



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(7): 2061-2062
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www.thepharmajournal.com
Received: 19-05-2023
Accepted: 26-06-2023

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Notoedric mange in cats: It's treatment and zoonotic importance

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Abstract

Two domestic cats were presented at TVCC, DSVCKV, Anjora, DURG with clinical signs showing alopecia, severe pruritis, a rough hair coat, itchy crust and scales, and lichenification on the ear margins, face, neck, and forelimbs were found to have Notoedric mange. Owner also mentioned that they had been experiencing severe itching for the past week. Laboratory finding of skin scrapings for *Notoedres cati* was found positive. Ivermectin @ 200µg/kg b.w. SC was administered at 15 days interval as a therapy to affected cats at weekly intervals for three weeks. At the 14th day after medication, the afflicted cats and owner displayed improvement with clinical sign remissions and the affected cats were found negative for *Notoedres cati* in skin scraping examination.

Keywords: Notoedric mange, zoonotic, DURG

Introduction

The obligatory parasite *Notoedres cati* is the source of the highly contagious parasitic skin condition known as feline scabies. According to Gryphon *et al.* (1993) ^[3], this parasite, a member of the *Sarcoptiform* family, opportunistically infests various species, including humans. According to Kumar *et al.* (2008) ^[6], illness in cats is characterised by severe itching and skin lesions on the face, neck, and ears. In India, the zoonotic spread of *Notoedres cati*-caused feline scabies has been well reported (Chakrabarti, 1986; Sivajothi *et al.*, 2015) ^[1, 7]. The treatment and control of Notoedric Mange remain complicated and challenging because to its transmission and zoonotic significance. The current clinical case report describes the zoonotic spread of feline scabies from Durg region.

History and clinical signs

Two female domestic cat (4 months old) with a history of partial appetite loss, persistent hair loss, severe itching, and scabby sores all over the body was brought to Teaching Veterinary Clinical Complex, DSVCKV, Anjora, Durg. A clinical examination of the cat indicated a notable emaciation. The entire body had thick, crusty scabs, although the severity was highest at the points of the nose and ears (Fig. 1). From multiple spots on the cat, tape imprint smears, superficial and deep skin scrapings, and more were gathered. A 10% KOH solution was used to clean the damaged portions of skin before being scraped off and inspected under a low power microscope (Soulsby, 1968) ^[8]. Sloughing of the skin was observed while collecting the skin scraping. The adult stage of the *Notoedres cati* mite was been identified by examining the scraping the crusty skin (Fig. 4). Owner also mentioned that they had been experiencing severe itching for the past week. Small erythematous crusted papules and hyperpigmentation on the body were the lesions noted. This series of events shows that feline mange and associated zoonotic transmission to humans are present in this instance.

Results

Clinical symptoms and a skin scraping investigation were used to make a confirming diagnosis of Notoedric Mange. Ivermectin @200 µg/kg was administered subcutaneously at weekly intervals for a month to treat the case, along with fipronil and (s)- Methoprene spot on coupled with supportive care. After the treatment, no negative side effects were noticed. The pruritis had subsided by day 7. After 15 days of treatment, a sizable clinical improvement was seen. Skin scrapings were examined three weeks after therapy and were confirmed to be negative. According to Chakrabarti (1986) ^[1], *Notoedres cati* mange must be treated promptly since it can spread to people and other animals.

Owners must also be warned to avoid handling the infected cats (fig. 5). Ivermectin @ 200 µg/kg, subcutaneously at weekly intervals or fortnightly for a month are two commonly used therapies (Scott *et al.*, 2001) [5]. The current study's positive results demonstrated the value of ivermectin therapy for cats in the treatment of feline scabies. This is consistent with other researcher's findings (Senthil Kumar *et al.*, 2008; Scott *et al.*, 2001) [6, 5].



Fig 1, 2: Thick crusty scab at the face, tips of ears and legs



Fig 3: Cat after recovery

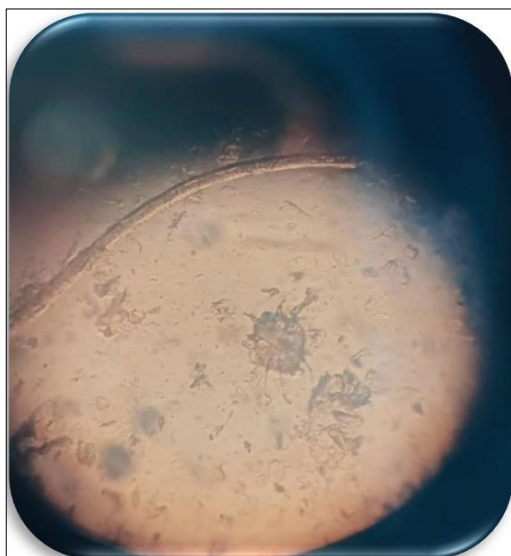


Fig 4: *Notoedres cati* adult

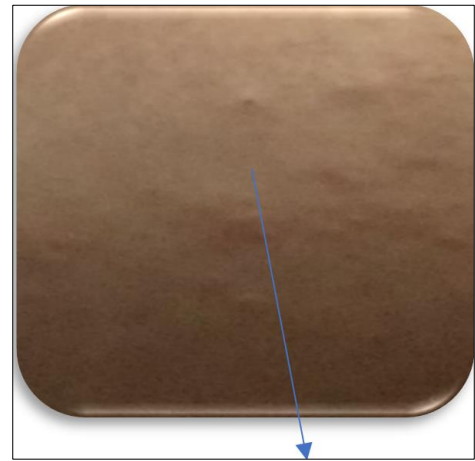


Fig 5: Erythematous crusted papules on body of owner

Discussion

The incidence of *Notoedres cati* mange and its zoonotic transmission to humans are reported in the current clinical case report. Based on the clinical signs and a skin scraping examination, the clinical case was identified as feline scabies (*Notoedres cati*). Additionally, based on the usual (small erythematous crusted papules, hyperpigmentation) lesions on the legs, human scabies was suspected. According to Mullen and Durden (2002) [4], prolonged contact with an infected cat can sometimes result in *Notoedres cati* mange infestation in people. Within a few hours of subsequent interaction, this mite may cause severe pruritus in susceptible individuals. The hands and legs are the most common sites for skin lesions, reflecting the areas where people are most likely to come into touch with pets, although pruritus reactions can be generated without the mites actually burrowing (Galdhar *et al.*, 2020) [2]. This case study may be very useful in educating pet owners about the significance of feline scabies as a zoonotic disease, not only for practicing veterinarians but also for medical professionals.

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