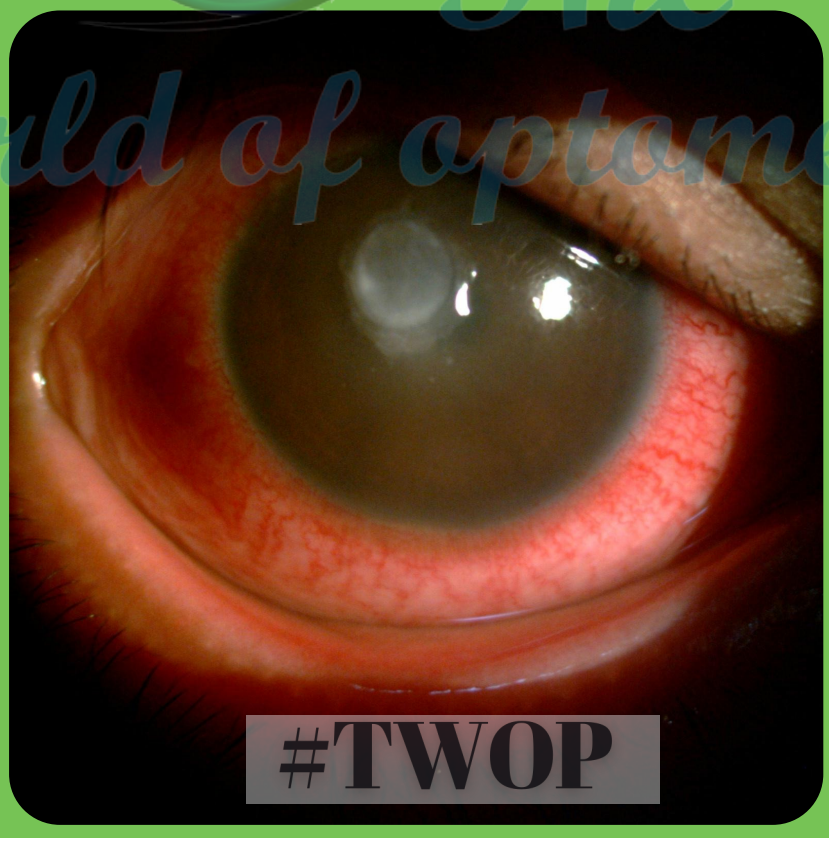
Globally United

The World of Optometry

Twop Case Study

Fungal Ulcer



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Patient History

CHIEF COMPLAINTS: 52 yrs old, Female, Pain, photophobia, redness, tearing, discharge, foreign body sensation in LE since 4 days.

OCULAR HISTORY: H/O Vegetative Trauma in LE 4 days ago

PAST MEDICAL HISTORY: None.

FAMILY HISTORY: None.

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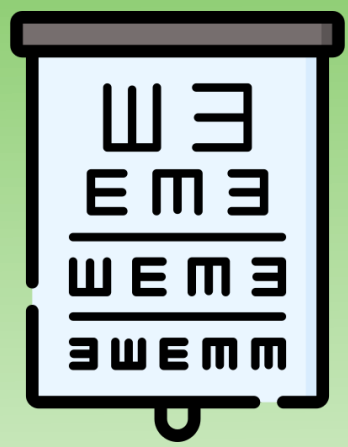
Clinical Examination



Distance Visual acuity (DVA) (uncorrected)

- RE 20/20 LE 20/160

EOM:

- Full

IOP (GOLDMANN)

- OD 17mmHg
- OS 24 mmHg

PUPILS:

- RRR

FUNDUS EXAMINATION

- OD: CD RATIO : 0.3,FR+
- OS: CD RATIO : 0.3,FR+

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Slit Lamp Examination

LIDS & LASHES

- OD Clean
- OS: Clean

CONJUCTIVA

- OD: Nad
- OS Congestion

CORNEA

- OD: Clear
- OS: feathery branching infiltrate, epithelial defect with stromal thinning, size 3mmx2mm

ANTERIOR CHAMBER

- OD D & Q
- OS Hypopeon

IRIS

- OD Brown, NAD
- OS Brown, NAD

LENS

- OD Clear
- OS Clear

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Diagnosis

Fungal Ulcer

Discussion

Fungal keratitis is generally seen when there has been ocular trauma or in immunosuppressed patients.

Types of Fungi

Filamentous Fungi

1. Septate

Monilaceae (Non-pigmented): Penicillium, Fusarium, Aspergillus
Dematiaceae (Pigmented): Curvularia, Cladosporium

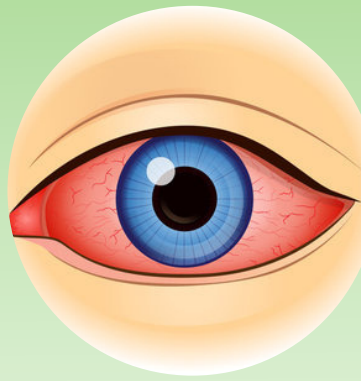
2. Non-septate

Mucor, Rhizopus

Yeasts

Candida, Cryptococcus
Dimorphic (Filamentous at 25 degrees and yeasts at 37 degrees)
Blastomyces, Coccidiomyces.

Discussion



Pathogenesis

Predisposing Factors

- Ocular trauma like injury with finger nail or tail of animal: Filamentous fungi
- Ocular surface disease like chronic contact lens wear or chronic use of antibiotics: Yeasts
- Systemic conditions: Diabetes, malnutrition, alcoholism, patient on immunosuppressives.

Symptoms:

Pain, photophobia, redness, tearing, discharge, foreign body sensation.

Signs:

Critical

- Filamentous fungi: Corneal stromal gray-white opacity (infiltrate) with a feathery border. The epithelium over the infiltrate may be elevated above the remainder of the corneal surface, or there may be an epithelial defect with stromal thinning (ulcer).
- Nonfilamentous fungi: A gray-white stromal infiltrate similar to a bacterial ulcer.

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Treatment

1. Admission to the hospital may be necessary, unless the patient is reliable. It may take weeks to achieve complete healing.
2. Natamycin 5% drops (especially for filamentous fungi), amphotericin B 0.15% drops (especially for Candida), or topical fortified voriconazole 1% initially q1–2h around the clock.
3. Cycloplegic (e.g., cyclopentolate 1% t.i.d.; atropine 1% b.i.d. to t.i.d. is recommended).
4. Consider adding oral antifungal agents. Oral antifungal agents are often used for deep corneal ulcers or suspected fungal endophthalmitis.
5. Consider epithelial debridement to facilitate the penetration of antifungal medications. Topical antifungals do not penetrate the cornea well, especially through an intact epithelium.
6. Eye shield, without patch, in the presence of corneal thinning.

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Follow-Up

Follow-up:

Patients are reexamined daily at first. However, the initial clinical response to treatment in fungal keratitis is much slower compared to bacterial keratitis. Stability of infection after initiation of treatment is often a favorable sign.

Fungal infections in deep corneal stroma are frequently recalcitrant to therapy.

Corneal transplantation may be necessary for infections that progress despite maximal medical therapy or corneal perforation.

Anterior lamellar keratoplasty is relatively contraindicated because there is a high risk of recurrence of infection

Wow, what a cool content

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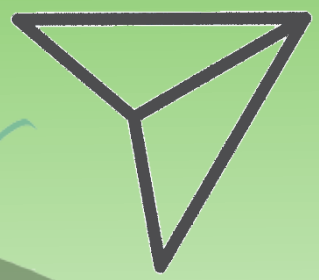

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