
Herpetic Keratitis in a Patient Who Used Two Different Prostaglandin Analogue Ophthalmic Solutions: a Case Report

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Purpose: To report a patient with glaucoma who developed recurrent herpetic keratitis while using two different prostaglandin analogue ophthalmic solutions.

Results: A 72 year-old male patient with primary open angle glaucoma and a history of herpetic keratitis in the left eye experienced recurrent herpetic keratitis in the left eye after treatment with latanoprost ophthalmic solution. Herpetic flares were controlled after discontinuation of latanoprost. Adding travoprost ophthalmic solution 0.004% to his glaucoma therapy was also associated with a recurrence of herpetic keratitis.

Conclusion: To our knowledge, this is the first case in which travoprost has been associated to recurrent herpetic keratitis. Further, this is the first report in which a patient has a recurrence of herpetic keratitis associated to two different prostaglandin analogues. These findings suggest that patients with recurrent herpetic keratitis associated to a prostaglandin analogue might be predisposed to a flare-up with other prostaglandin analogues.

Key words: Herpetic keratitis, Latanoprost, Primary open-angle glaucoma, Travoprost

Prostaglandin analogue ophthalmic solutions have been used to decrease intraocular pressure (IOP) in patients with glaucoma since the 1990's (1). Prostaglandin analogues in the market include: latanoprost, bimatoprost, and travoprost.

Side effects associated with the use of prostaglandin analogues are: conjunctival hyperemia, increase of iris pigmentation, and eyelash changes (1). Rare adverse reactions include periocular pigmentation, damage to the blood-aqueous barrier, uveitis, and cystoid macular edema (1-3).

Recurrent herpetic keratitis has been associated to latanoprost and bimatoprost (4-13). In this study, we report a patient who developed recurrent herpetic keratitis after using both latanoprost and travoprost.

Case Report

This is the case of a 72 year-old male patient with a history of primary open angle glaucoma and herpetic keratitis in left eye (OS) in 1984. The patient had been on various topical medications to control the IOP without any significant adverse effects until 2001. Two months

after starting treatment with latanoprost (0.005%), the patient developed a recurrent herpetic keratitis in OS. Initial visual acuity was 20/30 on his right eye (OD) and 20/50 on his left eye (OS). IOP, as measured by Goldman applanation tonometry, was 19 mmHg OD and 19 mmHg OS. Latanoprost was discontinued on OS. Treatment with topical trifluridine in OS and systemic famciclovir was started. Remission of the flare-up was achieved.

One month later, the patient developed herpetic keratitis in OD. Topical treatment with latanoprost was discontinued in OD. Treatment with topical trifluridine in OD and systemic famciclovir was started. Remission of the flare-up was achieved. During the following year, three more episodes of recurrent herpetic keratitis were diagnosed until latanoprost was discontinued on both eyes.

In 2007, the patient was started on bilateral travoprost for the treatment of glaucoma. One month later the patient had a recurrent herpetic keratitis in OS (Figure 1). Travoprost was discontinued in both eyes due to suspected prostaglandin induced recurrent herpetic keratitis. Treatment with topical trifluridine was started and remission of the flare-up was achieved.

Discussion

Previous studies have described an association between latanoprost and recurrent herpetic keratitis (4-13). An association between bimatoprost and recurrent herpetic keratitis was described by Kroll and co-workers (11). To our knowledge, there are no previous studies reporting a recurrence of herpetic keratitis associated with travoprost ophthalmic solution.

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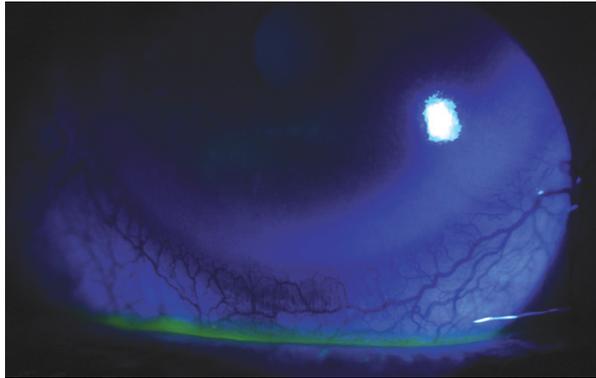


Figure 1. Dendritic herpetic keratitis associated to travoprost therapy.

Previous reports suggest that prostaglandin analogues increase the frequency and severity of recurrent herpetic keratitis (6). Hill and co-workers believe that prostaglandin analogues may promote a favorable state for ganglion cells that leads to sporadic shedding of herpes simplex virus to peripheral tissues like the cornea (5). According to this theory, travoprost has the theoretical potential to promote recurrent herpetic keratitis episodes in some patients.

In our patient, latanoprost led to a recurrent herpetic keratitis in both eyes. When years later this patient was started in a clinical trial with travoprost, he developed recurrent herpetic keratitis. Our patient presented with herpetic keratitis flare-ups only when a prostaglandin analogue was used as part of his glaucoma treatment. Remission of the flare-ups was achieved upon discontinuation of the prostaglandin analogue and the use of topical trifluridine.

To our knowledge, this is the first case in which travoprost has been associated to recurrent herpetic keratitis. Furthermore, this is the first report in which herpetic flares are associated to different prostaglandin analogues. These findings suggest that patients with recurrent herpetic keratitis associated to a prostaglandin analogue might be predisposed to a flare-up with other prostaglandin analogues.

Overall, prostaglandin analogue ophthalmic solutions should be used with caution in patients with a history of herpetic keratitis and should be avoided in patients with previous history of recurrent herpetic keratitis associated to prostaglandin analogues.

Resumen

El propósito de este manuscrito es informar sobre un paciente con glaucoma que desarrolló episodios de queratitis herpética recurrente asociados con dos análogos

de prostaglandina diferentes. Un hombre de 72 años de edad con glaucoma de ángulo abierto y un historial de queratitis herpética en el ojo izquierdo, experimentó una recurrencia de la queratitis herpética en el ojo izquierdo después de ser tratado con latanoprost. Los episodios de queratitis herpética fueron controlados al discontinuar el uso del latanoprost. Tras comenzar el tratamiento con travoprost para el glaucoma, también éste se asoció a la aparición de queratitis herpética recurrente en el paciente. A nuestro entender, este es el primer caso clínico en el cual travoprost se ha asociado a la aparición de queratitis herpética recurrente. Además, este es el primer informe en el que un paciente desarrolla queratitis herpética recurrente asociado a dos análogos de prostaglandina diferentes. Estos hallazgos sugieren que los pacientes con queratitis herpética recurrente asociada a un análogo de prostaglandina pueden estar predispuestos a desarrollar brotes por otro análogo de prostaglandina.

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