Case Report

STERILE HYPOPYON IRIDOCYCLITIS DURING THE TREATMENT OF PSEUDOPHAKIC BULLOUS KERATOPATHY WITH HYDROPHYLIC BANDAGE LENS

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ABSTRACT

Hydrophilic bandage lenses have proven to be a useful treatment modality in bullous keratopathy for pain relief and visual improvement. Some complications may arise after the application of bandage lenses. We present a sterile hypopyon iridocyclitis case in a pseudophakic bullous keratopathy using a bandage contact lens.

Key Words: Hypopyon iridocyclitis, Bandage contact lens

INTRODUCTION

Pseudophakic bullous keratopathy, which is one of the late postoperative complications of cataract surgery is quite a disturbing condition to the patients. Hydrophilic bandage lenses have proven to be a useful adjunct in the treatment of bullous keratopathy for the relief of pain and improvement in vision. It is important to be aware of complications due to the usage of hydrophilic contact lenses.

Here we present a sterile hypopyon iridocyclitis case in a pseudophakic bullous keratopathy using a bandage contact lens.

CASE REPORT

An 85-year-old woman underwent an uneventful right extracapsular cataract extraction with posterior chamber intraocular lens (IOL) implantation in April 1997. The best-corrected visual acuity was 0.6 on the second postoperative month. Macular atrophic pigment epithelial changes were noticed in the fundoscopic examination. In October 1998, patient was admitted with the complaint of decreased vision and pain in pseudophakic eye. On examination, corneal endothelial decompensation with striate keratopathy and epithelial bullae were noted and the visual acuity was 0.05. A plano powered T-Bausch & Lomb soft hydrophilic contact lens (polymacon polymer, 38.6% water content) was inserted in this eye. After 7 days, the contact lens was accidentally removed by the patient while rubbing the eye. The contact lens was reinserted after cleaning and disinfection with a chemical disinfectant (Bausch and Lomb Multipurpose Contact Lens Solution). Three days later the patient had severe pain, redness, photophobia and decreased vision to the level of light perception. There was a paracentral corneal epithelial defect without stromal infiltrate, stromal edema and a 3 mm hypopyon iridocyclitis was present (Fig. 1). Direct examination and cultures of the eyelids and conjunctiva, anterior chamber tap were negative. Contact lens was removed and the patient was treated with cycloplegics, hourly topical fortified antibiotics and patching for three days. There was no improvement of the signs and symptoms. Topical antibiotic dosage was lowered and a topical corticosteroid (0.1% flouromethalone qid.) was added in to the treatment. Over the course of next 5
Sterile hypopyon iridocyclitis

Days hypopyon cleared completely and epithelial defect healed (Fig. 2). The visual acuity returned to level of 0.05.

**DISCUSSION**

In 1970, Gasset and Kaufman, reported success in the therapeutic use of soft contact lenses in corneal disease (1). Since that report, bandage contact lenses have been used with varying degrees of success in some medical and surgical corneal diseases. Risks and benefits must be carefully weighed for any given patient while using bandage contact lenses. Main risks of bandage lens therapy are discomfort, secondary infection and corneal neovascularisation. As in our case, very rarely the application of hydrophilic bandage lens may produce true intolerance evidence by a sterile hypopyon and an increase in ocular inflammation, which is of extremely rapid onset and should not be confused with a secondary infection (2). Snyder et al reported two similar cases of hypopyon iridocyclitis associated with continuous wear of aphakic soft contact lenses that cleared with removal of contact lens and with the use of cycloplegics with patching (3).

A number of mechanisms may be involved in the pathogenesis of this sterile intraocular inflammation in our patient. The main principle risk of using a bandage lens is related with the overnight wear that predisposes acute hypoxic episodes with accompanying corneal swelling, iritis and a red eye. Corneal anoxia and subsequent epithelial erosion may allow an exogenous inflammogenic stimulus such as virus, bacterial toxin or contact lens solution to penetrate in the cornea and produce inflammation (3). Another possible explanation for this sterile inflammation is the tight lens syndrome, which occurs in presence of a tightly-fit immobile hydrogel lens. McCarey and Wilson, described a mechanism by which contact lens dehydration and lowering of the surface pH resulting in tighter fitting in a previously well-fitting hydrogel lens (4).

In conclusion, the application of bandage contact lenses in treatment of bullous keratopathy may result with a rapid onset of hypopyon iridocyclitis and may mimic intraocular infection. After the probability of infection has been ruled out by negative culture results and if the response to antibiotic treatment is unsatisfactory, bandage lens intolerance should be considered and treated accordingly.

**REFERENCES**