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TO EVALUATE EFFECT OF TYPE OF INJURY (CLOSED- GLOBE AND OPEN-GLOBE INJURY) ON THE VISUAL RECOVERY AFTER MANAGING TRAUMATIC CATARACT.

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Abstract
Background & Method: All patient coming to Index Medical College Hospital & Research Centre, Indore operated for traumatic cataract due to various injuries during the year March 2015 to December 2016. Patients who were cooperative and willing for the surgery were included. Patients with extensive ocular damage were not included. Corneal or scleral tear – tear repair done as soon as possible under LA or GA and cataract surgery postponed for at least 1 month.
Result: The age group ranged from 5-60 years. More number of cases were found in the age group of 0-15 years (35%).
Conclusion: Open globe injury in 19 cases (51%) followed by closed globe injury in 18 cases (49%). Stick and thorn were the major objects causing injury. The final visual outcome showed good result however the final visual outcome depends upon the extent of associated ocular injuries. Effective Intervention and management are the key points in preventing monocular blindness due to traumatic cataract.
Keywords: Injury, Visual, Traumatic & Cataract.

Introduction:

Ocular trauma is the leading cause of unilateral blindness all over the world. Traumatic cataract is a common sequel of ocular injuries in adults and children. The incidence of ocular injuries varies in different parts of the world. Any prevention strategy requires knowledge of causes of injuries, which may enable more appropriate targeting of resources toward preventing such injuries.[1] For both eye trauma victims the society bears a large potentially preventable burden.

Fibrin reaction in anterior chamber (30.9%), hyphema (19%) were the postoperative complications. In conclusion, an intraocular lens implantation in traumatic cataract, despite many postoperative complications enables most of the patients to achieve satisfactory and useful vision. Patients with severe posterior segment damage do not benefit functionally from cataract surgery.

Gagandeep S Brar, Jagat Ram (2001)[2] evaluated 40 children with traumatic cataract (blunt trauma n=22 eyes, penetrating eye injury, n=18 eyes) they saw that the postoperative complications were significantly higher in penetrating eye injury group as compared to blunt trauma group i.e., pupillary capture 44.44% versus 9.09%, posterior capsulotomy rate 83.33% versus 40.90% and IOL decentration 27.77% versus 4.54%. The final visual acuity was 6/12 or better in 38.8% and 86.36% with penetrating and blunt trauma respectively.[3] Extra capsular cataract extraction following blunt trauma results in better outcome and fewer complications compared to penetrating eye injury.[4]

Material & Method

All patient coming to Index Medical College Hospital & Research Centre, Indore operated for traumatic cataract due to various injuries during the year March 2015 to December 2016.

SELECTION CRITERIA:-

1. Patients who were cooperative and willing for the surgery were included.

2. Patients with extensive ocular damage were not included.

PREOPERATIVE ASSESSMENT:-

Patients were registered with their name, age, sex and address, Relevant history from the patients was taken regarding

- Diminution of vision and associated complain like pain, redness, watering with duration.
- Nature of trauma and associated ocular damage.
- Time lapse between the occurrence of trauma and institution of treatment recorded.

A comprehensive general examination of all patients was done to rule out any systemic illness. Ocular examination:

- Visual acuity (unadided and aided.
- Retinoscopy (where possible)
- Detailed anterior segment examination under diffuse
- Illumination and slit lamp microscopy.
- Tonometry by Schiotz tonometer.
- Syringing for patency of lacrimal apparatus.

- Limbal ring x-ray in cases of IOFB for exact laclization.
- USG- B scan to rule out posterior segment pathology.
- Kerotometry to determine preoperative astigmatism and A-scan to determine Power of IOL to be implanted.

Surgical procedures undertaken prior to cataract surgery: Corneal or scleral tear – tear repair done as soon as possible under LA or GA and cataract surgery postponed for at least 1 month. However, in some cases simultaneous cataract extraction is done and secondary implantation done at a later date. IOFB – localization done with limbal ring x-ray. Accordingly, sclera incision given and FB is extracted with giant electromagnet. Cryoprobe and sclera suture applied and cataract surgery done at least after 2 months

Management of Traumatic cataract: Depending on condition of lens and status of capsule and zonules**.** Type of cataract surgery:

- Irrigation and aspiration
- Anterior capsulectomy + irrigation and aspiration
- Lens extraction and vitrectomy
- Phacoemulsifcation
- SICS
- ICCE
- ECCE
- ECCE + membranectomy

Results

Table 1: Age Wise Analysis

Age group (in years)	No. of cases	Percentage %
0-15	13	35%
16-25	12	32.5%
26-35	6	16%
36-45	2	5.5%
45 and above	4	11%
Total	37	100

The age group ranged from 5-60 years. More number of cases were found in the age group of 0-15 years (35%).

Table 2: Type of Surgery (n=37)

Type of Surgery	No. of Eyes	Percentage
SICS with PCIOL	27	73%
SICS With PCIOl with corneal/corneo-scleral tear repair	06	16%
SICS with ACIOL	01	03%
Lens extraction/SFIOL	01	03%
Lens extraction with anterior Vitrectomy	02	05%

Out of 37 cases of traumatic cataract, 27cases underwent SICS (small incision cataract surgery) with posterior chamber intraocular lens implantation. 06 underwent SICS/PCIOL implantation with corneal/ corneo-sceral tear repair. 01 case had SICS with ACIOL implantation. 1 case had lens extraction with SFIOL implantation. Two cases underwent Lens extraction with Vitrectomy.

Out of 37 patients 8 patients had previous surgery of corneal/ corneo-scleral tear repair

Table 3: Early Postoperative Complications (n=37)

Early Postoperative complication	No. of Eyes	Percentage
Striate Keratopathy	24	65%
Uveitis	30	81%
Hypaema	02	05%
Vitreous in AC	02	05%
Cortical & lens matter in AC	06	16%
Primary PCO	05	14%

The postoperative complications seen in traumatic cataract may be due to trauma, surgery or both Out of 37 cases of traumatic cataract who underwent cataract extraction, Early Postoperative complication seen are:

24 cases (65%) showed striate keratopathy, 2 cases (5%) showed hyphaema, 30 cases (81%) uveities, 2 cases (5%) had vitreous in AC, 6 cases (16%) had cortical & lens matter in AC and 5 cases (14%) had primary PCO.

Discussion

Traumatic cataract management is always challenging as it is difficult to know and predict the final visual outcome.[5] In such a situation it is very important to understand the predictors of visual outcome which helps to plan management strategy and to know visual prognosis. In our study, more of younger patients with average age of 24 years. Male dominance of 88.37% was seen similar to male dominance of 71% in Srivastava et al. study.[6] The reason of the higher number of younger age cases with male predominance may be due to more exposure of outdoor activities such as playing or occupations related to the field.[7]

The mean time interval between injury and presentation of the patient to institute was 6 days which was similar to observation made by Gogate et al.[8] It was also noted that reporting of the patient was earlier in the severe grade of ocular injury which could be correlated to intolerable pain with gross diminution of vision.

Conclusion

Open globe injury in 19 cases (51%) followed by closed globe injury in 18 cases (49%). Stick and thorn were the major objects causing injury. The final visual outcome showed good result however the final visual outcome depends upon the extent of associated ocular injuries. Effective Intervention and management are the key points in preventing monocular blindness due to traumatic cataract.

References

1. Brar GS, Ram J, Pandav SS, Reddy SS. Postoperative complications And visual results in uniocular pediatric traumatic cataract. Ophthalmic Surg 2001
2. Moisseiev J. Segav F, Harizmann N et al. Primary cataract extraction and intraocular Lens implantation in penetrating ocular trauma. Ophthalmology, 2001, 108: 1099 -1103.
3. Loncar VL, Petric I. "Surgical Treatment, Clinical outcome, of "Traumatic. Cataract". Croatian Medical Journal 2004; 45(3):310-313 .
4. Mehul Shah, Shreya Shah, Shahshank Shah, Vinay Prasad and Avadh Parikh. Visual recovery and predictors of visual prognosis after managing traumatic cataracts in 555 patients. Indian J Ophthalmol. 2011 May-Jun; 59(3): 217–222. doi: 10.4103/0301-4738.81043
5. Sharma AK, Aslami AN, Srivastava JP, Iqbal J. Visual outcome of traumatic cataract at a tertiary eye care centre in North India: A Prospective study. J Clin Diagn Res 2016;10:NC05-8.
6. Srivastava U, Lalramhluri R, Rawat P, Bhaisare V. Clinical evaluation of post traumatic cataract in tertiary care hospital. Int J Sci Res Publication 2014;4:1-6.
7. Smith D, Wrenn K, Stack LB. The epidemiology and diagnosis of penetrating eye injuries. Acad Emerg Med 2002;9:209-13.
8. Gogate P, Sahasrabudhe M, Shah M, Patil S, Kulkarni A. Causes, epidemiology, and long-term outcome of traumatic cataracts in children in rural India. Indian J Ophthalmol 2012;60:481-6.