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Amitraz Responsive *Demodex gatoi* Infestation in a Persian cat-A Case Report from India

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A B S T R A C T

Demodex gatoi is a unique demodex mite which has distinct stubby appearance and found superficially in kartin layer of epidermis unlike hair follicle in case of other demodex mites. This report describes a Persian tom cat infested with *Demodex gatoi* and its successful management with weekly Amitraz @ 0.0125% dip for 8 weeks. It is probably contagious and the cat may harbour mites without any clinical signs. Due to grooming habit the diagnosis may be challenging.

Introduction

Demodex gatoi was first reported in 1981 (Conroy, *et al.*, 1982). It is a unique mite which doesnot reside in hiar follicle or sebaceous glands. They dwell in superficial keratin layer and tends to be contagious and pruritic (Scott, *et al.*, 2000).

Recently this infestation is considered as an important differential diagnosis for a pruritic cat. Until now little is known on mode of transmission, pathogenesis or treatment options (Saari, *et al.*, 2009). The present case reports the clinical features, diagnostic methods and successful treatment of a

Demodex gatoi infestation in a tom Persian cat.

Materials and Methods

A tom Persian cat weighing 3 Kg was presented at the dermatology unit of a tertiary veterinary care center for severe pruritus, erythematous eruptions on the skin with patchy hair loss. The appetite was normal and the cat was normal otherwise. Prior treatment history revealed that the diagnostic tests were not done earlier. Pruritic skin diseases of cats are

dermatophyte infections, other ectoparasites especially *Notoedrus cati* and *Cheyletiella* infestations (Reitmeyer and Kohn, 2002 and Carlotti, 2006) were ruled out. The former was done by wood's lamp examination and hair pluck culture. The culture did not show any pathological fungal growth. The skin scraping were negative for *Notoedrus* and *Cheyletiella* infestations. Any possible allergies were ruled out from the history. Intense self-grooming and hair plucking may result in symmetrical alopecia hindering diagnosis. Considering diagnosing difficulties some authors suggest that *D. gatoi* dermatitis should be treated whenever suspected (Medleau, 2006). So acetate tape impression was taken from multiple affected areas and examined by negative staining with Indian ink to rule out *Malassezia* dermatitis (Jayanthi *et al.*, 2015). There were few short stumpy mites in the sample. Hence, the procedure was repeated without staining. It revealed numerous *D. gatoi* mites. The condition was diagnosed as *D. gatoi* demodicosis in the presented tom Persian cat. This is probably the first report from India.

Results and Discussion

The acetate tape impression taken from the lesion was examined without staining which revealed numerous mites confirming the diagnosis as Demodicosis in the reported cat. The stubby rounded appearance of mites was regarded as typical *Demodex gatoi*. To control pruritus oral prednisolone @ 1 mg / Kg was advised. Amitraz is not approved for use in cats. With owner's consent and previous successful results (Saari *et al.*, 2009), 0.025% Amitraz dip once a week for 8 weeks was recommended. Every fortnightly examination revealed reduction in mite count. After 6 weeks of treatment the Tape Impression was negative for mites. A subsequent 2 tape impression at a week

interval was negative. So, the owner was advised to discontinue amitraz application.

During the treatment period the cat did not develop any adverse side effect due to amitraz. Intense pruritus, cats with broken and stubbled hair, alopecia, mild to moderate scaling, excoriation were observed in this case. Any cat presented with the above signs should have a differential diagnosis for *Demodex gatoi* infestation and treated accordingly. As in other ectoparasitic infestation of cats the fecal sample examination may reveal the parasites. So when multiple samples from the skin is negative fecal flotation can be done to rule out the infestation.

The minimum database include deep and superficial skin scrapings, cytology, acetate tape impression can help or potentially rule out demodectic mange in cats. As they are non-responsive to conventional systemic treatment amitraz is recommended with owner's consent for successful management of the disease.

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