



433 Teams

# DERMATOLOGY

Lecture (8)

## FUNGAL INFECTIONS AND INFESTATIONS

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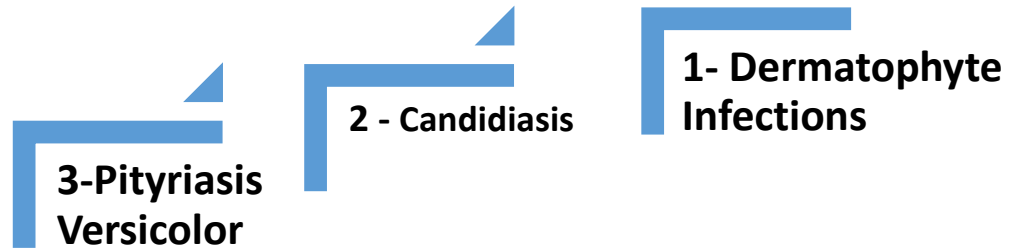
جامعة  
الملك سعود  
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## Objectives:

Not given

# FUNGAL INFECTIONS



## 1- Dermatophyte Infections :

- Dermatophyte fungi are a group of closely related organisms **capable** of **infecting keratinized tissue of the skin and its appendages**

### 3 Genera:

- Microsporum
- Trichophyton
- 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

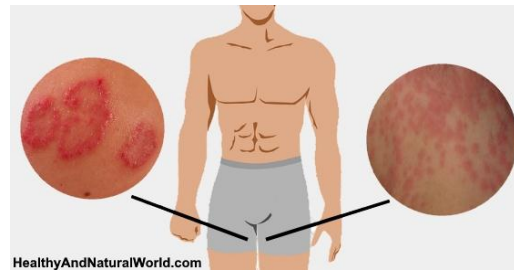
#### 1. Tinea Capitis



## 2. Tinea Corporis



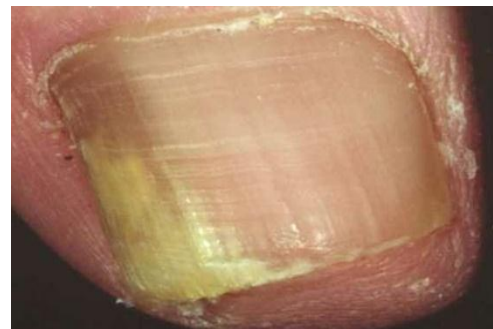
## 3- Tinea cruris



## 4. Tinea pedis



## 5. Onychomycosis



## Tinea Capitis:

- **Dermatophytosis** of the **scalp hair follicle**
- Caused only by *Microsporum* and *Trichophyton* genera
- **M. canis** is the dominant organism worldwide **and in KSA**
- 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

**(clotrimazole, miconazole, ketoconazole)**

- **Indications for topical therapy**

1. Tinea **corporis**
2. Tinea **cruris**
3. Tinea **pedis**

## 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:

- Dimorphic 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

- **Systemic anti-fungal agents:**

- 1-fluconazole tablet
- 2-itraconazole tablet
- 3-ketoconazole tablet
- 4-amphotericin B IV **for sever cases**

## 3 - 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 :

- ✓ **Permethrin cream (5%)** ( **Treatment of choice** )
- ✓ **Lindane lotion (1%)**
  - CNS toxicity
  - **Contraindicated in young children, pregnant or nursing women, or pts with neurologic disease**

✓ **Sulfur**

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

**B- Treatment Considerations**

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

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