Sarcoptic Mange in a Gazelle (*Gazella Gazella)* in Ankara, Turkey

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Abstract

The present case report describes a highly pruritic, alopecic and crusted dermatitis and microscopically diagnosed Sarcoptic mange infestation in a 2 year old male gazelle. A therapy including ivermectin resulted in complete remission in clinical signs, but the gazelle was dead after completion of therapy as a result of pneumonia detected following macro-pathological examination. To the present authors knowledge sarcoptic mange infection in gazelles has not previously been reported in Ankara province, Turkey.

Key words: Sarcoptic mange, Gazelle, Ivermectine

INTRODUCTION

Sarcoptic mange or scabies is a highly contagious parasitic disease caused by *Sarcoptes scabiei*, infects domestic and wild animals, and in addition humans [1, 2]. Sarcoptic mites usually cause a clinical disease comprising loss of condition, acute dermatitis and even death in severely affected animals among heards [2, 3].

In the present article we, report sarcoptic mange in a mountain gazelle and treatment with ivermectin. Gazelles *(Gazella gazella)* are abundant wild ruminants in Ankara, and little is known about contagious skin diseaes of those animals. To the present authors' knowledge sarcoptic mange infection and treatment in gazelles has not previously been reported in Ankara, Turkey.

CASE HISTORY

This case was conducted in the University of Ankara, Faculty of Veterinary, Department of Internal Medicine admitted of a 2 year old male gazelle, which was captured and held in a mixed herd of gazelle and goats for a one and a half year in a national zoological park related to Kecioren municipal, in the southern of Ankara.

In the history of case anorexia, muscle weakness and generalized pruritus were given by the herdsmen. Generalized alopecia, crusting and generalized dermatitic changes were observed some part of the body such as abdomen, hind leg, and foreleg. On the physical examination generalized alopecia, severe crusting, progressive dermatitis, keratinization, skin thickening, and wounds associated with intense itching (Fig. 1) (Table 1).

Figure 1. Pruritic, alopecic and crusted dermatitis (and microscopically diagnosed Sarcoptic mange infestation) in a 2 year old male gazelle.

RESULTS

A parasitologic examination was performed to diagnose possible etiologic agent. Briefly, parasitologic examination of this procedure consisted of microscopic examination of 4-cm^2 skin scrapings treated with a 10% KOH solution and observation under a light microscope with 4x and 10x lenses. The specific identification of *S. scabiei* was performed as descript previously [4].

The gazelle was treated with injectable ivermectin (Ivomec-f,®) at a dose of 0.2 mg/kg subcutaneously for a total of 2 times at one week interval, and in addition with local rivanol and Vaseline liquid application daily.

After treatment the gazelle was started to eat, and on day 7 started to walk. On day 21 following initial treatment, the skin

Table 1. Location of Sarcoptic mange lesions

Head	Neck	Shoulder	Trunk	Back	Flank	Croup	Foreleg	Hind Leg
-	-	-	+	+	+	+	+	+

Presence (+) Absence (-)

were completely resolved and hair regrowth was observed (Fig. 2). On day 35 as being informed by the herdsmen the gazelle was found to be died, as a result of pneumonia suggested as the causative reason detected following macro-pathological examination. The data of the pathological examination was not shown, though it was performed by the referring veterinary surgeon.

Figure 2. Following treatment with ivermectin, clinical sings related to the skin were resolved and hair regrowth in affected areas was observed.

DISCUSSION

Sarcoptic mange has been described as the most severe infection in European wild ruminants [5, 6]. Sarcoptic mites have been suggested to spread among animals via direct contact among groups [7, 8]. Rubbing behavior towards objects in attempt to relief the pruritis induced by sarcoptic mites, has also been shown to contribute outbreaks in herds [3, 9]. In addition the size of herd population [8, 9], and marked seasonality, especially between November and March [10], may also contribute spreading of the infection. The fact that the gazelle in the present study was individually infected, apart from the rest of the animals held in a mixed herd, may be because of this animal had low resistance to the parasite. Another explanation is that an individual immunosuppression might be occurred. The present gazelle referred to our clinic in the early May 2004, with a history of onset of disease several days before referral, suggesting that the clinical symptoms might be occurred, prior to May, in the early February or March, as has claimed by [10].

The ease of application of avermectin compounds suggests them as an effective choice for the treatment of scabies [11]. Ivermectin, recognized as a highly potent and broad spectrum avermectin compound, is of beneficial in various parasitic diseases [12]. In wild ruminants, oral ivermectin treatment has been suggested rather than other injectable compounds [13]. However, treatment with injectable ivermectin at the recommended dosage was completely effective, even in a generalized case of sarcoptic mange.

The results of the report presented here indicate that injectable ivermectin applications for a total of 2 times at one week interval, achieved clinical remission. To the authors' knowledge a gazelle is described here for the first time as a host of sarcoptic mange in Ankara, Turkey. More detailed and intensive studies are required to better understanding the etiology, pathogenesis and treatment of sarcoptic mange in wild ruminants, including gazelles.

REFERENCES

[1]. Fain A. 1968. Etude de la variabilite de *Sarcoptes scabiei* avec une revision des Sarcoptidae. Acta Zoolgy Pathology Antverpen. 47: 1-196.

[2]. Fain A. 1978. Epidemiological problems of scabies. International Journal of Dermatology. 17: 20-30.

[3]. Yeruham I, Rosen S, Hadani A, Nyska A. 1996. Sarcoptic mange in wild ruminants in zoological gardens in Israel. Journal of Wildlife Diseases. 32: 57–61.

[4]. Pence DB. 1984. Diseases of laboratory animals. In: Mammalian diseases and arachnids (ed. Nuffing WB), pp. 129–187.CRC Press, Boca Raton, Florida.

[5]. Rossi L, Meneguz PG, De Martın P, Rodolfi M. 1995. The epizootiology of sarcoptic mange in chamois, *Rupicapra rupicapra,* from Italian eastern Alps. Parasitologia, 37: 233–240.

[6]. Leo´ n-Vızcaý´No, L. 1990. Patologý´a de la sarna en la Cabra monte´ s en Cazorla. Quercus, 50: 22.

[7]. Kral F, Schwartzman RM. 1964. Veterinary and comparative dermatology, pp. 343-368. J. B. Lippincott Company, Philadelphia, Pennsylvania.

[8]. Gonza´Lez-Candela M, Vizcaý´no LL, Cubero-Pablo MJ. 2004. Population effects of Sarcoptic Mange In Barbary Sheep (Ammotragus Lervıa) From Sierra Espun˜A Regional Park, Spain. Journal of Wildlife Diseases. 40**:** 456–465.

[9]. Arlian LG, Vyszenski-Moher DL, Cordova. D. 1988. Host specifity of *Sarcoptes scabiei var.* canis (Acari: Sarcoptidae) and the role of host odor. Journal of Medical Entomology. 25:52-56.

[10]. Christophersen J. 1986. Epidemiology of scabies. Parasitology Today. 2: 247-248.

[11]. Shanks D J, Mctier TL, Behan S, Pengo G, Genchi C, Bowman DD, Holbert MS, Smith D G, Jernigan A D, Rowan TG. 2000. The efficacy of selamectin in the treatment of naturally acquired infestations of *Sarcoptes scabiei* on dogs. Veterinary Parasitology. 91: 269-281.

[12]. Campbell WC. 1985. Ivermectin, and update. Parasitology Today. 1:10-16.

[13]. Meleney WP, Wright F C, Guillot FS. 1980. Identification and control of psoroptic scabies in bighorn sheep (Ovis Canadensis Mexican a). Proceedings of the United States Animal Health Association. 84: 403-407.