ORIGINAL ARTICLE

Traumatic wound dehiscence after penetrating keratoplasty

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ABSTRACT

BACKGROUND: We aimed to evaluate the risk factors, clinical features and outcomes of surgery for traumatic wound dehiscence (TWD) following penetrating keratoplasty (PK).

METHODS: Twenty-six patients with TWD following PK were evaluated retrospectively in terms of factors related to the trauma, types of reconstructive surgery, final graft clarity, and visual acuity.

RESULTS: There were 26 patients with a mean age of 40.7±19.6 years. In 12 (46.1%) patients, the better eye was affected by the trauma. The most frequent type of trauma was blunt trauma by various objects (9). In all cases, the dehiscence was at the graft host junction. The mean extent of detachment was 135.4°±57.6°. Crystalline or intraocular lens damage was present in 42.3% of cases. Median follow-up time after the reconstructive surgery was 36 months. The graft remained clear in 13 (50%) patients, whereas graft insufficiency/graft rejection developed in 13 (50%) patients. Final visual acuity was over 20/200 in 13 (50%) patients.

CONCLUSION: TWD may occur at any time after PK, most frequently within the first postoperative year. Low visual acuity in the other eye seems to be a major risk factor. In patients without major complications such as posterior segment damage, visual outcomes and graft survival can be favorable.

Key words: Graft survival; penetrating keratoplasty; traumatic wound dehiscence; visual prognosis.

INTRODUCTION

Although the eyes comprise only 0.27% of our total body surface and 4% of the face, they are the third most frequently affected organ by trauma, after the hands and feet.[1] Worldwide, there are currently 1.6 million blind and 19 million monocular individuals as a result of ocular trauma, which makes it one of the most significant causes of ocular morbidity.[2]

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The incidence of traumatic globe rupture after penetrating keratoplasty (PK) and after planned extracapsular cataract extraction (ECCE) was reported as 0.6-5.8%[3-4] and 0.4-1.4%,[5-6] respectively. Therefore, PK is more prone to traumatic globe rupture than the other types of ocular surgery. The World Health Organization (WHO) reported that almost 120,000 PKs were performed worldwide in 2000,[7] and the donor supply increased 21% between 1990 and 2000 in the United States.[8,9] Considering this increase in the number of PKs (which is currently the most common homologous organ transplantation), an increase in cases of traumatic wound dehiscence (TWD) is also expected. Despite the low incidence of TWD following PK, the potentially serious complications with poor outcomes make the growing number of such cases a concern.

MATERIALS AND METHODS

This study was performed by retrospectively reviewing the

records of 26 patients who were diagnosed with and underwent reconstructive surgery to correct traumatic graft rupture in the Eye Clinic of Kartal Dr. Lütfi Kirdar Training and Research Hospital between 2003 and 2012. Patients' records were evaluated with respect to age, gender, indication of PK, suturing technique, time interval between PK and the trauma, type of trauma, presence of sutures, steroid usage at the time of trauma, accompanying anterior and posterior segment damage, wound specifications, type of reconstructive surgical procedures, and final visual acuity and graft clarity.

The Statistical Package for the Social Sciences (SPSS) 18.0 package program were used and statistical analyses were done by frequency tables, Mann-Whitney U, Kruskal-Wallis, chi-square, and Wilcoxon tests. A value of $p<0.05$ was accepted as statistically significant.

RESULTS

There were 14 (54%) males and 12 (46%) females, with a mean age of 40.7±19.6 years (range, 4-71). There was no sig-

Table 1. General demographic and medical data

Patient No	Age	Gender	Indication of PK	Follow-up (month)		Suture		Steroid usage during trauma	Pretraumatic other risk factors
				Between PK-trauma	After trauma	Suturing technique	Presence of sutures during trauma		
1	56	Female	Corneal Scar	2	112	IS	+	+	Glaucoma
2	28	Female	Keratoconus	0.6	105	ICS	+	+	–
3	11	Male	Leukoma Adherence	2	93	IS	+	+	–
4	23	Male	Granular Dystrophy	6	68	IS	+	+	–
5	24	Male	Corneal Scar	12	58	IS	+	+	–
6	45	Male	Keratoconus	9	52	IS	+	+	Low vision in other eye
7	47	Male	Macular Dystrophy	3	40	IS	+	+	–
8	15	Male	Keratoconus	1	22	ICS	+	+	–
9	60	Male	Fuchs	6.5	24	IS	+	+	Glaucoma
10	71	Male	PBK	56	31	IS	Removed	Stopped	–
11	25	Female	Corneal Scar	59	26	IS	Removed	Stopped	Glaucoma
12	37	Female	PBK	16	26	IS	+	Stopped	Glaucoma
13	50	Female	Corneal Scar	18	25	IS	Removed	Stopped	–
14	30	Female	Keratoconus	1	21	IS	+	+	Glaucoma +Deafness
15	45	Female	Herpetic Keratitis	72	20	IS	Removed	Stopped	Glaucoma +Single Eye
16	30	Male	Keratoconus	1	19	ICS	+	+	Glaucoma (AGV)
17	47	Female	Corneal Scar	7	12	IS	+	+	–
18	66	Female	PBK	1	12	IS	+	+	–
19	48	Male	Corneal Scar	30	6	ICS	Removed	Stopped	Single Eye
20	44	Male	Corneal Scar	44	43	IS	Removed	Stopped	–
21	8	Male	Graft Rejection	2	117	IS	+	+	Single Eye
22	4	Female	Corneal Scar	18	65	IS	Removed	Stopped	Single Eye
23	61	Male	Leukoma Adherence	30	84	IS	Removed	Stopped	Single Eye
24	49	Female	Graft Rejection	4	64	IS	+	+	Single Eye
25	71	Male	Leukoma Adherence	35	27	IS	Removed	Stopped	Single Eye
26	64	Female	Corneal Scar	26	16	IS	Removed	Stopped	–

AGV: Ahmed glaucoma valve implant present; ICS: Interrupted combined with continuous sutures; IS: Interrupted sutures; PBK: Pseudophakic bullous keratopathy.

nificant difference in the average age by gender (Z=-0.386, p=0.699). Among the 1,625 PKs performed during the study period, the incidence of TWD was 1.6%. The most frequent primary PK indication was corneal scar (8). In 30.8% (8/26) of these cases, PK was combined with cataract extraction and intraocular lens (IOL) implantation; 69.2% (18/26) underwent PK alone. Twenty-two (84.6%) patients had been operated with 16 single sutures. The most frequent risk factor was low vision in the other eye (8), and the better eyes were affected by the trauma in 12 (46.1%) cases. Sutures were present in 16 (61.6%) patients, and 15 (57.7%) patients were using steroids at the time of the trauma (Table 1). Visual acuity was 0.26±0.21 (5 mps-20/25) in the traumatized eye and 0.47±0.40 (P[-] - 20/20) in the other eye prior to trauma.

The median time interval between the PK and trauma was 8.0 months (range, 0.6-72 months). All of the traumas were blunt and found to be caused by various objects (9), by falls (6), and by hand (6) or finger slap (5). The average age of the fall-related injuries was found to be significantly higher (χ^2=12.540; p=0.006), but there was no significant relationship between etiology of the trauma and gender (χ^2=0.829; p=0.843).

The median time between the trauma and reconstructive surgery was 6 hours (range, 1-120 hours) in 21 cases, and the time was not recorded in the remaining 5. No statistically

Table 2. Data about dehiscence, final graft status and vision

Patient No	Quadrant of dehiscence	Extent of dehiscence	Final graft status	Pretraumatic visual acuity	Final visual acuity	Final low visual acuity reasons
1	Superior	120	Clear	1mFC	2mFC	Pretraumatic PDRP
2	Superior	45	Clear	0.1	1.0	–
3	Nasal	180	Clear	2mFC	2mFC	Amblyopia/Exotropia
4	Superior	90	Clear	0.7	0.7	–
5	Except Nasal	270	Insufficiency	0.4	HM	Graft Insufficiency
6	Inferior	120	Insufficiency	0.3	0.15	Graft Insufficiency
7	Inferior	120	Clear	0.2	0.6	Macular Pucker
8	Temporal	30	Clear	0.5	0.5	–
9	Inferior	180	Clear	0.2	HM	Epithelial Ingrowth+PVR
10	Superior	180	Insufficiency	0.15	HM	Graft Insufficiency+Secondary Glaucoma
11	Superior	180	Rejected	50 cmFC	50 cmFC	Pretraumatic Graft Rejection
12	Superior	120	Clear	0.4	0.7	–
13	Inferior	90	Clear	0.4	P(+)	Suprachoroidal Hemorrhage
14	Nasal	45	Rejected	0.15	0.15	–
15	Superior	180	Insufficiency	0.2	10cmFC	Graft Rejection
16	Nasal	140	Clear	0.4	0.4	–
17	Temporal	60	Rejected	0.8	0.2	Graft Rejection
18	Nasal	180	Insufficiency	2mFC	10cmFC	Graft Insufficiency+Fibrous Ingrowth
19	Inferior	180	Clear	0.05	30cmFC	Geographic Atrophy
20	Inferior	180	Rejected	0.5	0.1	Graft Rejection
21	Inferior	150	Rejected	1 mFC	P (+)	Graft Rejection
22	Nasal	90	Insufficiency	0.2	HM	Graft Insufficiency
23	Inferior	180	Clear	0.4	0.15	Retinal Vein Branch Occlusion
24	Inferior	200	Rejected	0.05	P(+)	Graft Rejection
25	Temporal	120	Clear	0.3	0.1	Geographic Atrophy
26	Inferior	90	Clear	0.4	0.5	–

FC: Finger count; HM: Hand motion; PDRP: Proliferative diabetic retinopathy; PVR: Proliferative vitreoretinopathy.

significant relationship was found between the time elapsed from trauma to reconstructive surgery and the final graft clarity (p>0.05) (Table 2). Each dehiscence was on the host-graft junction and was observed to be between 30° and 270° (mean, 135.38±57.61°) (Table 2). The degree of the host-graft dehiscence was not found to be statistically related to primary surgical indication, pretraumatic risk factors, suturing techniques, presence of the sutures, steroid use, etiology of the trauma, place of the dehiscence, or final graft status (p>0.05) (Table 3). The most frequent site of dehiscence was in the inferior quadrant (10 patients). There was no significant relationship between the affected quadrant and the etiology of the trauma (χ^2=9.908; p=0.820) or degree of the graft dehiscence (χ^2=9.054; p=0.06). The ratio of patients with crystalline lens/IOL damage was 42.3%, and traumatic damage to these structures was found to be significantly related to final graft clarity (p<0.05), but not related to the degree of the host-graft dehiscence (p>0.05) (Table 3). Eight of the corneas (30.8%) were clear, and the remaining 18 (69.2%) were affected in varying degrees from mild corneal edema to totally opaque cornea at presentation after the trauma. Posttraumatic graft edema was not related to crystalline lens/IOL damage (χ^2=1.418; p=0.234), degree of dehiscence (Z=-0.459; p=0.646) or final graft status (χ^2=0.680; p=0.409). Other common anterior segment complications were vitreous (10) and iris prolapse (7). Posterior segment damage was noted as suprachoroidal hemorrhage (1), macular pucker (1), or retinal detachment with proliferative vitreoretinopathy (PVR) (1), and all of these patients had crystalline lens/IOL damage (Table 4).

Table 3. Factors associated with degree of the host-graft dehiscence and final graft status

Degree of the host-graft dehiscence	
Primary surgical indication*	χ^2=8.156 p=0.319
Pretraumatic risk factors*	χ^2=2.651 p=0.449
Suturing techniques¶	Z=-0.656 p=0.512
Presence of sutures¶	Z=-1.189 p=0.234
Steroid use¶	Z=-0.931 p=0.352
Etiology of the trauma*	χ^2=1.502 p=0.682
Place of the dehiscence*	χ^2=9.054 p=0.060
Final graft status*	χ^2=1.141 p=0.565
Crystalline lens/IOL damage¶	Z=-1.170 p=0.116
Final graft status	
Age*	χ^2=1.099 p=0.577
Gender€	χ^2=1.666 p=0.435
Primary surgical indication€	χ^2=9.547 p=0.216
Median time between PK and trauma	Z=-0.668 p=0.504
Degree of dehiscence	Z=-0.657 p=0.511
Affected quadrant	χ^2=2.076 p=0.722
Etiology of the trauma	χ^2=1.867 p=0.631
The median time between trauma and reconstructive surgery	Z=-0.179 p=0.858
Reconstructive surgery type	χ^2=1.385 p=0.239
Crystalline lens/IOL damage¶	χ^2=7.369 p=0.025

*: Kruskal-Wallis test; ¶: Mann-Whitney U test; €: Chi-square test.

Reconstructive surgical procedures were done under local anesthesia (retrobulbar and periocular) in 20 (76.9%) patients and under general anesthesia in the remaining 6 (23.1%) patients. Primary suture (PS) alone was employed in 13 patients, and PS combined with other interventions was performed in the remaining cases (Table 4).

Median follow-up time was 36 months (range, 6–117 months) after the reconstructive surgery. The rates of clear graft and graft insufficiency/graft rejection were 13 (50%) and 13 (50%), respectively. There was no significant relationship between the final graft status and age, gender, primary surgical indication, median time interval between PK and trauma, degree of dehiscence, affected quadrant, etiology of the trauma, or reconstructive surgery type (p>0.05) (Table 3). Visual acuity was 0.05±0.1 (hand motions - 20/40) after the trauma, and it was 0.20±0.28 (P(+) - 20/20) at the final follow-up. There was no significant difference between pre-traumatic and final visual acuity (Z=-1.736; p=0.083), but a statistically significant difference was found between posttraumatic and final visual acuity (Z=-3.081; p=0.002). Visual acuity was decreased in 14 (53.8%) cases, remained the same in 7 (26.9%) cases, and increased in 5 (19.2%) cases. At the final follow-up, visual acuity was better than 20/200 in 13 (50%) eyes (Table 2). Epithelial ingrowth (1), fibrous ingrowth (1) and secondary glaucoma (1) were noted as anterior segment complications in addition to posterior segment-related complications (Table 2).

DISCUSSION

Any trauma to the globe with proper mechanism and sufficient force would cause rupture of the globe at the weakest region.[4] In virgin eyes, these regions are insertions of extraocular muscles or the corneoscleral limbus,[10] whereas in wounded eyes with previous surgery or penetrating trauma, the rupture site will be the previous corneal scar.[11] PK comprises a full thickness 360° surgical wound and creates permanent weakness in the eyeball throughout patients' lives.[12-14] Calkins et al.[15] demonstrated that in human corneas, weakness at the host-graft junction persists even a year after PK, despite the appearance of having healed.

Mental retardation, low vision in both eyes, deafness, and alcohol consumption are accepted risk factors for traumatic rupture following PK.[3,11,16,17] Older age, obesity, use of non-irritating nylon sutures, improper suturing, early suture removal, and glaucoma have been reported to delay corneal wound healing.[18] In our study group, at least one of these risk factors was present in 53.8% (14) of cases: low vision in the other eye (8), glaucoma (7) and deafness (1). Addition-

Table 4. Surgical procedures, traumatic crystalline lens/IOL and posterior segment damage

Patient No	Surgical procedure	Secondary surgery	Status of lens		Posterior segment damage
			Pre-trauma	Post-trauma	
1	PS	–	Pseudophakic	Pseudophakic Decentralized	–
2	PS + AV + LA	Secondary Sulcus PC IOL Implantation	Phakic	Traumatic cataract	–
3	PS	L	Phakic	Lens Subluxation	–
4	PS + IR	–	Phakic	Phakic	–
5	PS + AV	–	Phakic	Aphakia	–
6	PS + AV + IE	–	Pseudophakic	Pseudophakic	–
7	PS + IR	PPV / Scleral Fixation IOL	Phakic	Aphakia	Macular Pucker
8	PS	–	Phakic	Phakic	–
9	PS + AV + IR	Re-PK + Retroiridal Membrane Excision + L	Phakic	Aphakia	PVR + Retinal Detachment
10	PS	–	Pseudophakic	Pseudophakic	–
11	PS	–	Pseudophakic	Pseudophakic	–
12	PS	–	Pseudophakic	Pseudophakic	–
13	PS + AV + IOL E	–	Pseudophakic	Aphakia	Suprachoroidal Hemorrhage
14	PS	–	Phakic	Phakic	–
15	PS + AV + IE	–	Phakic	Aphakia	–
16	PS + AV + L	AV + Scleral Fixation IOL	Phakic	Traumatic cataract	–
17	PS	–	Pseudophakic	Pseudophakic	–
18	PS	–	Pseudophakic	Pseudophakic	–
19	PS + AV	–	Phakic	Aphakia	–
20	PS + IE+AV	–	Aphakia	Aphakia	–
21	PS	–	Phakic	Phakic	–
22	PS+IR	–	Phakic	Phakic	–
23	PS	–	Phakic	Phakic	–
24	PS	Re-PK	Pseudophakic	Pseudophakic	–
25	PS+AV	–	Pseudophakic	Aphakia	–
26	PS	–	Phakic	Phakic	–

AV: Anterior vitrectomy; IE: Iris excision; IOL E: IOL extraction; IR: Iris repositioning; L: Lensectomy; LA: Lens aspiration; PC: Posterior chamber; PPV: Pars plana vitrectomy; PS: Primary suture; PVR: Proliferative vitreoretinopathy; Re-PK: re-Penetrating keratoplasty.

ally, prolonged use of topical steroids against graft rejection has been shown to delay the wound healing process in many studies.[11,16,18-20] In our study group, 57.7% (15) of the patients were using topical steroids at the time of injury.

Traumatic graft dehiscence can occur at any time after PK.[13,18] In the literature, occurrences of traumatic graft rupture have been reported from 3 days to 33 years after PK.[18,21,22] Thirty-three years is the longest reported time interval after PK, indicating a lifetime risk of traumatic dehiscence. The mean time interval between PK and TWD was 17.7 months in our study group, and in 15 (57.7%) cases, trauma had occurred within the first postoperative year. Various types of injury resulting in graft dehiscence have been reported (following removal of rigid gas permeable lens, during self-installation of topical drugs, following impact by champagne cork, and bilateral graft rupture due to airbag deployment during a car accident).[11,16,20,23,24] However, many graft ruptures occur during daily activities that are considered 'low-risk activities'.[22] Previous reports have noted that traumatic graft dehiscence was

most often due to sports- or accident-related injuries and intentional assaults in the younger age group,[25,26] whereas falls or self-inflicted poking were found to be more frequent in the older age group.[17,25,27] In the current study, fall-related injuries were significantly more frequent compared to other causes in the older age group. Although Nagra et al.[20] reported a predominance of women in their study, men were found to be at higher risk for TWD in other studies.[4,11,14,16-19,22,28,29] Williams[25] noted that younger men are subjected to sport injuries and intentional assaults, whereas the older age group is exposed to fall-related injuries without any gender predominance. In our study group, neither gender was predominant, and no relationship was found between gender and age or trauma etiology.

There are various reports concerning the relation between primary PK indication and TWD.[14,19,28-31] It has been noted that the most frequent indications in TWD are keratoconus, corneal scars, bullous keratopathy, herpetic keratitis, and Fuchs endothelial dystrophy.[4,11,14,16-20,22,23,25-32] In the present study, the most frequent PK indications were consistent with the general literature: corneal scar, keratoconus, leukoma, and bullous keratopathy. As these are most common indications for PK,[33] there are no definite data concerning the relationship between TWD and PK indications.

In all of our patients, the wound dehiscence was at the host-graft junction. Likewise, other studies have also reported this region to be the most frequent site of wound separation.[16-20,25-32] The presence of sutures does not seem to protect against wound dehiscence, and there are differing reports about the effect of suturing techniques.[11,18,19,20,25,27] In our study group, interrupted suture was the most commonly used suturing technique, and in 16 (61.7%) eyes, all or some of the sutures were in place at the time of injury. We observed no significant relationship between the extent of wound dehiscence and the suturing techniques or the presence or absence of sutures at the time of trauma. Referring to special anatomical position and the protective effects of bony structures, certain quadrants of the globe have been proposed to be more vulnerable by some researchers, while others found no quadrant predominance.[11,17,27] In our series, the inferior quadrant was affected most frequently, followed by superior, nasal and temporal.

Kawashima et al.[27] asserted that the extent of dehiscence is not related to etiology of the trauma. In our study, we observed no significant relationship between etiological factors and extent of dehiscence, consistent with the literature. Lam et al.[22] apprised that grafts with larger dehiscence were more likely to fail and more likely to have loss of clarity at presentation, but we observed no significant relation between degree of dehiscence and final graft status. In the present study, damage to the crystalline lens or IOL was present in 11 (42.3%) cases. In the literature, crystalline lens or IOL damage is reported to be range from 37%[28] - 100%,[29] and is accepted as a bad prognostic sign. In a study by Tran et al.[31], extensive dehiscence was more frequent in cases with lens and posterior segment damage. Other studies also support this finding, and damage to crystalline lens or IOL at presentation (commonly accompanied by posterior segment injury) has been proposed as a bad prognostic sign for final visual acuity in such eyes.[26,27] Likewise, three of our patients with posterior segment damage also had concomitant crystalline lens or IOL damage.

Surgical intervention was resuturing of the original graft in all cases, and the time interval between the causative trauma and first presentation was a mean 23.76 hours (1-120 hours). Unless the graft is lost, resuturing of the original graft is recommended, especially in older patients, to avoid risk of explosive hemorrhage, even if the graft seems opaque.[17,20,23,25] There is insufficient data in the literature regarding the effect of time interval from trauma to resuturing on final graft status. Topping et al.[16] reported a case with 20/20 visual acuity and clear graft who had resuturing two days after the trauma. Similarly, one of our patients who admitted three days after trauma had maintained graft clarity, whereas another who was admitted five days after the injury developed graft rejection. Nevertheless, we found no significant relation between final graft status and the time interval between injury and resuturing.

Pettinelli et al.[23] alleged retrobulbar anesthesia to be contraindicated in cases with opened and distorted globe. We encountered no complications in the five patients underwent surgery under retrobulbar anesthesia. Rehany et al.[14] reported a case of sulcus-fixated IOL during primary surgical repair, and they also noted that this process may pose a risk to the eye and corneal graft. None of our patients had IOL implantation during the primary surgical repair. Six of our patients required various secondary surgical procedures including PK. Especially in eyes with posterior segment damage, need for secondary surgical procedures has also been emphasized by other researchers.[20,31]

The reported percentage of grafts remaining clear after TWD varies in a wide range between 20%[3] and 100%.[16,29] Although more endothelial cell loss is expected following trauma that is severe enough to cause lens/vitreous loss, due to some physiological transformation of endothelial cells following transplantation, long-term results following resuturing are usually satisfactory.[3] Lam et al.[22] analyzed various factors affecting graft survival following rupture. They found no statistically significant difference when comparing sex, age, original indication for grafting, or time interval between primary surgery and trauma. However, in patients in whom sutures were removed, grafts had a more extensive dehiscence; additionally, grafts with 180° or more of dehiscence were more prone to clarity loss. Likewise in our study, regarding graft clarity, we observed no statistically significant differences in age, gender, primary surgical indication, median time interval between PK

and trauma, degree of dehiscence, affected quadrant, etiology of the trauma, median time interval between trauma and surgery, or reconstructive procedure. Among the published studies, the highest number of regrafts was reported by Tseng et al.[17] In their series, 71.4% of grafts remained clear. Raber et al.[19] also found that regrafting affords good prognosis. In our study group, one patient had been regrafted, and the graft remained clear during the 18-month follow-up.

Other complications apart from early damage to anterior and posterior segment structures are reported as vitreous hemorrhage, suprachoroidal hemorrhage, retinal detachment, macular pucker, glaucoma, epithelial ingrowth, hypotonia, phthisis bulbi, and need of evisceration due to complete disturbance of intraocular structures.[4,11,14,18,20,22,23,25,27,31,34] Among our study population, we encountered secondary glaucoma, macular pucker, epithelial ingrowth with retinal detachment, fibrous ingrowth, and suprachoroidal hemorrhage.

Many researchers have determined severity of the trauma and posterior segment complications to be the major determinants of final visual acuity.[11,14,16-19,22,25,26,31] In our series, when pretraumatic and final visual acuities were compared, visual acuity was improved in 5 eyes, unchanged in 7, and worse in 14 cases. In patients whose final visual acuity was worse, the trauma was severe enough to cause ≥120° graft dehiscence (with the exception of patients 13 and 22) and/or crystalline lens/IOL damage (patients 5, 9, 13, 15, 19 and 25); posterior segment complications were also noted (patients 9, 13, 19, 23) (Table 2).

In conclusion, as a part of their treatment, patients should be well informed about the risk of TWD and its possible serious complications.[31] In patients without major complications such as posterior segment damage, visual results and graft survival following TWD can be favorable.

Conflict of interest: None declared.

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KLİNİK ÇALIŞMA - *ÖZET*

Penetran keratoplasti sonrası travmatik yara ayrışması

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AMAÇ: Penetran keratoplasti (PK) sonrası travmatik yara ayrışması için risk faktörleri, klinik özellikler ve cerrahi sonuçları değerlendirmek.
GEREÇ VE YÖNTEM: Penetran keratoplasti sonrası travmatik yara ayrışması gelişen 26 hasta travma ile ilişki faktörler, rekonstriktif cerrahi işlemler ile sonuç greft sağkalımı ve görme keskinliği açısından geriye dönük olarak değerlendirildi.
BULGULAR: Yaş ortalaması 40.7±19.6 yaş olan 26 hastanın 12'sinde (%46.1) travmadan daha iyi gören göz etkilenmişti. En sık travma tipinin dokuz olguda (%34.6) olmak üzere çeşitli objelerle gelişen künt travma olduğu görüldü. Ayrışma bütün olgularda greft ile alıcı bileşkesinde gelişmişti. Ayrışma genişliği ortalama 135.4°±57.6° idi. Kristalin lens veya göz içi lens hasar oranı %42.3 olarak bulundu. Cerrahi sonrası medyan takip süresi 36 aydı. On üç (%50) hastada greft saydam kalırken, 13 hastada (%50) greft yetmezliği/greft reddi gelişmişti. Sonuç görme keskinliği 20/200 üzerinde olan hasta sayısı 13 (%50) idi.
TARTIŞMA: Travmatik yara ayrışması PK sonrası en sık birinci yılda olmak üzere herhangi bir zamanda gelişebilir. Diğer gözde görme azlığı önemli bir risk faktörü olarak gözükmektedir. Arka segmenti hasarı gibi önemli komplikasyonu olmayan hastalarda görsel sonuçlar ve greft sağkalımı olumludur.

Anahtar sözcükler: Görsel prognoz; greft sağkalımı; penetran keratoplasti; travmatik yara ayrışması.

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