Ringworm (…it's not actually a worm)

It may surprise you to know that ringworm is not a worm at all, in fact it is not even an animal!

It is actually a fungus called a dermatophyte but got its name because it often causes a circular rash, shaped like a ring that is usually very red and itchy.

Dermatophytosis (ringworm) can be found in animals (including us humans) and decomposing keratin in the soil. Although the fungal spores are found in decomposing soil the most common route of transmission is exposure to infective spores via direct animal to animal contact. Once infected, visible skin lesions usually appear within 1-3 weeks after. Unfortunately, this also means that patients can shed infective spores before the onset of visible lesions.

Other routes of transmission include exposure to spores on items in the environment, such as blankets, clippers, soil, carpet, brushes, hair etc. The spores can stay in the environment for months to years after they are shed from the host which is why environmental decontamination is so crucial to effective treatment of ringworm.

The good news is contact with infected spores doesn't always result in an infection, the skin is often a good enough mechanical barrier, and it is not very common for healthy adults to get infected. Factors that make it more likely for an animal to get ringworm include:

- Damaged or abraded skin
- Environmental stress
- Immunodeficiency syndromes
- Poor nutrition
- Physiological stress (general illness)
- Age (younger and older animals have lower immune systems)

Symptoms of ringworm:

- Hair loss, broken hairs, red skin, scaling, crusting, ulceration, nail infections.
- Often on face, ears, and muzzle before spreading to paws and rest of the body
- Often very itchy

How do we diagnose your pet?

- Wood's Lamp: shining a UVA light can make infected hairs fluoresce "apple-green"; this test sometimes doesn't work, and you may get a negative result if the infection is in the outer skin layer but not yet in the hair follicles or the infection can be hidden under crusting skin.
- Fungal culture: collecting a sample with a small brush or a sample of hair via plucking which is then touched to a culture media. The medium changes colour usually within 7 days if ringworm is present. This test can also tell us what species of fungus is growing which can help determine the source of infection.
- Biopsy – taking a skin sample under anaesthesia which is then sent to a pathologist to perform special stains of the sample and examine under a microscope
- PCR testing – new method which involves testing hairs for dermatophyte fungus DNA – faster than culture but more expensive but it can also give a positive result even if the fungus is present but dead and no longer causing an infection.

In healthy animals it often resolves itself without treatment within 4 months, but treatment is recommended because it is very contagious and can infect people as well. We need to use a combination of topical, oral, and environmental treatment to get on top of the infection. Ideally, we always need to confirm that infection has been cured before discontinuing therapy even if they look better as they can still be carrying infective spores and get lesions re-developing.

Treatment:

- Antifungal creams and washes twice weekly
- Oral antifungal medication usually over a period of 4-6 weeks
- Environmental decontamination is extremely important to remove fungal spores from the environment. Twice weekly cleaning and disinfection with daily removal of hair.
    - Wear gloves while cleaning,
    - Remove hair from all surfaces with lint rollers/duct tape/vacuum and clean vacuum or dispose of bag following this.
    - Disinfect surfaces with bleach diluted 1:10 once a week until treated
    - Carpet cleaning with vacuum and ideally commercial hot water cleaner or carpet shampooer. Ensure fully dry after cleaning before allowing susceptible animals or children back on carpet.
    - Steam cleaning upholstered furniture where possible

- Soak toes and bowls in hot soapy water and scrub until clean and rinse.

Overall, there is an excellent prognosis for recovery, and it is not a life-threatening infection. In animals with other underlying medical conditions, these will often need to be addressed before treatment of ringworm can be successful.

Because ringworm can be transmitted to humans, please ensure to practice good hygiene.

Avoid touching infected animals without gloves, especially for young children, older people or the immunocompromised. If you have are showing signs of circular red lesions or any concerns, please seek medical advice from your local general practitioner as veterinarians are not able to make recommendations for human disease or infection.

Take care,

Dr Suead