

Ring Worm Infection in Cattle and Its Management

Chandrika M R¹, Manasa M R², Jayanthi K V³ and Akshatha Patil⁴

¹Department of Veterinary Clinical Medicine, TANUVAS, Chennai

²Department of Veterinary Surgery and Radiology, KVASU, Mannuthy

³Department of Animal Genetics and Breeding, Veterinary College, Hassan

⁴Ph.D. Scholar, Department of Animal Genetics and Breeding, NDRI, Haryana

*Corresponding Author: mrchandrika07@gmail.com



Numerous skin conditions commonly affect domestic animals; some are simple to treat, some are more challenging, and others are even extremely communicable to their human carers. The impact of skin conditions on animal productivity likewise ranges, from minor annoyances to sudden death, with a variety of intermediate stages affecting the animals' comfort and productivity.

Dermatophytosis (Ringworm)

Ringworm, also known as dermatophytosis, is exceedingly frequent in dairy calves and can also affect adult cows.

Etiology

The most frequent pathogen is *Trichophyton verrucosum*, with *Trichophyton mentagrophytes* and other dermatophytes occurring less frequently.

Mode of spread

The infection is spread by direct or indirect contact. Occurs more frequently in animals where they are housed or kept close to one another. The fungus is known to multiply best in environments with high humidity. Young calves are more sensitive since susceptibility is mostly determined by immunological state.

Pathogenesis

Only keratinized tissue can support ringworm growth, and the infection terminates once it reaches live cells or inflammatory tissue. Only the perimeter of the lesion is active because the fungus, which need oxygen, die out in the interior. This pattern of proliferation is what gives the lesions their distinctive ring shape.

Symptoms

- Ringworm symptoms appear in animals 7 to 28 days after infection.
- Animals have a 3 cm-wide circular scab on their skin.
- Scabs typically start to emerge initially in these areas: under the tail, on the ears, above and around the eyes. The skin is moist behind the dried scab. Scabs quickly congregate and thicken. After several days the scabs fall off. The skin underneath becomes dry with a heavy, gray-white crust raised above the skin.
- Stanchions, neck straps, halters, chutes, brushes, curry combs, milking straps for vintage bucket milking machines, and other implements can spread disease among a herd of cattle.
- In contrast to healthy herd mates that either remain unaffected or just have minor lesions, persistently infected BVDV and BLAD calves usually have extensive ringworm lesions.
- The scabs fall off after a few weeks and leave patches with no hair.
- Raised crusted lesion of ringworm. Multifocal ringworm lesions.

Diagnosis

To confirm the diagnosis, skin biopsies, scrapings of lesions for mineral oil or potassium hydroxide preps, or cultures of hair from the periphery of a lesion on selective media such as dermatophyte test medium may be utilised.

Treatment



Ringworm normally clears up on its own in animals, but it can take two to three months. Treatment is frequently required due to zoonotic risk or because a sick heifer or cow has been chosen to participate in a show or sale.

Topical

1. Lime sulfur 2% to 5% (Orthorix; Lym Dyp, Ortho Garden Supply)
2. 0.5% Sodium hypochlorite (Clorox)
3. 0.02% Enilconazole (Imaverol)
4. 3% to 5% thiabendazole paste applied once or twice daily.
5. Miconazole or clotrimazole cream once or twice daily.

Systemic

1. Griseofulvin 20 to 60 mg/kg orally for 7 or more days.
2. Sodium iodide 20% solution—150 cc per 450 kg intravenously (IV) repeat in 3 to 4 days
3. Vitamins A and D—only indicated if animals have been kept completely out of sunlight.

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