The Pharma Innovation Journal 2023; 12(3): 1861-1862

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; 12(3): 1861-1862
© 2023 TPI
www.thepharmajournal.com
Received: 02-12-2022
Accepted: 05-01-2023

Yashoda Rathod
Assistant Professor, Department of Veterinary Medicine, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Pankaj
Assistant Professor, Department of Veterinary Medicine, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Vivek R Kasaralikar
Professor and Head, Department of Veterinary Medicine, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Sandeep Halmandage
Associate Professor and Head, Department of VCC, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Malasri G
Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Naveena Antony
Assistant Professor, Department of Veterinary Microbiology, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Corresponding Author:
Yashoda Rathod
Assistant Professor, Department of Veterinary Medicine, Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, India

Sarcoptic mange in a Pomeranian dog: A case study

Yashoda Rathod, Pankaj, Vivek R Kasaralikar, Sandeep Halmandage, Malasri G and Naveena Antony

Abstract
A six month old female Pomeranian dog was presented to the department of veterinary clinical complex, veterinary college, Bidar with the history of severe itching and alopecia all over the body. Clinical examination revealed crusty lesions over the margins of the ear pinnae, allopathic patches over chest, ventral abdomen and mild crusty lesions with alopecia over elbow region. Deep skin scraping examination showed the presence of *Sarcoptes scabiei* var *canis* mite. The affected dog was treated with injection ivermectin @ 200 µg/kg BW S/C at weekly interval for five weeks along with supportive therapy. Five weeks post treatment skin scraping examination showed absence of mites and the dog recovered uneventfully.

Keywords: Pomeranian, *Sarcoptes scabiei* var *canis*, mange, skin scraping, ivermectin

Introduction
Sarcoptic mange is a highly contagious, intensely pruritic and potentially zoonotic skin condition of animals (Miller *et al.*, 2013) [5]. It affects all warm blooded animals including human and is caused by different species of mites. In dogs, it is caused *by Sarcoptes scabiei* var. *canis* (Anita and Peter, 2008) [1] which burrows into its hosts epidermis and often called canine scabies. The parasite commonly affects young dogs and dogs with poor nutrition but can affect healthy dogs that are exposed to the mites (Reddy and Kumari, 2013) [6]. Activities of the mite cause marked irritation characterized by hyperkeratosis and intense itching and scratching on hard surfaces, resulting in partial to complete alopecia on medial aspects of the hind limbs, axillae, brisket and abdomen. Dry and encrusted lesions are typically found on ear margins, lateral hocks and elbows and ventrum of the dog in more severe cases. Thickened and wrinkled skin, with cracks and fissures with heavy dandruff may be evident on hairy areas covering the neck and abdominal region (Kemp *et al.*, 2002) [3]. Robert (2011) [8] stated that there are two clinical forms of mange in dogs; localized and generalized forms. The localized form occurs in dogs < 2 years while generalized form affects older dogs.

Case history and Observation
A six month old female Pomeranian dog was presented to the department of veterinary clinical complex, veterinary college, Bidar with the history of severe itching and alopecia all over the body. It was developed over a period of one week. The animal was active, but reduced feed intake was noticed. On clinical examination, the animal was showing intense pruritis, crusty lesions over the margins of the ear pinnae (Fig. 1). Allopecic patches with erythema over chest, ventral abdomen and mild crusty lesions with alopecia over elbow region (Fig. 2) were also observed. The rectal temperature was 103°F, conjunctival mucus membranes were slightly congested.

Diagnosis and Treatment
From the margins of ear pinnae and elbow regions scrapings were taken with a sterile scalpel blade dipped in liquid paraffin until blood oozes from dermal capillaries. Scrapings were boiled in potassium hydroxide (10%), after cooling the sample was centrifuged and the sediment was observed under microscope (10X) for the presence of mites. The parasite was identified according to its morphological characteristics cited by Soulsby (1986) [9]. Microscopic examination confirmed the presence of *Sarcoptes scabiei* var. *canis* (Fig. 3)

Fig 1: Crusty lesions over the margins of ear pinnae

Fig 2: Erythema with alopecia over chest and abdomen

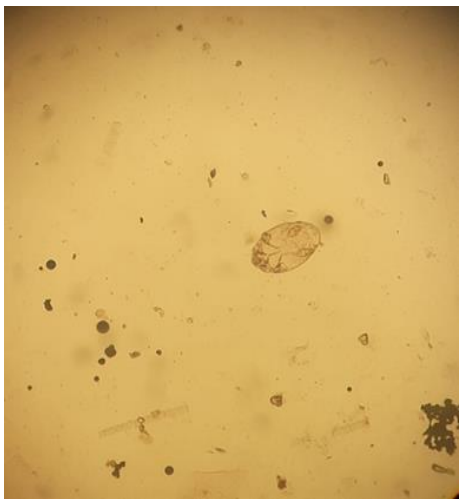

Fig 3: *Sarcoptes scabiei* var *canis*

Dog was treated with injection of Ivermectin (NEOMEC®: 1% w/v, intas pharmaceuticals Ltd) @ 200 µg/kg body weight S/C, at weekly intervals for 5 weeks. Fiprofort plus Spot on was applied from head to lumbar region along the vertebrae. Supportive therapy included administration of meloxicam @ 0.2 mg/kg BW, chlorpheniramine maleate @ 0.4 mg/kg BW. Follow up theraphy included oral antibiotic Cefpodoxime proxetil @ 10mg/kg BW, Hydroxyzine @ 1 mg/kg BW for 7 days along with weekly bath of dog using the Permethrin shampoo was recommended.

Results and Discussion

Skin lesions such as crusty lesions over the margins of the ear pinnae, erythematous allopathic patches over chest, ventral abdomen and mild crusty lesions with alopecia over elbow region over the body of dog were reasonable to prove the tentative diagnosis of mange. Diagnosis was confirmed by collecting deep skin scrapings from the periphery of the lesions and *Sarcoptes scabies* var *canis* was identified. *Sarcoptes scabies* var *canis* yield only from deep scrapping at the periphery of the alopecic areas because the mite burrows deep into the skin where it lays eggs, feed and suck the lymph. This finding was in agreement with observation of Chosidow (2006) [2]. Fipronil spray has been reported to be effective in treatment of mange but should be considered an aid in the control rather than a primary therapy (Uzuegbu, 2015) [10]. Ivermectin (200 ug/kg SC, 2 treatments 2 weeks apart) is very effective and usually curative (Robert, 2011) [8]. Ivermectin has exceptionally got potency against endo and ectoparasites at low doses (200 µg/kg) as well as having a large margin of safety (Lee and Preston, 1980) [4]. Use of antibiotics was followed to eliminate secondary bacterial infections which may have resulted from pruritus. The good therapeutic response to Ivermectin, Cefpodoxime and antihistamine therapy observed in this case was in accordance with the reports of Reddy *et al*. (2014) [7] and Robert (2011) [8].

Acknowledgement

The authors humbly thank the authorities of KVAFSU, BIDAR for providing facilities in carrying out the clinical case study.

References

1. Anita P, Peter F. Saunders Solutions in Veterinary Practice – Small Animal, 2008. Dermatology © Elsevier Ltd.
2. Chosidow Scabies O. NEJM. 2002;354(16):1718-1727.
3. Kemp D, Walton S, Harumal P, Currie B. The scourge of scabies. Biologist. 2002;49:19-24.
4. Lee RP, Preston JM. Efficacy of ivermectin against *Sarcoptes scabiei* in pigs. Vet. Rec. 1980;107:503-505.
5. Miller WH, Griffin CE, Campbell KL, Muller GH. Muller and Kirk's Small Animal Dermatology. 7th edition. Elsevier Health Sciences, 2013.
6. Reddy BS, Kumari KN. Canine scabies- its therapeutic management and zoonotic importance. Intas Polivet. 2013;14(2):292-294.
7. Reddy BS, Kumari KN, Rao VV, Rayulu VC. Efficacy of cefpodoxime with clavulanic acid in the treatment of recurrent pyoderma in dogs. ISRN veterinary science; c2014. p. 1-5.
8. Robert SP. Mange in dogs. Merck sharp and Dohme corp., a subsidiary of Merck and Co. Inc. Whitehouse Station, NJ USA; c2011.
9. Soulsby Helminths E. Arthropods and protozoa of domestic animals, 1986, 7 edn. Tindall, London.
10. Uzuegbu MO. Sarcoptic mange in a dog: A case study. Merit Research Journal of Biochemistry and Bioinformatics. 2015;3(1):005-008.