Subcutaneous Mycoses

Medical Mycology
Lec. 5

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Subcutaneous Mycoses

These are caused by fungi that grow in soil and on vegetation and are introduced into subcutaneous tissue through trauma.
Sporothrix schenckii is a dimorphic fungus that live on vegetation. When introduced into the skin, typically by a thorn, it cause a local pustule or ulcer with nodules along the draining lymphatics.
There is little systemic illness. Lesion may be chronic.

* Sporotrichosis occurs most often in gardeners, especially those who prune roses, because they may be stuck by a rose thorn.
Cutaneous sporotrichosis

Produces nodular lesions around the infection site

Lymphocutaneous sporotrichosis

Secondary lesions occur on the skin along the course of lymphatic vessels
Sporotrichosis, infection with the fungus Sporothrix schenckii.
Sporotrichosis ulcer.
Lymphocutaneous sporotrichosis on the arm
In the clinical laboratory specimen, round or cigar-shaped budding yeasts are seen. In culture, hyphae occur bearing oval conidia in clusters at the tip of slender conidiophores.
The **drug of choice** for skin lesions is itraconazole.

It can be **prevented by** protecting skin when touching plants, moss, and wood.
Chromomycosis

This is a slowly progressive granulomatous infection that is caused by several soil fungi (*Fonsecaea, phialophora, cladosporium, etc*) when introduced into the skin through the trauma. These fungi are collectively called dematiaceous fungi, so named because their conidia or hyphae are dark-colored, either gray or black.
Chromycoysis

**Wart like lesion** with **crusting abscesses** extend along the lymphatics.

The disease occur mainly in the tropics and is found on bare feet and legs.

In **the clinical laboratory**, dark brown, round fungal cell are seen in leukocytes or giant cells.
Chromoblastomycosis, syn. chromomycosis; hyperkeratotic lesions foot; Fonsacaea (Phialophora) infection.
In tissue these fungi form **sclerotic bodies** which are the reproductive forms dividing by fission. These organisms induce a granulomatous reaction.
The disease is treated with oral flucytosine or thiabendazole, plus local surgery.
Mycetoma

Tumor like infections of skin, fascia, and bones of hands or feet

Caused by mycelial fungi in the division Ascomycota

Fungi are found in the soil

Fungi introduced via wounds from contaminated twigs, thorns, or leaves

Nodules form at site of infection that slowly worsen and spread

Bone destruction can cause permanent deformity

Surgical removal of the mycetoma is required
A mycetoma of the ankle
mycetoma

Soil organisms (*petriellidium, madurella*) enter through wounds in the feet, hands, or back and cause abscesses, with pus discharge through sinuses. The pus contain compact colored granules.
Actinomycete can cause similar lesions (Actinomycotic mycetoma). Sulfonamide may help the actinomycotic form. There is no effective drug against the fungal form; surgical excision is recommended.
Mycetoma of the arm.
Mycetoma of the shoulder and back.
Thank You!