Medical Mycology

Lecture (5)

By

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Subcutaneous mycoses

- Subcutaneous mycoses include a heterogeneous group of fungal infections that develop at the site of transcutaneous trauma.

Chromoblastomycosis

- include various dematiaceous hyphomycetes associated with soil,

Clinical manifestations:

- are most often found on exposed parts of the body and usually start a small scaly papules or nodules which are painless but may be itchy.
- lesions may gradually arise and as the disease develops rash-like areas enlarge and become raised irregular plaques that are often scaly.
- In long standing infections, lesions may become tumorous

Laboratory diagnosis:

1. Clinical Material: Skin scrapings and/or biopsy..

2. Direct Microscopy: Skin scrapings should be examined using 10% KOH and Parker ink or calcofluor white mounts.

3. Culture: Clinical specimens should be inoculated onto primary isolation media, like Sabouraud's dextrose agar.

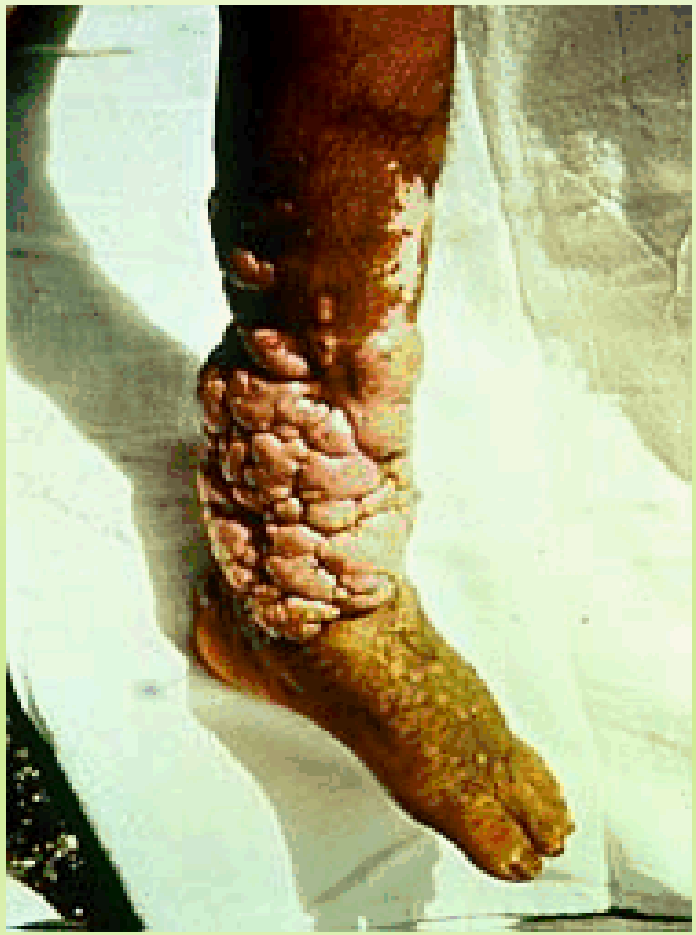
4. Serology: There are currently no commercially available serological procedures for the diagnosis of chromoblastomycosis.

Management:

- The treatment of chromoblastomycosis has been difficult.
- Successful surgical excision requires the removal of a margin of uninfected tissue to prevent local dissemination.
- both itraconazole [400 mg/day] and terbinafine [500 mg/ day] for 6 to 12 months have been used successfully for the treatment of chromoblastomycosis

Lobomycosis (Lacaziosis)

- **The disease has been found in humans and dolphins**
- ***Lacazia loboi***



Clinical manifestations:

- The initial infection is thought to be caused by implantation such as an arthropod sting, snake bite, or wound acquired while cutting vegetation.
- The lesions begin as small, hard nodules and may spread slowly in the dermis and continue to develop over a period of many years.
- Lesions are usually found on the arms, legs, face or ears.

Laboratory diagnosis:

1. Clinical Material: Skin scrapings and/or biopsy..

2. Direct Microscopy: Skin scrapings should be examined using 10% KOH and Parker ink or calcofluor white mounts or Tissue sections should be stained using PAS digest, Grocott's methenamine silver (GMS) or Gram stains.

3. Culture: "*Loboa loboi*" remains to be cultured.

4. Serology: There are currently no serological tests available

Management: The most successful treatment is surgical excision of the affected area, Clofazimine at 100-200 mg/day has been used with varying results

Mycetoma

- **A mycotic infection of humans and animals Mycetoma are caused by two different groups of organisms:**
- **the first are moulds, they are referred to as eumycetomas**
- **the second are filamentous bacteria in the order Actinomycetales. by draining sinuses, granules and tumefaction.**
- **Aetiological agents include Madurella, Fusarium, Aspergillus etc.**

Clinical manifestations:

- Mycetoma is more common in men than women, particularly those aged 20 to 50. It generally presents as a single lesion on an exposed site and may persist for years

1. **It starts as a small hard painless lump under the skin.**
2. **It grows slowly but eventually involves underlying muscles and bones.**
3. **discharges pus, which contains grains.**
4. **granules which vary in size, colour and degree of hardness, depending on the aetiologic species.**

Laboratory diagnosis:

1. Clinical Material: Skin scrapings and/or biopsy..

2. Direct Microscopy: Skin scrapings should be examined using 10% KOH and Parker ink or calcofluor white mounts or Tissue sections should be stained using H&E, PAS digest

3. Culture: "*Loboa loboi*" remains to be cultured.

4. Serology: There are currently no serological tests available

Treatment of mycetoma

Actinomycetoma:

Streptomycin injections

Amikacin , rifampicin, tetracycline

Eumycetoma is more difficult to treat:

Itraconazole , ketoconazole

Surgery

remove the affected tissue completely. These may mean amputation if bone is involved

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