

Overcoming the Abyss: Effective Management of a Gram-Negative Microbial Corneal Ulcer with Melting and Impending Perforation in a Contact Lens Wearer

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Abstract

Background: To present the management of a compelling case of gram-negative microbial corneal ulcer, accompanied by corneal melting and impending perforation in a 39-year-old female contact lens wearer.

Methods: Corneal scrapings for culture were taken. Owing to a strong suspicion of *Pseudomonas* being the offending agent, IV Ceftazidime 2gr x3 was incorporated into the regimen alongside with intense topical antibiotic drops.

Results: On a 5-day follow-up corneal melting subsided, the hypopyon had minimized, and the anterior chamber reaction had downgraded and cultures yielded *Pseudomonas*.

Conclusions: Post-discharge, she was followed in outpatient, scheduled for DALK.

Keywords: DALK, *Pseudomonas* Cornea Ulcer, Perforation, Contact Lens, Hot Therapeutic PK, Penetrating Keratoplasty, Gram Negative Bacteria.

Abbreviations

- **DALK:** Deep Anterior Lamellar Keratoplasty
- **BSCVA:** Best Spectacle Corrected Visual Acuity
- **OD:** Right Eye
- **OS:** left Eye
- **CCT:** Central Cornea Thickness
- **IV:** Intravenous
- **PK:** Penetrating Keratoplasty

Introduction

A 39-year-old otherwise healthy female contact lens wearer without any previous ocular history was referred the emergency department with pain and redness in her left eye (OS) ongoing for 5 days. The low CCT of 56 μ m as illustrated in tomography, as well as the rapid progression of the melting, indicated an urgent therapeutic PK, however the decision to follow the patient conservatively with medications was taken [1].

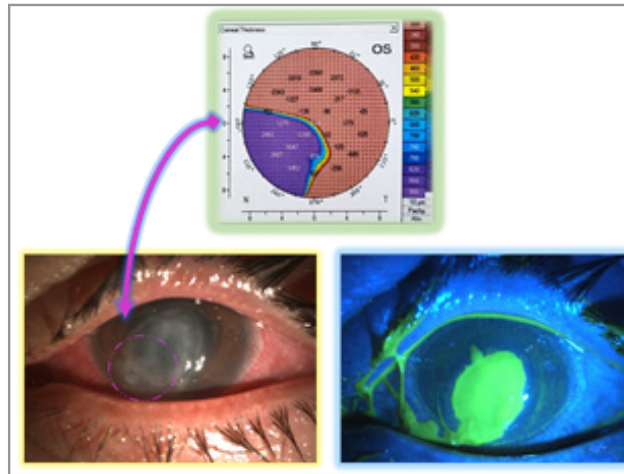


Figure 1: At presentation

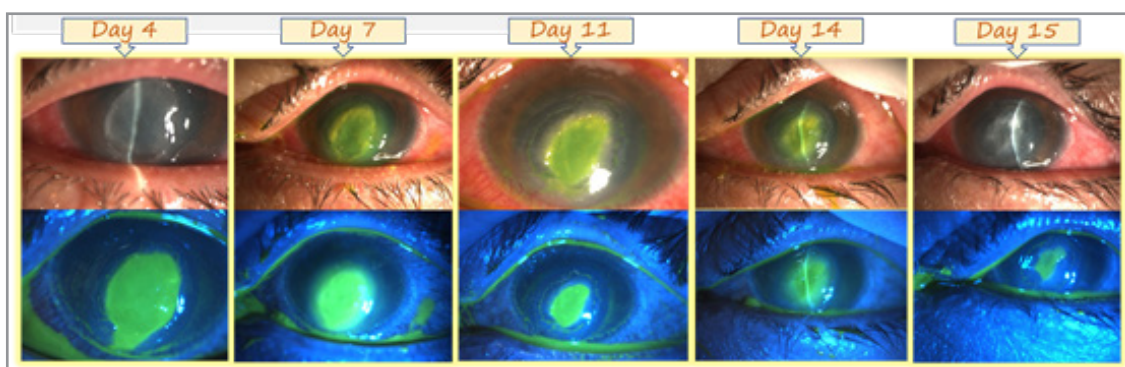


Figure 2a: Follow-up

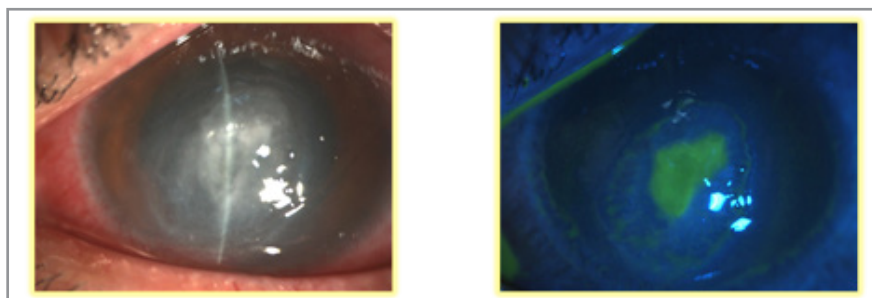


Figure 2b: At discharge

Materials and Methods

Slit lamp biomicroscopy of OS yielded conjunctival hyperemia with corneal melting. Anterior Chamber (AC) was deep, with significant inflammation (Tyndall +4), and a 3mm high hypopyon. All topical and systemic medications were discontinued for 6 hours as preparation for corneal scraping collection for culture. We switched treatment to Amikacin instilled every 15 minutes as a loading dose and then to hourly. Moreover, vancomycin was added. Owing to a strong suspicion of Pseudomonas being the offending agent intravenous (iv) Cefazidime 2gr x3 was incorporated into the regimen [2-4].

Results

On a 5-day follow-up corneal melting subsided, the hypopyon had minimized, and the anterior chamber reaction had downgraded to +2. Corneal scraping cultures yielded Pseudomonas. Epithelization of the ulcer was initially evident 5 days later and the patient was discharged.

Discussion

Post-discharge, she was followed in outpatient, scheduled for DALK since the endothelium and Descemet membrane were left intact by the infection. By these means we avoided a hot therapeutic PK and the risks that it entitles [5].

Conflicts of Interest

There are no conflicts of interest

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