

Subcutaneous Fungal Diseases

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Subcutaneous Mycotic Infection

- Direct contact of fungi with injured skin
 - * By soil ,plants.....
 - * **Many destroyed by high temperature of blood**
- Mycoses of this group are:
 - * Sporotrichosis
 - * Chromoblastomycosis
 - * Mycetoma
 - * Pheohyphomycos

Sporotrichosis

- **Granulomatose disease of skin**
- **First recognized in USA by:**
 - * **Shenks (1898)**
 - * **Sporotrichum Schenkii**
- **Epidemi**
 - * **Africa (1940)**
 - * **France (1941 & 1943)**
 - **Infected 3000 people**

Pathogenesis

- **Portal of entry**
 - * Injured part of skin
- **After som weeks:**
 - * Subcutaneous Nodules
 - * Color of skin changes to pink or red
- **Produces**
 - * sporotrichotic ulcer
 - * Often unit with red circle



Pathogenesis

- **Bleeding ulcers cause:**
 - * Tegumentair problems
 - * Vescerale problems
- **Sporotichosis of nose & mouth cause:**
 - * Ostitis
 - * Orchitis
 - * Epidiymitis
 - *



Diagnosis

- **Macroscopic morphology**
 - * **Dimorphic fungi**
 - Yeast form in tissue
 - Filamented in culture
 - * **Culture medium**
 - Saboraux (gelos&glucose 2%)
 - * **Produces different colonies**

Diagnosis

- **Microscopic morphology:**
 - * **Irrigulare filaments**
 - 10-60 μ long
 - 1.5-2 μ diameter
 - * **Condiophores**
 - Sometimes have budding
 - Rodulospore

Diagnosis

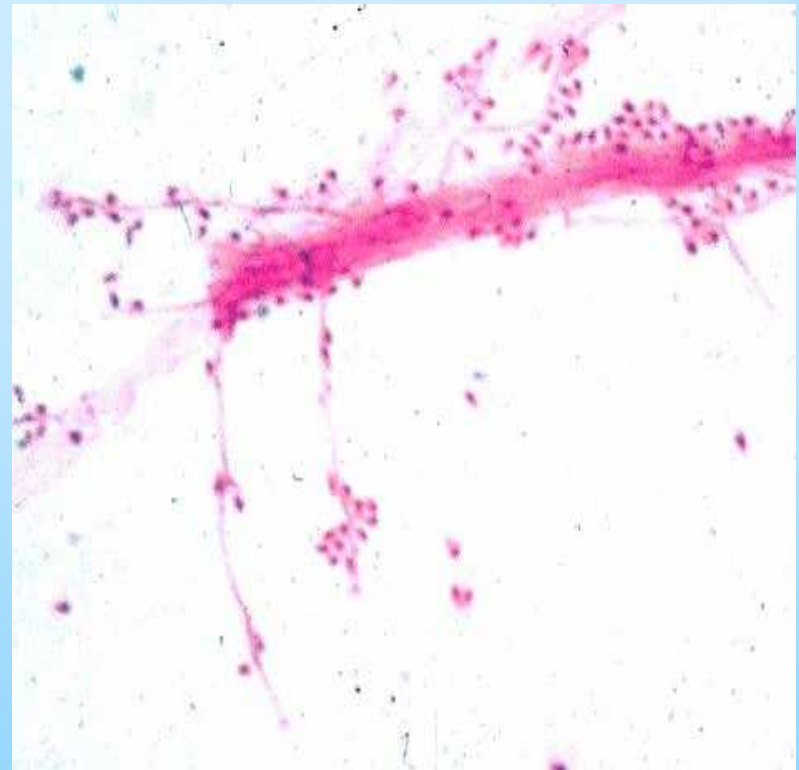
- **Laboratory examinations**
 - * **Sample**
 - Pus, biopsy, scrubbing
 - Should be cultured
 - Sabouraud medium
 - Needs Vit B1
 - Grows in 30°-37°

Diagnosis

- **Laboratory examinations**
- **Inoculation in animals**
- * **Forms in tissues**
 - **Yeasts**
 - **Yeast with budding**
 - **Asteroid bodies**

Diagnosis

- **Microscopic examination**
 - * **After applying with KOH**
 - * **Budding cells**
 - * **Yeasts**



Diagnosis

- Culture



Diagnosis

- **Histological examination**
 - * Staining with Hematoxylene & eosin
 - * Staining with Methamin silver
- **Inoculation in animals**
 - * In peritoan or testicle of mouse

Treatment

- Cutaneous sporotrichosis
 - * KI + Ketoconazol (oral)
- Diffuse sporotrichosis
 - * Amphotericin – B (IV)
- Grisofluvine
- Itraconazol(Sporanox)

Chromoblastomycosis

- **Synonyms**

- * Chromomycosis, Dermatitis verrucosa
- * Mossy foot disease

- **Causes**

1. *Phialophora Verrocosa*
2. *Phialophora Pedrosi*
3. *Phialophora Campactum*
4. *Cladosporium Carionii*

Pathogenesis

- **World wide Mycose**
- **Cutaneous & Subcutaneous Mycose**
 - * After injuries
 - * Bites
- **First produces papule**
 - * Progression take many years
 - * Size : 2-5 cm
- **Rarely prpagates by blood**
- **Never cause visceral mycosis**
- **Mostly in men rarely in women**



Phaeohyphomycosis

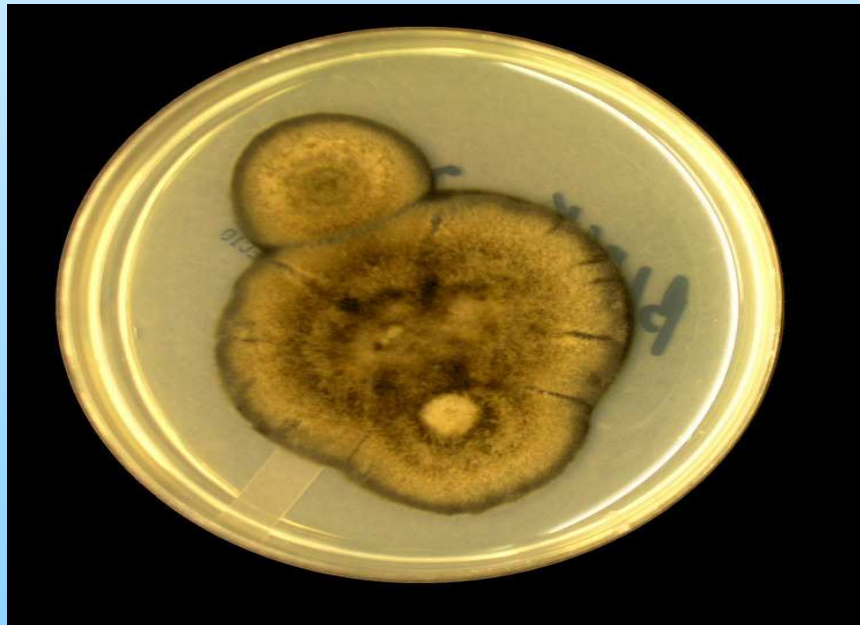
- It is similar to chromoblastomycosis
- Just differ in cause & form of fungi in tissue
 - * Chromoblastomycosis produces sclerotic cells
 - But Phaeohyphomycosis just remains as hyphae
 - **Cause :**
 - Phialophora
 - Alternaria
 - Aureobasidium
 - Cuvalaria
 - Exophiala

Laboratory Diagnosis

- **Immunofluorescence**
- **Biopsy**
 - * Just filaments are seen
- **Histologic**
 - * Fumagoid cells
- **Culture**
 - * In all mediums containing anti bacterial

Laboratory Diagnosis

- Colonies of *Phialophora verrucosa*



Laboratory Diagnosis

- **Under microscop three kinds of reproductive part are seen:**
 - * Phialides
 - Produces microspore with 2-4 micron diameter
 - * Hormodendrons
 - Long Hormodendrons
 - Short Hormodendrons
 - * Acortica

Treatment

1. Surgical treatment
2. Electrocoagulation + Amphotericin -B
3. Nowadays treatment
 1. Itraconazol + Amphotericin -B

The end