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Case Report

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Effectiveness of Using A Single Dose of Selamectin in The Treatment of Sarcoptic Mite Infestation in A Rabbit

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Abstract: Sarcoptic mange in rabbits caused by *Sarcoptes scabiei (S. scabiei)* is a highly contagious and severe disease. In this case report, it is reported that the efficacy of 15 mg/kg topically applied selamectin in the treatment of an 8-month-old female, non-neutered, 1 kg weight, wild rabbit (*Lepus europaeus*) with clinical symptoms such as itching on the feet and around the nose, alopecia and white dry crusts. By microscopic examination of the skin scraping, clinical improvement was observed on the 15th day after a single topical application of 15 mg/kg to the rabbit diagnosed with S. scabiei. As a result, it was determined that one dose of topically applied selamectin without the need for additional treatment is a safe, easy and practically effective option in the treatment of sarcoptic mange.

Keywords: Rabbit, Sarcoptes scabiei, Selamectin.

INTRODUCTION

The Sarcoptic mange caused by *S. scabiei* is one of the contagious and very severe infestations caused by ectoparasites that affect many mammals including rabbits (1). This zoonotic disease infects an average of 300 million people worldwide every year (2). Lesions caused by *S. scabiei* are mostly seen in the feet, auricle, nose and genital area (3). It has characteristic clinical signs such as intense itching, alopecia, seborrhea, hypersensitivity reaction, crust formation and hyperkeratosis in rabbits (4). This disease, which has a zoonotic feature, is transmitted to humans by direct contact with infected animals or their environment (5). Options such as selamectin, ivermectin, doramectin and moxidectin are used reliably in the treatment of this disease. In some cases, these drugs may need to be used more than once (every 10-30 days, approximately 4-6 times) for treatment (6–8).

CASE REPORT

An 8-month-old, non-neutered, 1 kg live-weight hare (*Lepus europaeus*) was presented with clinical signs of itching, alopecia, and white dry crusts on the feet and around the nose (Figure 1, 2). *S. scabiei* mites (Figure 3) were detected in the microscopic examination (at 10x magnification) of the scraping sample treated with 10% potassium hydroxide after deep skin scraping from 3 different areas with a sterile scalpel (9). At the same time, it was learned that the patient's owner had itchy lesions. A single dose of selamectin (Stronghold® 6% 15mg; Zoetis) at a dose of 15mg/kg was applied topically to the rabbit between the two shoulder

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blades (8). On the 15th day, clinical improvement was observed (Figure 4).

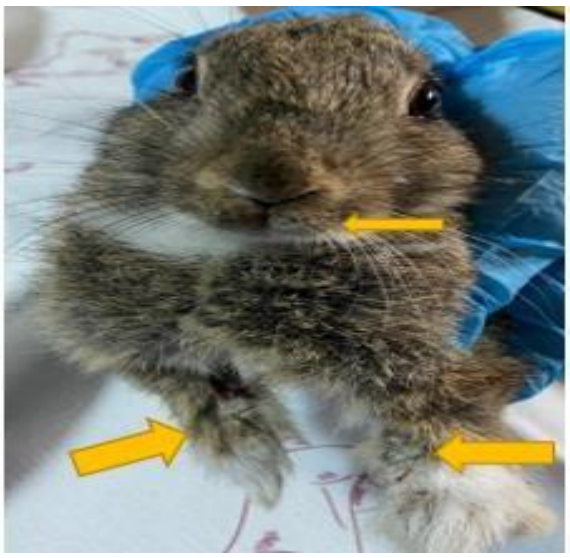

Figure 1: Skin lesions due to sarcoptic scabies detected before treatment (arrows).

Figure 2: Close-up view of skin lesions due to sarcoptic scabies detected before treatment (arrows).

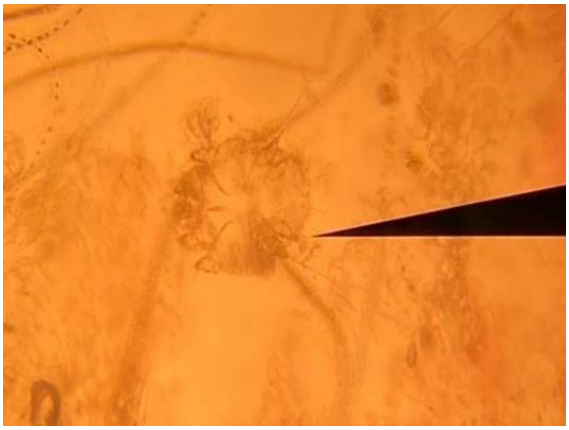

Figure 3: Microscopic image (10 x magnification) of a *Sarcoptes scabiei* mite detected from a skin scraping.

Figure 4: Day 15th after administration of a single dose of selamectin.

DISCUSSION and CONCLUSION

In this case report, the efficacy of a single dose topical selamectin administration in clinical recovery in a wild rabbit (*Lepus europaeus*) infected with *S. scabiei* was reported. These and similar studies (8,10,11) suggest that a single dose of topical selamectin may be effective in clinical improvement. Therefore, no second dose was administered in the presented case.

Selamectin, which is a common endectocide used in cats and dogs, has been reported in studies to be safe and effective against various ecto and endoparasites, including *S. scabiei* (10,12). Although detailed toxicity studies on the use of the active ingredient selamectin in rabbits have not been

reported, it has been reported to be safe in cats and dogs (13,14). In this study, as Mctier et al. (2003) stated, a single dose of selamectin in rabbits was proven to be effective against ectoparasites, as an important advantage (15).

The results of this case report show that although no additional treatment is required for the eradication of mites in rabbits, a topically applied dose of selamectin at a dose of 15mg/kg can eliminate lesions within 15 days without any adverse clinical signs. It has been seen that the single point and topical application of selamectin to the skin is safe, easy and practical. In conclusion, the ease of application of selamectin makes it an effective treatment option in the treatment of *S. scabiei* infestations.

Conflict of Interest

The authors declare that they have no conflict of interest.

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