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Therapeutic management of *Sarcoptic* mange in a rabbit

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Abstract
The clinical signs of alopecia, severe itching, erythema, and scabby, dry crusty lesions on both ear edges were noticed in a rabbit used in this investigation. *Sarcoptes* scabiei mites were found in skin scrapings. Ivermectin 400 mcg/kg b.wt. was given by injection subcutaneously once a week for three weeks as part of the treatment. Zincovit drops (10 drops twice daily) and Tab. Cadistin (0.3-0.4 mg/kg BW) are used as supportive therapy. For early healing, oral medication was administered twice a day. Clinical examination showed that the lesions had significantly improved after three weeks, and mites were not found in the scrapings.

Keywords: *Sarcoptic* sp., intense itching, ivermectin

Introduction
Dermatological problems are one of the most common clinical entities in domestic pets and fur bearing animals (Deshmukh *et al.*, 2010) [5]. Among dermatological problems mite infestation is one of the most common and major constraint in rabbits (Darzi *et al.* 2007) [4]. It is most obstinate, persistent and zoonotically important contagious disease (Kumar *et al.*). Clinically it is characterized by pruritis alopecia and prolonged illness and death due to cachexia (Roy *et al.*, 2001) [7].

Case history and Observations
A rabbit with a history of alopecia, pruritus, erythematous, scabby, and dry crusty lesions on both ear edges was brought to the veterinary clinical complex at OUAT Bhubaneswar (Fig. 1). The pinna-pedal reflex test result for the rabbit was positive. For microscopic examination, both superficial and deep skin scrapings were collected from the ear margins. Using a low power objective, a considerable number of *Sarcoptes* scabiei mites were found (Fig. 2). *Sarcoptes* infection was verified based on the history, clinical examination, and microscopic analysis of skin scrapings.

Treatment and Discussion
Ivermectin 400 µg/kg body weight was administered subcutaneously to the afflicted rabbit on ce a week for three weeks. Meanwhile, 10 drops of Zincovit were taken orally twice daily.. There was marked improvement in skin lesions after three weeks of treatment. The deep skin scrapings taken from the same site revealed absence of mites after three weeks of treatment. At the same time, clinical signs like alopecia and intense itching were also reduced completely. Deshmukh *et al.* (2010) [5] and Bhardwaj *et al.* (2012) [1] also reported *Sarcoptes scabiei* infection in rabbits and it is distinguished by presence or absence of pruritus and morphology of mite. Diagnosis is generally confirmed by skin scrapings and Ivermectin @ 300-400 µg/kg body weight, subcutaneously is effective in controlling scabies in rabbits (Birchard and Sherding, 2000) [2]. Indiscriminate usage of organophosphorous chemicals against mange infestation may prove dangerous in terms of persistent effect (Dakshinkar and Kumar *et al.* (2000) [3] utilized ivermectin).we employed Ivermectin at 400 µg/kg body weight subcutaneously as an alternative to organophosphorous.

Fig 1: Picture showing crusty and scabby lesions on ear margins.

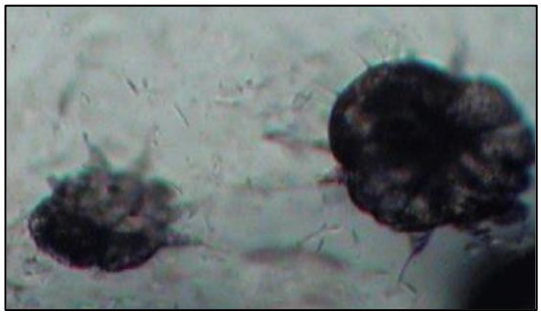

Fig 2: Skin scrapings showing *Sarcoptic scabiei* mites.

Conclusion

The present case highlights the successful diagnosis and management of *Sarcoptes scabiei* infestation in a rabbit. Clinical signs such as alopecia, pruritus, erythema, and crusty lesions on the ear margins, along with a positive pinna-pedal reflex, aided in clinical suspicion, which was confirmed by microscopic examination of skin scrapings. Subcutaneous administration of ivermectin at 400 µg/kg body weight, once weekly for three weeks, proved highly effective in eliminating mites and alleviating clinical signs without adverse effects. Supportive therapy with multivitamins further aided recovery. This case emphasizes the importance of early diagnosis, proper therapeutic intervention, and avoidance of indiscriminate chemical use for safe and effective mange control in rabbits.

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