

Cat-associated sporotrichosis in humans

Caused by *Sporothrix brasiliensis*



HEALTHCARE PROVIDERS: Emerging sporotrichosis is often spread by a bite or scratch from an infected cat and can have severe outcomes.

What is sporotrichosis?

Sporotrichosis is a fungal infection that can infect humans, cats, and other mammals. It typically causes isolated pustules and abscesses, but it can also spread into the lymph nodes or even cause disseminated infections that involve the bones, lungs, or central nervous system.

Sporotrichosis can be caused by certain species of *Sporothrix*, most commonly *S. schenckii* in the United States, which are typically acquired when injured skin contacts plant material with this fungus. However, in Brazil, the species *S. brasiliensis* has emerged as a zoonotic disease that is spread from cats to humans through bites and scratches of infected cats. This species appears to cause more severe disease among humans and animals than other *Sporothrix* species, though it has not yet been detected in the United States.

Clinical features

Human sporotrichosis can occur in two forms – a cutaneous form and an extracutaneous form.

The cutaneous (skin) forms can cause:

- Subcutaneous nodules or abscesses
- Ulcerative lesions
- Enlarged lymph nodes
- Hypersensitivity reactions



The extracutaneous and disseminated forms can cause:

- Ocular lesions
- Respiratory infections
- Pulmonary cavitation
- Bone invasion
- Encephalitis and meningitis



Diagnosis and treatment

Consider *S. brasiliensis* as a cause of unexplained skin lesions following cat scratches or bites, especially those from cats in or from Brazil and neighboring countries.

Sporotrichosis is best diagnosed by a culture of clinical specimens. Molecular methods, such as polymerase chain reaction (PCR), can be used to determine the infecting species. Cytology and immunohistochemistry can also be used for initial diagnosis. Serological tests for antibody detection are commercially available, but can vary in performance depending on the disease presentation.

Sporotrichosis is typically treated with oral itraconazole. Supersaturated solution of potassium iodide (SSKI), posaconazole, terbinafine, and fluconazole are sometimes used. Amphotericin B may be required as initial therapy for severe disease. Prolonged treatment of 3–6 months or longer is often needed, depending on the type of infection and response to therapy. Cryosurgery may be considered for patients with thick keratotic skin lesions or who are pregnant.

Prevention and control

- The public should be cautious with unfamiliar animals and approach cats with care, even if they appear friendly
- Tell your state or local health department if you detect human or animal cases of sporotrichosis caused by *S. brasiliensis*.



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