



Our Visual Results in Traumatic Cataract Cases

Musa Yiğit¹, Levent Tök², Özlem Tök³

ABSTRACT

Published Online: November 07, 2022

Aim: The aim of this study is to evaluate the visual results in our cases with traumatic cataract and to examine the factors affecting the level of vision.

Material-Method: In our study, the files of 27 cases with traumatic cataract because of ocular trauma October 2017 and May 2020 were reviewed retrospectively. Demographic data, type of injury, accompanying findings, treatment applied, follow-up period, and best corrected visual acuity of all patients were recorded.

Results: Twenty-two (81.4%) of the cases were male and 5 (18.5%) were female. The mean age was 35.8 ± 19.3 years (4-76 years). The mean follow-up period was 6.8 ± 6.6 months (1-24 months). The most common causes of trauma were sharp metal objects (29.6%), wood pieces (25.9%), and glass pieces (11.1%). Seventeen (62.9%) cases were corneal perforation, 5 (18.5%) cases were cornea-scleral perforation, and 4 (14.8%) cases were scleral perforation. There were hyphema in 11 (40.7%) cases, vitreous loss in 8 (29.6%) cases, intraocular foreign body in 7 (25.9%) cases, intraocular hemorrhage in 4 (14.8%) cases, iridodialysis in 3 (11.1%) cases and retinal detachment in 1 (3.7%) case. Cataract operation was performed in 13 cases (48.1%). Visual acuity improved in 74% of the patients at the last control.

Discussion: There is no certain surgical technique and timing for traumatic cataract surgery. Satisfactory visual results can be obtained with the most appropriate treatment by evaluating each case on its own.

KEYWORDS:

Complication, traumatic cataract, visual prognosis.

INTRODUCTION

Traumatic cataract is an early or late complication of ocular trauma (1). Traumatic cataracts most commonly develop as a result of penetrating injury (2). The lens is more frequently affected in penetrating traumas, especially by direct contact with the lens capsule and interventions for the lens become necessary in a short time. Since the lens is also touched during the surgical intervention to be performed for the reconstruction of the globe following these traumas, the lens can rarely preserve its transparency even if it is not affected at the beginning (3). Surgical intervention for the lens arises in order to evaluate the follow-up and treatment of changes in the posterior segment, reduced vision because of lens opacification, lens-related inflammation and glaucoma in traumas (4). There are conflicting reports about the timing of cataract surgery in the literature.

Corresponding Author: Musa Yiğit

*Cite this Article: Musa Yiğit, Levent Tök, Özlem Tök (2022). Our Visual Results in Traumatic Cataract Cases. *International Journal of Clinical Science and Medical Research*, 2(11), 87-89

There are also those who advocated that intraocular lens (IOL) implantation should be a second operation, as well as those who replaced the cataract with an IOL in the same session for early developing traumatic cataract (5,6).

In this study, we evaluated cases with traumatic cataracts in terms of etiology, clinical findings, surgical timing, and visual outcomes.

MATERIAL-METHOD

In our study, the files of 27 cases with traumatic cataract because of ocular trauma October 2017 and May 2020 were reviewed retrospectively. The type of injury, complications, follow-up times, trauma localizations, and ocular trauma scores (OTS) of the patients were recorded. Cataract surgery was performed in 13 cases. IOL implantation was performed in 6 cases in the same session with primary repair, and in 7 cases in the second session. Preoperative, postoperative and final visual acuity of the patients were recorded. Those who underwent cataract surgery in the same session and those who underwent cataract surgery in the second session were compared in terms of visual prognosis.

RESULTS

Twenty-two (81.4%) of the cases were male and 5 (18.5%) were female. The mean age was 35.8 ± 19.3 years (4-76 years). The mean follow-up period was 6.8 ± 6.6 months (1-24 months). The most common causes of trauma were sharp metal objects (29.6%), piece of wood (25.9%), and piece of glass (11.1%). Seventeen (62.9%) cases were corneal perforation, 5 (18.5%) cases were cornea-scleral perforation, and 4 (14.8%) cases were scleral perforation. There were hyphema in 11 (40.7%) cases, vitreous loss in 8 (29.6%) cases, intraocular foreign body in 7 (25.9%) cases, intraocular hemorrhage in 4 (14.8%) cases, iridodialysis in 3 (11.1%) cases and retinal detachment in 1 (3.7%) case. Cataract operation was performed in 13 cases (48.1%). The mean age of these patients was 5.5 (5-67 years) and 11 were male and 2 were female. Right eye was affected in 4 patients and left eye was affected in 9 patients. The patients were divided into 2 groups according to the timing of the cataract operation. The first group consisted of the patients who underwent cataract surgery in the same session with the penetrating eye injury, and the second group consisted of the patients who underwent cataract surgery in the second session.

There were 6 patients in the first group. Injury localization of the patients was in zone 1 in 4 patients and in zone 2 in 2 patients. 1 patient had an intracorneal foreign body. There were anterior and posterior capsular tears in 1 patient, lens subluxation in 1 patient, vitreous prolapse in 2 patients, and vitreous hemorrhage in 1 patient. The mean OTS of the patients was 57.6 (46-66). Visual acuity of the patients was between counting fingers from 75 centimeters and no sense of light. In the same session with the repair of penetrating eye injury, IOLs were placed in the pouch in 3 of these patients, while the other patients were left aphakic. Final visual acuity was determined at the level of light perception and 0.4 at the follow-ups after an average of 9.1 months (less than 1 month-21 months).

There were 7 patients in the second group. Injury localization of the patients was in zone 1 in 6 patients and in zone 2 in 1 patient. 1 patient had an intracorneal foreign body. There were hyphema in 4 patients, anterior capsule in 2 patients, anterior and posterior capsules in 1 patient, posterior capsule tear in 1 patient, vitreous prolapse in 1 patient, vitreous hemorrhage in 2 patients, retinal detachment in 1 patient, metallic intraocular foreign body in 2 patients. The mean OTS of the patients was 59.3 (56-66). Visual acuity of the patients was at the level of counting fingers from 1 meter with the sense of light. The visual acuity of a 5-year-old patient could not be evaluated. Cataract operation was performed on average 21.7 days (2-150 days) after the primary repair. IOLs were placed in the pouch in 3 patients and in the sulcus in 3 patients. Capsule tension ring was also placed in 1 patient who underwent IOL implantation into the pouch. One patient was left aphakic. One patient with retinal detachment which has intraocular foreign body and one patient with vitreous hemorrhage which has intraocular foreign body underwent

cataract operation and pars plana vitrectomy and foreign body removal in the same session. Final visual acuity was determined as from counting fingers from 30 centimeters to 0.1 at the follow-ups after an average of 7 months (1-20 months).

Recurrent retinal detachment occurred 5 months later in the patient who was operated because of retinal detachment after trauma.

Endophthalmitis and sympathetic ophthalmia did not develop in any patient.

DISCUSSION

All of the traumatic cataracts in our study were caused by penetrating injury.

Traumatic cataract is a common cause of unilateral vision loss in both children and adults. It most commonly occurs after a penetrating eye injury. Performing cataract surgery under elective conditions following the primary repair of the injury is more accepted than performing it in the same session as the primary operation (3,7). Surgery is mandatory in the first session in cases where pupillary block develops, lens swelling and increased intraocular pressure (IOP), lens fragmentation, lens luxation into the anterior chamber or vitreous (8).

By leaving the IOL implantation for the second session, the risk of encountering conditions such as the variability of the corneal or scleral wound size and the possibility of infection decreases (6).

In the literature, it has been stated that IOL implantation left to the second session is better in terms of visual prognosis. Unlike the literature, in our study, the visual prognosis of the patients in group 1 was better than those in group 2.

As a result; It was thought that the presence of additional pathologies (vitreous prolapse, vitreous hemorrhage, presence of intraocular foreign body, retinal detachment, lens capsule tear...) as a result of trauma may adversely affect the final visual prognosis.

Declaration of interest: I have no declaration of interest.

REFERENCES

1. Kaya M, Kulaçoğlu DN, Baykal O, Tüfekçi A, Energin F. Perforating eye trauma in 688 cases. *T Clin Ophthalmol* 1998;7:120-3.
2. Fırat T.; *Eye and Diseases*. Ankara : Emel Printing. 1980:301-354.
3. Hersh PS, Kenyon KR.: Anterior segment reconstruction following ocular trauma. In: Shingleton BJ, Hersh PS, Kenneth RK, editors. *Eye Trauma* St. Louis. Mosby. 1991:175-84.
4. Irvine JA, Smith RE.: Lens injuries In: Shingleton BJ, Hersh PA, Kenneth RK, editors. *Eye Trauma* St. Louis. Mosby. 1991:126-35.
5. Lamkin JC, Azar DT, Mead MD, Volpe NJ. Simultaneous corneal laceration repair, cataract

Musa Yiğit et al, Our Visual Results in Traumatic Cataract Cases

removal, and posterior chamber intraocular lens implantation. Am J Ophthalmol 1992;113:626-31.

6. Rubsamen PE, Irvin WD, McCuen BW 2nd, Smiddy WE, Bowman CB. Primary intraocular lens implantation in the setting of penetrating ocular trauma. Ophthalmology 1995;102:101-7.
7. Erkan D, Özge İ, Arıtürk N.: Intraocular lens implantation in traumatic cataracts. MN Ophthalmol. 1995;2:154-159.
8. Dürük K.: Corneal injuries. Türkiye Klinikleri Ophthalmology special issue of eye traumas. 2004;13:144.