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DEMODICOSIS IN A PERSIAN CAT

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Abstract: A two-year-old male Persian cat was presented to the veterinary clinic in Guntur, with the history of localized skin lesions associated with pruritus from one week onwards. Upon clinical examination cat had primary and secondary skin lesions on face, neck, tail and lateral abdomen. Microscopic examination of skin scrapings revealed Demodex mite. Cat was treated with ivermectin at a dose rate of 200 mcg/kg body weight per oral, external application of clobetasol propionate and ofloxacin (wokazole lotion), and supportive treatments with topical antimicrobial shampoo. Sulfur dips followed by neem oil application were followed every 3 days. After the completion of forty-five days of therapy, the cat recovered from the demodicosis.
Keywords: Demodex mite, Ivermectin, Neem oil, Sulfur.

1. INTRODUCTION

Demodicosis is a widely spread parasitic skin infection in dogs and cats. Veterinarians are treating this annoying skin condition with both traditional and more recent miticidal techniques. Any product containing glucocorticoids should not be used as a treatment, which may promote the spread of the disease. The use of ivermectin and natural remedies like sulfur, along with neem oil, has a greater impact on reducing demodicosis and restoring skin health.

Feline demodicosis (FD) is a dermatologic disease affecting cats' skin. The breed tendency for FD is found in Persian, Siamese and Burmese cats. The illness is caused by three species: D. gatoi, D. cati, and an unidentified third (Ferreira et al., 2015). The most prevalent demodex mite in cats is D. cati (Matricoti and Maina, 2017). Follicle mite D. cati resembles D. canis, the canine follicular mite, in terms of form (Neel et al., 2007). The condition can cause mild to severe pruritus, which can be either localized or widespread. D. cati infections

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can cause a variety of clinical signs such as alopecia, seborrhea, scale, papules, crusts, military dermatitis, erosions, and ulcerations on the head, neck, eyelids, and periorbital region (Mueller et al., 2020).

History-taking, physical examination, deep skin scrapings, and trichograms are used to diagnose D. cati infection (Beale, 2012; Mueller et al., 2020). Effective and secure parasiticide usage is part of the necessary treatment for FD. In recent decades, cats have been treated with effective parasiticides, either in isolation or in combination. For the treatment of FD, a number of medications have been recommended, including fluralaner, rotenone, lime sulfur, amitraz, ivermectin, selamectin, milbemycin oxime, moxidectin and natural remedies like neem oil (Beale, 2012; Mueller et al., 2020). Lime sulphur dips and amitraz rinses are the most frequent therapy for treating FD. Localized demodectic lesions were cured by topical antimicrobial agents like mupirocin, benzyl peroxide, chlorhexidine or ethyl lactate.

2. MATERIALS AND METHODS

A male Persian cat weighing 4.1 kg was brought to a veterinary clinic in Guntur, Andhra Pradesh, with a history of localized skin lesions that started to itch after a week. Upon clinical examination cat exhibited alopecia, scaling, marked erythema, pruritus and deep folliculitis on the face (Figure 1), neck (Figure 3), tail (Figure 2) and lateral abdominal regions. Superficial and deep skin scrapings were collected for microscopic examination. Scrapings were collected with scalpel blade dipped in liquid paraffin and collection of scrapings was continued until there was slight ooze of blood from dermal capillaries. Material was suspended in a few drops of liquid paraffin on a microscopic slide, a coverslip was applied and the preparation was examined under low and high magnifications (10x, 40x) of microscope.

Fig 1 cat with lesions at face

Fig 2 Cat with lesions at tail

Fig 3 Cat with lesions at neck

Fig 4 Scraping containing demodex mite (40x)

3. RESULTS AND DISCUSSION

The microscopic examination revealed the presence of a long, slender Demodex mite (Figure 4) consistent with D. cati. On the first day Cat was treated with ivermectin at a dose rate of 200 mcg/kg per oral along with chlorpheniramine maleate at a dose rate of 0.5 mg/kg per oral and this dose of ivermectin was repeated for every 7 days. The use of ivermectin at weekly intervals has significant effect in reducing the disease condition. The cat's pruritus dropped significantly during the 1st week follow-up checkup, these results were in accordance with previous observations (Mueller et al., 2020). Topical antimicrobials like clobetasol

propionate and ofloxacin (wokazole lotion) was applied at the lesions daily once. sulfur dips followed by neem oil application was followed for every 3 days. Application of 2 percent Sulfur along with neem oil on the lesions twice a week has shown greater decrease in the erythematic lesions. The results were partially in line with (Chalmers et al., 1989) and (Saari et al., 2009) who investigated on use of sulfur along with lime for demodicosis treatment in cats. Application of neem oil has a significant impact on eliminating demodex mites because neem oil is said to starve the mites of oxygen. This was in correlation with Singh et al. (2011). Omega-3 fatty acid rich syrup was advised at 3 ml per day. Use of chlorpheniramine maleate, omega-3 fatty acid syrup helped at a greater level to decrease the pruritis. These results are similar to previous reports (Scott et al., 1995).

Microscopic examination of multiple skin scrapings from the lesions at 7 – day interval showed a greater reduction in demodex count when compared to day1. Skin scrapings evaluation at day 30 revealed no presence of demodex mite. The skin lesions were completely resolved by day 45, and hair growth improved. These results were in correlation with Reddy et al. (2014). The complete disappearance of mites and regrowth of hair were noticed after 45 days of therapy.

4. CONCLUSION

Feline demodicosis is a severe parasitic dermatosis brought on by an overpopulation of different Demodex species' host-specific follicular mites. The present study focuses on the prevalence of demodicosis in cats. The use of ivermectin, along with natural remedies like sulfur and neem oil, had a significant impact in arresting the spread of disease. By day 45, the skin lesions had fully disappeared, and the growth of hair had improved.

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