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## Mycotic Blepharitis Due To *Trichophyton equinum* in a Horse and Treatment With Topical Terbinafine

The involvement of eyelids by dermatophytes is infrequent in horses. In this article, characteristics, diagnosis, clinical signs and therapy course of mycotic blepharitis due to *Trichophyton equinum* in a dressage horse were described. *Trichophyton equinum* was isolated from broken eyelashes and scales of annular lesions of eyelids. The horse was successfully treated with topical terbinafine 1% cream resulting in clinical and mycological cure.

**Key Words:** Horse, mycotic blepharitis, terbinafine.

### Bir Atta *Trichophyton equinum*'a Bağlı Mikotik Blefaritis ve Topikal Terbinafine ile Sağaltımı

Atlarda dermatofitozis göz kapaklarında nadiren şekillenir. Bu makalede, bir dresaj atında gelişen *Trichophyton equinum*'a bağlı mikotik blefaritisin özellikleri, tanısı ve sağaltımı tanımlanmıştır. Kırık kirpikler ve göz kapaklarındaki dairesel lezyonlardan alınan kıl örneklerin muayenesinde *Trichophyton equinum* izolasyonu yapıldı. Klinik ve mikolojik sağaltım, lezyonlu bölgelere uygulanan %1'lik terbinafine krem ile gerçekleştirildi.

**Anahtar Kelimeler:** At, mikotik blefaritis, terbinafine.

### Introduction

There have been several dermatoses in equine species accompanying with scaling and/or crust formation (1), in which dermatophytosis is one of the most common and important cause (2). Blepharodermatomycesis, namely mycotic blepharitis, is the fungal infection of eyelids (3). Mycotic blepharitis has anecdotally been reported in association with a generalized fungal dermatological infection, usually with *Microsporum* and *Trichophyton* species (4).

The aim of this work was to characterize and analyse a clinical case of mycotic blepharitis in a dressage horse. No publications have been found, to the present author's knowledge so far describing this condition in this animal species in Turkey.

### Case Report

The described horse was a Belgian Warmblood (Belgian Half-blood) dressage horse, male, two years old, weighing approximately 370 kg.

Blepharitis, photophobia, conjunctival redness, severe lacrimation and periocular alopecia were noted during the first clinical examination. The ophthalmic examination revealed a diagnosis of blepharitis. According to the owner, the horse had no remarkable past medical history, and no systemic or seasonal allergies were noted during the past years.

Lymph node examination was unremarkable, body temperature, heart rate and the respiratory rate were in normal ranges. According to the owner, the lesion started as patches of raised hair, several days later the hair detached leaving bald and gray areas around the periocular area. In an attempt to diagnose the etiology of periocular alopecia, skin scrapings and culture examinations were performed. Skin scraping was unremarkable, samples were collected and cultured on mycobiotic agar, as described previously (5), and microscopic examination revealed the isolation of *Trichophyton equinum*. Complete blood counts were within reference ranges.

The erythematous, scaly plaque localized to the right lower eyelid, had a well-defined border and formed a characteristic annular lesion. The results of the remainder of the ocular examination were within normal limits. A mycotic cause was suspected on the basis of the characteristic red, scaly, annular appearance. Following clinical and culture examinations, a diagnosis of mycotic blepharitis was made. The early treatment

began on the first day with topical terbinafine hydrochloride 1% cream four times daily (Lamisil 1% cream®, Novartis). Follow-up examination revealed fading of the active border, a decrease in conjunctival redness and photophobia was cured on day seven. However due to the nature of the dermatophytic disease, alopecia was still present on day seven. On day ten, there was no evidence of the disease and patches of hair regrowth were evident. The treatment was continued, for a total of five weeks, until mycological cure and complete disappearance of the total lesions was achieved. There was no recurrence during 11 months of follow-up.

**Discussion**

Mycotic infections of the conjunctiva, the lacrimal system and the cornea are well recognized and described, whilst cutaneous mycotic infection of the eyelid is unusual (6). There are some cases in the literature of human dermatophytosis affecting the eyelids (7, 8, 9). Mycotic blepharitis is usually associated with a generalized fungal dermatological infection. *Microsporum* and *Trichophyton* species are usually responsible for those infections (4). However, as to the present author’s knowledge mycotic blepharitis due to *Trichophyton sp.* has not previously been reported in horses in Turkey. This rare presentation was described to alert veterinary

clinicians about the importance of searching for fungal infection on eyelid lesion in horses.

Dermatophytoses are caused by filamentous fungi. Dermatophytosis results in infection of the hair root and follicle in horses and although not causes fatality, is an important disease condition (10, 11). The principal genera responsible for infections are *Trichophyton* and *Microsporum* (11-13). Although it is a common infection, this report describes an unusual location. The well-demarcated, circumscribed, scaly and alopecic appearance of the lesion in this horse was characteristic of mycotic blepharitis.

Terbinafine has previously been reported as an effective treatment choice for dermatophytosis in human (14, 15), in cats (16, 17) and in dogs (17). Up to date, as well as to the present author’s knowledge, terbinafine has not previously been used in mycotic blepharitis cases in dressage horses in Turkey. In the present case, topical terbinafine was prescribed for treatment choice, resulted in complete clinical cure. The location of the unusual lesion presented concern about possible ocular toxic effects of such treatment. However no treatment related side effects were noticed during terbinafine administration.

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