

Occupational Health - Zoonotic Disease Fact Sheet

SPOROTRICHOSIS

KEY FACTS:

- Sporotrichosis (also known as rose gardener's disease or rose handler's disease) is a rare infection caused by a fungus called Sporothrix.
- This fungus lives throughout the world in soil and on plant matter such as sphagnum moss, rose bushes, and hay, and typically affects farmers, gardeners, and agricultural workers.
- The three types of sporotrichosis are cutaneous, pulmonary, and disseminated sporotrichosis.

SPECIES: Sporotrichosis occurs in many domestic, wild, and laboratory animals. Cases have been recorded in cats, dogs, rodents, cattle, goats, swine, mules, horses, camels, non-human primates, rats, armadillos, birds, and humans.

CAUSATIVE AGENT: *Sporothrix schenckii*, which is a dimorphic fungus.

TRANSMISSION: Individuals get sporotrichosis by coming in contact with the fungal spores in the environment. Cutaneous infection is the most common form of the infection in both humans and animals. In rare cases, individuals can inhale the spores, which can result in pulmonary sporotrichosis.

DISEASE IN ANIMALS: Infected animals typically have lesions, which are usually located on distal extremities, head, or base of tail. These lesions appear as draining puncture wounds, which can ulcerate and become nodular with seropurulent exudate. May cavitate and expose muscle and bone. May lead to disseminated disease which is usually fatal.

DISEASE IN HUMANS: Sporotrichosis may be grouped into three forms: cutaneous, pulmonary, and disseminated. Cutaneous is the most common form of infection and begins with a nodule or pustule at the point where broken skin allowed inoculation. The infection may remain confined or may eventually spread and look like an open sore or ulcer. Pulmonary sporotrichosis is less common than the cutaneous form and symptoms include cough, shortness of breath, chest pain, and fever. Pulmonary sporotrichosis can be confused with TB. Disseminated forms, which are extremely rare, may give rise to localizations in different organs, especially the bones and joints, as well as in the mouth, nose, and kidneys. Infections of the central nervous system can involve difficulty thinking, confusion, headaches, and seizures.

DIAGNOSIS: Diagnosis can be made by culture through biopsy and histo fungal cultures obtained from unopened lesions. Organisms are numerous in cats but are difficult to detect in other animals. Blood tests are used to diagnose disseminated disease but will not detect cutaneous infections. *Please review current literature before prescribing diagnostic testing as recommendations may have changed.*

TREATMENT: Cutaneous infections are treated with prescription antifungal medication, such as itraconazole. Supersaturated potassium iodide is another treatment option for cutaneous sporotrichosis. However, both potassium iodide and itraconazole should not be used during pregnancy. Patients with severe forms of sporotrichosis are usually treated with amphotericin B. In some cases of infection with pulmonary sporotrichosis, surgery may be required to remove infected tissue. *Please consult your physician for treatment options as recommendations may have changed.*

PREVENTION/CONTROL: The use of protective clothing, including gloves, when handling infected animals or working with plants, with hay, or in the field will lower the risk of infection. Individuals should observe strict personal hygiene measures, including washing hands. To prevent and control unintended infections, use uninfected animals for research, and isolate any animals used in clinical trials. Additionally, only conduct projects in laboratories with proper engineering controls and train staff members in the proper use of required personal protective equipment when they are in spaces containing live agent.

More information on sporotrichosis can be found on the Centers for Disease Control and Prevention website at: <https://www.cdc.gov/fungal/diseases/sporotrichosis/index.html>