Managing a difficult case of fungal corneal ulcer.

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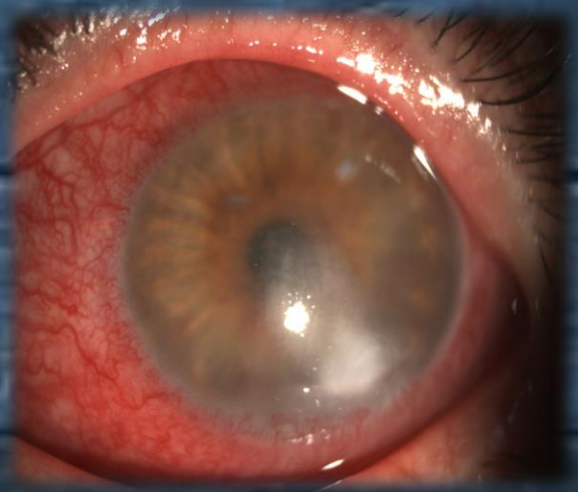
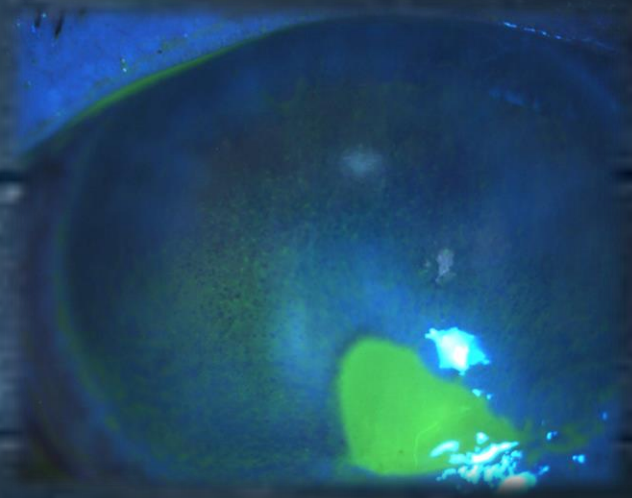
Case presentation

- A 48-year-old male gardener walked in reporting prior injury on his left eye caused by plant debris.
- **Slit lamp biomicroscopy** revealed a corneal ulcer 1mm proximal to the limbus, accompanied by
  - a fibrous stromal plaque,
  - generalized corneal edema and
  - endothelitis.
  - Anterior chamber rection was severe (tyndal +4).





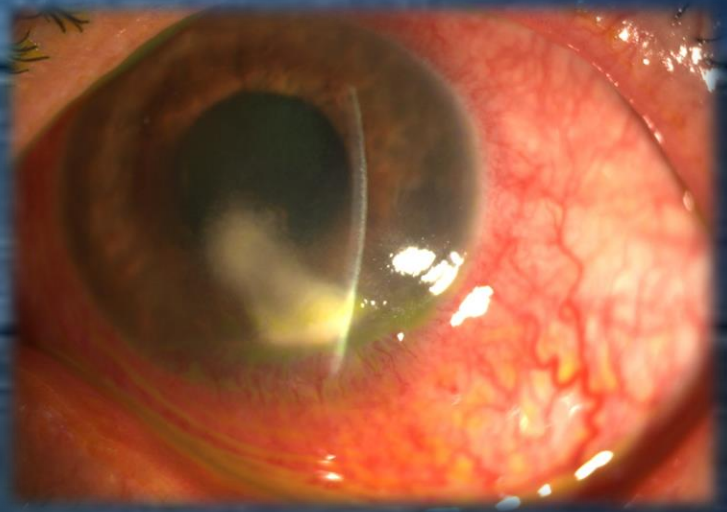
Our course of action

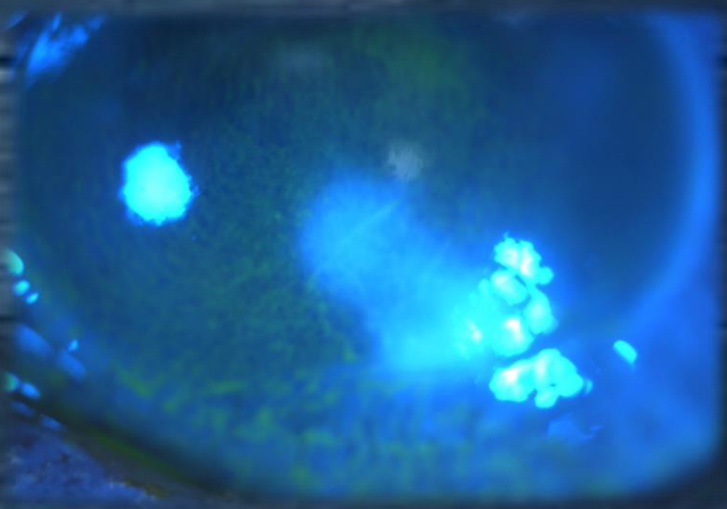
- **Corneal scrapings**

came back positive for **Aspergillus Tereus** sensitive to voriconazole.

- **Medical therapy:**
  - Topical
    - vancomycin x8,
    - amikacin x8,
    - voriconazole hourly,
    - and artificial tears every four hours was initiated.
  - Oral
    - voriconazole twice a day

Within 4 weeks of daily observation, the ulcer margins shrinked and the A/C became quiet.

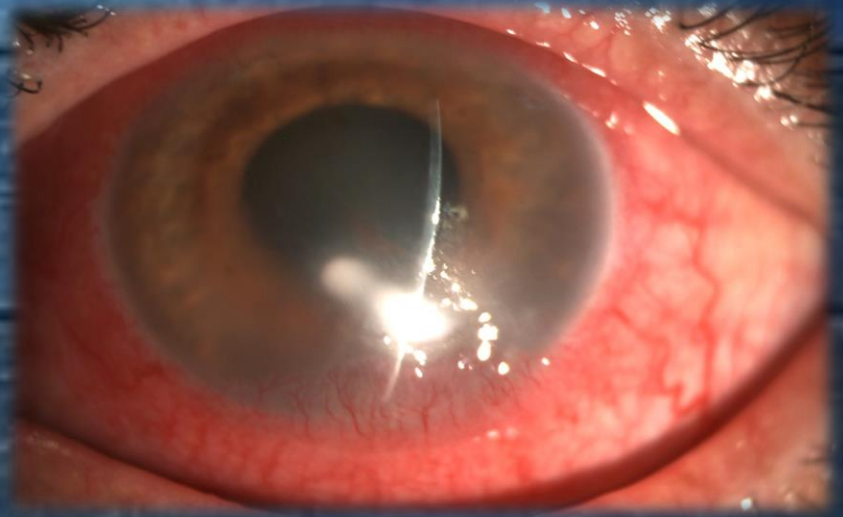




The unexpected turn

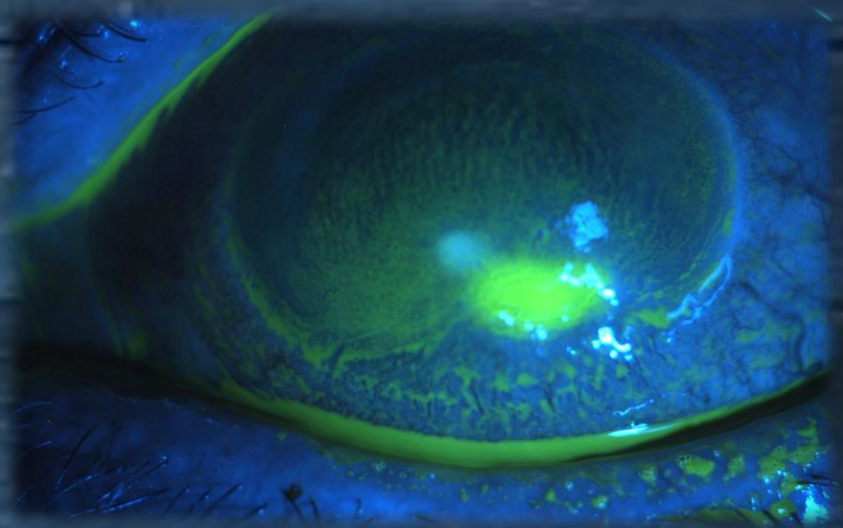
Shortly before discharge the following emerged

- endothelitis with descemet folds,
- infiltrate extension and
- significant anterior chamber reaction.
- IOP rise.



Topical treatment switched to

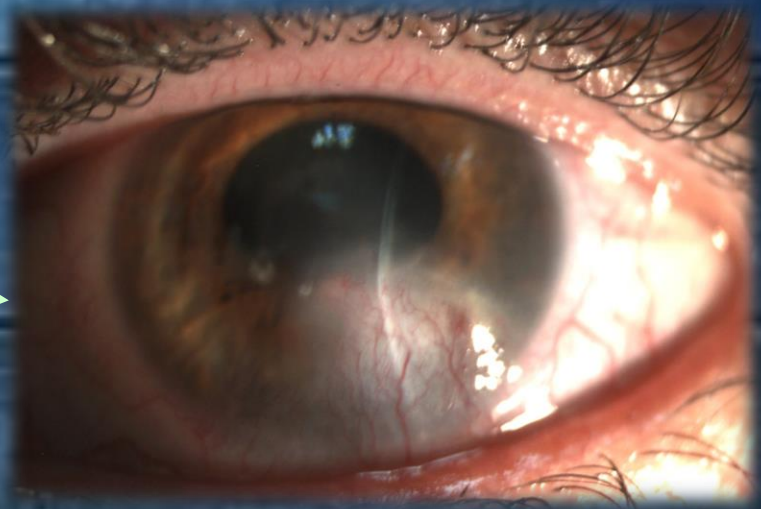
- topical ofloxacine x4,
- oral and topical voriconazole were resumed
- Incorporation of oral valacyclovir 500mg x2 and
- topical atropine x2
- due to the suspicion of herpetic co-infection.

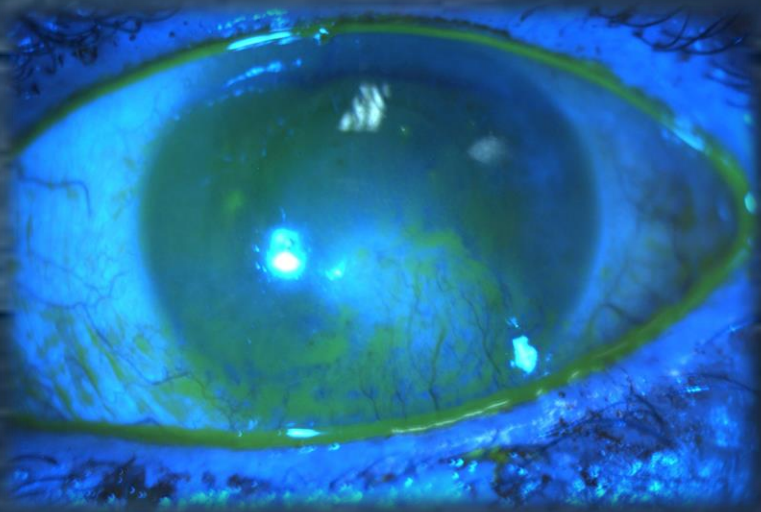


The final outcomme

- Within 2 additional weeks of observation
  - the ulcer resurfaced ,surrounded by an infiltrate and accompanied by a neovascular pannus.
  - A/C became quiet
  - IOP normalized
  - Endothelitis subsidided and Descemet folds disappeared

Discharge regimen involved
- oral voriconazole x2,
- topical
  - voriconazole hourly,
  - ofloxacin x4,
  - atropine x3,
  - artificial tears and
  - tobramycin ointment x1 at nighttime.





Conclusion

- Managing a fungal corneal ulcer is incredibly challenging.
- One should also take into account
  - Not only the duration of the therapy but also the patient's adherence to treatment
  - Tackling of any simultaneous herpetic co-infection, which may further complicate the clinical picture
  - IOP and A/C reaction assessment as decisive factors.

- **An important take home message**
- unlike bacterial ulcers, epithelial healing in fungal keratitis is not always a sign of positive response, as **healing impends penetration of topical medication.**

Citations

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- Wang, J. Y., Wang, D. Q., Qi, X. L., Cheng, J., & Xie, L. X. (2018). Modified ulcer debridement in the treatment of the superficial fungal infection of the cornea. International journal of ophthalmology, 11(2), 223–229. https://doi.org/10.18240/ijo.2018.02.07