

CLINICAL PRACTICE Clinical Images

Hyperacute Gonococcal Keratoconjunctivitis

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A sexually active 37-year-old man presented with 1 week of rapidly worsening eye pain unimproved with antibiotic drops. Exam revealed bilateral copious mucopurulent discharge that reappeared within minutes of wiping (Fig. 1), lid edema, conjunctival chemosis, complete right corneal "melting," and left full-thickness perforating ulcerations. Parenteral ceftriaxone and every hour moxifloxacin drops were started and he emergently underwent bilateral ophthalmologic salvage surgery. Intracellular gram-negative diplococci on gram stain grew Neisseria gonorrhoeae (Fig. 2). Though otherwise asymptomatic, a urethral sample was positive for gonococcal urethritis. After weeks of therapy, including full-thickness corneal transplant, vision was 20/30 in the left eye and light perception only in the right.

Adult gonococcal conjunctivitis, while infrequent, is important to recognize because, unlike more common forms of bacterial conjunctivitis, gonococcus can cause corneal perforation (effectively an open globe) requiring surgical repair. Left untreated, corneal destruction can lead to blindness within hours. Copious hyperpurulent discharge (described as "fountain of pus") that reappears quickly after wiping away is highly suggestive and warrants immediate parenteral and topical antibiotics, microbiologic evaluation, ophthalmologic consultation, and hospitalization. Testing for HIV and sexually transmitted diseases is warranted as concomitant urethritis is common. Recognized and treated prior to corneal damage, outcomes are favorable. Advanced in the common of the

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Compliance with Ethical Standards:

Patient provided written consent to use of his story and images including photos of face for publication for the purposes of education.



Fig. 1 Photograph of ocular hyperpurulent discharge on patient presentation. Discharge returned several minutes after being wiped away.

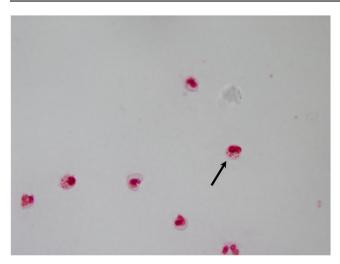


Fig. 2 Gram stain demonstrating intracellular gram-negative diplococci (arrow) within neutrophils, that on culture grew *Neisseria gonorrhoeae*.

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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REFERENCES

- 1. **Leibowitz HM.** The red eye. N Engl J Med. 2000;343(5):345–51. Review.
- Alteveer JG, McCans KM. The red eye, the swollen eye, and acute vision loss: handling non-traumatic eye disorders in the ED. Emerg Med Practice. 2002;4(6):1–26.
- Donham BP, Gibler WB. Images in emergency medicine. Gonococcal conjunctivitis. Ann Emerg Med. 2008;52(1):11-16. https://doi.org/10. 1016/j.annemergmed.2007.10.003.
- Wan WL, Farkas GC, May WN, Robin JB. The clinical characteristics and course of adult gonococcal conjunctivitis. Am J Ophthalmol. 1986;102(5):575–83.