

**Short Communication****Therapeutic Management of Generalized Scabies in a Dog: A Case Report**

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This report reveals the successful treatment of generalized scabies in a dog in Ranchi, using oral ivermectin at 50, 100, 150, 200, and 300 µg/kg b.wt respectively from day-1 to day-5. After the priming of the dog, Ivermectin @ 300 µg/kg b.wt was continued at weekly intervals for four weeks, until the resolution of scabies.

INTRODUCTION

Canine scabies caused by *Sarcoptes scabiei* is one of the most common skin diseases encountered in veterinary practices, and may be in localized or generalized form. Animals affected with five or more local lesions or having two or more body regions are considered as generalized form of scabies. A 3-year-old male non-descript dog, weighing 20 kg with a repeated history of recurrent scabies was presented at the clinical complex RVC. The dog was treated previously with ivermectin injection, but the condition relapsed every time, whenever the therapy was stopped.



Fig. 1. Showing scabies-infested dog

On physical examination, severe alopecia was observed, especially on the legs and belly with darkening and thickening of the skin. The animal showed intense pruritis with crusty lesions and scales all over the body. For the treatment of generalized scabies, ivermectin is the drug of choice. Although the recommended dose of ivermectin in generalized scabies in dogs is 300-600 µg/kg b.wt (Plumb, 2005, Mueller, 2004).



Fig. 2. Showing *Sarcoptes scabiei* (10X)

MATERIALS AND METHODS

Multiple skin scrapping was taken using a scalpel blade. A portion of the skin samples was boiled with 10 percent KOH solution and Sediment was examined under the microscope (10X) which revealed *Sarcoptes scabiei* Soulsby

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(1982) while another portion was stained with Gram's stain in which skin samples were initially stained with crystal violet which imparts a purple color to all cells. Iodine is then added as a mordant forming a crystal violet iodine complex within the cell. Alcohol or acetone is used as a decolorising agent. Gram positive bacteria retain the crystal violet iodine complex due to their thick peptidoglycan layer while gram negative bacteria lose the stain because of their thinner peptidoglycan layer and outer lipid membrane. After decolorisation the cells are counterstained with safranin which stains gram negative bacteria pink or red while gram positive bacteria remain purple. which revealed several cocci bacteria.

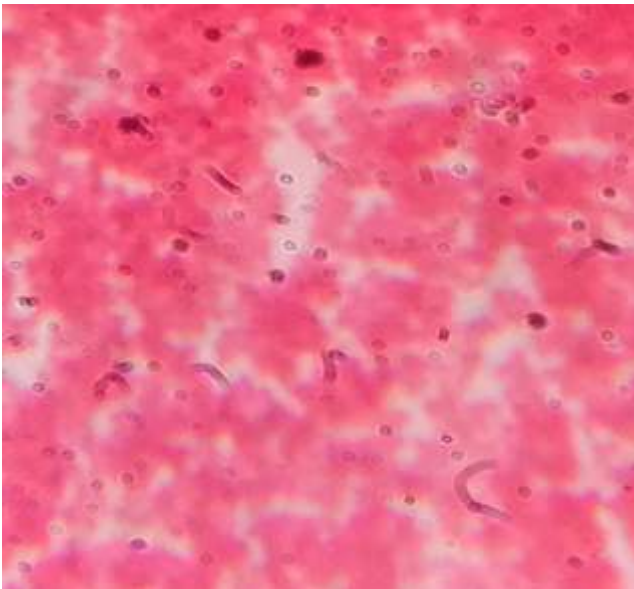


Fig. 3. Showing Gram -ve cocci (100X)

RESULTS AND DISCUSSION

Treatment was carried out for four weeks with oral Ivermectin (Neomec^R, INTAS) @ 300 µg/kg b.wt, Cephalexin (Cephalexin^R, VIRBAC

@ 300 mg bid every alternate day for seven days, and vitamin E (Evion, Mark) @ 200mg, once daily for two weeks with topical application of Benzyle benzoate. Skin scraping and the vital parameters of the dog were monitored at intervals of 2 weeks.

Marked improvement was observed after one-week treatment schedule, whereas complete resolution was noted after 6 weeks of therapy.

Generalized scabies was confirmed when *Sarcoptes scabiei* was spotted in the microscopic evaluation (10x) of skin scraping of the affected dog. Since secondary pyoderma is a concurrent problem in generalized scabies, antibiotics (e.g., cephalexin, enrofloxacin, or marbofloxacin and skin supplements such as vitamin E may be needed depending on the individual case (Nesbit and Ackerman,1998). Here, the secondary bacterial infection was observed, and hence Cephalexin with vitamin E was included for the purpose.

CONCLUSION

Recurrent generalized scabies in a non-descript dog was treated with oral ivermectin (along with supportive therapy) with complete recovery in 6 weeks.

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