

# Self-inflicted Chronic Bacterial Keratoconjunctivitis Using Self Semen

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This case report describes a case of self-inflicted chronic bacterial keratoconjunctivitis involving the patient's own semen. A 20-year-old male soldier was referred to our clinic for the evaluation of refractory chronic bacterial conjunctivitis. Over the previous 4 months, he had been treated for copious mucous discharge, conjunctival injection, and superficial punctate keratitis in both eyes at an army hospital and a local eye clinic. Despite the use of topical and systemic antibiotics according to the results of conjunctival swab culture, there was no improvement. During the repeated smear and culture of conjunctival swabs, surprisingly, a few sperm were detected on Gram staining, revealing that the condition was self-inflicted bacterial keratoconjunctivitis involving the patient's own semen. Thus, in cases of chronic keratoconjunctivitis that do not respond to appropriate antibiotic treatment, self-inflicted disease or malingering should be considered.

**Key Words:** Keratoconjunctivitis, Malingering, Self-inflicted disease

Self-inflicted eye injuries are rare, but are important because the diagnosis can be difficult. Ocular injuries related to self-inflicted disease vary from self-enucleation to mild conjunctivitis or minor surface irritation [1]. When the signs and symptoms are intentionally produced by patients for a secondary gain, it is difficult for clinicians to identify the underlying cause and to manage the signs and symptoms [2]. Soldiers who were recruited into mandatory military service may harm themselves in order to be exempt from military duties [3,4]. We report a case of a 20-year-old male soldier who was referred for evaluation of refractory chronic bacterial keratoconjunctivitis, which was finally revealed to be a case of self-inflicted disease involving the patient's own semen.

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## Case Report

A 20-year-old male soldier was referred to our clinic for the evaluation of refractory chronic bacterial conjunctivitis. Over the previous 4 months, he had been treated for copious mucous discharge, conjunctival injection, and superficial punctate keratitis on both eyes at an army hospital and a local eye clinic. The transfer note stated that *Citrobacter koseri* was cultured from a conjunctival swab, but targeted topical and systemic antibiotic treatment based on antimicrobial susceptibility testing had not been effective.

In our clinic, he also complained of ocular redness, pain, and severe discharge in both eyes. Best-corrected visual acuity was 20 / 20 in both eyes. Slit lamp examination showed multiple punctate erosions on the inferior cornea and severe conjunctival injection on both bulbar and palpebral conjunctiva (Fig. 1). Mucous discharge was observed in both eyes (Fig. 2). Other ophthalmic examinations were within normal limits.

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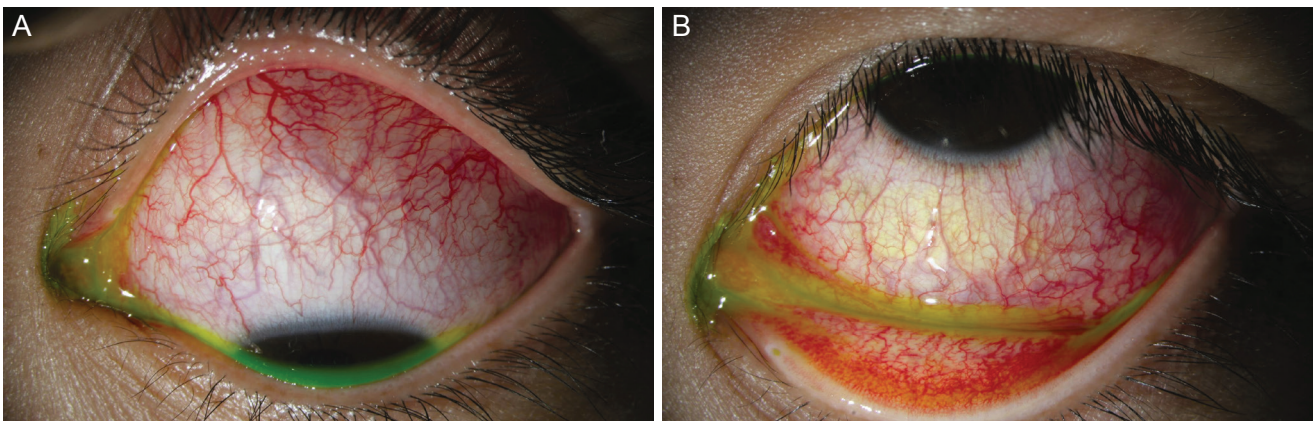
Prior to topical antibiotic treatment, conjunctival swabs were collected for smear and culture. Moxifloxacin 0.5% ophthalmic solution (Vigamox; Alcon Laboratories, Fort Worth, TX, USA) was prescribed for use every 2 hours. The conjunctival swabs revealed a mixed infection of *Acinetobacter baumannii* and *Staphylococcus xylosus*. As *S. xylosus* was reported to be resistant to moxifloxacin, topical vancomycin eye drops were added; however, despite 4 weeks of topical antibiotic treatment, the patient showed no improvement. On the repeated conjunctival swabs, microorganisms continued to be cultured, but different bacterial strains were observed, including *A. baumannii* and *Chryseobacterium indologenes*. The patient's complete blood count was normal, and serologic tests such as human immunodeficiency virus antibody were negative.

During the repeated smear and culture of conjunctival

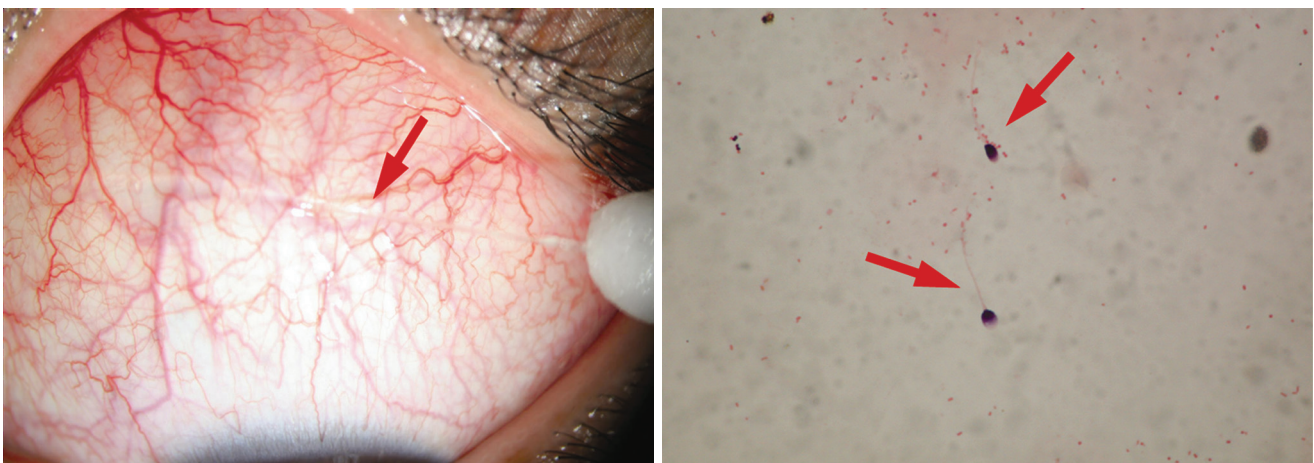
swabs, surprisingly, a few sperm were detected on Gram staining (Fig. 3), revealing that the condition was a self-inflicted bacterial keratoconjunctivitis involving the patient's own semen. We informed the patient and his father of the smear results and recommended a psychiatric consultation.

## Discussion

Many different types of self-inflicted eye injuries have been reported including self-enucleation, penetrating orbital injuries using pens and pencils, endophthalmitis, corneal infection, lens dislocation, and retinal detachment [1,5,6]. They are usually associated with psychiatric disorders, such as schizophrenia, drug-induced psychosis, obsessive-compulsive disorder, depression, and mental retarda-



**Fig. 1.** The external photographs of the patient at the first visit. Severe conjunctival hyperemia is observed on both upper (A) and lower (B) bulbar conjunctiva.



**Fig. 2.** Sticky mucous discharge (arrow) on both eyes.

**Fig. 3.** A few sperm (arrow) are observed on Gram staining.

tion [1,6]. Organic mental disorders like temporal lobe epilepsy, encephalitis, or neurosyphilis also have been associated with self-inflicted eye injuries [7,8].

The diagnosis of self-inflicted eye injuries can be divided into malingering and factitious disorder according to the existence of external incentives. The intentionally feigned signs and symptoms of malingering are consciously motivated by a secondary gain, a recognizable external incentive [9]. However the feigned symptoms of factitious disorder satisfy the unconscious need for a primary gain which arises from the motivation of assuming the sick role [2]. External incentives, such as an exemption from military duties, are absent in the case of factitious disorder. Malingering can also be distinguished from factitious disorder by whether or not there is implied psychopathology [9]. However, it can be difficult for an ophthalmologist to distinguish whether conjunctivitis is self-inflicted or not. Furthermore, it is even more difficult to discern whether a self-inflicted behavior arises from conscious or unconscious origins, and whether the patient's primary motive is to assume the sick role or to acquire secondary gains. Collateral information from family, friends, or a psychiatrist is needed.

In this case, the patient was compulsorily conscripted into the army. Whenever he sought treatment for his eye problem, he could avoid military duties, and he showed a surprising lack of concern that his condition was not responding to treatment. He was diagnosed as malingering because the signs and symptoms were thought to be motivated by a secondary gain, an exemption from military duties.

Self-inflicted conjunctivitis is relatively common in both prisoners and soldiers [4,10]. Pokroy and Marcovich [4] studied 17 soldiers with self-inflicted conjunctivitis. They summarized the reliable signs of self-inflicted conjunctivitis as follows: purulent discharge purposely left on the lashes and periorbital skin, severity of the discharge greater than that of the conjunctival hyperemia, severity of the conjunctival chemosis less than that of the conjunctival hyperemia, predominantly inferior conjunctival involvement, and uninvolved cornea. However, in this patient, the conjunctival hyperemia was severe on both superior and inferior conjunctiva and many microorganisms continued to be cultured from conjunctival swabs. This patient caused mucous discharge, severe conjunctival hyperemia, and bacterial conjunctivitis with his own semen. In previous reports,

various methods, such as paper, cotton wool, jequirity, and castor oil were used to produce keratoconjunctivitis [3,11].

In cases of chronic keratoconjunctivitis that do not respond to appropriate antibiotic treatment, self-inflicted disease or malingering should be considered. Laboratory examination can provide diagnostic clues, including unusual pathogens like those seen in this patient. The attitude of the patient may also provide helpful information for diagnosis, because some factitious patients show a happy, unconcerned, and/or detached attitude regarding their medical problems [12].

Malingering does not imply psychopathology; however, psychiatric consultation should be considered in these patients because the condition may coexist with true mental disorders such as major depressive, bipolar, and personality disorders.

## Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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