

# DERMATOLOGY PEARLS

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## PEARL OF THE MONTH: DEMODEX UPDATE

There are two exciting recent developments in the treatment of canine demodicosis; Interceptor (milbemycin) is available again, now from Elanco Animal Health. This will alleviate concerns about possible inconsistencies of compounded drugs, or the overdosage of lufenuron and praziquantel when using daily Sentinel. The dose of milbemycin for canine demodicosis is 1-2mg/kg orally once daily, given until one month beyond a negative skin scraping.

Even more exciting options for the treatment of canine demodicosis are the new systemic insecticide and acaricides belonging to the isoxazoline class of parasiticides with selective inhibition of arthropod  $\gamma$ -aminobutyric acid- and L-glutamate-gated chloride channels. These products have efficacy not only for fleas and ticks, but also for demodex and scabies mites as well. We have used the 3 month flea/tick pill from Merck called Bravecto (fluralaner) with amazing results in the multiple (20 or so) demodex dogs we have treated with it so far (though a couple of dogs have needed to receive Bravecto every 2 rather than 3 months), and have seen no adverse side effects. Merial's NexGard (Afoxolaner) and Zoetis' Simparica<sup>TM</sup> (sarolaner) are related drugs with a one month efficacy for fleas/ticks. The abstract of the Bravecto study is appended below:

### **Efficacy of orally administered fluralaner (Bravecto<sup>TM</sup>) or topically applied imidacloprid/moxidectin (Advocate®) against generalized demodicosis in dogs**

Josephus J Fourie et al. *Parasites & Vectors* 2015, 8:187

#### **Background**

This laboratory study compared the efficacy of Bravecto<sup>TM</sup> (fluralaner), formulated as a chewable tablet, with the efficacy of Advocate® (imidacloprid/moxidectin), formulated for topical administration, against naturally acquired generalized demodicosis in dogs.

#### **Methods**

Sixteen dogs, all diagnosed with generalized demodectic mange, were randomly allocated to two equal groups. Bravecto<sup>TM</sup> chewable tablets were administered once orally at a minimum dose of 25 mg fluralaner/kg body weight to one group of dogs, while the second group was treated topically on three occasions at 28-day intervals with Advocate® at a minimum dose of 10 mg imidacloprid/kg body weight and 2.5 mg moxidectin/kg body weight. Mites were counted in skin scrapings and demodectic lesions were evaluated on each dog before treatment and at 28-day intervals thereafter over a 12 week study period. Deep skin scrapings (~4 cm<sup>2</sup>) were made from the same five sites on each dog at each subsequent examination.

#### **Results**

After single oral administration of Bravecto<sup>TM</sup> chewable tablets, mite numbers in skin scrapings were reduced by 99.8% on Day 28 and by 100% on Days 56 and 84. Mite numbers in the dogs treated topically on three occasions at 28-day intervals with Advocate® were reduced by 98.0% on Day 28, by 96.5% on Day 56 and by 94.7% on Day 84. Statistically significantly ( $P \leq 0.05$ ) fewer mites were found on Days 56 and 84 on the Bravecto<sup>TM</sup> treated dogs compared to Advocate® treated dogs. A marked decrease was observed in the occurrence of erythematous patches, crusts, casts and scales in the dogs treated with Bravecto<sup>TM</sup> and in the occurrence of erythematous patches in the dogs treated with Advocate®. With the exception of one dog in each treated group, all dogs exhibited hair regrowth  $\geq 90\%$  at the end of the study in comparison with their hair-coat at study start.

#### **Conclusions**

Single oral administration of Bravecto<sup>TM</sup> chewable tablets is highly effective against generalized demodicosis, with no mites detectable at 56 and 84 days following treatment. In comparison, Advocate®, administered three times at 28-day intervals, is also highly effective against generalized demodicosis, but most dogs still harboured mites at all assessment time points. Both treatments resulted in a marked reduction of skin lesions and increase of hair re-growth 12 weeks after the initial treatment.