AMNIOTIC MEMBRANE TRANSPLANTATION WITH FIBRIN GLUE AS TREATMENT OF REFRACTORY CONJUNCTIVOCHALASIS

INJERTO DE MEMBRANA AMNIÓTICA CON ADHESIVO TISULAR EN EL TRATAMIENTO DE LA CONJUNTIVOCALASIA REFRACTIVA

FERNÁNDEZ-HORTELANO A[1], MORENO-MONTAÑÉS J[1], HERAS-MULERO H[2], SADABA-ECHARRI LM[1]

ABSTRACT

Case report: A 63-year-old man with bilateral conjunctivochalasis presented with tearing, irritation, foreign body sensation and a delayed fluorescein clearance test. After no symptomatic improvement with topical treatment, surgery was carried out, with amniotic membrane transplantation and fibrin sealant.

Discussion: Conjunctivochalasis is a frequent disorder that shares symptoms with dry eye syndrome. When there is no response to topical treatment, surgical treatment is needed. The surgical technique described by Tseng, and based on amniotic membrane transplantation without suture, resulted in a very useful response, due to less inflammation and a rapid resolution and improvement of symptoms *(Arch Soc Esp Oftalmol 2007; 82: 571-574).*

Key words: Conjunctivochalasis, amniotic membrane, fibrin glue, eye dryness, inflammation.

RESUMEN

Caso clínico: Paciente de 63 años que presenta una conjuntivocalasia bilateral con lagrimeo, picor, escozor y retraso en el aclaramiento de fluoresceína. Al no observarse mejoría sintomática con el tratamiento tópico, se interviene quirúrgicamente con implante de membrana amniótica sin sutura.

Discusión: La conjuntivocalasia es una patología frecuente con síntomas comunes a la sequedad ocular. Cuando no hay respuesta al tratamiento médico se recurre al tratamiento quirúrgico. La técnica descrita por Tseng basada en el implante de membrana amniótica sin sutura resulta muy eficaz en estos casos debido a la poca inflamación que produce permitiendo una rápida recuperación y mejoría sintomática.

Palabras clave: Conjuntivocalasia, membrana amniótica, pegamento de fibrinógeno, sequedad ocular, inflamación.

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Ophthalmology Dept. Navarra University Clinic. Pamplona, Spain.
[1] Ph.D. in Medicine.
[2] Graduate in Medicine.
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Correspondence:
A. Fernández Hortelano
Departamento de Oftalmología
Clínica Universitaria de Navarra
C/. Pío XII, s/n
31008 Pamplona
Spain
E-mail: anaferh@unav.es

INTRODUCTION

Conjunctivochalasis is an excess of bulbar conjunctiva mainly found between the eye globe and the lower eyelid. It tends to be bilateral, with lower location and is more frequent among aged patients (1,2). The mildest forms of conjunctivochalasis aggravate any preexisting dry eye conditions with unstable tear film and delay in the fluorescein clearance test. The most severe forms, however, may lead to ocular exposure-related problems such as corneal ulcers or corneal dellen.

Whenever conjunctivochalasis is non-symptomatic, treatment is not required. If there are any associated symptoms, initial treatment consists of artificial tears and night ocular occlusion aimed at reducing night exposure and topical steroids. When topical treatments fail, surgical treatment is the next option. All the proposed surgical techniques include excision of the redundant conjunctiva. The method usually described is a simple excision of the redundant lower conjunctiva and closure with absorbable sutures (3).

Amniotic membranes are successfully used in the reconstruction of the conjunctival and corneal surface. Thanks to its anti-inflammatory properties, it is used with good results in the reconstruction of conjunctival surfaces during conjunctivochalasis surgical procedures (2).

CASE REPORT

A 63-year-old male reports symptoms including tearing, chronic conjunctivitis and nasal congestion. Biomicroscopic exploration revealed a marked bilateral conjunctivochalasis (fig. 1) with delayed fluorescein clearance (FCT), an elevated basal secretion, slowed down fluorescein clearance and normal reflex tear secretion.

The treatment prescribed consisted of artificial tears with no added preservatives, daily palpebral cleaning and ocular occlusion, resulting in no improvement of symptoms. We added 0.5% preservative-free methylprednisolone eye drops 3 times a day during 2 weeks. Symptoms improved only temporarily, since the symptoms reappeared as soon as treatment was interrupted.

Due to the persistence of the symptoms, bilateral surgical treatment was advised and subsequently performed according to the technique described by Tseng. The conjunctival excess was removed under external anesthesia. The exposed sclera was covered with amniotic membrane, the basal membrane being oriented upwards. The amniotic membrane was folded over itself in order to spread the two components of the fibrin glue (Tissucol®) along the sclera and on the stromal side of the amniotic membrane. Small drops of glue were then spread aided by an anterior chamber cannula. The amniotic membrane must be tightly stretched over the sclera in order to guarantee a good adhesion of both tissues, while the excess amniotic membrane dried. The residual conjunctiva was glued over the membrane. Postsurgical treatment consisted of 0.5% preservative-free methylprednisolone eye drops 3 times a day and ofloxacin eye drops twice a day for 15 days. There was no need to perform a postsurgical occlusion. Biomicroscopic and symptomatic

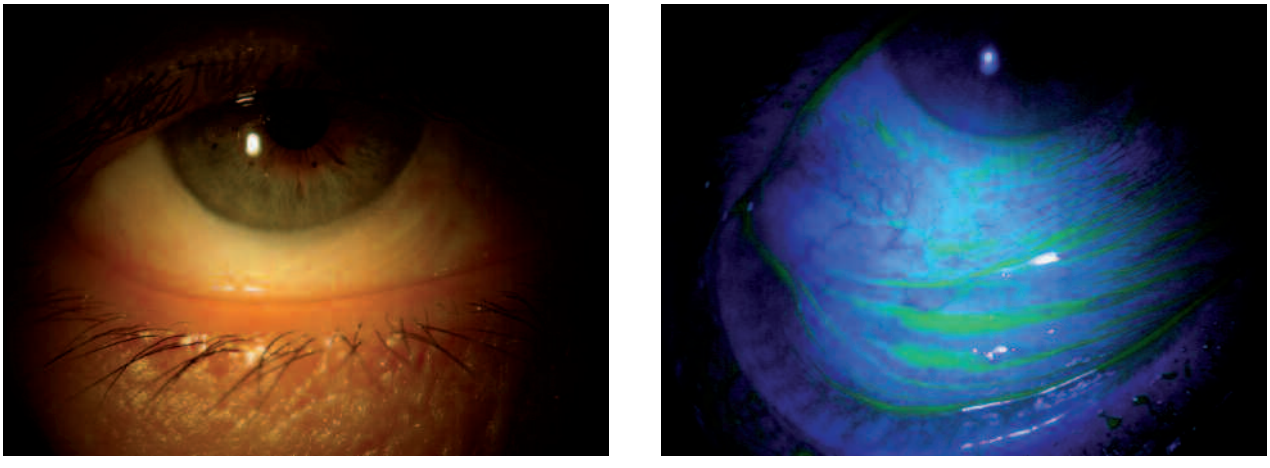

Fig. 1: Conjunctivochalasis before surgery.

improvement became apparent immediately after surgery (fig. 2), and stayed so during follow-up months (fig. 3).

DISCUSSION

Conjunctivochalasis is a redundant conjunctiva associated with a partial or total loss of Tenon's capsule. Due to their properties, amniotic membranes can be the perfect support to reinforce the Tenon's capsule. The amniotic membrane stimulates the proliferation and differentiation of epithelial cells, maintaining the original epithelial phenotype and decreasing scarring, vascularization and inflammation.

The diagnosis of conjunctivochalasis is often mistaken for dry eye, but conjunctivochalasis does not respond to conventional dry eye treatments. It is crucial to make a differential diagnosis between dry eye due to a deficiency of aqueous tear secretion and dry eye induced by conjunctivochalasis (4).

There are several theories regarding the origin of conjunctivochalasis. One is the mechanics theory, which states that mechanical changes related to age result in a chronic obstruction of the lymphatic flow, with the subsequent lymphatic dilation that leads to clinical conjunctivochalasis (5).

Another significant theory is the inflammatory theory, based on an excess degradation of the extracellular matrix, with delayed tear clearance. This leads in turn to an accumulation of degradation enzymes in tears whose chronic inflammatory changes result in conjunctival laxity or conjunctivochalasis (1). Aided by this theory, the anti-inflam-

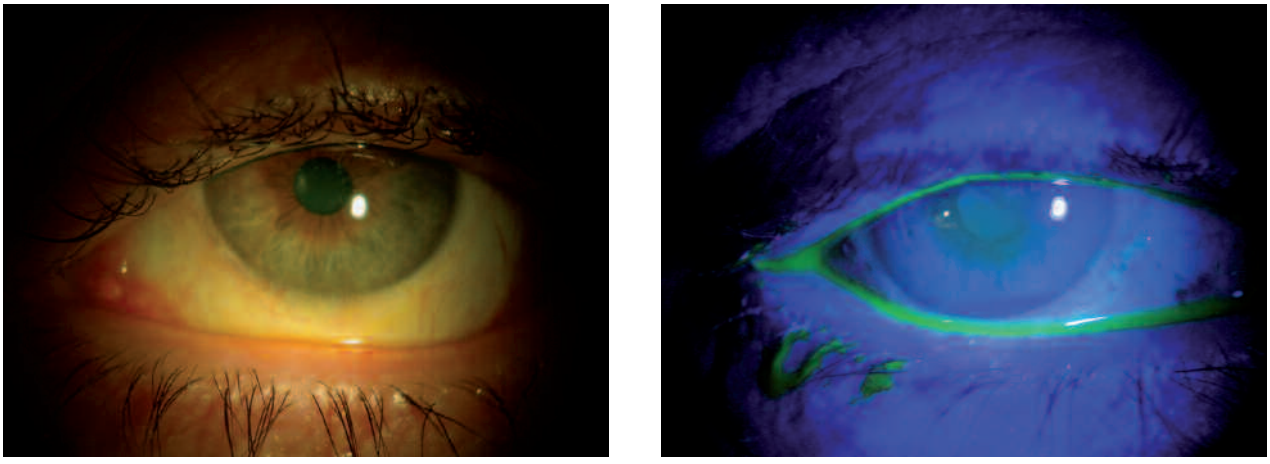

Fig. 2: Biomicroscopic exploration immediately after surgery.

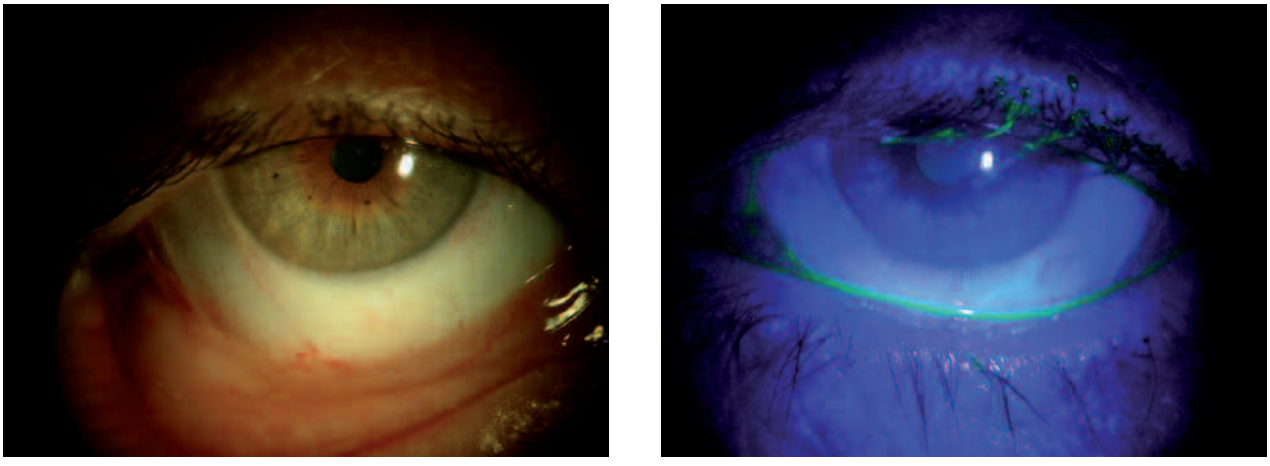

Fig. 3: Biomicroscopic exploration two months after surgery.

matory properties of the amniotic membrane allow us to intervene directly on the source of conjunctivochalasis.

This surgical technique speeds recovery due to the lesser postsurgical inflammation in comparison with the suture technique. In addition to this, it improves symptoms for both conjunctivochalasis and the associated dry eye. Thus, it would be necessary to perform a prospective study allowing for comparison between the described technique and the simple excision and excision associated with the conjunctival autograft in the treatment of conjunctivochalasis resistant to conventional medical treatments.

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