—Case Reports—

Simultaneous Treatment of Pterygium and Temporal Conjunctivochalasis

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Abstract

Pterygium and conjunctivochalasis are common diseases in elderly people and are not uncommonly observed together. However, there have been few reports of the simultaneous treatment of pterygium and conjunctivochalasis. We report such a surgical method and describe the results of two cases. Two patients presented with pterygium accompanied by temporal conjunctivochalasis. We decided to perform simultaneous pterygium excision and free conjunctival autograft transfer using the excess conjunctiva from the conjunctivochalasis surgery. The free graft was obtained from the bulbar conjunctiva from the 6 to 8 o'clock position in the conjunctivochalasis. To reduce the temporal conjunctivochalasis, the conjunctiva was extended and sutured to the perilimbal conjunctiva and episclera at the 6 o'clock position using 8-0 polyglactin suture. Tear meniscus break-up induced by pterygium and by conjunctival laxity was reduced, and the patients' symptoms had been significantly reduced by several days postoperatively.
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Key words: pterygium, conjunctivochalasis, conjunctiva, cornea, discomfort

Introduction

Pterygium and conjunctivochalasis are common diseases in elderly people and are not uncommonly observed together. Although surgical treatments have been established for each condition, simultaneous surgery can be performed in some cases. This paper describes such a surgical method and reports the clinical results of 2 cases.

Case Reports

Case 1

A 67-year-old Japanese man presented with pterygium accompanied by temporal conjunctivochalasis of the right eye (**Fig. 1A and C**). He complained of discomfort in the lateral canthus, likely because of the temporal conjunctivochalasis. We decided to perform simultaneous pterygium excision and free conjunctival autograft transfer using the excess conjunctiva from the

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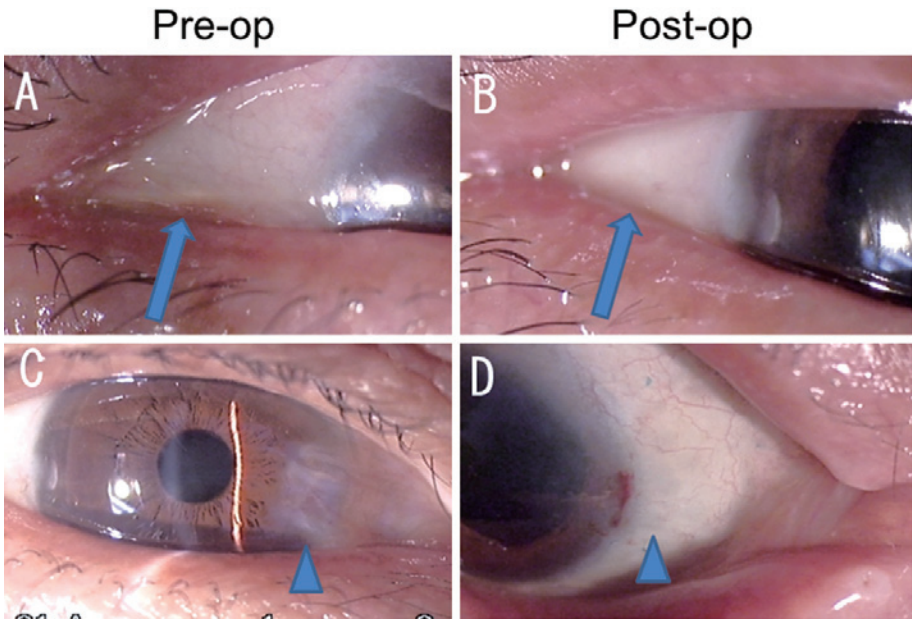

Fig. 1

A: Conjunctivochalasis was observed in the lateral canthus of the right eye.
B: By extending the conjunctiva, conjunctivochalasis was reduced 1 month postoperatively.
C: Pterygium was observed in the nasal canthus of the right eye.
D: The graft was clear and compact 1 month postoperatively.

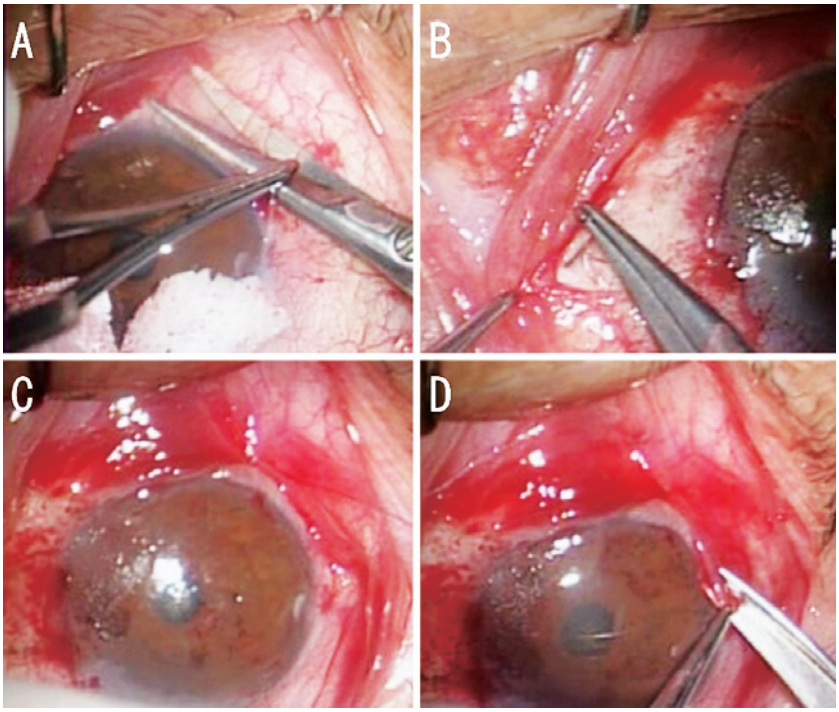

Fig. 2

A: A free graft was obtained from the bulbar conjunctiva from the 6 to 8 o'clock position in the conjunctivochalasis.
B: The graft was attached to the adjacent conjunctiva and episclera with interrupted 10-0 polypropylene sutures (Prolene, Ethicon).
C: The conjunctiva was extended and sutured to the perilimbal conjunctiva and episclera at the 6 o'clock position using 8-0 polyglactin suture (Vicryl, Ethicon).
D: The excess conjunctiva that covered the cornea was excised.

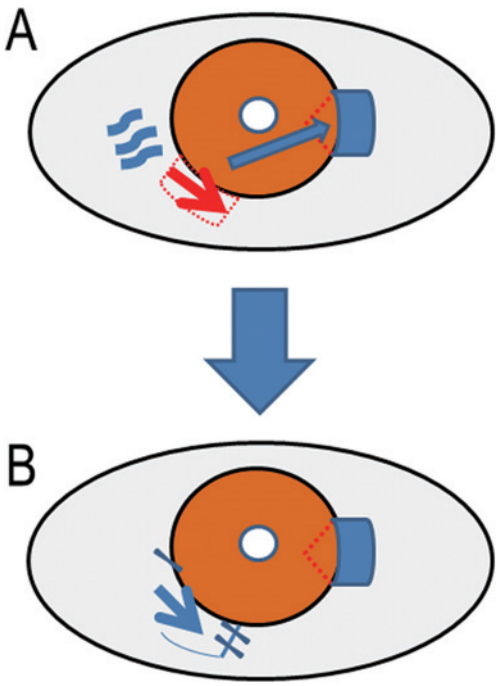

Fig. 3
A: The free conjunctival flap was moved to the nasal bare sclera **(blue arrow)**, and the excess conjunctiva was extended **(red arrow)**.
B: The conjunctiva was extended and sutured to the perilimbal conjunctiva and episclera at the 6 o'clock position using 8-0 polyglactin suture (Vicryl, Ethicon) **(blue arrow)**.

conjunctivochalasis surgery. First, under topical anesthesia, the head of the pterygium was fully excised from the cornea. Blunt and sharp dissections were performed to separate the pterygium from the underlying sclera and surrounding conjunctiva. Subsequently, abnormal scar tissue was removed from the corneal and scleral surfaces. After hemostasis was achieved with coagulation of the bare sclera, the dimensions of the bare scleral bed were measured with a caliper, and a free graft was then obtained from the bulbar conjunctiva at the 6 to 8 o'clock position in the conjunctivochalasis **(Fig. 2A)**. The graft was then attached to the adjacent conjunctiva and episclera with interrupted 10-0 polypropylene sutures (Prolene, Ethicon, Somerville, NJ, USA) **(Fig. 2B)**. Great care was taken to maintain the spatial orientation of the graft in relation to the limbus. Next, conjunctival peritomy was performed from the 8 to 10 o'clock positions, and the conjunctiva with Tenon's tissue was separated from the sclera. To reduce the temporal conjunctivochalasis, the conjunctiva was extended and sutured to the perilimbal conjunctiva and episclera at the 6 o'clock position using 8-0 polyglactin suture (Vicryl, Ethicon) **(Fig. 2C)**. Finally, the excess conjunctiva covering the cornea was excised **(Fig. 2D)**, and the remaining stretched conjunctiva was sutured to the limbus at the 10 o'clock position using 8-0 polyglactin suture (Vicryl, Ethicon) **(Fig. 3)**.

Slit lamp examination 1 day postoperatively showed significant improvement in the temporal conjunctivochalasis. Tear meniscus break-up induced by the pterygium and by conjunctival laxity was reduced, and the patient's complaints had been significantly reduced in the right eye by 1 month postoperatively **(Fig. 1B and D)**.

Case 2

A 77-year-old Japanese woman presented with a pterygium accompanied by temporal conjunctivochalasis in the right eye **(Fig. 4A and C)**. Her condition and complaints were similar to those in case 1. Consequently, we performed simultaneous surgery in the same manner.

As with Case 1, on slit examination, the temporal conjunctivochalasis had improved by 1 day postoperatively. **(Fig. 4B and D)**. Furthermore, her complaints had significantly decreased by several days postoperatively.

Discussion

Pterygium is a fibrovascular growth arising from the bulbar conjunctiva and extending onto the cornea. Surgical excision is the standard treatment for pterygium; however, outcomes are compromised by postoperative recurrence. Consequently, several methods and techniques have been developed to reduce the recurrence rate. Limbal-conjunctival autograft transfer has been shown to be the method with the lowest rate of recurrence[1]. The autograft is usually obtained from the superior bulbar conjunctiva. Conjunctivochalasis is a common ocular disorder that is characterized by redundant bulbar conjunctiva. As previously described, pterygium and conjunctivochalasis are often associated; therefore,

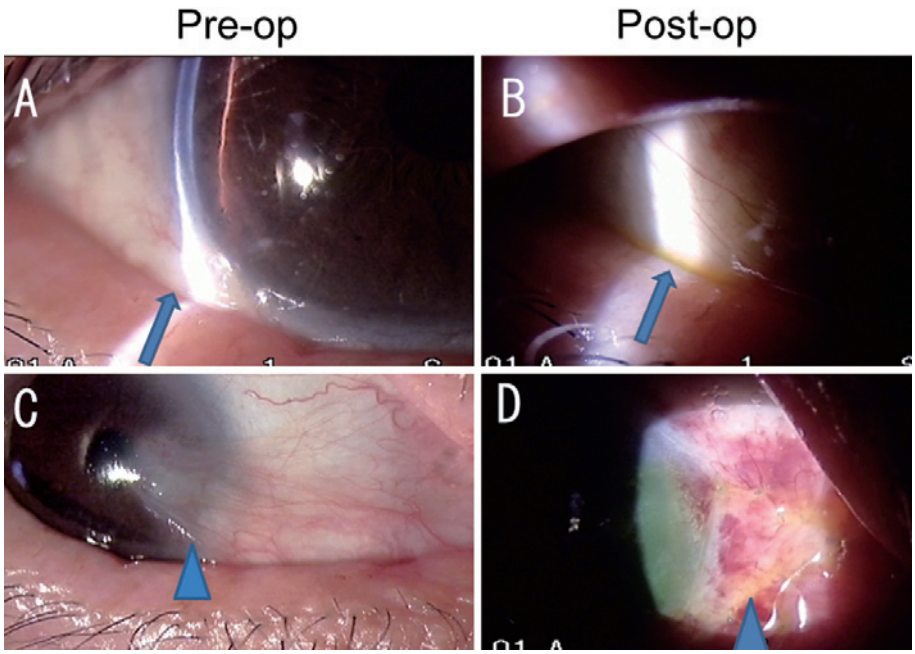

Fig. 4

A: Conjunctivochalasis was observed in the temporal canthus of the right eye.

B: By extending the conjunctiva, the conjunctivochalasis was improved 1 day postoperatively.

C: Pterygium was observed in the nasal canthus of the right eye.

D: The graft was clear and compact 1 day postoperatively.

our goal was to determine whether the redundant conjunctiva from the conjunctivochalasis lesion could be used as a graft for pterygium surgery.

Several methods of simultaneous surgery have been reported. Toshida et al. introduced the method referred to as combined conjunctivochalasis and pterygium surgery[2]. In their study, the graft created from the 4 to 6 o'clock position was used as a pedicled flap for the pterygium lesion. This flap was raised from the inferior conjunctiva at the site of redundant tissue, resulting in improved nasal conjunctival laxity. As for temporal conjunctivochalasis, the method Yokoi and Kinoshita[3] of removing excess conjunctiva has been used. Also, Kato et al. have reported that the conjunctiva removed from the 5 or 7 o'clock position could be used as a free flap to suture the sclera where the pterygium was removed, with the inferior conjunctiva being lifted and sutured to the limbus[4]. Although these surgical techniques are useful, they are also complicated and time-consuming.

Although it can be used only for temporal conjunctivochalasis, our method is more stable and easier to perform. In addition, it leads to early lessening of discomfort because the conjunctival incision is small and less invasive. Our method is effective in cases of pterygium accompanied by temporal conjunctivochalasis.

The authors have no financial interest.

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