

# Adult gonococcal keratoconjunctivitis with AIDS

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## Abstract

**Gonococcal eye infection in adults is an uncommon cause of blindness, where prompt diagnosis and effective treatment are essential in the prevention of ophthalmic morbidity. We present a case report detailing the management and complications encountered in this condition in a patient coinfecting with human immunodeficiency virus (HIV).**

Adult gonococcal ophthalmic infection is an uncommon but preventable cause of blindness. From 1970 to 1987 three cases, all men, were identified out of 16600 cases of adult male gonorrhoea seen at the Genitourinary Department of the London Hospital (Whitechapel Clinic). We describe one of these cases to highlight the importance of prompt diagnosis and treatment, screening for concomitant sexually transmitted diseases (STD), and the possible role of human immunodeficiency virus (HIV) infection in modifying host response to gonococcal eye disease.

## Case report

A 42-year-old homosexual telephonist had noticed over a period of 10 days failing vision and greenish discharge from his left eye. He was prescribed antibiotic eye drops at his local casualty department. He failed to respond after a week of treatment, and the other eye became involved. He had no genitourinary symptoms and there was no history of STD. He had, however, lost 8 kg in weight in the previous six months. There was profuse bilateral purulent conjunctivitis, with chemosis and lysis of 90% of the left cornea to a depth of Descemet's membrane, with a flat anterior chamber. Proctoscopy revealed heavy mucopurulent rectal discharge. Gram-negative intracellular diplococci were identified from conjunctival and rectal smears, and confirmed as penicillin-sensitive *Neisseria gonorrhoeae* on culture. Other investigations: specific tests for syphilis were positive, haemoglobin concentration was 108 g/l, white cell count  $5.3 \times 10^9/l$ , normal complement levels and a markedly depressed CD4+ lymphocyte count ( $0.014 \times 10^9/l$ , <1% total lymphocytes).

He was given intravenous cefotaxime 2 g, then 1 g eight-hourly, together with probenecid orally 500 mg six-hourly for 10 days and, initially hourly, cefuroxime 5% eye drops. HIV antibody testing was performed after counselling in view of the severity of the oculo-genital infection, significant weight loss, and to help decide on the feasibility of embarking upon protracted reconstructive corneal surgery.

He was found to be HIV-antibody positive,

and a temporary tarsorrhaphy of his left eye was performed. Vision in his right eye returned to normal. Although the integrity of the left globe was retained with slow regrowth from the periphery of new but scarred corneal tissue, vision in this eye was limited to counting fingers. He died three months later from the acquired immune deficiency syndrome (AIDS), weighing 33.5 kg, having developed severe intractable diarrhoea and *Pneumocystis carinii* pneumonia.

## Discussion

Gonococcal ophthalmic infection should be considered in the differential diagnosis of purulent conjunctivitis, since anogenital symptoms may be absent, or, if they are present, patients may not readily connect their ocular complaint with genital infection. In the preantibiotic era these cases frequently progressed to corneal perforation within 24 hours.<sup>1</sup> The increasing prevalence of chromosomal-mediated and penicillinase-producing *N. gonorrhoeae* further emphasise the importance of treating this sight threatening infection promptly with effective antibiotics.<sup>2</sup>

Systemic therapy is essential to cover the ocular and genital infections, which almost inevitably coexist, though additional local ocular therapy may help hasten recovery. HIV infection may have contributed to the subtotal corneal perforation, since bacterial infections occur more frequently and severely in the context of immune deficiency.<sup>3</sup> Serious corneal involvement caused by penicillinase-producing *N. gonorrhoeae* has also been reported from the Central African state of Rwanda.<sup>4</sup> However, Rwanda is an area of high HIV seroprevalence,<sup>5</sup> and it is possible that the severity of gonococcal ophthalmic infection encountered was also associated with HIV coinfection.

The complications of ocular gonococcal infection are preventable. A presumptive diagnosis can readily be made on Gram-stained smear, and treatment should be with systemic antibiotics effective against both penicillin-sensitive and penicillinase-producing strains of *N. gonorrhoeae*. Screening for concomitant STD in these patients and their sexual partners should form an integral part of management.

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