

Case Report



The Use of Selamectin in Treating Notoedric Mange in Cats: A Case Report

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Abstract

Notoedric mange in cats is less commonly diagnosed compared to sarcoptic mange. In the present study, a 9-month-old tomcat with severe itching, alopecia, crusts, and ulcerative necrotic areas on the head and neck underwent a clinical examination. The laboratory tests (superficial scrapes of the skin) confirmed the presence of *Notoedres* mites. The topical administration of 2 doses of 45 mg selamectin, 14 days apart, resulted in the complete healing of the animal.

Keywords: *Notoedres* mites, Cat, Selamectin

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Introduction

The notoedric mange in cats is caused by the *Notoedres cati* mite, which belongs to the *Sarcoptidae* family. If the treatment is not applied at the beginning of the disease, the evolution can be fatal, and the transition from one animal to another is quite fast, being an extremely contagious parasitic dermatitis (1,2).

The characteristic symptoms are intense itching and the appearance of extensive necrotic areas with hyperplasia, and the mange can lead to sepsis in some severe cases. The animal may frequently self-mutilate due to the scratching caused by pruritus, the lesions of which are extremely painful (1,3,4).

The life cycle is about 2 weeks. All the evolutionary stages of the mite develop in the epidermis, but they can occasionally migrate to the skin surface; the direct transmission to another animal can take place in this case. Sometimes, skin lesions have been reported in the owners of sick cats, including erythema, low pruritus, and even the presence of pustules (1,3,4). Due to the possibility of human transmission and the high degree of contagion, it is highly important to properly treat the animals diagnosed with notoedric mange. In this study, a case of notoedric mange and its successful resolution after the topical application of selamectin was reported in a cat (1,2).

Case Presentation

A 9-month-old common red-haired tomcat was evaluated in this research. The animal was brought to the vet due to excessive scratching and injuries noticed by the owner

in the head and neck areas. The animal has not been vaccinated or dewormed, and the appetite was normal.

The clinical examination revealed whitish crusts, ulcerated areas, and scaling with alopecia on large areas of the head, including the neck. Blackish deposits and slight hyperpigmentation were also observed in the perinasal region. Due to the scratching and the extension of the lesions, the animal was unable to open its eyes. The presence of yellowish tear secretions was also noticed, thus suspecting secondary bacterial conjunctivitis. The animal was normothermic (Figure 1).

The superficial scraping of several head and neck areas was performed to identify the mites from the *Notoedres* genus. Lactophenol was used to clear and immobilize the mites. The diagnosis was made according to the morphological characteristics of the mites.

An antibiogram for the specific treatment of conjunctivitis was refused due to the low income of the owner. Thus, wet wipes for dogs and cats were applied to clean periocular secretions; this step was followed by the topical application of a kanamycin sulfate 1% ointment. The treatment was applied twice a day for 14 days.

The topical application of Stronghold® (Zoetis) for cats weighing 2.6-7.5 kg (45 mg active substance), based on selamectin, was chosen to treat the mange. The product application was repeated after 14 days (5).

The owner refused to hospitalize the animal due to costs. The patient was monitored by telephone in close collaboration with the owner.

The animal returned for control on days 14 and 30. Superficial scraping was repeated to check for mites.



Discussion

The efficacy of the product was determined based on the lesions observed during the check-up, but most importantly according to scraping results.

Seven days after the treatment, a decrease of scratch intensity was observed, until it was abolished, and the ulcerated areas began to heal; In addition, no crusts were present, and the eye secretions were transparent and in normal amounts. The eyelids were not attached, and the conjunctival mucosa looked normal. The result of superficial scraping was negative and there were no mites) (Figure 2).

On day 14, the skin looked normal. The areas with alopecia have been replaced with hair, and the scraping was also negative. The same observations were noted on the 30th day (Figure 2).

Although ivermectin is also effective against mites, its side effects have been reported in some individuals. Udainiya et al indicated the subcutaneous injectable use of a 400 µg/kg body weight dose. No adverse reactions were observed after this weekly dose for 5 weeks (6). Likewise, Ozukum et al reported the parenteral use of ivermectin 10%, in 200 µg/kg body weight dose, weekly for 21 days. On day 14 and after using the previous protocol, the pruritus was still present, but the alopecia and crusty areas were smaller in size (7).

Similar to the present study, Sofyan et al administered 2 doses of 0.1 mL/kg body weight, at 14-day interval between them. After 2 weeks, the itching and the crusting were absent (8).

Doramectin is also highly effective in treating notoedric mange. Sivajothi et al employed a product based on doramectin (in 0.2 mg/kg body weight dose)

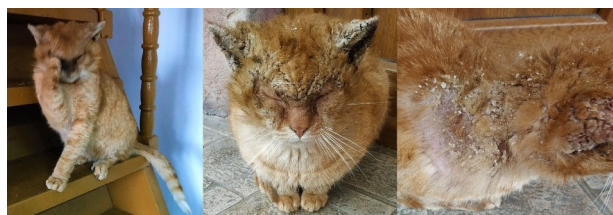


Figure 1. Clinical Signs: Scratching, Scaling, and Crusting on the Skin (Head and Neck Regions), Alopecia, and Small Ulcers.



Figure 2. Clinical Appearance: Days 7 (left), 14 (middle), and 30 (right).

subcutaneously injected weekly for one month. The investigated cat was also diagnosed with otitis, secondary to itching. Intra-auricular drops with 0.3% ciprofloxacin and dexamethasone were used for this purpose. The lesions recovered at recontrol (2 weeks), and the itching was absent (9,10).

Conclusion

The topical administration of 2 doses of 45 mg selamectin to cats weighing 2.6-7.5 kg, every 14 days, is effective against the *Notoedres* mites.

Competing Interests

None.

Ethical Approval

Not applicable.

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