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CASE REPORT

MOOREN'S ULCER –A CASE REPORT

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ABSTRACT

Introduction: Mooren' s ulcer is a painful, relentless, chronic ulcerative keratitis that starts peripherally and progresses circumferentially and centrally. Mooren's ulcer is a rare corneal ulcer and it is important to be recognized early and treated properly. The different clinical symptoms and local sings and presentation (unilateral or bilateral) of corneal Mooren's ulcer, separate this entity in two groups, benign-limited form and aggressive or progressive form with severe symptoms and morbidity, high tendency for recurrence and increased risk of unsuccessful treatment.

Case presentation: A case of Mooren's ulcer in a female patient 65-year-old is present. She was treated at the University Clinic for eye disease in Skopje after one month of leech extraction of her left eye. The patient came at the Clinic as urgent case with melting syndrome of the peripheral left cornea. Slit lamp examination of the anterior segment confirm the Mooren's ulcer clinical characteristic such as crescent-shaped, peripheral half-circumferential corneal ulcer which start from the limbus with gray infiltrated margin. The sclera around was not involved. The patient complained of pain in her eye and blurred vision. Red eye, foreign body sensation and epiphora were present also. Corneal and conjunctival culture was taken. The lacrimal canal was examined with the straight lacrimal cannula on a 3 ml saline –filled syringe inserted into the lower canaliculus. There was no obstruction in the upper or lower or the common canaliculus. The lacrimal canaliculus was without secretion.

Conclusion: A proper, rigorous and early treatment of the Mooren's ulcer is important for improvement of the local status of this peripherally circumferential melting syndrome. The leech extraction from the patient left eye, a month before, maybe is one of the key factors in the pathogenesis of Mooren's ulcer.

Keywords: Mooren's ulcer, therapy, clinical characteristic, etiology, corneal melting syndrome.

INTRODUCTION

Mooren's ulcer is a painful, relentless, chronic ulcerative keratitis that begins peripherally and progresses circumferentially and centrally [1]. Mooren's first describe this corneal clinical entity in 1867 [1] and that's why this peripheral ulceration was named by him. It is very rare peripheral ulcerative keratitis and its etiology is not fully understood. It is thought that this keratitis is caused by an ischemic necrosis resulting from vasculitis of limbal vessels. It has been shown that the conjunctiva around the ulcer produces enzymes such as collagenase and proteoglycanase which has a certain role in the causation of the Mooren' s ulcer. Trauma, corneal surgery, infection such as parasitic and hepatitis C are mention in the literature that are leading to corneal melting syndrome such as Mooren' s ulcer. The relationship of the systematic disease with the Mooren' s ulcer is poorly understood also [2].

The incidence and severity of the Mooren' s ulcer vary geographically, its rare in the northern hemisphere and common in the Africa (southern and central part), China and India [3,4].

CASE REPORT

A patient 65-year-old woman was treated at the University Clinic for eye disease in Skopje after one month of extraction of leach from her left eye. After extraction, the local antibiotic drops and ointment were prescribed such as ciprofloxacin and chloramphenicol. The symptoms of red eye, foreign body sensations and epiphora were gone after 10 days and the patient returned to the ophthalmologist for the control examination. The far vision acuity was normal. The patient could not read with her dioptric glasses and a prescription of new dioptric lenses for near vision was given to a patient. The ocular pressure was normal on both eyes. After 10 days of the control examination, the patient feels a sensation of foreign body in her left eye which was red and return to the ophthalmologist. The ophthalmologist prescribed the local antibiotics ciprofloxacin drops and corticosteroids drops. After ten days the local symptoms as redness, sensation of the foreign body and epiphora were not improving and the patient started to complain of pain in her left eye. The patient came as urgent case at the Clinic with melting syndrome of the peripheral left cornea. The vision acuity on the right eye was 1,0 without correction and 0,3 with and without correction on the left eye. Slit lamp examination of the anterior segment confirm the Mooren's ulcer clinical characteristic such crescent-shaped, peripheral half-circumferential corneal ulcer which start from the limbus with gray infiltrated margin. The sclera around was not involved. The patient complains of pain in her left eye and blurred vision. Red eye, foreign body sensation and epiphora were present also. Corneal and conjunctival culture was taken. The lacrimal canal was examined sued with the straight lacrimal cannula on a 3 ml saline –filled syringe inserted into the lower canaliculus. There was no obstruction in the upper or lower or the common canaliculus. The lacrimal canaliculus was without secretion. The differential blood count was taken, erythrocyte sedimentation rate, antistreptolyzine and rheumatoid factor (RF) were tested. The result of this investigation were in normal range. The patient was treated with local antibiotics drops such as moxifloxacine (fluoroquinolone drops from the fourth generation) and chloramphenicol ointment. The patients complain after the application of chloramphenicol ointment, such as sensation of foreign body, painful burning and discomfort. As that the ointment was excluded. Also mydriatics drops were prescribed twice a day and local corticosteroids and non-steroid drops. The use of topical corticosteroids was tapered based on the patient's response to the treatment. The system antibiotics therapy such as ceftriaxone injection was given for 7 days. Day by day the reepithelization of the corneal epithelium starts to cover the peripheral ulcer from the limbus and grays margin to the active margin of the ulcer near by the center of the cornea. The neovascularization of the conjunctiva starts to profound the limbal cornea. The healing takes place from the periphery leaving a thin vascularized and opaque cornea. The patient was regularly visited the Clinic for checking on month bases in the beginning, and on tree months after it. After 6 months, patient complain of epiphora and red eye and local antibiotic therapy such as moxifloxacin (fluoroquinolone drops from the fourth generation) combined with the tobramycin were prescribed. Also other eye drops were prescribed such as dexamethasone and mydriatics. The slip lamp examination, confirm the recurrences of the Mooren's ulcer. There was involved active elevated margin of the ulcer near by the center of the cornea. After 24 months of following the patient, there is no recurrence or worsening of the Mooren's ulcer.

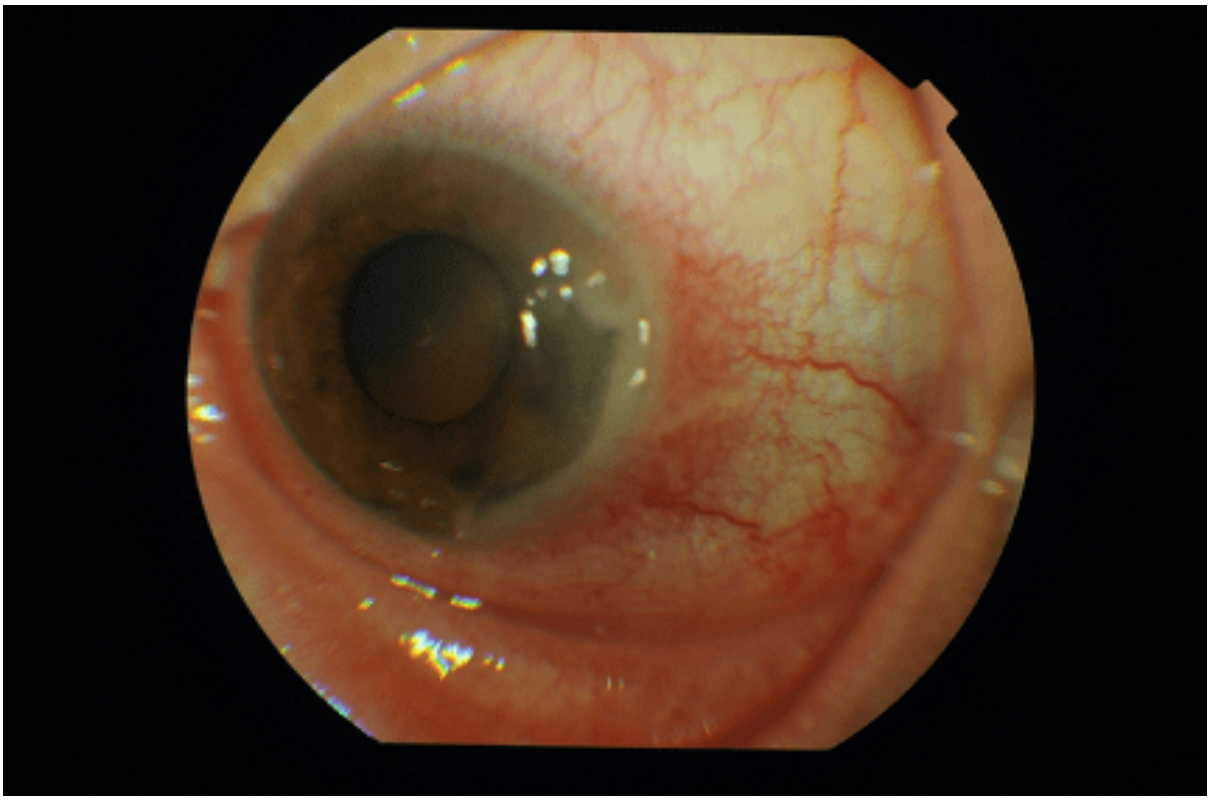

Fig. 1. Mooren's ulcer before the treatment.

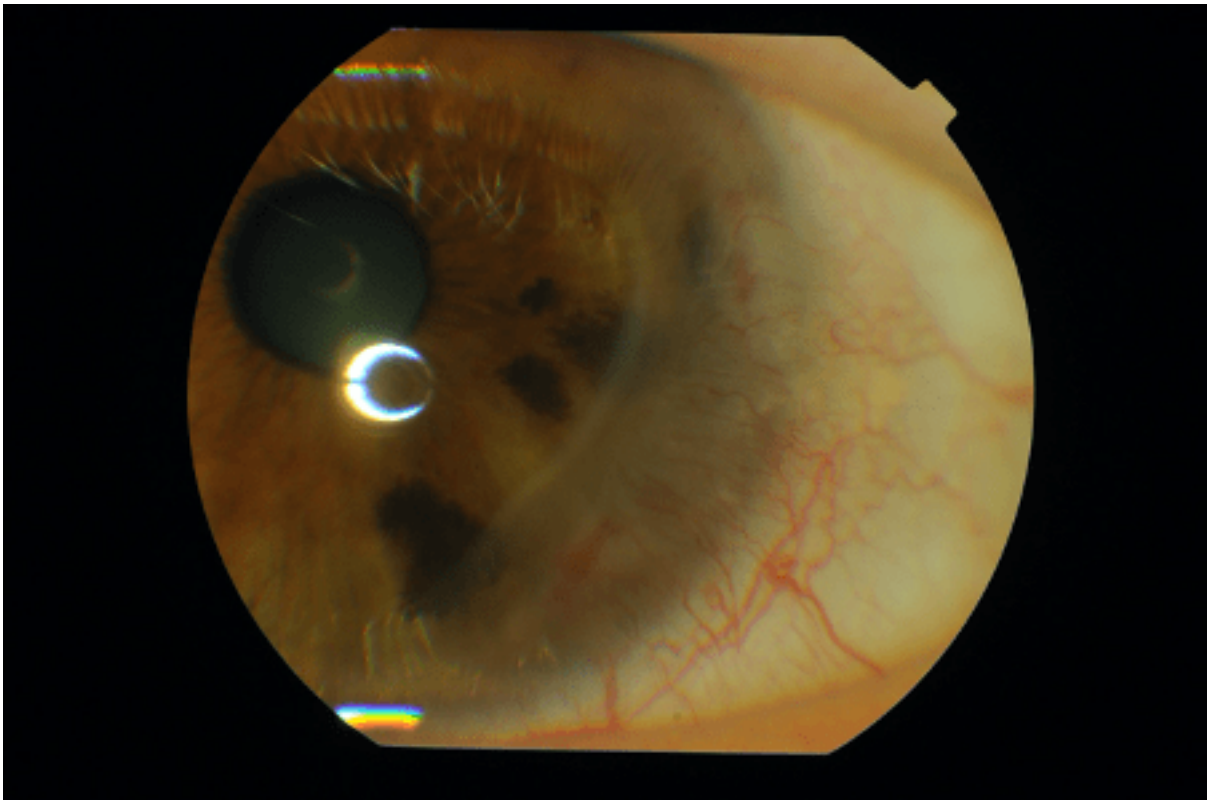

Fig. 2. Mooren's ulcer after one month of the treatment.

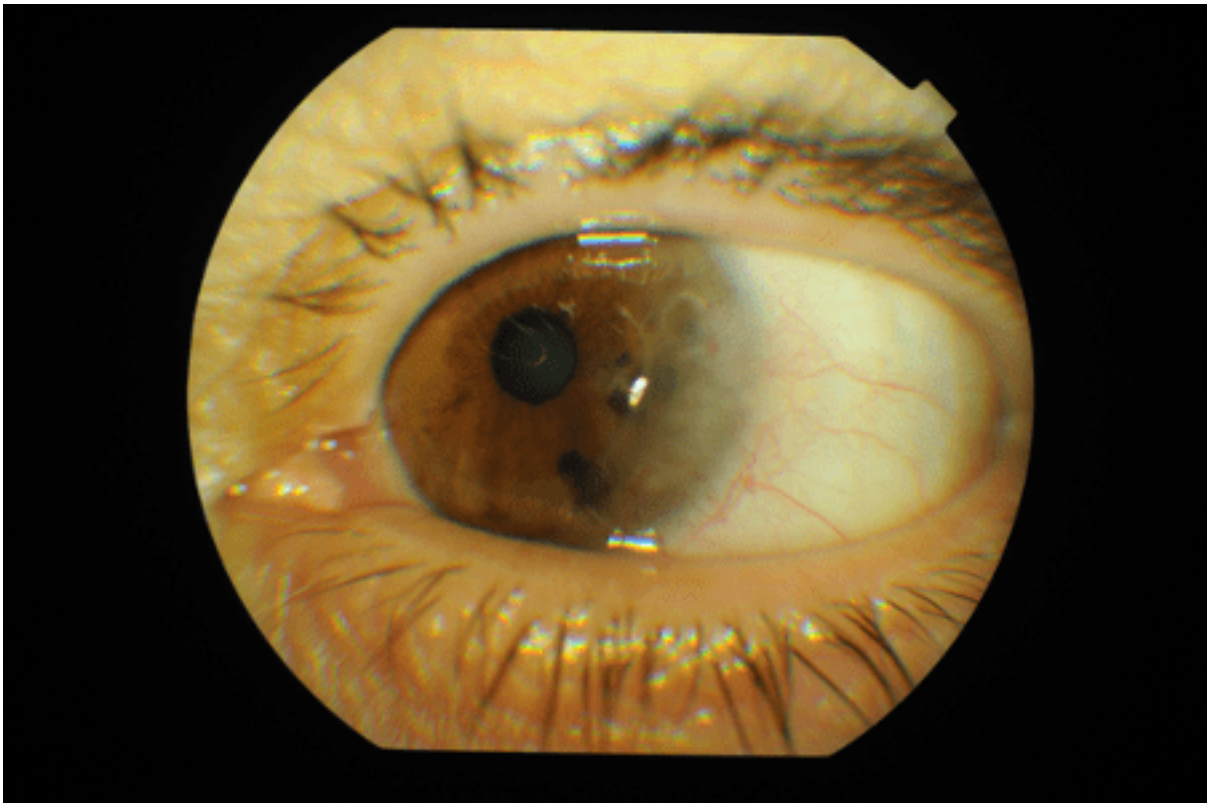

Fig. 3. Mooren's ulcer recurrence after 6 months.

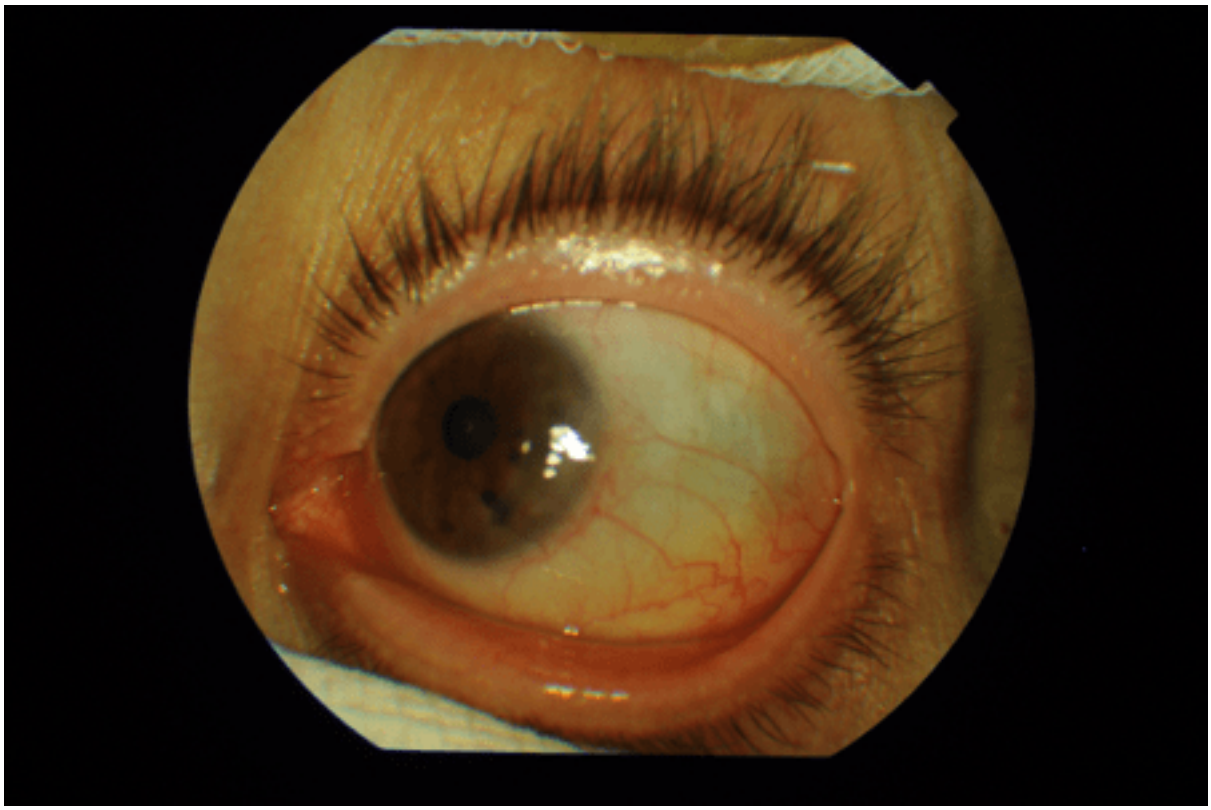

Fig. 4. Status of the cornea after 24 months of the beginning of the Mooren's ulcer treatment.

DISCUSSION

Wood and Kaufman [5] classified this disease in two groups according to the age of onset, clinical characteristic and prognosis of nine cases. The two types of Mooren's ulcer are: benign responsive to therapy which is usually unilateral and mostly affects the elderly and the other a progressive form which is bilateral and typically affects relatively young individuals with relatively more pain and generally a poor response to the therapy. But many ulcers due to difference of course or response to therapy cannot be simply classified in this convenient classification, because of complex underlying pathology. This is underlined by the range of histopathological data obtained in several studies of this rare condition [6].

Recently it has been suggested that the more general term corneal melting syndrome would be more appropriated because the etiology and relationship of Mooren's ulcer to systematic diseases are also poorly understood [6].

Previous studies supported that corneal trauma, surgery and infection were risk factors for Mooren's ulcer [7-9]. There were no signs of bacterial infection in the agar of Petri's cup from the corneal and conjunctival specimen taken from the anterior segment of the eye of the patient involved in our study. But we could not forget that the patient was treated with local antibacterial ciprofloxacin and chloramphenicol and anti-inflammatory corticosteroid drops such as almost 3 weeks before the corneal and conjunctival swab was taken.

Young and Kim reported separately that 48% [10] and 41.7% [3] has a history of ocular surgery, corneal trauma or infection. Zegans and Srinivasan [11] confirmed significant association and Mooren's ulcer formation in his prospective study of 21 patients in India, and 68% of the patients had a history of corneal trauma, surgery and infection. In the same study the authors confirmed a significant association between hookworm infection and Mooren's ulcer formation. In our case report, extraction of leech was done a month before a Mooren's ulcer was diagnosed of the same eye which probably is the cause and trigging factor for the corneal melting syndrome in our patient.

Some authors such as Ye, Chen, Kim and Yao confirmed that Mooren's ulcer is result of an autoimmune process. In this autoimmune process the humoral and cell-mediated components are involved [12,13]. In the sera of patients with the Mooren's ulcer Co-antigen (cornea associated antigen was found [14,15)]. Co-ag might be a protein calgranulin C which is involved in the immune response to parasitic infections and it's also found in the corneal stroma [14,15]. There for, calgranulin C maybe a key factor in the pathogenesis of Mooren' s ulcer.

The recurrence of the Mooren's ulcer in some studies were related with corneal infection and corneal perforation [10]. The recurrence of Mooren's ulcer, still is a big issue in the management of this corneal peripheral ulcer. The prevalence of Mooren's ulcer and the blindness caused by the disease is unknown [3]. The treatment is difficult and includes different options regarding of the type and stage of the Mooren's ulcer. Usually topical therapy with antibiotics and corticosteroids drops is the initial approach. In patients with bilateral ulceration with worse prognosis for the vision acuity and the eye ball, systematic therapy with steroids, cyclosprin and cytotoxic drugs are required. In some cases, resistant to the therapy, the conjunctival excision, parallel to the ulcer may be required and effective. Other surgical interventions such as, keratoepithelioplasty and lamellar keratoplasty is widely used [13,16]

CONCLUSION

A proper rigorous and early treatment of the Mooren's ulcer can improve the local status of this peripherally circumferential melting syndrome. The infection from the leach extraction a month before the diagnosis of the Mooren's ulcer in our patient, maybe is one of the key factors in the pathogenesis of this condition.

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