

Microsporium canis

Microsporium canis is a fungal species that causes numerous forms of disease. It is part of a group of fungi known as Dermatophytes. Though mostly well known for ringworm in pets and other animals, it is also known to infect humans. This fact makes this pathogen both anthrophilic and zoophilic in nature.

Microsporium canis is a communicable pathogen.

Mycology

Microsporium canis is part of a family of fungi known as dermatophytes. Microscopically, it has multi-celled spores known as macroconidia with rough thick walls. Macroconidia are characteristically spindle shaped with 5-15 cells. On a culture medium it grows white and cottony with a yellow perimeter and a bright yellow orange underside. It can be found in a variety of environments and survive for up to 15 months. It feeds on the keratin on the outer layers of skin, hair and nails. The natural reservoir of *Microsporium canis* is in cats and dogs.

Clinical Signs

Infections in animals due to *Microsporium canis* manifest as Ringworm and can cause a scaly, crusted rash that may appear as round, red patches on the skin. Other symptoms and signs of ringworm include:

- Patches of hair loss
- Scaling on the scalp
- Itching
- Blister-like lesions

Epidemiology of Transmission

The main reservoir for *Microsporium canis* are cats and dogs; however, it can also be transmitted to humans through direct and indirect contact with animals and fomites such as combs, brushes, hats, furniture, linens etc. The greatest risk factor for acquiring infection is contact with damaged cells on skin, hair and nails. *Microsporium canis* can infect all mammals.

Treatment and Control

Treatment of ringworm depends on the severity of the infection. A veterinarian may prescribe a medicated shampoo, ointment or a dip to kill the fungus. In some cases, oral medications are necessary

to cure ringworm. In severe cases, it may be necessary to use a topical and oral treatment, in addition to clipping away the fur. Once treatment begins, lesions should begin to heal in about one to three weeks.

In order prevent the spread of infection via the environment or contaminated fomites, an EPA or Health Canada approved disinfectant with a fungicidal claim will be effective at inactivating fungal spores. Direct contact with infected animals and related fomites should be minimized. If contact with infected areas of skin or infected animals is unavoidable, wash hands immediately after exposure. Wash/change bedding as frequently as possible as shed skin may also spread infection. As soon as infection is suspected seek medical attention.

References

Ringworm, MedicineNet.com (2015). <http://www.medicinenet.com/ringworm/article.htm>

Ringworm Infections in Dogs, WebMD. <http://pets.webmd.com/dogs/ringworm-infection-dogs>

Prevention of Fungal Infection. <http://www.slideshare.net/icsp/prevention-of-fungal-infections>

The Dermatophytes. Clinical Microbiology Reviews, p. 240-259, vol. 8, No.2 Apr. 1995.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC172857/pdf/080240.pdf>

CDC-Fungal Diseases. <http://www.cdc.gov/fungal/>

Epidermophyton floccosum, Microsporum spp., Trichophyton spp. <http://www.phacaspc.gc.ca/lab-bio/res/psds-ftss/epidermophyton-eng.php>

Microsporum canis.

http://www.mycology.adelaide.edu.au/Fungal_Descriptions/Dermatophytes/Microsporum/Microsporum_canis.html