



## Pictorial Essay Cornea

# Progression of corneal sub-epithelial infiltrates in a case of undertreated epidemic keratoconjunctivitis

Balamurugan Ramatchandirane<sup>1</sup>, Divya Deepthi Syamala<sup>1</sup>, Pratyusha Ganne<sup>1</sup>

<sup>1</sup>Department of Ophthalmology, AIIMS, Mangalagiri, Andhra Pradesh, India.



### \*Corresponding author:

Balamurugan  
Ramatchandirane,  
Department of Ophthalmology,  
AIIMS, Mangalagiri,  
Andhra Pradesh, India.

bala16690@yahoo.co.in

Received: 15 September 2023

Accepted: 02 October 2023

Published: 31 October 2023

### DOI

10.25259/LAJO\_19\_2023

### Quick Response Code:



## ABSTRACT

A 27-year-old lady presented with watering, redness, blurring of vision and foreign body sensation in right eye since 3 days. On slit lamp examination, there was conjunctival follicular reaction and two pin head sized subepithelial infiltrates (SEI) suggestive of epidemic keratoconjunctivitis. Patient was started with ganciclovir 0.15% ointment along with fluorometholone-tobramycin drops with which patient relieved off her symptoms in 1 week and then discontinued herself but recurred with the same symptoms in 1 month. Initial two SEIs were progressed to six which all were disappeared after restarting fluorometholone-tobramycin drops. Presences of SEIs require prompt management with topical steroid and adequate treatment is needed till it resolved completely thereby permanent scarring of the cornea can be avoided.

**Keywords:** Progression of subepithelial infiltrates, Subepithelial infiltrates, Epidemic keratoconjunctivitis, Topical steroids

## INTRODUCTION

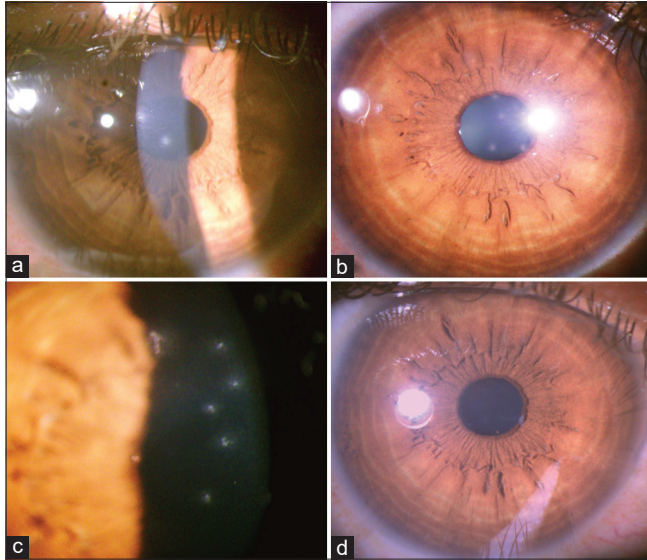
A 27-year-old lady presented with watering, redness, blurring of vision, and foreign body sensation in the right eye (RE) for 3 days following an episode of flu-like illness. Best corrected visual acuity (BCVA) was 20/40 (RE). Slit lamp examination showed conjunctival follicular reaction and two pinhead sized grayish lesions with a fluffy border in the central part of the right cornea (not staining with fluorescein dye) suggestive of sub epithelial infiltrates (SEI) [Figure 1a]. A clinical diagnosis of epidemic keratoconjunctivitis (EKC) was made and the patient was put on ganciclovir eye ointment (0.15%) 5 times a day along with a tapering dose of fluorometholone (0.1%) - tobramycin (0.3%) combination eye drops starting at 4 times a day and advised to follow-up 1 week later. The patient stopped treatment 1 week later since she was relieved off her symptoms. However, she came back with decreasing vision in the RE 1 month later. BCVA in the RE was 20/40. Slit lamp examination of her RE showed that the SEIs progressed and now there are six spots in the cornea [Figure 1b and c]. Treatment with fluorometholone (0.1%) - tobramycin (0.3%) combination eye drops was re-started at 4 times a day. At the end of 2 weeks, SEIs completely disappeared [Figure 1d] and BCVA improved to 20/20.

## DISCUSSION

SEI are pathognomonic for EKC.<sup>[1]</sup> These lesions develop because of the immune response of the host to the proliferating viral particles in the corneal sub-epithelial region.<sup>[2]</sup> The incidence of SEI following acute adenoviral EKC is reported to be between 49.1% and 80%.<sup>[3,4]</sup> Prompt resolution of

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2023 Published by Scientific Scholar on behalf of Latin American Journal of Ophthalmology



**Figure 1:** The various stages of subepithelial infiltrates. (a) Slit lamp photograph shows two greyish white pinhead sized subepithelial infiltrates in the central cornea. (b and c) Slit lamp photograph shows progression of subepithelial infiltrates to six spots following discontinuation of steroid at 1 month follow-up. (d) Slit lamp photograph shows complete resolution of subepithelial infiltrates after re-starting steroid treatment.

these lesions with topical steroids is seen. However, recurrences have been noted after stopping steroids. Left untreated/undertreated these lesions can progress to corneal scarring and cause significant visual morbidity.

## CONCLUSION

This case report demonstrates the photographic documentation of the progression of SEIs in case of inadequate treatment and also emphasize about adequate treatment to avoid such untoward outcomes.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflict of interest.

## Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

## REFERENCES

1. Pihos AM. Epidemic keratoconjunctivitis: A review of current concepts in management. *J Optom* 2013;6:69-74.
2. Thakur A, Chaudhary T, Kulshreshtha A, Gupta A. Corneal sub-epithelial infiltrates. *QJM* 2020;113:575.
3. Okumus S, Coskun E, Tatar MG, Kaydu E, Yayuspayi R, Comez A, *et al.* Cyclosporine a 0.05% eye drops for the treatment of subepithelial infiltrates after epidemic keratoconjunctivitis. *BMC Ophthalmol* 2012;12:42.
4. Butt AL, Chodosh J. Adenoviral keratoconjunctivitis in a tertiary care eye clinic. *Cornea* 2006;25:199-202.

**How to cite this article:** Ramatchandirane B, Syamala DD, Ganne P. Progression of corneal sub-epithelial infiltrates in a case of undertreated epidemic keratoconjunctivitis. *Lat Am J Ophthalmol* 2023;6:17.