Non-inflammatory**
 - Seborrheic dermatitis-like
 - Discrete patches of scaling and alopecia
 - Black dot infection
- **Inflammatory**
 - Kerion
- **DDx:** Seb dermatitis, psoriasis, bacterial infection



Diagnostic Tools

- KOH preparation
- Fungal culture
 - Sebouroud's agar
 - Mycosel, DTM
- Skin biopsy



Management

- **Indications for oral anti-fungal therapy**
 1. *Extensive dermatophytosis*
 2. *Onychomycosis*
 3. *Tinea capitis*
 4. *Immunocompromised*
- **Indications for topical therapy**
 1. *Tinea corporis*
 2. *Tinea cruris*
 3. *Tinea pedis*
- **Pt education**

2) Candidiasis

- Cutaneous and mucosal infections with *Candida* Spp. are common and are frequently associated with predisposing factors
- In a healthy pt. Candidiasis is a minor self-limiting disease amenable to topical therapy
- May be a harbinger of a major underlying systemic disease



- **Etiology**

- **Diamorphic fungi**

- **Candida albicans (the most common)**

- **Candida tropicalis**

- **High frequency phenotype variation
(phenotype switching)**



- **Predisposing factors**

- Diabetes
- Broad spectrum antibiotics
- Dentures
- Systemic corticosteroids
- HIV infection/ AIDS
- Pregnancy



Clinical variants

- Oral candidiasis
- Angular cheilitis
- Candida vulvovaginitis/ balanitis
- Candida intertrigo
- Diaper candidiasis
- Congenital/ neonatal candidiasis
- Chronic mucocutaneous candidiasis
- Systemic & disseminated candidiasis

Diagnostic Tools

- KOH preparation
- Fungal culture
 - Mycosel
 - Sabouroud agar



Management

- **Topical anti-fungal agents**
 - *Nystatin*
 - *Imidazoles*
 - *Terbinafine*suspension/lotion/creams/ointments
- **Oral anti-fungal agents**
 - *Chronic mucocutaneous candidiasis*
 - *Systemic candidiasis*
 - *Poor response to topical agents*



Pityriasis Versicolor

- Tinea versicolor
- Common superficial fungal infection
- **Etiology:** pityrosporum orbiculare
(Malassezia furfur (dimorphic fungus))
- Commonly affects adolescents and young adults



- Presents as hypopigmented/
hyperpigmented scaly macules and patches
- Distribution: trunk & proximal arms
- Chronic and relapsing course



Diagnostic Tools

- Wood's light:
- KOH: grape-like cluster
 spaghetti-and-meatball
- Fungal Culture:



Treatment

- Selenium sulfide shampoo
- Topical antifungal agents
- Oral anti-fungal agents
 - Persistent or extensive nature



INFESTATIONS



Scabies

- Scabies is a highly contagious and pruritic skin disease caused by the mite *sarcoptes scabiei*
- It occurs world wide in both sexes and in any age group
- Transmitted by close skin-to-skin contact
- Can be acquired sexually



Clinical Features

- Nocturnal itching
- Bilateral distribution on hands, finger webs, wrists, elbows, axillae, umbilicus
- Small erythematous papules (often excoriated) + short, wavy, linear burrows

"When several members of a family complain of an itchy eruption, it is almost always Scabies until proven otherwise"



Other Clinical Variants

- **Scabies in infants & young children**
 - *May be misdiagnosed*
 - *Secondary eczematous changes*
 - *Involvement of the head, neck, palms & soles*
 - *Vesicles*
- **Nodular scabies**
- **Crusted (norwegian) scabies**
- **Scabies in clear persons**



Laboratory Findings

- **Skin scrapings for microscopic identification of mites, eggs or fecal materials**



Management

A. Scabicides

I. Permethrin cream (5%)

- *Treatment of choice*

II. Lindane lotion (1%)

- *CNS toxicity*
- *Contraindicated in young children, pregnant or nursing women, or pts with neurologic disease*

III. Sulfur

- *Safe and effective*
- *Recommended for infants < 2-month-old*



Treatment Considerations

- Anti-histamines
- Oral antibiotics for secondary bacterial infection
- Hot dry cleaning of clothing, bed linens & towels
- Treatment of asymptomatic family members

