



ISSN (E): 2277- 7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2022; SP-11(3): 796-797  
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[www.thepharmajournal.com](http://www.thepharmajournal.com)  
Received: 07-01-2022  
Accepted: 09-02-2022

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## Prevalence of demodicosis in cats in and around Mhow (M.P.)

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DOI: <https://doi.org/10.22271/tpi.2022.v11.i3SI.11411>

### Abstract

This study was designed to investigate the prevalence of demodicosis in cats presented to the Veterinary Clinical Complex of the College of Veterinary Science and Animal Husbandry, Mhow (M.P.), government Veterinary hospital and private pet clinics Indore. A total of 140 cats (male 69 and female 71) having dermatitis were examined and sixteen cats (11.42%) were found positive for demodicosis. The prevalence of demodicosis was found higher in cats of 6-18 months of age (37.5%). Infestation of *Demodex* was significantly ( $p < 0.05$ ) higher in male (62.5%) than female (37.5%) cats. Grossly, alopecia, redness of skin, hyperkeratinization, crusts and pruritus were found. The results indicated that companion animals in and around the Mhow are susceptible to *Demodex* spp. Infestation.

**Keywords:** Demodicosis, prevalence, age, sex, breeds

### Introduction

Parasitic skin diseases are an important part of feline dermatology in general. There are several main types of mange in the cat including otodectosis, notoedrosis, cheyletiellosis and demodicosis. Feline demodicosis is caused by *Demodex cati*, *Demodex gatoi* and an unnamed species (Lliev *et al.*, 2019) [2]. *Demodex gatoi* is a transmissible, short-bodied mite found in the stratum corneum of cats. It is known to cause moderate to intense purities, often manifested as self-induced alopecia and excoriations (Short and Gram, 2016) [7]. *Demodex gatoi* can be difficult to detect in skin scrapings due to its small size and translucency, and due to excessive grooming behavior in affected cats. *Demodex cati* is uncommon to rare and is characterized by alopecia, often symmetrical involving the head, extremities and trunk, and occasionally generalized scale and crust formation (Noxon, 2017) [4].

### Materials and Methods

The research work was conducted at Veterinary Clinical Complex and Department of Veterinary Medicine, College of Veterinary Science and Animal Husbandry, Mhow (M.P.), Government Veterinary hospital and private pet clinics Indore. Over a period of six (Jan to June) months. A total number of 140 cats irrespective of age, sex, and breed having dermatological problems were screened for demodectic mange. Clinical examination of the affected cats revealed significant itching, alopecia, redness, hyperkeratinization and crustation. Deep skin scrapings were collected from all affected cats skin lesions using a scalpel blade coated in 10% potassium hydroxide solution, as per routine technique for microscopic analysis (10X) (Soulsby, 1982) [8].

### Results and Discussion

#### Overall prevalence

During the present investigation, the skin scraping examination from 140 cats, revealed positive for *Demodex* mites in 16 with percentage of prevalence was (11.42 %) (Table 1). These findings are in agreement with findings of earlier researchers Saari *et al.* (2009) [5] as they reported overall prevalence of demodicosis in cats 47.95%. Tkacheva and Glazunova (2018) [9] also reported overall prevalence of demodicosis in cats as 3.53 %.

#### Age wise prevalence

Age wise prevalence was higher (37.5%) in cats age group between 6-18 months followed by 18 months to 3 years of age (31.25%), then in 0-6 months of age (18.75%) and in cats ageing

>5 years, it was (12.5%). (Table 2) These findings are in line with the findings of Salib and Barakam (2011) [6] who reported a prevalence of 25 % mites infestation in adult.

### Sex wise prevalence

In the present study, demodicosis was found significantly higher in males (62.5%) than female (37.5%). (Table 3) these findings are well supported by Chakrabarti *et al.* (1986) [1] and Mosallanejad *et al.* (2011) [3].

### Breed wise prevalence

The highest prevalence was recorded in Persian cats (50%), followed by feral cats (37.5%) and Bombay cats (12.5%) (Table 4). Higher occurrence in persian cats might be due to their long-hairs which provides optimum environment for growth of fleas and mites.

### Conclusion

Among the positives cats for mange the prevalence recorded for demodicosis was 11.42 percent in and around Mhow. Prevalence of demodicosis was higher (37.5 percent) in cats age group between 6-18 months followed by 18 months to 3 years of age (31.25 percent) and was substantially more prevalent in male (62.5 percent) than female (37.5 percent). Higher prevalence was recorded in Persian cat (50 percent) as compared to other breeds.

**Table 1:** Prevalence of demodicosis

Total no. of cats with dermatitis	No. of cats positive to demodicosis	Prevalence (%)
140	16	11.42

**Table 2:** Age wise prevalence

Age	No. of cats	Prevalence (%)
0-6 months	3	18.75
6-18 months	6	37.5
18 months – 5 years	5	31.25
>5 years	2	12.5

**Table 3:** Sex wise prevalence of demodicosis

Sex	No. of cats	Prevalence (%)
Male	10	62.5
Female	6	37.5

**Table 4:** Breed wise prevalence of demodicosis

Breeds	No. of cats	Prevalence (%)
Persian cats	8	50
Feral cats	6	37.5
Bombay cats	2	12.5

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