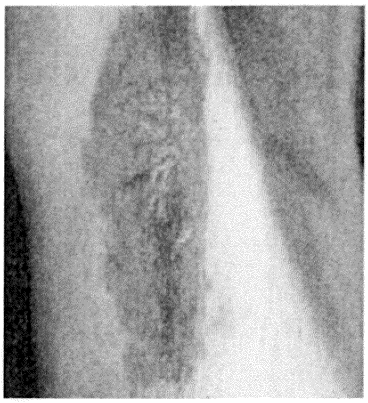
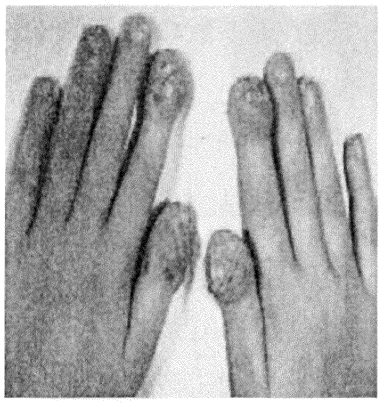
- **Mucosal and cutaneous infections**
- **Cutaneous candidosis**

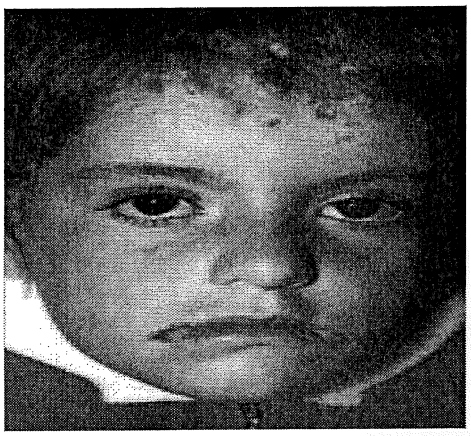


Candida albicans infection of axilla.

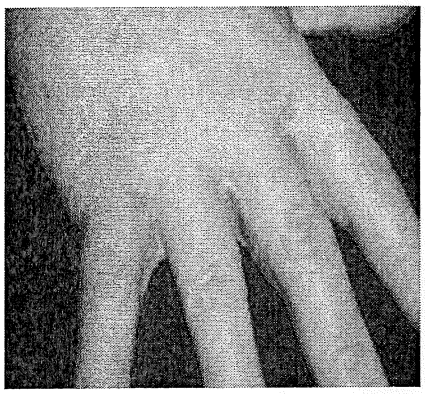


Chronic mucocutaneous candidosis.

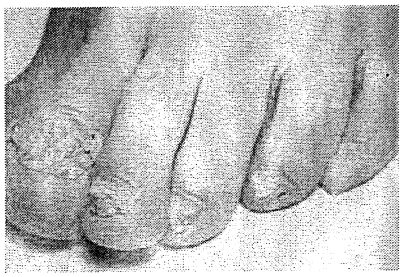
- **Definition**
- Cutaneous candidosis is a ***yeast*** infection of the skin caused by members of the genus ***Candida***. Infection of the proximal nail fold known as ***Candida paronychia*** داحِس
- (التهاب ما حول الظفر) may lead to nail infection.
- **Causal organisms and habitat**
- • Most commonly caused by *Candida albicans* then *C. tropicalis* ; other species are occasionally implicated: Normal flora of the **skin, mouth, intestinal tract and vagina.**



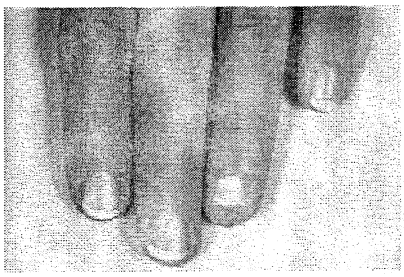
Candida granuloma of the forehead and angular cheilitis associated with chronic mucocutaneous candidosis due to congenital defects in cell-mediated immunity.



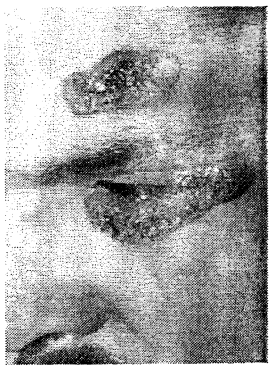
Interdigital candidosis caused by *Candida albicans*.



Tinea unguium due to *Trichophyton rubrum*



Superficial white onchomycosis.



Cutaneous blastomycosis

Chronic cutaneous coccidioidomycosis showing granulomatous lesions on face, neck and chin.

- **Management**
- **Oral agents** are indicated for folliculitis, nail involvement, extensive lesions and in the immunocompromised:
- • **itraconazole 200 mg/day or fluconazole 100 mg/day, 2-4 weeks.**

- **Topical therapy** with **azole** agents, **nystatin** and **naftifine**, should be **used twice daily until 1–2 weeks after clearing.**

- **Additional steroid or antibacterial therapy may be indicated.**

- ***General Treatment Guidelines***
- **1. Polyene antifungals : Amphotericin B, Nystatin, Natamycin and rimocidin**

- **2. Azoles : Imidazole, triazole, thiazole**

- **2.1 Imidazoles : Clotrimazol, Econazol, Ketoconazol, Sertaconazol, Omoconazol and Oxiconazol**

  2.2 Triazoles: Fluconazol, Itraconazol, Posaconazol, Voriconazol and Terconazol

  2.3 Thiazoles : Abafangin

General Treatment Guidelines

- **3. Allylamines : Amorolifin, Naftifine and Terbinafine**

- **4. Echinocandins : Micafungin, Caspofungin, Anidulafungin**

- **5. Others : Grisofulvin, Benzoic Acid, Flucytosine.**

The *first three antifungal* classes target *fungal cell membranes* by interacting with or *inhibiting ergosterol*.

The echinocandins uniquely target *fungal cell wall* (by inhibiting 1,3-β-D-glucan synthesis for the fungal cell wall), chitin .

Amphotericin B

- In spite of its **toxic potential**, amphotericin B is the **drug of choice for the treatment of life-threatening, systemic mycoses**. [Note: **Conventional amphotericin (amphotericin B deoxycholate,** the nonlipid formulation) has undergone several formulation improvements to reduce the incidence of side effects, **particularly nephrotoxicity.]** The drug is also sometimes used in **combination** with **flucytosine** so that lower (**less toxic**) levels of amphotericin B are possible.

- Antifungal spectrum: Amphotericin B is either **fungicidal or fungistatic, depending on: the organism *and the* concentration of the drug**. It is effective **against** a wide range of fungi, including **Candida albicans, Histoplasma capsulatum, Cryptococcus neoformans, Coccidioides immitis, Blastomyces dermatitidis and Moderate or severe aspergillosis.**
- **Resistance: Fungal resistance, although infrequent, is associated with decreased ergosterol content of the fungal membrane.**

- **Pharmacokinetics:** Amphotericin B is administered by **slow, intravenous infusion**. Amphotericin B is ***insoluble*** in water, and ***injectable preparations require the addition of sodium deoxycholate***, which produces a ***soluble colloidal dispersion***.

- The simplest and smallest of the liposome preparations, AmBisome®,.
- These **liposomal** preparations **have the primary advantage of reduced renal and infusion toxicity.**