

Türkiye’de bir Ceylanda (*Gazella subgutturosa*) Kutanöz Miyaz Vakası

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Özet: Miyaz dünyada, özellikle tropikal ve subtropikal bölgelerdeki hayvanlarda oldukça yaygın olarak bulunmaktadır. Bu çalışmada bir ceylanda (*Gazella subgutturosa*) tespit edilen kutanöz miyaz vakası tanımlanmıştır. Ceylandan elde edilen larvaların mikroskopik incelemesinde birinci ve üçüncü dönem *Lucilia sericata* larvaları olduğu teşhis edilmiştir. Bu makalede miyazın klinik ve epidemiyolojik önemi tartışılmıştır. **Anahtar kelimeler:** Miyaz, Ceylan, Türkiye

A Case of Cutaneous Myiasis in a Gazelle (*Gazella Subgutturosa*) in Turkey

Summary: Myiasis can be found worldwide in animals but it is more prevalent in tropical and subtropical regions. This study was undertaken to determine traumatic cutaneous myiasis in Gazelle (*Gazella subgutturosa*). During microscopic examination, the larvae were identified as the first and third larva of *Lucilia sericata*. The epidemiological and clinical significance of myiasis has been discussed.

Key words: Myiasis, Gazella, Turkey

INTRODUCTION

Myiasis is the infestation of the organs or tissues of host animals by the larval stages of dipterous flies, usually known as maggots or grubs. The fly larvae feed on the host’s necrotic or living tissues, liquid body substances, or ingested food (Zumpt, 1965). Maggots can infest any organ or tissues accessible to fly oviposition, most cases probably occur as a result of direct egg or larvae deposition on an animal host. The hosts are usually mammals, occasionally birds and, less commonly, amphibians or reptiles (Ruiz Martinez et al., 1991; Valentin et al, 1997; Farkas and Hall, 1998; Saki and Ozer, 1999a; Altinoz and Dik, 2001; Farkas and Kepes, 2001; Farkas et al, 2001; Ferroglio et al, 2003).

Myiasis are often classified according to the anatomical position in, or on the animal that the larvae infest. They may be described as dermal, sub-dermal or cutaneous, nasopharyngeal, ocular, intestinal, genital or urogenital (Dincer, 1997).

Myiasis may be described as obligatory, facultative or accidental. Obligatory ectoparasites must have a living host to complete their development and are unable to survive in the absence of the host. In contrast, facultative parasites can develop in both living and dead organic matter (Wall and Shearer, 1997).

It usually occurs during summer periods when fly populations are most dense, and most of the larvae are identified as *Phaenicia sericata* and *L. sericata* all of which belong to the family Calliphoridae (Amitay et al., 1998).

Most of the adult agents of myiasis are oviparous, laying large numbers of eggs either directly on to the host or on to vegetation at a site where they are likely to be picked up by the passing host. Two broad life-history groups can be detected within the dipteran agents of myiasis. One group is composed of highly specialized, obligate and relatively host-specific ectoparasites,

typified by the oestrids. The second group is composed of flies that are generally facultative ectoparasites with a relatively broad host range, typified by the calliphorid blowflies (Kettle, 1990; Wall and Shearer, 1997).

The Calliphoridae, known as blow flies, are a large family composed of over 1000 species divided between 150 genera. At least 80 species have been recorded as causing traumatic cutaneous myiasis. These species are found largely in four important genera: *Cochliomyia*, *Chrysomya*, *Lucilia* and *Calliphora*. Most of these species are either primary or secondary facultative invaders (Wall and Shearer, 1997).

This case is the first gluteal traumatic cutaneous myiasis of *G. subgutturosa* in Turkey. The objectives of this study were to detect the presence of traumatic cutaneous myiasis and to explore some potential risk factors associated with the disease in Gazelle flocks of Southeastern Anatolia region in Turkey.

CASE PRESENTATION

Traumatic cutaneous myiasis is a rare disease, which has not been reported in *G. subgutturosa* in Turkey, yet. This case report describes a gluteal traumatic cutaneous myiasis in a four years old, male gazelle which was kept in Ceylanpınar Agricultural State Farm in Turkey. It was admitted to the Internal Medicine Department of Veterinary Faculty Hospital, Harran University in an exhausted condition and died on the same day. Post mortem examination was carried out and 46 fly maggots were found in the wound cavity in gluteal region. The maggots were removed by simple extraction (Figure : 1).



Figure. 1: Cutaneous myiasis of *Gazella subgutturosa* and larvae of *Lucilia sericata*.

They were identified as 8 first and 38 third instar larvae of *L. sericata* (Meigen, 1826) belonging to the genus *Lucilia*, family Calliphoridae according to Zumpt (1965). For this purpose following criteria were concerned: Mouthparts with no accessory oral sclerite; cephalopharyngeal skeleton without pigmented area below posterior extremity of ventral cornua; posterior spiracle with complete peritreme enclosing a button; inner tubercles of upper margin of anal segment separated by a distance approximately equal to distance between inner and medial tubercles.

DISCUSSION

Myiasis have been reported worldwide, particularly in regions with a temperate/warm climate, where the prevalence of infestation can exceed 90 % in sheep (Pandey and Ouhelli, 1984). Larval infection and adult flies may be found all year round. It has been demonstrated that weight gains of lambs decrease with the presence of myiasis. For instance, Ilchmann et al (1986) indicated body weight losses of 1.1-4.6 kg and up to 10 % in milk production. The effects of myiasis extend to loss of body condition and predispose the host to secondary bacterial infections (Martinez, 1989).

Cutaneous myiasis in gazelle have not been reported in literature available to us. This case was presented to emphasize epidemiological parameters of cutaneous myiasis in gazelle in Sanliurfa where, in spite of the high number of gazelle present (> 800) and the importance of gazelle breeding in the area, there is currently no data on the prevalence and intensity of the infestation. This is first case the existence of traumatic cutaneous myiasis in a *G. subgutturosa* in Sanliurfa, Turkey.

The probable origin of the myiasis in this case can be attributed to poor environmental condition and general weakness of the patient.

The predisposing conditions included traumatic wounds, chronic ulcerations of the vulva and vagina, burns, gangren, traumatic laceration and pyometra. Cutaneous myiasis can be prevented by protecting open wounds from flies; wound should not be left without a covering capable of excluding flies, especially in the summer months (Mimioglu, 1973; Wall and Shearer, 1997).

Belem and Rouille (1988) reported that climate influences the dissemination and severity of the infestation. Similarly, Yilma and Drochies (1991) reported that climatic conditions of a region determine the duration of the infestation and the number of generations of parasites per year. In generally, the myiasis cases occur during summer seasons. The fly population is the greatest density in summer months.

As indicated by Saki and Ozer (1999 b) the prevention measures of traumatic cutaneous myiasis are directly related to the flies. Wound care and dressing, as well as attention to the hygiene of the patients will also decrease the attractions of flies to the patients. Routine care of the animals during the postpartum period should include essential preventive procedures.

There are at least 27 species in the genus *Lucilia*. However, only two species, *L. sericata* and *Lucilia cuprina*, are of major clinical and economic significance worldwide as primary agents of cutaneous myiasis, particularly affecting sheep, although they may also strike a range of other wild and domestic animals. The distribution of this species is very extensive, including Europe, North Africa and Asia (Wall and Shearer, 1997).

Knowledge of life cycle of *L. sericata* and of the infestation dynamics throughout the year can help in designing prophylaxis and eradication programs against gazelle maggot infestations. Thus, preventive measures for the eradication of the infection should be applied in the region.

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