

# Glokom Tüpünün Açığa Çıkmasının Temporal Kas Fasya Grefti ile Başarılı Örtülmesi

## Successful Coverage of Glaucoma Tube Exposure With Temporal Muscle Fascial Graft

Bora YÜKSEL<sup>1</sup>, İsmail AKKOL<sup>2</sup>, Umut Duygu UZUNEL<sup>1</sup>, Tuncay KÜSBEÇİ<sup>3</sup>

### ÖZ

Tüpün açığa çıkması, Ahmed glokom valv implantasyonunun sık bir komplikasyonudur. Bizim hastamız, dinamit patlaması sonucu gelişen korneal skar nedeniyle penetran keratoplasti yapılmış olan 48 yaşındaki bir erkek idi. 2003-2015 yılları arasında 5 kez penetran keratoplasti ve 2 kez trabekülektomi olmuş idi. Aralık 2014'te Ahmed glokom valv implantasyonu olmuş idi. Cerrahiden 7 hafta sonra tüpün açığa çıkması meydana geldi. Tüpü örtmek için otolog skleral yama grefti kullanıldı. 8 hafta sonra tekrar tüpün açığa çıkması meydana geldi. Nisan 2015'te tübü örtmek için otolog temporal kas fasyası kullanıldı. Temporal fasial greft, kafa derisi defektlerini tamir etmek için kraniofasial cerrahide sık olarak kullanılmaktadır ve oküler dokular tarafından da iyi tolere edilmektedir. Greftin amnion zarı ile kaplanması hasta konforunu artırır ve daha iyi kozmetik görünüm sağlar.

**Anahtar kelimeler:** Ahmed glokom valvi, amnion membran transplantasyonu, trabekülektomi, temporal fasial greft, tüp açığa çıkması.

### ABSTRACT

Tube exposure is frequent complication of Ahmed glaucoma valve implantation. Our patient was 48-year-old man who had penetrating keratoplasty for corneal scar due to dynamite explosion. He had corneal grafting 5 times and trabeculectomy 2 times between 2003-2015. Ahmed glaucoma valve implantation was performed in December 2014. Tube exposure occurred 7 weeks after the surgery. An autologous scleral patch graft was used to cover the tube with an initial success. However, tube exposure recurred after 8 weeks. This time, autologous temporal muscle fascia was used to cover the tube exposure on April 2015. Temporal fascial graft is widely used in craniofacial surgery to repair scalp defects and also well tolerated by the ocular structures. Amniotic membrane coverage of the graft enhances patient comfort and provides better cosmetic appearance.

**Key words:** Ahmed glaucoma valve, amniotic membrane transplantation, trabeculectomy, temporal facial graft, tube exposure.

Tube exposure is frequent complication of Ahmed glaucoma valve implantation. Its incidence is higher in patient with previous trabeculectomy or combined surgeries.<sup>1</sup> Several materials have been used to cover the exposed part of the tube including; gamma-irradiated corneal patch grafts,<sup>2</sup> human corneascleral rims, heterologous human donor sclera<sup>3</sup>,

autologous scleral graft<sup>4</sup>, autologous tragal perichondrium patch graft<sup>5</sup>, glycerol preserved cornea and pericardium<sup>6</sup>, buccal membrane<sup>7</sup> and amniotic membrane transplantation<sup>8</sup> (AMT). Herein, we report a case who have successfully been treated with temporal muscle fascial graft in combination with AMT.

1- Uz.Dr., İzmir Bozyaka Eğitim ve Araştırma Hastanesi, Göz Kliniği, İzmir - TÜRKİYE  
YÜKSEL B, drborayuksel@gmail.com  
UZUNEL UD, druzunel78@yahoo.com

2- Uz.Dr., İzmir Bozyaka Eğitim ve Araştırma Hastanesi, Beyin Cerrahisi Kliniği, İzmir - TÜRKİYE  
AKKOL I, ismailakkol@yahoo.com

3- Doç.Dr., İzmir Bozyaka Eğitim ve Araştırma Hastanesi, Göz Kliniği, İzmir - TÜRKİYE  
KÜSBEÇİ T, tkusbeci@yahoo.com

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Yazışma Adresi / Correspondence Adress:

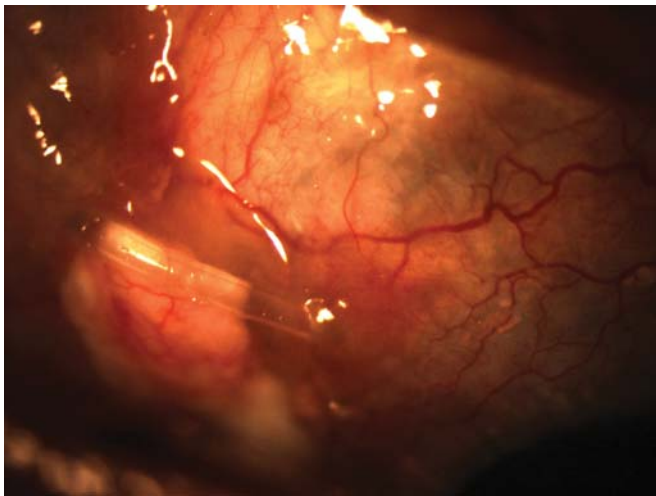
Umut Duygu Uzunel  
İzmir Bozyaka Eğitim ve Araştırma Hastanesi, Göz Kliniği  
İzmir - TÜRKİYE

Phone: +90 232 250 5050

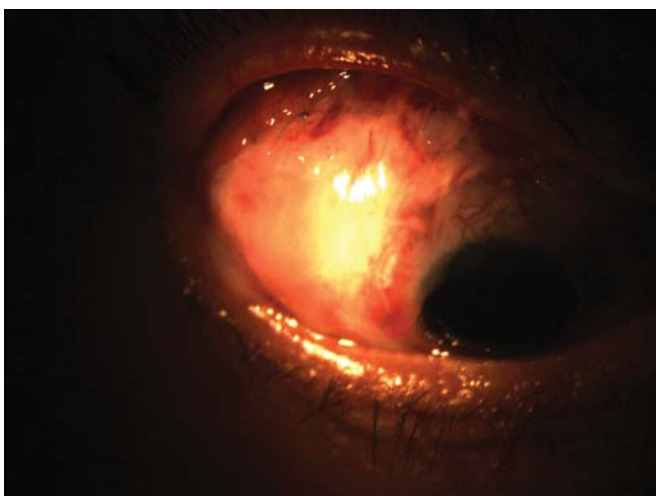
E-mail: druzunel78@yahoo.com

## CASE REPORT

Our patient was 48 year-old man who had penetrating keratoplasty for corneal scar due to dynamite explosion. He had corneal grafting 5 times and trabeculectomy 2 times between 2003-2015. He had also anterior chamber intraocular lens (IOL) removal and anterior vitrectomy during first PK. Ahmed glaucoma valve implantation was performed in December 2014. Tube exposure occurred 7 weeks after the surgery. An autologous scleral patch graft was used to cover the tube with an initial success. However, tube exposure recurred after 8 weeks (Figure 1). This time, autologous temporal muscle fascia was used to cover the tube exposure on April 2015. Temporal fascial graft (TFG) was harvested by a neuro-surgeon (IA) under local anesthesia. TFG was trimmed layer by layer to make it thin enough to lie on the scleral surface. After meticulous dissection of the tube from synechiae and remnants of previous surgeries; TFG was sutured to the episclera with interrupted 6-0 polyglactin sutures. Conjunctival defect over the graft surface was covered



**Figure 1.** Tube exposure. Remnant of previous scleral graft is also visible.

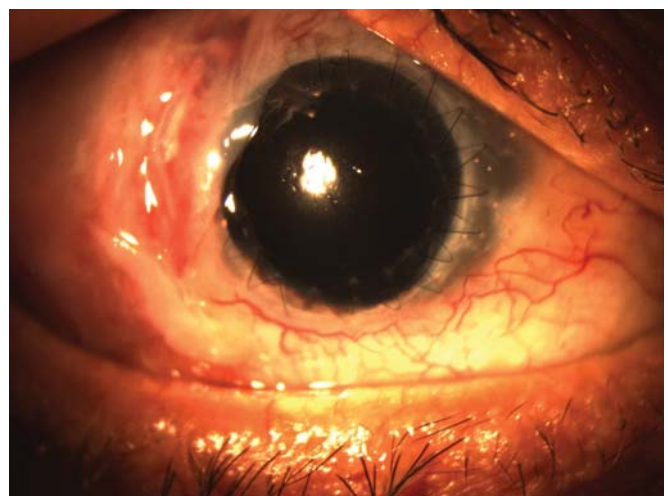


**Figure 2-3.** Post-operative appearance at 1 week. Coverage of the exposure with temporal muscle fascia and amniotic membrane can be seen.

with AMT. TFG vascularised and thinned over time. No recurrence of tube exposure was observed and IOP remained between 5 to 8 mmHg through 1-week of follow-up (Figure 2,3) and there was no tube exposure at 10 months, too. Cornea was clear and best corrected visual acuity of the patient was 20/400 with aphakic spectacles. There was a glaucomatous optic atrophy at the fundus with a cup/disc ratio of 9/10.

TFG is widely used in craniofacial surgery to repair scalp defects.<sup>9</sup> To our knowledge, this is the first report of its use in glaucoma tube exposure. In our patient, the cause of tube exposure was previous trabeculectomies and severe trauma making the conjunctiva and sclera thin and vulnerable. TFG was used to cover the exposure successfully. TFG provides surgeon with copious amount of tissue making the repair procedure easier. TFG is well tolerated by the ocular structures. Amniotic membrane coverage of the graft enhances patient comfort and provides better cosmetic appearance.

Advantages of Temporal Muscle Fascia over Fascia lata may be summarized like following manner: Easy access, no additional instrumentation, large amount of tissue which is very thick and durable, no cosmetic sequela, one surgical site (head) instead of two(head and leg), local anesthesia, quick operation, no cost, repeatable, more familiar tissue compare to fascia lata and last it can be done by an ophthalmologist alone.



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