

- This **increased** incidence of **fungal infections** is associated with greater numbers of individuals who are **on** :
- **Chronic immune suppression following organ transplant,**
- **Undergoing chemotherapy for myelogenous and solid tumors, or**
- **Infected with the human immunodeficiency virus (HIV).**

■ **The five major pathogens that cause endemic mycoses are :**

- (1) *Coccidioides immitis*, الكُروانيَّة اللِّدوْدَة
- (2) *Histoplasma capsulatum*, النَّوَسَجَةُ الْمُعَمَّدَةُ
- (3) *Blastomyces dermatitidis* البُرْعُمِيَّةُ الْمُطَهَّبَةُ لِلجِلْدِ
- (4) **Aspergillosis** الرِّشاشِيَّات
- (5) **Candidiasis** المَبِيضَات

■ **ANTIFUNGAL DRUGS**

■ **1- SUBCUTANEOUS & SYSTEMIC MYCOSES**

■ **Amphotericin B**

■ **Flucytosine**

■ **Ketoconazole**

■ **Fluconazole**

■ **Itraconazole**

■ **Voriconazole**

■ **Posaconazole**

■ **Echinocandins: Caspofungin, micafungin, and anidulafungin.**

■ **ANTIFUNGAL DRUGS**

■ **2- CUTANEOUS MYCOSES**

■ **Naftifine**

■ **Griseofulvin**

■ **Nystatin**

■ **Miconazole**

■ **Clotrimazole**

■ **Butoconazole**

■ **Terconazole**

■ **Econazole.**

Aspergillosis

Aspergillosis, the most common invasive

mold infection worldwide, caused by

Approximately 150 species include

A. fumigatus, A. flavus, A. niger,

A. terreus, and A. nidulans. A. fumigatus

is the predominant species causing

invasive aspergillosis. *A. fumigatus* is

the most rapidly growing species and

has very small spore size, allowing

deep penetration into the lungs.

Macrophage and neutrophils are the

primary host defenses against

***Aspergillus* in the lungs.**

Corticosteroids can substantially impair

the functions of macrophages and

neutrophils.

T-cell function is thought to be important

in the more chronic forms of invasive

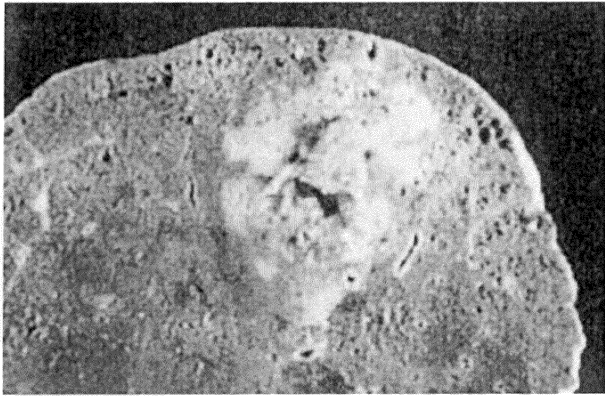
aspergillosis.

■ Acute Pulmonary

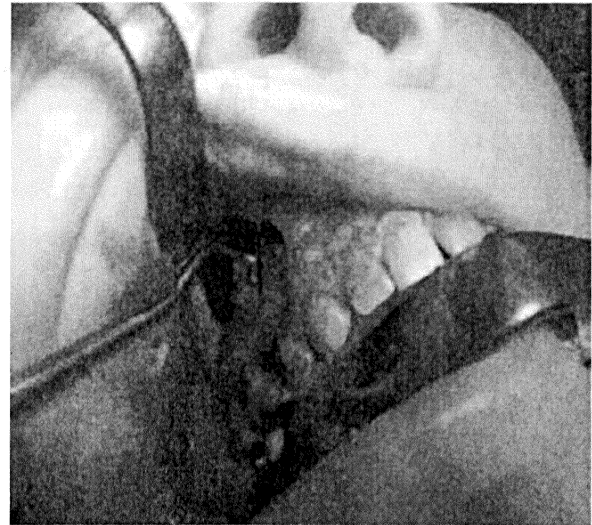
- Acute invasive pulmonary aspergillosis occurs primarily in immunocompromised hosts. Early symptoms may consist of dry cough with fever and nonspecific chest pain. Hemoptysis can occur with focal disease without warning and can be life threatening. More commonly, the clinical presentation of acute pulmonary aspergillosis in immunocompromised hosts is one of unremitting fever and the development of lung infiltrates despite broad-spectrum antibacterial therapy.

■ Chronic Pulmonary

- Chronic invasive aspergillosis occurs less frequently than acute aspergillosis. Affected patients commonly have underlying conditions such as AIDS, chronic granulomatous disease, diabetes mellitus, alcoholism, and corticosteroid use.
- They include chronic productive cough, mild to moderate hemoptysis, low-grade fever, malaise, and weight loss.



Invasive aspergillosis of the lung



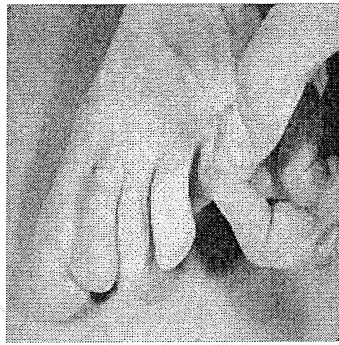
Aspergilloma in the maxillary sinus

Management

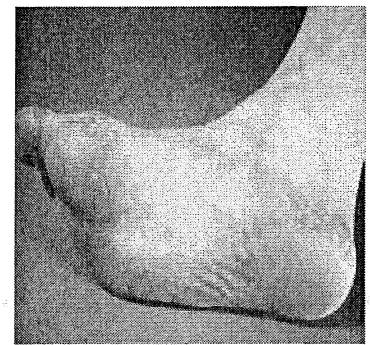
- **Acute invasive pulmonary aspergillosis**
- • **Amphotericin B:** 1.0–1.5 mg/kg/day, to a total dose of at least 25 mg/kg (1 month) (DW5%).
- • **Itraconazole:** 600 mg/day for 4 days then 200 mg twice daily (3 months).
- • **Caspofungin:** 70 mg/day until patient stabilizes.
- • **Voriconazole:** 6 mg/kg IV b.i.d. on day 1 followed by 4 mg/kg b.i.d. until patient stabilizes, then 200 mg/day, b.i.d, orally.

Dermatophytosis

Tinea pedis سعفة القدم



Interdigital tinea pedis due to *Trichophyton rubrum*.



Moccasin form of tinea pedis.

Definition

Dermatophyte infection of the feet.

Causal organisms and habitat

- *Trichophyton rubrum* الشَّعْرَوِيَّةُ الحَمْرَاءُ is the most common cause.

■ Management

- This condition seldom resolves if untreated. However, it often responds to :
- **Topical treatment : with an azole** (clotrimazole, econazole, miconazole, sulconazole), naftifine or terbinafine morning and evening for 2–4 weeks.
- **Oral therapy**, if indicated, includes these alternatives:
 - • itraconazole: 200 – 400 mg/day for 1 week
 - • terbinafine: 250 mg/day for 2– 6 weeks.