



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(7): 2591-2592
© 2023 TPI

www.thepharmajournal.com

Received: 02-05-2023

Accepted: 20-06-2023

Dr. Rashmi Lata Rakesh
Veterinary Assistant Surgeon,
Department of Livestock
Development, Government of
Chhattisgarh, Chhattisgarh,
India

Dr. Rashmi S Kashyap
Veterinary Assistant Surgeon,
Department of Livestock
Development, Government of
Chhattisgarh, Chhattisgarh,
India

Dr. B. Roopali
Assistant Professor, Veterinary
College Bidar, Veterinary Animal
& Fisheries Sciences University
Bidar, Karnataka, India

Dr. Shiv Kumar Sidar
Veterinary Assistant Surgeon,
Department of Livestock
Development, Government of
Chhattisgarh, Chhattisgarh,
India

Dr. Preety Singh
Assistant Professor, Department
of Veterinary Pathology, College
of Vety. Sci. &A.H, DSVCKV,
Durg, Chhattisgarh, India

Dr. Somesh Kumar Joshi
Veterinary Assistant Surgeon,
Department of Livestock
Development, Government of
Chhattisgarh, Chhattisgarh,
India

Corresponding Author:

Dr. Preety Singh

Assistant Professor, Department
of Veterinary Pathology, College
of Vety. Sci. &A.H, DSVCKV,
Durg, Chhattisgarh, India

Successful therapeutic management of Sarcoptic mange in Rabbits

Dr. Rashmi Lata Rakesh, Dr. Rashmi S Kashyap, Dr. B Roopali, Dr. Shiv Kumar Sidar, Dr. Preety Singh and Dr. Somesh Kumar Joshi

Abstract

In the present study, five non-descript rabbits were presented with a history of hair fall, intense itching, scabby and dry crusty lesions on both ear margins. Clinical examination revealed alopecia, erythema, crust formation, scale and scab formation on nose, legs and ear pinna with pruritus. Skin scrapings revealed *Sarcoptes scabiei* mites. Treatment was done with subcutaneous injection of Ivermectin @ 400 mcg/kg b.wt at weekly intervals for 4 weeks. Supportive therapy with Zincovit drops @ 6 drops twice a day was given orally along with disinfection of cages was done with 1.25% Deltamethrine @ dilution of 5 ml/lit of water. After four weeks, clinical examination revealed marked improvement of lesions and scrapings were negative for mites in both the rabbits.

Keywords: Rabbits, hair fall, intense itching, scabby lesion, *Sarcoptes scabiei* mites, Ivermectin

Introduction

Dermatological problems are one of the most common clinical entities in domestic pets and fur bearing animals (Deshmukh *et al.*, 2010) [4]. Rabbits are vulnerable to get variety of parasitic infestations and among them the incidence of mange is quite high (Rajeshwari *et al.*, 2001) [9]. *Sarcoptes* mange infestation is one of the most common and major constraint in commercial rabbit production in India (Darzi *et al.*, 2007) [3]. Burrowing mites (*Sarcoptes scabiei* and *Notoedres cati*) present a zoonotic danger; affecting dogs, cats and humans causing a transient itching dermatosis. *Sarcoptes scabiei* is more common mange in rabbits and distinguished by presence or absence of prurites, morphology of mite and distribution of lesions and if left untreated may cause significant morbidity and economic losses (Bhardwaj *et al.*, 2012) [2]. Ivermectin is used as broad spectrum parasiticide in domestic animals and is also used for acariasis (Aulakh *et al.*, 2003) [1].

Materials and Methods

Five non-descript rabbits were presented with a history of skin lesions to Govt. Veterinary Hospital Kasdol, District-Balodabazar-Bhatapara (C.G.) with a history of hair fall, intense itching, scabby and dry crusty lesions on both ear margins. Clinical examination revealed alopecia, erythema, crust formation, scale and scab formation on nose, legs and ear pinna with pruritus. Skin scrapping and crusts were collected and digested in 10% KOH for microscopic examination (Soulsby, 1985) [11], which revealed *Sarcoptes scabiei* mites. Based on history, clinical lesions and laboratory findings, the cases were diagnosed as *Sarcoptes* mange infestations.

Results and Discussion

The affected rabbits were treated with Inj. ivermectin @ 400 µg/kg body weight by s/c route, weekly for four weeks, along with Zincovit drops @ 6 drops twice a day orally. Disinfection of cages was done with 1.25% Deltamethrine @ dilution of 5 ml/lit of water. One of the skin scrapings were examined and found negative for mites on second week. Skin lesions like itching, crust and scale formation and erythema were resolved by fourth week and scrapings were negative for mites in both the rabbits. Sarcoptic mange is a highly contagious zoonotic parasitic infection caused by a burrowing mite (*Sarcoptes scabiei*) in the epidermis of animals, including men. The mite is easily transmitted to other animals through close contact. Overcrowded living conditions and poor hygiene are significant factors for infection with *Sarcoptes scabiei* (Kachhawa *et al.*, 2013) [6].

The feeding behaviour of larvae and nymphs causes irritation, hypersensitivity reaction and inflammation with subsequent hyperkeratosis, seborrhea and alopecia (Scott *et al.*, 2001) [10]. In present study, rabbits exhibited alopecia, erythema, crust formation and pruritus. Lesions were seen on nose, legs and ear pinna. The findings were in accordance with Lakshmi and Padmaja (2013) [7]. Treatment with injection ivermectin @ 400 µg/kg body weight subcutaneously weekly for four weeks was effective in controlling the sarcoptic mange in rabbits. Ivermectin selectively binds to glutamate-gated and gamma-aminobutyric acid (GABA)-gated chloride channels in the mites nervous system, resulting in hyperpolarization of cells, paralysis and finally death of mites (Haritha *et al.*, 2016) [5]. Ivermectin was found more effective than doramectin in rabbits affected with sarcoptic and psoroptic mange (Bhardwaj *et al.*, 2012) [2]. Disinfection of rabbits' cages with deltamethrine spray helped in controlling the mange. Darzi *et al.* (2007) [3] and Mitra *et al.* (2014) [8] used blow lamp for control of mange in rabbit's cages. The present observations suggest that ivermectin therapy along with proper management and disinfection of rabbit house was effective in controlling Sarcoptic mange in rabbits.

References

1. Aulakh GS, Singla LD, Singla N. Pathology and therapy of natural notoedricacariosis in rabbits. *J Vet. Parasitol.* 2003;17:127-129.
2. Bhardwaj RK, Mir IA, Ahmad O, Kumar A, Wahid A, Bhardwaj D. An outbreak of mange in rabbits. *Indian Vet. J.* 2012;89:78.
3. Darzi MM, Mir MS, Shahardar RA, Pandit BA. Clinicopathological, histochemical and therapeutic studies on concurrent sarcoptic and notoedricacariosis in rabbits (*Oryto lagus cuniculus*). *Vet Orhiv.* 2007;77:167-175.
4. Deshmukh VV, Varshney JP, Chaudhary PS, Desai SN. Clinical management of scabies in rabbit bunnies. *Intaspolivet.* 2010;11:112-114.
5. Haritha GS, Saritha G, Nalini Kumari K. Therapeutic management of Sarcoptic mange in rabbits. *Vet. Clin. Sci.* 2016;4(3):40-41.
6. Kachhawa JP, Kachhawa S, Srivastava M, Chahar A, Singh NK. Therapeutic management of mange in rabbits. *Intas Polivet.* 2013;14(11):306-308.
7. Lakshmi K, Padmaja K. Therapeutic management of mange in rabbits with ivermectin. *Intas Polivet.* 2013;14(2):322-323.
8. Mitra J, Shikari RN, Das AK, Roy BB, Mitra M. Therapeutic management of sarcoptic mange in rabbit with ivermectin. *Explor. Anim. & Med. Res.* 2014;4(1):119-122.
9. Rajeshwari YB, Udupa V, Suryanarayan T. Efficacy of Scavon in mange of rabbits. *Indian Vet. J.* 2001;78:331-332.
10. Scott DW, Miller WH, Griffin CE. Dermatoses of Pet Rodents and Rabbits. In: Miller and Kirk's Small Animal Dermatology. W.B. Saunders, Philadelphia; c2001. p. 1415-1458.
11. Soulsby EJL. Helminths, Arthropods and Protozoa of Domesticated Animals. 7th edn. ELBS, Bailleurs Tindall, London; c1985. p. 490.