Observational Study of Ocular Damage and Visual Loss Associated with Traumatic Cataract Patients at Tertiary Care Hospital in Aurangabad Maharashtra

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Research Article

Abstract: **Background:** Traumatic cataract, a consequence of severe ocular injury contributes to notable visual morbidity. It remains an important cause of avoidable and predominantly monocular visual morbidity particularly among the younger age group. Methods: 62 patients with traumatic cataract admitted at the ophthalmology wards at Government Medical College, Aurangabad were included in the study. Patients with posterior segment pathologies and with intraocular foreign body were excluded as they were immediately referred to specific units or higher centres and were not available to participate in our study. Detailed history and clinical examination was done. The associated ocular damage and the extent of visual loss in the traumatic cataract cases included in the study was analyzed and described. Results and Conclusion: Corneal tear was the most common associated ocular damage noted in 21 cases (33.9 %) followed by corneal opacity in 15 cases (24.2%). Presence of cortex or vitreous in anterior chamber was found in 12 cases (19.3%). Adherent leucoma, uveal tissue prolapse, secondary glaucoma, dislocation or subluxation of lens, iris damage, strabismus, hyphema and scleral tear were among the other associated ocular damage noted in traumatic cataract patients. There was severe degree of visual loss at presentation with 35 cases (56.4%) showing visual acuity restricted to hand movement or perception of light only. 9 cases (14.5%) had visual acuity reduced to Finger counting, 15 cases (24.2%) reported with visual acuity > 1/60 whereas only 3 cases (4.8%) had visual acuity > 6/60 at the time of presentation. However there were no patients with visual loss up to faulty projection of rays or no perception of light as all patients with posterior segment pathology were excluded.

Keywords: Ocular Damage, Traumatic Cataract.

Introduction

Traumatic cataracts comprise a special category of cataracts due to the fact that they usually present with associated other ocular morbidity in the form of corneal tears, iris injury, vitreous haemorrhage and retinal tears; however they are considered to be preventable to a certain extent. [1] Ocular trauma is among the most common causes of ocular morbidity in children as well as young adults. Counselling of the trauma victim and his family is one of the important components in management of ocular injury and we should counsel and explain the prognosis to any patient with ocular trauma before and also after the repair of ocular injury. [2] Ocular damage and visual loss at the time of presentation associated with traumatic cataract are among the major factors affecting the prognosis of traumatic cataract cases. [3, 4, 5, 6] The present study analyzes the ocular damage and visual loss associated with Traumatic Cataract patients at tertiary care hospital in Aurangabad Maharashtra.

Methods

Study Design Descriptive Observational Study

Study Site: Department of Ophthalmology, Government Medical College, Aurangabad (MS) INDIA.

Study Period: January 2001 to December 2001

62 patients with traumatic cataract admitted at the ophthalmology wards at Government Medical College, Aurangabad were included in the study. Patients with posterior segment pathologies and with intraocular foreign body were excluded as they were immediately referred to specific units or higher centres and were not available to participate in our study. Detailed history and clinical examination was done. The associated ocular damage and the extent of visual loss in the traumatic cataract cases included in the study was analyzed and described.

Observations and Results

Table 1: Associated ocular damage in Traumatic cataract patients

Sr. No	Ocular Damage	Number of Patients	Percentage (%)
1	Corneal tear	21	33.8
2	Corneal opacity	15	24.2
3	Cortex/ Vitreous in Anterior Chamber	12	19.3

4	Adherent Leucoma	8	12.9
5	Uveal Tissue Prolapse	8	12.9
6	Secondary Glaucoma	8	12.9
7	Dislocation or Subluxation of Lens	8	12.9
8	Iris Damage	6	9.7
9	Strabismus	6	9.7
10	Hyphema	5	8.1
11	Scleral Tear	1	1.6

Table 2: Extent of Visual loss in Traumatic cataract patients

Visual Acuity	Number of Patients	Percentage (%)
➢ > 6/60	3	4.8
➢ > 1/60	15	24.2
➢ Finger Counting	9	14.5
Hand movement, PL +, PR +	35	56.4
➢ No PL	---	-----
➢ Total	62	100

PL: Perception of light, PR: Projection of rays

Discussion

Corneal tear was the most common associated ocular damage noted in 21 cases. (33.9 %) followed by corneal opacity in 15 cases (24.2%). Presence of cortex or vitreous in anterior chamber was found in 12 cases (19.3%). Adherent leucoma, uveal tissue prolapsed, secondary glaucoma, dislocation or subluxation of lens, iris damage, strabismus, hyphema and scleral tear were among the other associated ocular damage noted in traumatic cataract patients. There was severe degree of visual loss at presentation with 35 cases (56.4%) showing visual acuity restricted to hand movement or perception of light only. 9 cases (14.5%) had visual acuity reduced to Finger counting, 15 cases (24.2%) reported with visual acuity > 1/60 whereas only 3 cases (4.8%) had visual acuity > 6/60 at the time of presentation. However there were no patients with visual loss up to faulty projection of rays or no perception of light as all patients with posterior segment pathology were excluded. Corneal involvement seen in 58 % cases was most common associated ocular damage. It is obviously due to the fact that cornea is the most exposed part of globe and therefore most liable to trauma. Most other studies like D Hiles *et al* (50%) [5], Koenig *et al* (50%) [6], M Blum *et al* (61%) [7] and D Singh *et al* (37.7%) [8] Have also noted a similar preponderance of corneal damage. Lens matter in anterior chamber was found in 19.3 % cases in our study. Koenig *et al* [6] found 50% cases while M Blum *et al* [7] found 26.9% similar cases. Secondary glaucoma was found in 12.9% cases consistent with study done by M. Blum *et al* [7] which found 14.4% cases. It was also found in study of Koenig *et al* [6] on the higher side with 37.4% cases while a lower (3%) incidence was found by D Hiles *et al* [5] study. Subluxation of lens was found in 12.9% cases which was slightly higher than the 8% cases reported by D Hiles *et al* [5].

More than half of our patients (56.4%) had visual acuity of perception of light and projection of rays only. Other studies have shown much less incidence of such an extent of visual loss. Koenig *et al* [6] found similar extent of visual loss in 25% cases while Churchill *et al* [9] found 20% cases, Brady *et al* [10] found 15% cases and Reubsaman *et al* [11] found 28.5% cases. The higher incidence of severe vision loss in our study may be due to the fact that there was late medical consultation by the patients and they have already developed total lens opacity prior to examination. Also, more number of penetrating injuries might have contributed to this higher incidence. Thus, further studies need to be done to assess the causes and prognostic factors associated with traumatic cataract so that preventive steps can be designed at society level and proper measures can be taken in management of ocular injury so as to positively affect the prognosis.

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