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Bilateral Peripheral Ulcerative Keratitis Reveals Rheumatoid Arthritis: A Case Report

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Abstract **Case Report**

Central aseptic keratolysis is presented as a rare but serious complication, requiring urgent diagnosis and treatment. This is a 56-year-old woman with bilateral eye pain, photophobia and tearing, who was eventually diagnosed with rheumatoid arthritis associated with secondary Gougerot-Sjögren's syndrome. Peripheral ulcerative keratitis (PUK) is discussed in association with immune-mediated systemic diseases such as rheumatoid arthritis, highlighting its rarity and severity, particularly when it causes corneal ulcers. Emphasis is placed on regular ophthalmological assessments for early detection of ocular complications, and collaboration between rheumatologists and ophthalmologists is highlighted for optimal management. we stress the importance of timely consultation and collaboration between medical specialties to address the rarity and severity of sterile corneal ulcers in rheumatoid arthritis, to ensure appropriate management and prevention of visual impairment.

Keywords: Keratitis, arthritis, ulcer, Peripheral, complication, Rheumatoid.

INTRODUCTION

Central aseptic keratolysis is an entity that is often associated with systemic disease of the Goujerot-Sjögren syndrome type and/or is secondary to treatment with local NSAIDs. It is a rare but serious complication in rheumatoid arthritis and constitutes a genuine diagnostic and therapeutic emergency. We report the case of a woman who consulted the ophthalmological emergency department for bilateral ocular pain associated with photophobia and lacrimation.

CASE

This is a 56-year-old diabetic woman on insulin who consulted the ophthalmological emergency department for bilateral red eye pain that had been evolving for 1 month. She had previously consulted privately and was diagnosed with simple dry eye and was using artificial tears. Her symptoms worsened over the past three days, with a significant drop in visual acuity (VA). She presented with a painful red eye with photophobia and lacrimation. Her medical history reveals previous arthralgias of inflammatory origin with dry mouth and eyes, but she had never consulted a specialist for this.

Ophthalmological examination revealed AV with hand movement on the right and close-up finger counting on the left, bilateral diffuse conjunctival hyperemia, and bilateral peripheral corneal ulcers (Figure 1 & 2). The fluorescein test revealed superficial punctate keratitis with a break-up time of 3 seconds. Schirmer's test was 1 mm on the right and 2 mm on the left at 5 minutes, indicating a severe dry syndrome. Eyelid examination and corneal sensitivity were normal in both eyes.

An inflammatory blood test revealed an accelerated sedimentation rate of 90 mm in the first hour. A rheumatology consult was requested, and the biological workup for systemic disease revealed a high level of anti-rheumatoid factor and anti-CCP antibodies. Biopsy of the accessory salivary glands revealed Chisholm and Mason stage 3 sialadenitis.

The diagnosis was rheumatoid arthritis associated with secondary Goujerot-Sjögren's syndrome.

The patient was admitted to the rheumatology department after receiving a bolus of methylprednisolone 10 mg/kg for three days, followed by methylprednisolone 1 mg/kg orally combined with

wetting agents. There was a slight clinical improvement, and the addition of local ciclosporin helped with good progress and the healing of the ulcers in both eyes.

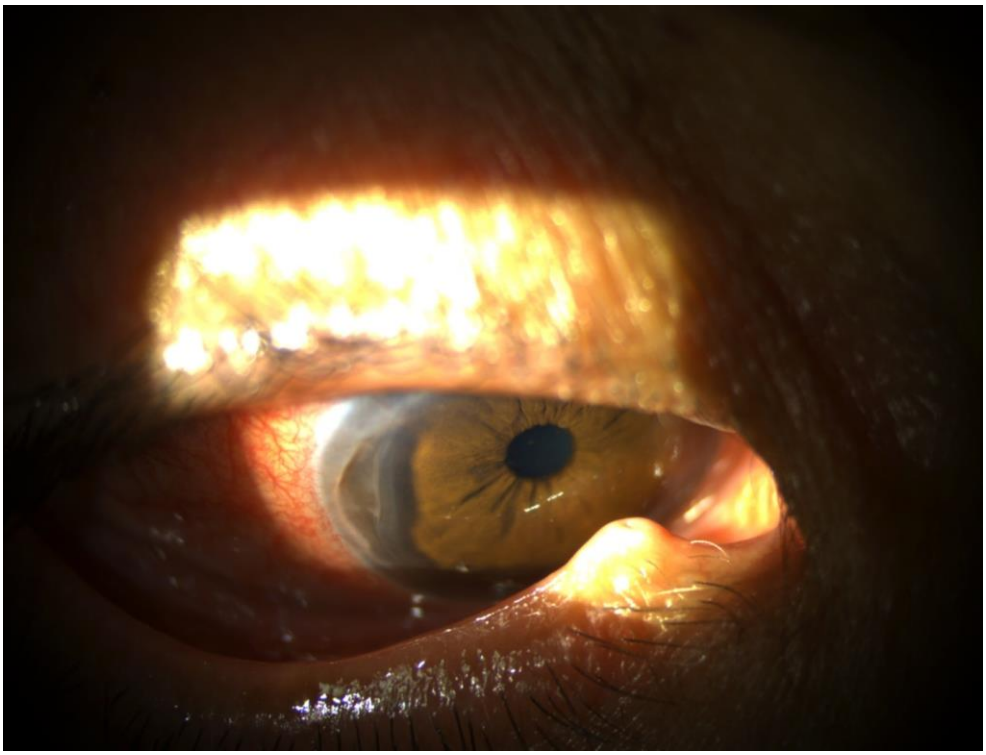

Figure 1: Peripheral corneal ulcer the right eye

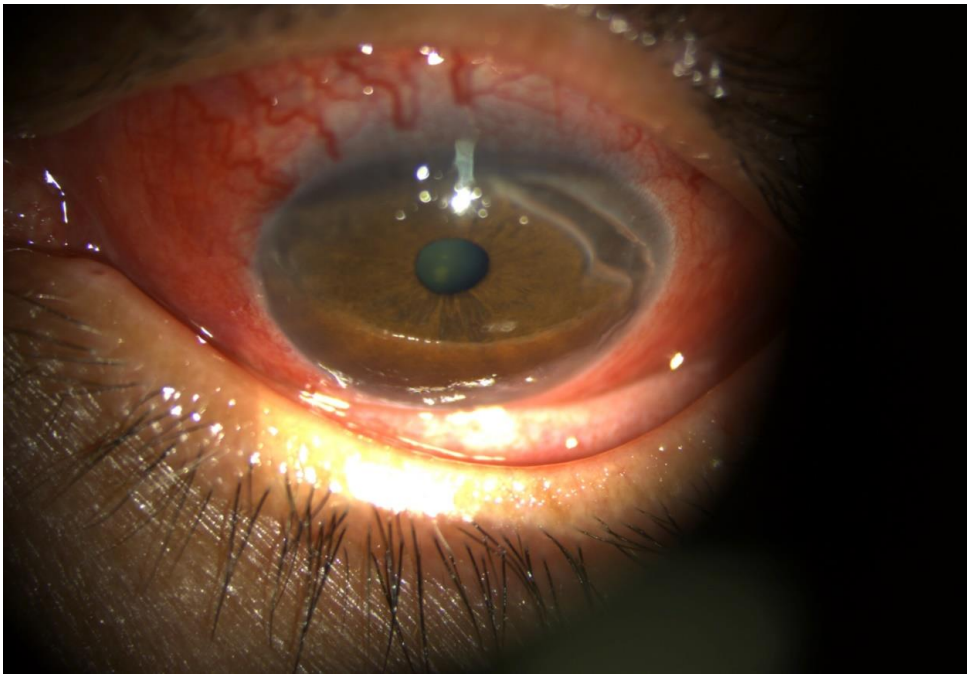

Figure 2: Peripheral corneal ulcer the left eye

DISCUSSION

The chronic inflammatory disease known as polyarthritis rhumatoïde (PR) primarily affects women and is characterized by a predisposition to the synovium. About 25% of individuals will experience an ocular ailment [1], primarily kérato-conjunctivite sèche (KCS), épisclérite, sclérite, and kératite. These symptoms are generally not very severe. However, a small percentage of patients have severe ocular inflammation, which is frequently linked to vascularite [2]. In the absence of timely immunosuppressive treatment, these individuals

typically develop corneous ulcers, which can lead to sclerotic lesions that can puncture and destroy the globe [3].

Undoubtedly, one well-known PR manifestation is cornéenne stérile. These patients experience two types of ulcers: those that appear in the central, paracentral, or peripheral cornea in calm eyes, and those that appear in the peripheral cornea and are frequently linked to an inflammatory scleritis. The development of central keratolysis is a very serious complication due to the significant risk of perforation [4].

The clinical presentation of KUP varies; patients describe pain, larrhea, and a decrease in visual acuity along with a feeling of being in another body [5].

The treatment mostly uses corticosteroids and muscle relaxants; it also calls for cooperation with the rheumatolog.

An inflammatory corneal disorder known as peripheral ulcerative keratitis is thought to impact three people out of every million annually [6]. It does not significantly favor one gender over the other and primarily affects older people [6-8]. Ocular redness, discomfort, tears, photophobia, and impaired vision are common presentation symptoms for patients. A crescent-shaped corneal ulceration (stromal thinning with an overlaying epithelial defect) in the peripheral cornea, 2 mm from the limbus, is the usual exam finding [10]. Due to its near proximity to the conjunctival arteries, which feed the inflammatory mediators that cause the disease, it is thought that the predilection for the periphery is secondary. Adjacent to the ulcer, there might be a localized conjunctival injection and a surrounding infiltrate. Although they might be bilateral, they are often unilateral [6, 7].

PUK and scleritis occur concurrently in 36–66% of cases [7].

Rheumatic pathology or systemic immune-mediated illnesses are linked to at least half of PUK instances [2, 6]. PUK may be the first sign of the illness in 25% of instances [6]. Rheumatoid arthritis is the most prevalent systemic association [6-8]. The majority of patients with polyarthritis rhumatoïde (PR), a chronic inflammatory illness, are female. It is estimated to occur in 3% of adults. Even though the etiology is unknown, the immunopathological mechanisms underlying it are gradually being identified. The typical rheumatoid arthritis is a progressive, chronic, peripheral, symmetric, deformable arthritis with unpredictable exacerbations. Even though there may be clinical regressions, the persistent deterioration of the articulations and the resulting deformities frequently result in significant disability [9].

About 1.4% of RA patients have UK, and about 25% of these people go on to get secondary Sjögren's Syndrome (sSS). In patients, bilateral corneal ulcers are not common. It is still unclear exactly what pathophysiology underlies ulcerative keratitis linked to RA [10].

Non-infectious bilateral corneal ulcers are rarely reported, especially in RA patients [11].

Regular ophthalmological assessments are necessary to detect any damage to the ocular surface as soon as possible and to prevent any side effects related to corticotherapy. However, if the patient exhibits eye pain, decreased visual acuity, localized conjunctival injection, or sudden tenderness in one eye, they should be referred to an ophthalmologist right away.

In summary:

During rheumatoid arthritis, sterile corneal ulcers are rare but very serious complications. It is necessary to raise awareness among those who suffer from this illness so they can consult in the necessary early stages. The course of treatment involves starting an immunosuppressive medication. The pejorative and inconsistent prognosis. To prevent visual loss, cooperation between treating physicians, rheumatologists, and ophtalmologists is essential.

REFERENCES

1. Klareskog, L., Rönnelid, J., Saevarsdottir, S., Padyukov, L., & Alfredsson, L. (2020). The importance of differences; On environment and its interactions with genes and immunity in the causation of rheumatoid arthritis. *Journal of Internal Medicine*, *287*(5), 514-533.
2. McKibbin, M., Isaacs, J. D., & Morrell, A. J. (1999). Incidence of corneal melting in association with systemic disease in the Yorkshire Region, 1995–7. *British Journal of Ophthalmology*, *83*(8), 941-943.
3. Nguyen, T. (2022). Kératolyse périphérique aseptique bilatérale: un signe cutané rare de la polyarthrite rhumatoïde. *Revue de Dermatologie*, *29*(4), 123-136.
4. Schwam, B. (1997). Scleritis. In: Krachmer, J., Mannis, M., Holland, E., editors. Cornea and External Disease: Clinical Diagnosis and Management. 1. II. Saint Louis: Mosby; p. 1479-1491.
5. Watson, P. G., & Hayreh, S. S. (1976). Scleritis and episcleritis. *British Journal of Ophthalmology*, *60*(3), 163-191.
6. Tauber, J., de la Maza, M. S., Hoang-Xuan, T., & Foster, C. S. (1990). An analysis of therapeutic decision making regarding immunosuppressive chemotherapy for peripheral ulcerative keratitis. *Cornea*, *9*(1), 66-73.
7. de la Maza, M. S., Foster, C. S., Jabbur, N. S., & Baltatzis, S. (2002). Ocular characteristics and disease associations in scleritis-associated

peripheral keratopathy. *Archives of Ophthalmology*, *120*(1), 15-19.

8. Cartwright, N. E. K., Tole, D. M., Georgoudis, P., & Cook, S. D. (2014). Peripheral ulcerative keratitis and corneal melt: a 10-year single center review with historical comparison. *Cornea*, *33*(1), 27-31.
9. Bongartz, T., Nannini, C., Medina-Velasquez, Y. F., Achenbach, S. J., Crowson, C. S., Ryu, J. H., ... & Matteson, E. L. (2010). Incidence and mortality of interstitial lung disease in rheumatoid arthritis: a population-based study. *Arthritis & Rheumatism*, *62*(6), 1583-1591.
10. Watanabe, R., Ishii, T., Yoshida, M., Takada, N., Yokokura, S., Shirota, Y., ... & Harigae, H. (2017). Ulcerative keratitis in patients with rheumatoid arthritis in the modern biologic era: a series of eight cases and literature review. *International Journal of Rheumatic Diseases*, *20*(2), 225-230.
11. Cartwright, N. E. K., Tole, D. M., Georgoudis, P., & Cook, S. D. (2014). Peripheral ulcerative keratitis and corneal melt: a 10-year single center review with historical comparison. *Cornea*, *33*(1), 27-31.