



Picture of a Microorganism

Keep an eye on *Neisseria gonorrhoeae*

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To the editor

A 21-year-old man was admitted to the ophthalmic emergency department for purulent unilateral keratoconjunctivitis which began 3 days previously. He had no medical history but he reported unprotected anal sex with another man 10 days before. He did not report any other symptom, and notably there were no signs of urethritis. He had an abundant purulent conjunctival discharge associated with an important chemosis associated with eyelid swelling (Fig. 1).

Direct examination of a conjunctival pus swab revealed several gram-negative diplococci in neutrophil cytoplasm (Fig. 2). A specific nucleic acid amplification test (NAAT) and culture of the conjunctival sample were positive for *Neisseria gonorrhoeae* which was fully susceptible to ceftriaxone. *N. gonorrhoeae* NAAT was also positive in first-void urine and in rectal and oropharyngeal swabs. He had no other sexually transmitted diseases (STIs), especially no HIV infection. He was administered intravenous ceftriaxone 75 mg/kg and doxycycline 200 mg/day for 5 days, together with ceftazidime and



Fig. 1. Gonococcal keratoconjunctivitis with a purulent conjunctival discharge.

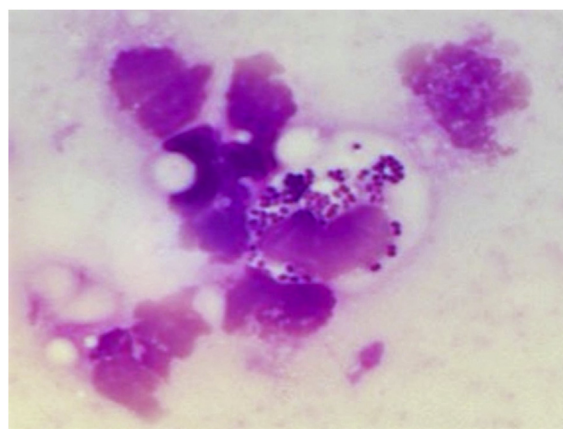


Fig. 2. Numerous gram-negative diplococci in the cytoplasm of a neutrophil, all over its heart-shaped nucleus.

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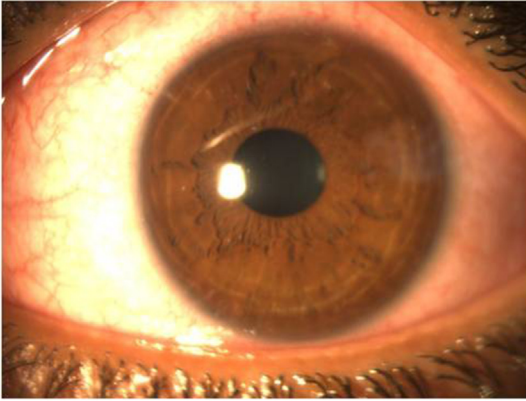


Fig. 3. Clinical cure of the gonococcal conjunctivitis after 6 days.

rifampicin eye drops. Symptoms rapidly improved and he was considered cured at the end of antibiotic treatment (Fig. 3).

N. gonorrhoeae is usually responsible for STIs, especially urethritis, proctitis, vaginitis, and most frequently extragenital infections (pharyngeal and anal). Keratoconjunctivitis is rarely observed in adults. For instance, in 2015 in Ireland, gonococcal conjunctivitis prevalence was only 0.9 cases per 1000 eye-emergency attendees [1]. This infection could be transmitted by

direct or manual contact with infected urine or genital secretions. Depending on the virulence of the isolate, this ocular infection may be extremely severe as it can lead to ulcerative keratitis, corneal perforation and endophthalmitis. Misdiagnosis and delayed treatment can be dramatic for visual prognosis. Gonococcal keratoconjunctivitis must be borne in mind for patients with high-risk sexual behaviour suffering from purulent conjunctivitis. Direct examination of conjunctival pus allows a rapid diagnosis and specific local and systemic therapy.

Author contributions

MM, VS, TG, DL, CCazanave and MP cared for the patient. MM and MP drafted the manuscript. BB, BDB and CB acquired, analysed and interpreted the data. CCastor conducted epidemiological investigations. All authors revised the manuscript.

Transparency declaration

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Reference

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