

Forgotten Bridle Suture Causes Scleritis: An Uncommon Complication of Keratoplasty: Case Report

Sklerit Sebebi Olarak Unutulmuş Dizgin Sütür: Keratoplastinin Nadir Komplikasyonu

H. Deniz İLHAN,^a
Elif Betül TÜRKOĞLU,^a
A. Burak BİLGİN,^a
Mustafa ÜNAL,^a
M. Erkan DOĞAN,^a
K. Cemil APAYDIN^a

^aDepartment of Ophthalmology,
Akdeniz University Faculty of Medicine,
Antalya

Geliş Tarihi/Received: 02.12.2014
Kabul Tarihi/Accepted: 04.03.2015

*This case report was presented at
47. National Congress of
Turkish Ophthalmology Society in
6-10 November 2013, Antalya, Turkey.*

Yazışma Adresi/Correspondence:
Elif Betül TÜRKOĞLU
Akdeniz University Faculty of Medicine,
Department of Ophthalmology, Antalya,
TÜRKİYE/TURKEY
drelifbetul@yahoo.com

ABSTRACT We report a case of a 58-year-old woman for evaluation of persistent scleritis after 19 year of keratoplasty surgery. The patient mentioned having bilateral partial penetrating keratoplasty. She noted pain, redness and photophobia in her right eye and was evaluated by an ophthalmologist who presumed infectious scleritis. The patient started on various broad-spectrum topical antibiotics and topical non-steroidal anti-inflammatory drops. After two months without any significant improvement, she was referred for further evaluation. Forgotten bridle suture remained without symptoms for many years caused acute onset conjunctivoscleral inflammation as an unusual late complication of keratoplasty. All symptoms were improved after the suture excision.

Key Words: Eye foreign bodies; corneal transplantation; sutures; scleritis

ÖZET Bu makalede keratoplasti cerrahisinden 19 yıl sonra persistan sklerit gelişen 58 yaşındaki bir kadın olgu sunuldu. Keratokonus nedeni ile her iki gözde parsiyel penetran keratoplasti ameliyatı yapılmış. Sağ gözünde gelişen ağrı, kızarıklık ve fotofobi nedeni ile göz doktoruna başvurmuş ve infeksiyöz sklerit tanısı konulmuş. Geniş spektrumlu topikal antibiyotik ve topikal non-steroid anti-inflamatuar ilaç başlanmış. İki ay geçmesine rağmen iyileşme izlenmemesi üzerine ileri merkeze yönlendirilmiş. Yıllardır semptom vermeyen unutulmuş dizgin sütür, keratoplasti sonrası alışılmadık bir geç komplikasyon olarak akut başlangıçlı konjunktivoskleral inflamasyona neden olmuştur. Tüm semptomlar sütür eksizyonundan sonra düzeldi.

Anahtar Kelimeler: Gözde yabancı cisimler; kornea nakli; dikişler; sklerit

Türkiye Klinikleri J Ophthalmol 2016;25(2):121-3

Bridle suture is an old technique frequently used before phacoemulsification surgery in which the suture passed under the superior rectus muscle to assist controlled globe movement during the anterior segment surgeries.^{1,2} Previously, complications of using bridle suture were reported in the literature.^{1,2} Pederson et al. described a case who represented an occult form of hypotony from scleral perforation by the superior rectus bridle suture.¹ Kaplan et al. reported postoperative acquired ptosis after a trauma to the superior rectus muscle complex with bridle suture.² In this paper, we report a case of a 58-year-old woman for evaluation of persistent scleritis after 19 year of partial penetrating keratoplasty (PPK).

CASE REPORT

A 58-year-old woman with persistent diffuse anterior scleritis that is refractory to treatment for two months was referred to our clinic. The patient reported a history of bilateral PPK 19 years ago. She had keratoconus and had only one operation in each eye. She noted pain, redness and photophobia in her right eye and was evaluated by an ophthalmologist who presumed infectious scleritis. The patient was started on various broad-spectrum topical antibiotics and topical non-steroidal anti-inflammatory drops. After two months without any significant improvement, she was referred for further evaluation. Best visual acuity was 0,4/0,05 (OD/OS). Irregular astigmatism in OD and graft failure in OS was found to be the reason of low vision. Slit-lamp biomicroscopy revealed 6×8 mm local moderate (2+) injection of the superior bulbar conjunctiva located 8 mm posterior to the limbus. The surrounding conjunctiva was minimally inflamed and a filamentous foreign body was seen in the center (Figure 1). Conjunctival exploration was performed. The material was non-absorbable poly-filament suture that surrounded superior rectus muscle. The suture was dissected

free from the firmly adhered surrounding tissues and removed. The patient's symptoms improved in one week (Figure 1).

DISCUSSION

We report a case of persistent scleritis due to a bridle suture as a late complication of PPK. To the best of our knowledge, our case is the first reported case with forgotten bridle suture adhered surrounding tissue after PPK in English literature.

Although unexpected sutures found in tissues out of main surgical area is uncommon, suture migration is one of the complications after ocular adnexal surgery. It might be anteriorly migration that mimics pseudo-tumor inflammation of the eyelid.³ Similarly, the migration of non-absorbable monofilament polypropylene suture material posteriorly through the subconjunctival space from the eyelid after blepharoptosis surgery causes conjunctivoscleral inflammation.⁴ Beside that, even a small amount of suture material like 1 mm in length in superior fornix near the cul de sac can masquerade a conjunctival malignancy.⁵ These reports were all related to upper eyelid surgery, however our case had only keratoplasty. Unlike reported sutures that



FIGURE 1: A. Photograph of OD showing injection and scleral inflammation with foreign body in its center. B. Photograph of OD showing complete improvement one week after removal of the suture material. C. Right eye corneal graft is fairly well, despite leucoma in superior of the graft with lipid deposition in her left eye.

(See color figure at <http://www.turkiyeklinikleri.com/journal/oftalmoloji-dergisi/1300-0365/>)

were monofilament polypropylene, the suture in the present case was polyfilament non-absorbable. And furthermore, the patient has been symptomatic only for two months.

In conclusion, this case enlightened late onset inflammation due to a forgotten bridle suture in PPK. The only clues of any foreign body might be

persistant examination and get history of the patient carefully. Foreign body in patients with surgical history should be kept in mind in case of scleritis and conjunctivitis that resistant to any medication. Moreover, if there is any possible foreign body to be forgotten, it should be taken care more to prevent late unexpected complications.

REFERENCES

1. Pederson JE, Cantrill HL. Hypotony form occult bridle suture perforation. *Arch Ophthalmol* 1988;106(5):581-2.
2. Kaplan LJ, Jaffe NS, Clayman HM. Ptosis and cataract surgery. A multivariant computer analysis of a prospective study. *Ophthalmology* 1985;92(2):237-42.
3. D'Hermies F, Morel X, Meyer A, Elmahel C, Renard G. [Chronic pseudo-tumor inflammation of the eyelid induced by reaction to a non-resorbable suture. Apropos of an anatomoclinical case]. *J Fr Ophthalmol* 1998;21(7): 540-3.
4. Foster JA, John KB, Castro E, Meisler DM. Blepharoptosis surgery complicated by late suture migration. *Am J Ophthalmol* 2000; 130(1):116-7.
5. Chung HS, Feder RS, Weston BC, Bryar PJ. Suture reaction masquerading as a conjunctival malignancy. *Can J Ophthalmol* 2006; 41(2):207-9.