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Resolving Sarcoptic mange infection in a New Zealand white rabbit

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Abstract

Sarcoptes scabiei are burrowing mite causes major constraint in rabbit production and highly contagious dermatological condition. The successful therapeutic management of sarcoptic mange in a one year old New Zealand White Rabbit with ivermectin injection (200 micro gm/kg) thrice, at weekly interval along with antihistamines, given daily for seven days. There were no either side effects of the drugs or the recurrence of the mange was observed.

Keywords: *Sarcoptes scabiei*, mange, New Zealand white rabbit

Introduction

Sarcoptic mange is a highly contagious, non-seasonal, pruritic skin condition caused by infestation with the mite *Sarcoptes scabiei* and is a problem infrequently encountered in colonies of rabbits. Mange infestation in rabbits become a common and major constraints in India [1]. *Sarcoptes scabiei* in rabbits is frequently found on the sparsely haired parts of the body such as the face, ears and legs and is typically characterized by marked pruritis, extensive pyoderma, severe alopecia and considerable weight loss [2]. In comparison with other domestic animals it is difficult to eliminate *Sarcoptes scabiei* in rabbits. The traditional treatment of Sarcoptic mange includes external application of Organophosphates, Pyrethroid insecticides or Amitraz. However, it is problematic in that it needs frequent and careful application and has side effects. Macrocyclic lactones, which are long acting and easier to apply, have therefore replaced the conventional dips, rinses and aerosol sprays [3]. The present paper reports a case of Sarcoptic mange in New Zealand White Rabbit.

Materials & Methods

A one year old New Zealand White Rabbit was presented to Veterinary Clinical Complex, College of Veterinary Science and Rajendranagar with the history of inappetance, itching, alopecia and rough hair coat. Physical examination reveals dullness and depression with presence of diffused erythema, crust, scale and scab formation in lips, nose, ear pinna and inter-digital space and generalised patchy alopecia (Figure. 1). On clinical examination, the rabbit was dull and acrylic appearance, temperature was 103.2°F and pale conjunctival mucous membrane. Skin scrapings were collected from affected areas in a glass test tube and dissolved 10% NaOH and examined microscopically [Figure 2]. Examination of skin scraping revealed mites that were identified as *Sarcoptes scabiei* [4].

Result and Discussion

Based on history, clinical signs and microscopic examination of skin scrapings, the condition was diagnosed as Sarcoptic mange infestation. The rabbit was treated with inj. Ivermectin at the rate of 200 µg/kg body weight subcutaneously. Inj. Avil (0.4 ml intramuscularly) was given daily for 7days. By the seventh day the pruritus has resolved. There were no side effects noticed hence Inj. ivermectin was continued as safe at weekly interval for 3 weeks. There was a significant clinical improvement after 15 days of treatment and later skin scrapings were examined and found negative for the mites. Ivermectin as highly potent, broad spectrum and systemic antiparasitic drug [5]. No side effects found when ivermectin was used for a month at weekly interval in treatment of feline mange [6]. Supportive therapy was done with antihistamines by paraentral route [7]. Vimeral syrup orally was also given to hasten up the recovery. In the present case, complete recovery of lesions was noticed after four weeks post treatment and no side effects were found [Figure 3].

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Fig 1: Presence of diffused erythema, crust, scale and scab formation in lips, nose, pinna of the ear



Fig 2: Microscopic image of *Sarcoptes scabiei* mite (40X) in skin scrapping examination.



Fig 3: Complete recovery observed after four weeks from *S. scabiei*.

Conclusion

It is concluded that Sarcoptic mange in rabbits with many dermatological conditions is major constraints and causes severe morbidity and mortality. Hence Macrocylic lactones derivative like Ivermectin found to be long acting and has got great efficacy in canine parasitic management.

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Ethical Approval: This article does not contain any studies with human participants or animals performed by any of the authors.

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