ORIGINAL ARTICLE

Outcome of Preservative Free Intracameral Triamcinolone Acetonide Assisted Anterior Vitrectomy in Traumatic Cataract Surgery

AMTUL NASEER SAMI, ABDUL BAQI, MOHAMMAD ANWAR, *ASAD ASLAM*

ABSTRACT

Aim: To evaluate the effects and complications of intracameral injection of triamcinolone acetonide in traumatic cataract with capsular rupture.
Design: A prospective, interventional observational study was performed in 30 cases of traumatic cataract.
Methods: They underwent surgery between 1.1.13 and 31.12 .13. The cases were prospected and evaluated. This study was conducted in Mayo Hospital/ King Edward Medical University, Lahore. All the patients were worked up according to the protocol.
Results: During surgery injection of intracameral Triamcinolone acetonide was used. Postoperatively the visual acuity, IOP, glaucoma, posterior synechiae, cell deposits, and posterior capsule opacification were studied at 1 week, 1 month, and 3 months intervals for 12 months. Visual acuity improved from Pl+ Pr + to 6/18 or above in 88% cases postoperatively. There was no significant change in the intraocular pressure. One eye showed increased intraocular pressure (34 mm Hg) at first week, which was controlled by use of antiglaucoma medication. The intraoperative findings, results, and complications were noted. Minimum inflammation was observed postoperatively. No serious complications were found.
Conclusions: Intracameral injection of triamcinolone acetonide improved the visibility of the vitreous in the anterior chamber during traumatic cataract surgery, and can be used safely.
Keywords: Vitrectomy, traumatic cataract, glaucoma

INTRODUCTION

Trauma is the cause of monocular blindness. Ocular trauma can cause traumatic cataract leading to blindness. In cases of capsular rupture with vitreous prolapsed into anterior chamber, the vitreous is transparent and cannot be visualized which may lead to complication e.g. raised intraocular pressure, endothelium damage, up drawn pupil. It is essential to perform thorough anterior vitrectomy to avoid these complications[1,2]. Triamcinolone Acetonide is being used to enhance the visualization of vitreous bodies in the anterior chamber of the eye during surgery and it leads to effective anterior vitrectomy and also reduces the post operative complications[3].

MATERIAL AND METHODS

This prospective, interventional study conducted in 30 eyes of 30 cases in King Edward Medical University/Mayo Hospital, Lahore, Department of Ophthalmology from 1.1.13 to 31.12.13. All traumatic cataract with ruptured capsule were included. Glaucoma, Aniridia, Corneal opacities and corneal haze were excluded from the study.

Department of Ophthalmology, King Edward Medical University/Mayo Hospital, Lahore
Correspondence to Dr. Amtul Naseer Sami Email: amtulnaseersami@gmail.com Cell: 0321-4745747

All patients gave written informed consent after they received the explanation of the nature and possible consequences of the procedure. Baseline evaluation included visual acuity with Snellen chart, intraocular pressure by using applanation tonometer, Slit lamp examination and fundus examination. The surgeon operated the eye with standard extra capsular cataract extraction. Vision blue was used to stain the anterior capsule and visualize the extent of anterior capsular tear. Irrigation aspiration was done. Triamcinolone acetonide was used to stain vitreous in anterior chamber, then anterior vitrectomy was done. After Intraocular lens implantation we used injection Triamcinalone acetonide intracamerolly, to visualize the vitreous wick. Anterior vitrectomy was performed and the anterior chamber was washed to remove Triamsilone acetonide to avoid its complications. Post operative examination included visual acuity, intraocular pressure recorded by applanation tonometer, slit lamp examination, and detailed fundus examination. And post operative examinations were done at 1st week, one month, 3 months intervals for one year.

RESULT

Results of age, gender as mean by standard deviation, SPSS 13 used for window software for statistical purposes were analyzed. PC .005 was considered as statistically significance.

Table 1: The age wise distribution of subjects

Valid (age)	Frequency	%
0-10 yrs	3	10.0
11-20 yrs	14	46.7
20-30 yrs	13	43.3
Total	30	100.0

Table 2: Gender incidence (Distribution)

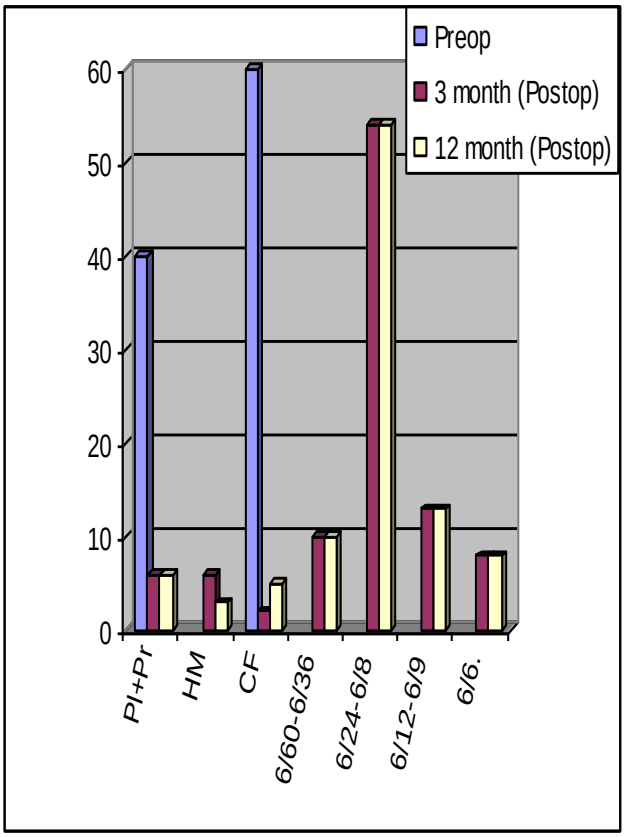
Valid	Frequency	%
Male	19	70
Female	11	30
Total	30	100

Table 3: Nature of injury visual outcome

Valid	Frequency	%
Blunt	12	26.7
Perforating	18	73.3
Total	30	100.0

Table 4: Intraocular pressure

	Mean IOP
Pre OP	16.4
1st week Post IOP	19
1 month	18
3 month	16
12 month	16



Pl=pr perception and projection of light HM hand movement CF counting finger

DISCUSSION

Triamcinolone acetonide is a water insoluble steroid. It inhibits the inflammatory process. Previously it has been used as a potent anti-inflammatory drug in various diseases. In ophthalmology, triamcinolone acetonide injection is used for the safety of anterior chamber in cases of phacoemulsification. In our study we used triamcinolone injection as an agent that can stain the vitreous and visualize vitreous prolapsed into the anterior chamber in cases of traumatic cataract to do thorough anterior vitrectomy and avoid post operative complications. Our study showed that in preoperative and postoperative evaluations there was no significant difference in the intraocular pressure. In our study, one patient developed raised intraocular pressure which was controlled by beta blocker drugs and the use of Acetazolamide thrice daily for one week to control the intraocular pressure. Praveen MR et al noticed that there is increase iop in their study. Chang CJ et al also reported no post operative increase in iop. In our study we noticed good staining and visualization of vitreous prolapsed into the anterior chamber. Yamaguchi et al also noticed the staining of vitreous and found it easy to remove vitreous from the anterior chamber. Regarding corneal toxicity a single injection of triamcinolone has no harmful effects. Our study also showed the same results. In our study no eye required second surgery. Post operative vision was good in all cases. Jost B Jones et al noticed decreased inflammation. Gill et al also noticed decreased postoperative inflammation. We also noticed less inflammation in eyes in our study.

CONCLUSION

Intracameral injection of triamcinolone acetonide improved the visibility of the vitreous in the anterior chamber during traumatic cataract surgery, and thus can be used safely.

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