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Clinical management of generalized and podo demodicosis in German shepherd dog

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Abstract

A male German shepherd dog about 18 months old was presented to the Campus Veterinary Hospital Rajendranagar, with a history of diffused alopecia, pustules and itching all over the body. Clinical examination revealed rough hair coat and alopecic patches, subsequently deep skin scrapings were collected with Scalpel and digested with 10 % KOH and diagnosed as *Demodex canis*. The lesions of the dog was washed with benzyl peroxide and treated with Ivermectin @ 400 µg/kg s/c at every week interval & Amitraz @ 4ml/litre of water twice weekly for 4 weeks. During the due course Ceftriaxone @ 30 mg/kg once a day per oral for 10 days were administered to prevent Secondary bacterial infection. An uneventful recovery was observed after therapy and full recovery was observed after 45 days from the date of first injection. Two successive deep skin scraping examination after one week interval of last injection yielded no mites, considered complete recovery from the Demodicosis.

Keywords: German shepherd dog, generalized demodicosis, Ivermectin, Amitraz

Introduction

Demodicosis is an inflammatory parasitic condition characterized by the presence of larger numbers of demodectic mites in the skin [4]. *D. canis* habituated to in the hair follicles and sebaceous glands causes Acne. It is assumed that immunosuppression or a defect in the skin macrophages allows for mites to proliferate in hair follicles, resulting in to clinical conditions [5]. Canine generalized Demodicosis is a disease commonly seen in canine and feline practices. Apart from generalized, locally it parasitizes inter digital space resulting in to Podo dermatitis and self-resolving in most of the dogs [6]. The present clinical report imports the successful management of generalized Demodicosis in German shepherd dog.

Materials & Methods

A German shepherd male dog of 18 months old was presented to the Campus Veterinary Hospital Rajendranagar, with a history of diffused alopecia pustules and itching all over the body. On clinical examination there was a generalized alopecia, pustules, itching and lichenification at face, neck, fore & hind legs, including inter digital spaces. (Figure 1&2)

Results & discussion

Deep skin scrapping was taken till the capillary bleeding and processed with 10 % KOH and it was observed under low power, many Demodex mites were observed (Figure 3). The case was diagnosed as generalized Demodicosis. The haematological biogram revealed more of eosinophils with normal range of differential leukocytes.

The lesions of the dog was washed with benzyl peroxide and treated with Ivermectin at the dose rate of 400 µg/kg s/c at every week interval & Amitraz @ 4ml/litre of water twice weekly for 4 weeks. During the due course Ceftriaxone @ 30 mg/kg once a day per oral for 10 days were administered to prevent Secondary bacterial infection. The supportive medications like Nutriccoat advance® syrup (Petcare Company) 5 ml twice daily per oral was given to nourish the skin and hair follicles. Changes in the skin colouration and reduction in the infection rate were observed for ten days after treatment (Figure 4). An uneventful recovery was observed 4 weeks onwards and full recovery was observed after 45 days from the date of first injection (Figure 5). Two successive deep skin scraping examination after one week interval of therapy results no mites, it is considered complete recovery from the disease.

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Discussion

The present study was considered as a generalised Demodicosis. Many clinicians tried different formulations and reviewed and reported their efficacies. In the present case the weekly dose of Ivermectin at 400µg/kg s/c combination with Amitraz (5%) lotion and benzyl peroxide shampoo showed a good success in the therapy of generalised Demodicosis.

Even though ivermectin is not licensed for use in canine Demodicosis, weekly injection at a dose of 0.4 mg/kg s/c given variable and inconsistent results [1]. The success rate of Amitraz therapy in canine Demodicosis varies from 0 to 92% [1, 6, 7, 3]. Benzyl peroxide-based shampoo are often recommended because of their keratolytic and supposed follicular flushing activity [6]. The use of broad spectrum antibiotic is majorly due to the fact that most cases of canine generalized demodicosis involve a secondary bacterial skin infection, which needs administration of systemic antibiotics for several weeks along with acaricidal treatment [8].

Conclusion

It is concluded that Demodex mange in dogs with many dermatological conditions is major constraints and causes severe morbidity. Hence Macrocytic lactones derivative like Ivermectin with Amitraz found to be long acting and has got great efficacy in canine parasitic management.

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Author Contributions

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Ethical Approval

This article does not contain any studies with human participants or animals performed by any of the authors



Fig 1: Alopecia & thickening of skin –head, legs before therapy



Fig 2: Erythematous lesions observed in inter digital space in forelimb.



Fig 3: Microscopic image of *Demodex canis* mites (40X) in deep skin scrapping



Fig 4: Improvement observed from ten days post therapy.



Fig 5: Complete recovery observed after 45days from *Demodex canis*.

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