

# Peripheral Ulcerative Keratitis in a Rare Case of Reiters Disease

Dr. Richa Sharma<sup>1</sup>, Dr. Smita Mohod<sup>2</sup>, Dr. Gaurav Sharma<sup>3</sup>

<sup>1</sup>Senior Resident Department of Ophthalmology, TNMC and BYL Nair Hospital (Corresponding Author)

<sup>2</sup>Assistant Professor, Department of Ophthalmology, BJGMC and Sassoon General Hospital, Pune

<sup>3</sup>Senior Resident Astha Hospital, Shimla

**Abstract:** A 25 year old female presented with severe pain, photophobia and decreased visual acuity. On ophthalmic evaluation patient had peripheral corneal ulcer with corneal melting which lead to iris prolapse, hypopyon and multiple conjunctival ulcers. Patient also history of arthritis and urethritis. On conjunctival and corneal biopsy acute on chronic inflammation was reported. Patients were treated with systemic steroids and match and patch graft. Patient responded well to the treatment. The corneal patch graft was accepted well and the conjunctival ulcers were healed subsequently.

**Keywords:** Match and patch graft, Reiters disease, Peripheral ulcerative keratitis

## 1. Introduction

Peripheral ulcerative keratitis is a group of destructive inflammatory diseases involving the peripheral cornea. Peripheral cornea is an arbitrary central limit which begins 3.5 to 4.5 mm from visual axis extending to junction of ill - defined transition between limbus and conjunctiva. This zone of peripheral cornea is a highly vascular zone.

It is a rare inflammatory disease of the peripheral cornea with an incidence of 0.2–3.0 per million population per year. (1)

## 2. Case Report

A 25yearold female presented with severe pain, photophobia and sudden diminution of visual acuity within a span of 15 days. She also complained of small joint arthritis, mucocutaneous ulcer in oral and genital mucosa. On slit lamp evaluation peripheral corneal ulcer with corneal melting were noted along with multiple conjunctival ulcers and hypopyon in the anterior chamber. These mentioned findings can be observed in figure 1 and 2.



Figure 2: On Presentation



Figure 1: On Presentation

### Clinical Findings

Vision	Counting Fingers 2 Meters
LID	EDEMA
Conjunctiva	Multiple Ulcers
Cornea	Peripheral Ulcerative Keratitis at 7 O Clock And 2 O Clock
Anterior Chamber	Hypopyon Present
Iris Pupil	Pupil Peaked at 7 O Clock after 24 Hours
Lens	Clear

Over a span of next 24 hours, she developed iris prolapse.

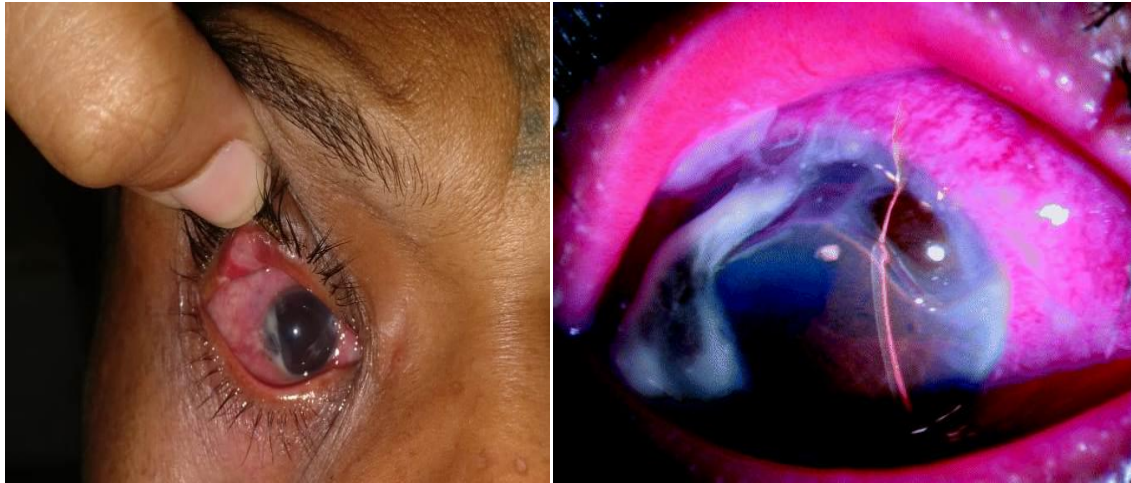


Figure 3 and Figure 4: Iris Prolapse at 2 O Clock

**Investigations**

Routine laboratory investigations were done including CBC, LFT, RFT along with ESR and C - reactive protein.

Conjunctival and corneal biopsy was taken. The results were as mentioned below:

ESR	54 mm/hr
CRP	7.1 mg/L
Rheumatoid Factor	Negative
Biopsy Histopathology	Acute on chronic inflammation was reported. Focally necrotic fibromuscular tissue with dense acute on chronic inflammation with overlying conjunctival ulceration.

The etiology was identified as autoimmune and the patient was started on corticosteroids and early intervention using MATCH AND PATCH GRAFT was done. Post operatively patient was started on topical steroids 0.1% PRENISOLONEACETATE along with topical antibiotics.

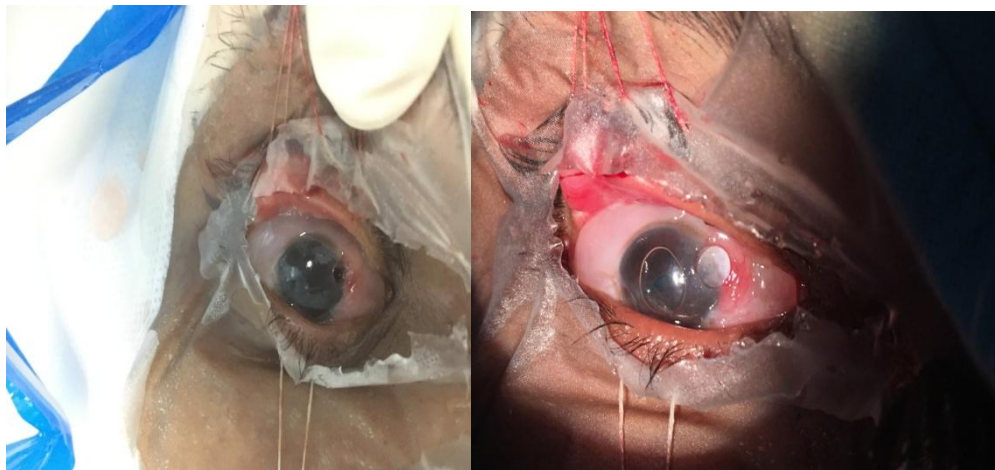


Figure 5 and 6: Intraoperative pictures

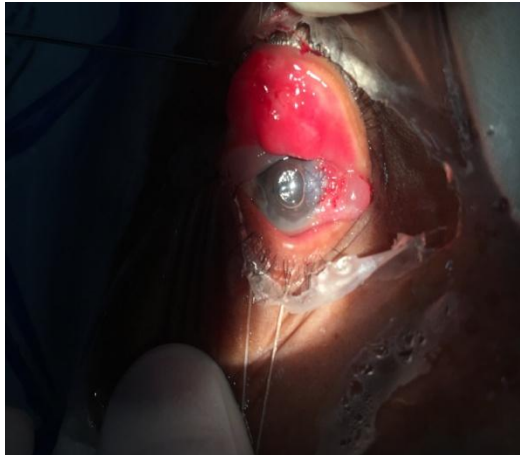


Figure 7: Immediate post operative



Figure 8: Post operative day 3

### 3. Results

Patient improved symptomatically with a reduction and healing of conjunctival ulcers. The corneal thinning process halted and match and patch graft was well accepted. Post operative vision 6/36 which improved to 6/12 on 7th postoperative day.

### 4. Discussion

Peripheral ulcerative keratitis is a multifactorial disease affecting the peripheral cornea as it is rich in vascular supply and lymphatic drainage.

Ocular causes of PUK can be infective or autoimmune. Bacterial, viral, fungal, and parasitic aetiology have been found in PUK. (2 - 4) Any patient of PUK should be assessed through detailed history, systemic workup and necessary laboratory investigations. A multi departmental approach is required to address all the symptoms and manifestations. Definitive treatment of PUK is match and patch graft which helps to maintain the corneal integrity.

In 1991, Kinoshita et al used donor corneal lenticules with intact epithelium along with conjunctival resection for treating 20 eyes with aggressive Mooren's ulcer. (5) Additional corneoscleral lamellar grafts were done in 5 eyes. With a follow - up period of 3.1 years, 90% eyes had complete recovery while on steroid therapy. Soong et al used

free hand dissected lamellar corneal patch grafts in 31 eyes with PUK. With an average follow - up period of 1 year, 17 cases maintained stable grafts with good visual outcome. Complications noted were corneal melt necessitating repeat patch graft, cataract and need for penetrating keratoplasty for visual recovery.

Sharma et al used crescentic and circular corneal patch grafts for 4 cases of moderate level and 5 cases of severe level of involvement in PUK (6) They achieved 100% anatomical success in moderate cases with maximum follow - up of 3 years with resolution rate 83.3% in the severe cases.

Reiters disease is characterized by triad of conjunctivitis, urethritis and arthritis. Being an autoimmune disease, it is important to start with corticosteroids to prevent further damage. The main goals of therapy in these patients are to control the systemic and local inflammatory process, halt keratolysis, prevent infection and promote healing. Autoimmune diseases are regarded as the invisible epidemic of the decade; therefore, it is necessary to increase awareness so that the symptoms are identified early and proper intervention is done

### References

- [1] Gupta Y, Kishore A, Kumari P, et al. Peripheral ulcerative keratitis. *Surv Ophthalmol.*2021; 66 (6): 977–998. <https://doi.org/10.1016/j.survophthal.2021.02.013>
- [2] Asbell P, Stenson S. Ulcerative keratitis: survey of 30 years' laboratory experience. *Arch Ophthalmol.*1982; 100: 77e80. doi: 10.1001/archophth.1982.01030030079005 [PubMed] [CrossRef] [Google Scholar]
- [3] Baum J, Fedulowica HB, Jordan A. A survey of Moraxella corneal ulcers in a derelict population. *Am J Ophthalmol.*1980; 90: 476e80. doi: 10.1016/S0002 - 9394 (14) 75014 - 7 [PubMed] [CrossRef] [Google Scholar]
- [4] Polack FM, Kaufman HE, Newmark E. Keratomycosis: medical and surgical treatment. *Arch Ophthalmol.*1971; 85: 41e6. doi: 10.1001/archophth.1971.00990050412003 [PubMed] [CrossRef] [Google Scholar]
- [5] Kinoshita S, Ohashi Y, Ohji M, et al. Long - term results of keratoepithelioplasty in Mooren's ulcer. *Ophthalmology.*1991; 98: 438–445. doi: 10.1016/S0161 - 6420 (91) 32272 - 3
- [6] Sharma N, Sinha G, Shekhar H, et al. Demographic profile, clinical features and outcome of peripheral ulcerative keratitis: a prospective study. *Br J Ophthalmol.*2015; 99: 1–6.