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Feline mange: Diagnosis and therapeutic management of *Notoedres cati*

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Abstract

Cats infected with *Notoedres cati*, a mite that causes feline mange resulting in severe pruritus, itching, and crust development over the face, back, and legs, were successfully treated using a combination of Ivermectin injections, Demoscanil lotion (Lime Sulphur Dip), and additional medications. The treatment resulted in full clinical recovery and the elimination of mites in skin scrapings. This article aims to discuss the management of feline mange caused by *Notoedres cati*, highlighting the use of Ivermectin and Lime Sulphur dip.

Keywords: *Notoedres cati*, Feline mange, Pruritus, Ivermectin, Demoscanil

Introduction

Notoedric mange is a highly contagious dermatological condition in felids caused by the obligate sarcoptic mite, *Notoedres cati*, which can also infest humans and other animals (Foley *et al.*, 2016) [1]. The condition is characterized by alopecia, pruritus, and crusty lesions on the head, neck, feet, ears, and area around the eyes (Priyanka *et al.*, 2016) [4].

Materials and Methods

Twelve cats, aged between 8 months and 1.5 years of either sex, were presented at the Veterinary Clinical Complex, Rajendranagar, Hyderabad with acute allergic pruritus, hair loss on the face, neck, and forelimbs. Physical examination revealed alopecia, irritating crust development, and severe pruritus, with lesions on the cheeks, legs, and ear margin. The affected skin exhibited hair loss, thickened leathery wrinkles, and hyperkeratinized skin (Sivajyoti *et al.*, 2015) [6]. One of the nine-month-old kittens had extensive sores covering its entire body.

The pruritus and hair loss pattern in these cats were indicative of notoedric mange. In present case, Skin scrapings from the affected areas were examined under a 40X microscope after treatment with 10% KOH for clearance (Fig. 1) (Soulsby, 1968) [7].

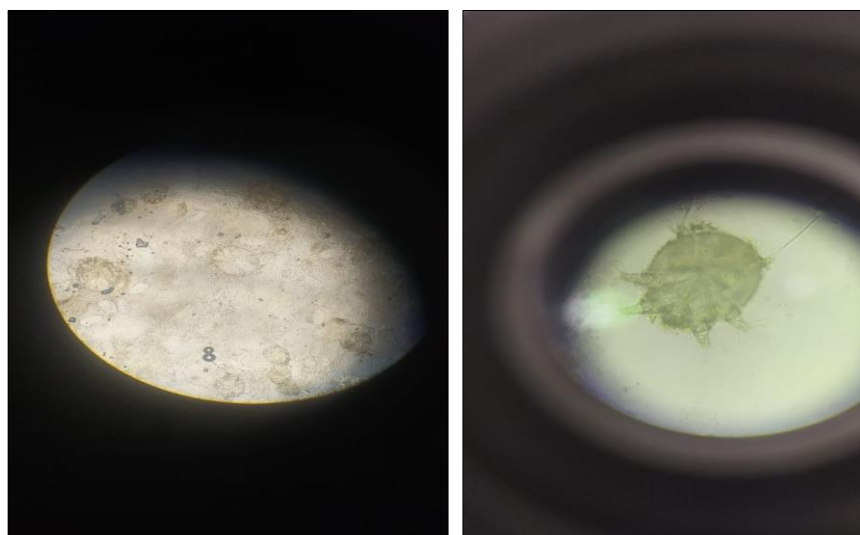


Fig 1: Microscopic images of *Notoedres cati*

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Results and Discussion

Out of the 12 cats evaluated, eight were found to be infested with *Notoedres* mites. Initially, the lesions were predominantly observed on the face and its surrounding area, which later spread to the back and legs (Fig 2, 3, 4). Skin Scraping examination confirmed the presence of *Notoedres cati* mites, consistent with the clinical signs observed. The mites were identified based on Walker's (1994) [9] recommendation, which differentiated *Notoedres cati* from *Sarcoptes* based on the smaller, more circular anus on the dorsum.

Upon confirmation of the diagnosis, the cats were immediately treated with subcutaneous injections of Ivermectin (Neomec® injection, Intas Pharmaceuticals, India) at a dosage of 200mcg/kg body weight every 14 days. Additional medications, including injections of Chlorpheniramine maleate (Histamil® VETINDIA Pharmaceuticals Ltd.) at the rate of 1mg/kg body weight (0.2 ml SC every 14 days) and Tribivet (Intas Pharmaceuticals, India) containing vitamin B1, B6, B12 (0.2 ml IM once a week), were administered. A Lime Sulphur dip (Demoscanil by JIBSS Vet solutions Pvt. Ltd.), was applied topically every week (25 ml in 1 liter of water; precautions were taken to wear gloves and apply it all over the cat). No adverse effects or allergic reactions were observed throughout the treatment period.

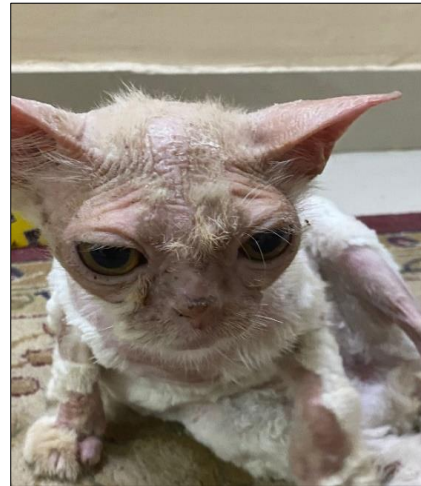


Fig 4: Leathery, wrinkled and hyper-keratinized skin



Fig 2: Alopecia and redness



Fig 5: After 45 days of treatment



Fig 3: Crusty lesions over head

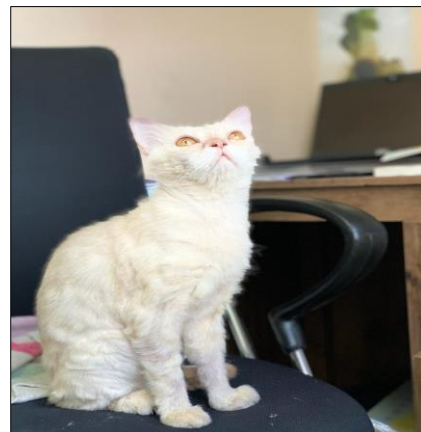


Fig 6: Cat after full recovery

On the 45th day of therapy, significant improvement was observed in the crusty lesion and alopecia (Fig. 5). Skin scraping examination performed on the 45th day after treatment showed no evidence of *Notoedres cati* mites. The present study suggests that Ivermectin can be used as a therapeutic option for cats with notoedrosis, as it successfully reduces clinical signs. Previous studies by Yadav *et al.* (2021) [10], Senthil Kumar *et al.* (2008) [5], Priyanka *et al.* (2016) [4], Stevanovic *et al.* (2019) [8], Fular *et al.* (2019) [2], and Narang *et al.* (2019) [3] also reported similar efficacy of ivermectin in treating feline notoedrosis and notoedric mange in rabbits. In this study, cat notoedrosis was effectively and safely treated with subcutaneous administration of ivermectin once a week for two occasions at a dose of 200 mcg per kg body

weight. The combination of Ivermectin and Demoscanil (Lime Sulfur dip) demonstrated a 100% effectiveness against notoedric mange in cats. Demoscanil, being an anti-parasitic and anti-microbial lotion, also acts as a follicular flushing agent.

Conclusion

In conclusion, it has been observed that the combination of Ivermectin and Lime Sulfur dip has a synergistic effect on the therapeutic management of feline mange infestations, showing proven effectiveness.

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