

## **Black Fungi:**

Black fungus or mucormycosis is a rare but dangerous invasive fungal infection caused by a group of molds called mucormycetes. Black fungus commonly affects the sinuses and lungs but can affect skin and brain. People can get infected when they inhale the mold spore or touch the mold spore. A skin infection can occur after the fungus enters the skin through a scrape, burn, or other type of skin injury.

Mucormycosis is not contagious from person to person. You cannot get it from an infected person.

Most cases of mucormycosis are sporadic (meaning they occur infrequently). But outbreaks do occasionally occur. Most outbreaks are concerned about an unusual number of cases should contact their state or local public health department.

Symptoms depend on where in the body the fungus is growing and can include facial swelling fever, skin ulcer and black lesion in the mouth.

## **Subcutaneous Mycosis:**

These are infections confined to the dermis, subcutaneous tissue or adjacent structure. Infection may arise following the wounding of the skin and the introduction of vegetable matter, these mycoses are rare and confined mainly to tropical regions.

They tend to be slow in onset and chronic in duration. An example is sporotrichosis caused by *Sporothrix schenckii*. The fungus is dimorphic, being a mold that can convert to a yeast from at 37 °C on rich laboratory media or in infection.

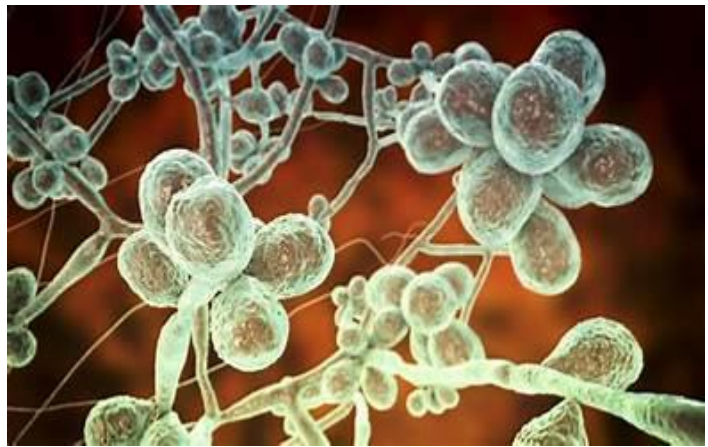
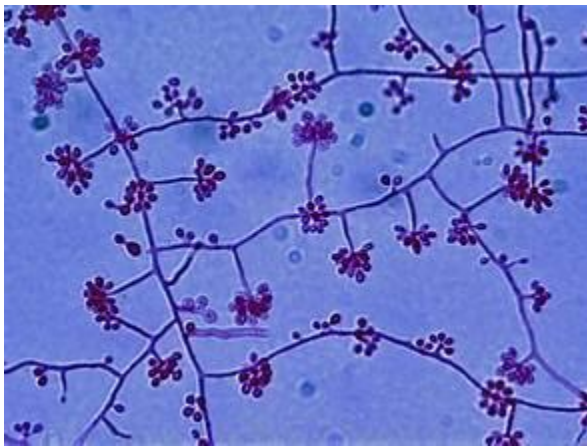
## **Sporotrichosis:**

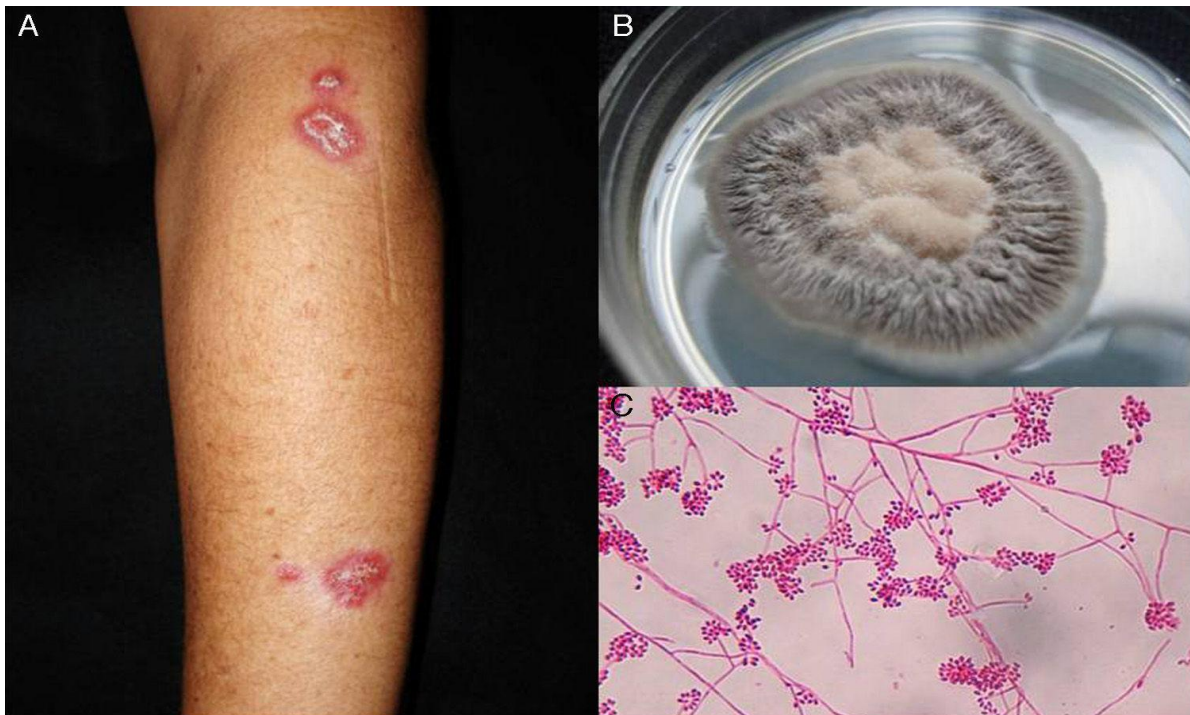
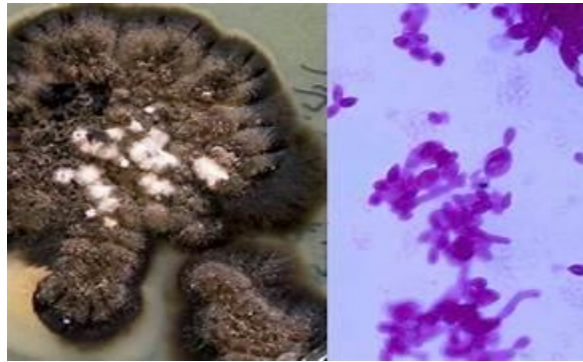
Is a disease caused by the infection of the fungus *Sporothrix schenckii*. This fungal disease usually affects the skin, although other rare forms can affect the lungs, joints, bones, and even the brain. Because roses can spread the disease, it is one of a few diseases referred to as rose-thorn or rode-gardeners disease.

Because *S. schenckii* is naturally found in soil, hay, sphagnum moss, and plant, it usually affects farmers, gardeners, and agricultural workers. It enters through small cuts and abrasions in the skin to cause the infection. In case of sporotrichosis affecting the lungs, the fungal spores enter through the respiratory pathway. Occupational hazard for veterinarians.

## **Pathophysiology:**

Infection with the dimorphic soil fungi *S. schenckii* is usually acquired from organic matter through cutaneous inoculation. The mycosis has also been transmitted from animals through bites or scratches. Cats have been responsible for cases among veterinarians and for a large outbreak in Rio de Janerion, Brazil. See the Image below.





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### **Types of Sporotrichosis:**

- **Cutaneous (Skin) Sporotrichosis:** Usually occurs on a person's hand or the arm after they have been handling contaminated plant matter.
- **Pulmonary (Lung) Sporotrichosis:** Is very rare but can happen after someone breathes in fungal spores from the environments.

- **Disseminated sporotrichosis:** occurs when the infection spreads to another part of the body, such as the bones, joints or the central nervous system. This form of sporotrichosis usually affects people who have weakened immune systems, such as people with HIV infection (see Risk & prevention)
- **Mycetoma:** is a suppurative and granulomatous subcutaneous mycosis, which is destructive of contiguous bone, tendon, and skeletal muscle. Mycetoma is characterized by the presence of draining sinus tracts from which small but grossly visible pigmented grains of granules are extruded. These grains are micro-colonies of fungi causing the infection.
- **Diagnosis of Mycetoma:**  
Specimen collection: Aspiration (best), drainage, tissue biopsy/section.  
Examination of grains.
  - Examination of grains:-
    - Record size, color, shape and consistency of grains
    - Direct microscopic examination: KOH/LPC preparation (LCP- Lactophenol cotton blue).
    - Culture standard mycological media or aerobic/anaerobic bacterial culture condition.
- **Treatment**  
Treatment is difficult due to inability of drugs to infiltrate lesions, combination of medicine and surgery is the best. Eumycotic mycetoma: Amphotericin B.