

EFFICACY OF FLURALANER FOR THE TREATMENT OF CANINE GENERALIZED DEMODICOSIS IN A GOLDEN RETRIEVER DOG

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Eight months old golden retriever dog was presented with the history of severe skin lesions on face, neck and fore limbs. Dog was also having itching, irritation and hair loss. The condition was not improved by previous treatment. Physical examination followed by sample collection for haemato-biochemical analysis and skin scrapping was performed. Thorough clinical examination and skin scrapping reports revealed condition of canine demodicosis. The condition was treated with single dose of Fluralaner chewable tablet (1000mg). Significant improvement was reported in the condition of dog after 8-10 days and no recurrence was noticed.

Keywords: Canine demodicosis, Fluralaner, Skin scrapping, Golden retriever.

Canine demodicosis is an inflammatory parasitic skin disease, caused by *Demodex canis* and is characterized by the presence of large numbers of *Demodex* mites. Therapeutic options that are currently available for canine demodicosis include amitraz, ivermectin, milbemycin oxime and moxidectin, mostly to be given at multiple occasions for periods of three months or more (Paterson, 2014). To be effective, these treatment regimens require high owner compliance over an extended period of time. In field studies involving naturally infested dogs, a single oral administration of Bravecto, formulated as a chewable tablet, proved to be >99% effective against fleas and ticks at each measured time-point over a period of 12 weeks following treatment (Rohdich *et al.*, 2022). Fluralaner is a potent acaricide and insecticide from the family of isoxazolines, a class of systemic antiparasitic agents, which have high and long-term efficacy and can provide protection against ectoparasites (Williams *et al.*, 2014). Fluralaner kills fleas before they can lay eggs and so helps to reduce contamination of the dogs' or cats' environment. After being given, its actions last for 12 weeks against fleas and 8 to 12 weeks against ticks. Treatment should be repeated every twelve weeks for optimal flea control. For optimal tick control, treatment should be repeated every 8 to 12 weeks

depending on the tick species. Single dose is effective against mite infestation.

Case Histroy and Observations

A male Golden Retriever dog of age 8 months (Body weight- 28 kg) was presented with a history of chronic skin lesions on the face, around the ears, chin, neck and fore limbs. These skin lesions were localized at first but after few days they started spreading all over the body. Dog was dull and lethargy. Excessive hair fall along with itching and irritation was also reported. Dog was previously treated by other medications but no improvement was noticed.

A thorough physical examination was done and blood samples were collected for routine hematological (Hb, PCV, Total erythrocyte and leukocyte count and differential leukocyte count) and biochemical estimations. Deep skin scrapping was collected in 10%potassium hydroxide, until capillary bleeding was observed and was microscopically examined.

Clinical examination revealed presence of primary and secondary skin lesions mainly alopecia, follicular papules, pustules, scaling, foul smelling, crusting and bleeding tracts (Fig. 1 and 2) Skin scrapping reveals the infestation of *Demodex* mites. Adult mites were cigar shaped with four pair of stubby legs in the thorax part of their body. The case

was diagnosed as generalized demodicosis. The systematic investigation did not show any significant abnormality in the haemato-

biochemical parameters. Blood examination report has been presented in the given in Table -1.

FIGURE-1 AND -2: CANINE DEMODICOSIS IN GOLDEN RETRIEVER DOG



TABLE-1: BLOOD EXAMINATION REPORT OF DOG AFFECTED WITH GENERALIZED DEMODICOSIS

Parameters	Findings	Normal Value
Haemoglobin	12.7 gm/dl	12-18 gm/dl
PCV	39.30%	33-55%
Platelet count	$4.75 \times 10^5/\mu\text{l}$	$2-9 \times 10^5/\mu\text{l}$
TEC	$4.47 \times 10^6/\mu\text{l}$	$5.5-8.5 \times 10^6/\mu\text{l}$
TLC	$13.8 \times 10^3/\mu\text{l}$	$6-17 \times 10^3/\mu\text{l}$
Neutrophils	68%	60-70%
Lymphocytes	24%	12-30%
Monocytes	2%	3-10%
Eosinophils	2%	2-10%
Basophils	-	Rare
BUN	21.4 mg/dl	8.8-25.9 mg/dl
Serum protein	7.05 gm/dl	5.5-7.5 gm/dl
ALT	42.7 u/l	8.9-48.5 u/l
AST	48.2 u/l	8.2-57.3 u/l
Alkaline phosphatase	88.3 u/l	10.6-100.7 u/l

Treatment

Dog was treated once orally with chewable tablets containing fluralaner. Bravecto tablets were provided at the recommended dosage of 1000 mg fluralaner according to the body weight (22 kg) of dog

of dog. The condition of dog was improved after 8-10 days post treatment. Skin of dog started healing at this phase and pododemodicosis was resolved. Hair re-growth was observed after 3 weeks (Fig-3).



FIG. – 3. HAIR RE-GROWTH WAS OBSERVED AFTER 3 WEEKS

Discussion

Bravecto administered once as chewable tablets is not only effective against *Demodex* spp. mites on dogs but remains effective for 12 weeks following treatment. Moreover, it is effective for the same period of time against ticks and fleas that may concomitantly infest these animals, in agreement to this, Petersen *et al.*, 2020 and Rohdich *et al.*, 2022 suggested efficacy of Bravecto tablets against various ectoparasites of dogs. The most common side effects of the tablets in dogs are mild and short-lived diarrhoea, vomiting, lack of appetite and drooling.

Conclusions

A single topical administration of fluralaner eliminated *Demodex* sp. mites on dogs with generalized demodicosis. These observations concluded that Bravecto is an effective alternate for the treatment of generalized canine demodicosis.

References

Paterson, T.E., Halliwell, R.E., Fields, P.J., Louw, M.L., Ball, G. Louw, J. (2014).

Canine generalized demodicosis treated with varying doses of a 2.5% moxidectin + 10% imidacloprid spot on and oral ivermectin: Parasitocidal effects and long-term treatment outcomes. *Vet. Parasitol*, **205**: 687–696.

Petersen, I., Chiummo, R., Zschiesche, E., Karas-Tecza, J., Rapti, D., Roepke, R. and Thomas, E. (2020). A European field assessment of the efficacy of fluralaner (Bravecto®) chewable and spot on formulations for treatment of dogs with generalized demodicosis. *Parasites & Vectors*, **13**: 304.

Rohdich, N., Meyer, L. and Guerino, F., (2022). Fluralaner 5.46% (w/w) flavored chewable tablet (Bravecto® 1-Month) is effective for treatment of canine generalized demodicosis. *Parasites & Vectors*, **15**: 83.

Williams, H., Young, D.R., Qureshi, T., Zoller, H. and Heckerth, A.R. (2014). Fluralaner, a novel isoxazoline, prevents flea (*Ctenocephalides felis*) reproduction in vitro and in a simulated home environment. *Parasites & Vectors*, **7**: 275.