Evaluation of Turmeric, Neem Leaves Paste and Ivermectin for Management of Sarcoptic Mange in Camels

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Abstract

Four camels were presented with history of chronic itching. Clinical examination revealed alopecia, crusts, excoriations, thickened skin layers and intensive pruritus. The skin lesions were noticed over the face, around the mouth, neck region, lateral aspect of abdomen and hind legs. Skin scrapings revealed *Sarcoptes scabiei* mites. Animals were treated with ivermectin (@ 200 μg/kg body weight s/c, once weekly) along with daily topical application of neem leaves and turmeric paste. Animals showed significant clinical improvement by the third week of therapy.

Key words: Camel, *Sarcoptes scabiei*, neem leaves, turmeric

Camels are affected by different ectoparasites which causes loss of body condition, productivity and unfair during the shows (Volpato et al., 2015). Sarcoptic mange is one of the most common and economically important zoonotic diseases. The present article describes the successful management of sarcoptic mange infestation in four camels with topical application of neem leaves and turmeric paste along with parenteral ivermectin.

Case History and Observations

Four adult camels were presented to the Veterinary College and Research Institute, Namakkal with history of severe itching and hair loss. Clinical examination of camels showed alopecia, crusts, excoriations, thickened skin layers and intensive pruritus. Lesions were noticed on the face, around the mouth, neck region, lateral aspect of abdomen and hind limbs (Fig.1). Blood samples and skin scrapings were collected for laboratory examination. Haematological parameters were range within the normal limit. Skin scrapings revealed *Sarcoptes scabiei* mites.

Treatment and Discussion

All the animals were administered with ivermectin (@ 200 μg/kg body weight s/c, once weekly) along with daily topical application of neem leaves turmeric paste. Improvement was assessed by analysis of skin scrapings. Complete clinical improvement was noticed by the third week of therapy. Clinical improvement was appreciated in the form of remission of skin lesions and hair re-growth. Botanical acaricides have become research hot spots because of their environmental safety and efficacy (Khater, 2013). Neem has multipurpose medicinal properties including antibacterial, antifungal, immunostimulant and acaricidal activity. Knowledge on management, housing, care of affected camel, prevention of overcrowding, separation of infested animals are considered key factors for eliminating mange infestation. Poor management in circus might be reason for extensive spread of mange in all the four camels noticed in the circus. *Azadirachta indica* has medicinal properties, including acaricidal action to have biocidal activity against different vectors arthropods, without any adverse effects toward most non-target organisms. Scabies was successfully treated by application of neem oil (Du et al., 2008) in rabbits. Although amitraz is effective against scabies in animals. It was not used in the present study as the animal attendant reported that animal licks the topical application as soon as it was applied and had clinical toxicity on previous occasions.
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References

![Fig. 1: Presence of lesions in different camels](image-url)