EVALUATION OF THREAD CUSHION TECHNIQUE IN MANAGEMENT OF APHAKIA IN COMPLICATED PHACOEMULSIFICATION

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Introduction

Despite the fact that aphakia is relatively uncommon in current ophthalmology practice, there are still certain scenarios in which ophthalmologists have to deal with it. Intraocular lens implantation is now the accepted option for management of aphakia. To achieve stable fixation, the lens should ideally be positioned in the capsular bag as it is so close to the eye's nodal point. When there is no capsular support, the surgeon must choose the most appropriate approach for correcting this problem. There are several choices for correcting aphakia. These include anterior chamber IOL, iris-fixation of the IOL, scleral-sutured IOL and sutureless intra-scleral fixation. There are benefits as well as drawbacks to each of these IOLs. In this report, we introduce amodified surgical approach that makes an implantation of an IOL in the posterior is possible in patients with insufficient capsular support. It offers safe IOL support, good centralisation and stability.

Aim of the Work

The aim of this study was to evaluate the thread cushion technique in management of aphakia in complicated phacoemulsification.

Patients and Methods

This prospective study was conducted on twenty aphakic eyes following cataract surgeries. All cases were evaluated through thread cushion technique.

Inclusion criteria:

Patients with aphakiaand no capsular support after complicated phacoemulsification.

Exclusion criteria:

1. Patients with glaucoma.
2. Patients with uveitis.
3. Patients with ocular surface diseases especially conjunctival diseases that may interfere with the surgical technique e.g. pterygium.
4. Previous surgeries involving the conjunctiva and sclera e.g. squint and glaucoma surgeries.
5. Patients with good capsular support allowing the use of more simpler techniques e.g. sulcus implantation of three piece intra ocular lens.
6. Persistent corneal edema hindering visualization during surgery.

Methods:

All patients were subjected to detailed history taking. Pre-operative evaluation: Refraction, best corrected visual acuity, fundus biomicroscopy, tonometry, and slit lamp biomicroscopy for assessment of anterior segment. Postoperative assessment: Intra ocular lens stability, anterior chamber stability, best corrected visual acuity, intra ocular pressure and refraction.

Results

Table 1: Comparison between pre and postoperative BCVA logMAR

BCVA	Preoperative	One week	One month	Three months	Fr	p
LogMar						
Min. – Max.	0.17 – 1.30	0.17 – 1.16	0.17 – 1.0	0.17 – 1.0	45.286*	<0.001*
Mean ± SD.	0.71 ± 0.31	0.54 ± 0.28	0.48 ± 0.29	0.43 ± 0.29		
Median (IQR)	0.60 (0.48 – 1.0)	0.48 (0.30 -0.77)	0.39 (0.30 – 0.69)	0.30 (0.17-0.54)		
p_0		0.002*				
P1			<0.001*			
P2				<0.001*		

p: p value for comparing between pre and post different studied periods
*; statistically significant
p_0: for comparing between pre and post 1 week VA
p_1: for comparing between pre and post 1m VA
p_2: for comparing between pre and post 3m VA

Table 2: Comparison between the different studied periods according to IOL position and decenteration (n = 20)

IOL position	One week		One month		Three month	
	No.	%	No.	%	No.	%
Inferiorly decentered	1	5.0	1	5.0	1	5.0
Nasally decentered	2	10.0	2	10.0	2	10.0
IOL centered	17	85.0	17	85.0	17	85.0

IOL: Intra ocular lens

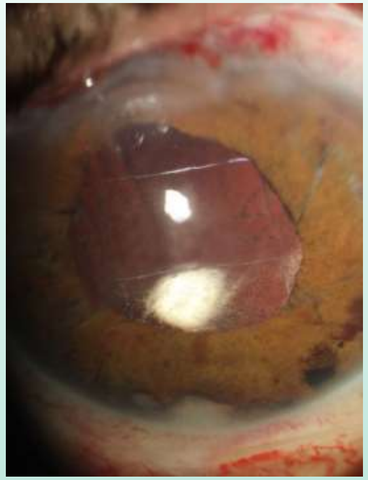

Figure:

Slit lamp image of well centered IOL with maintenance of the mesh after 1week post-operative

Conclusion

In our study we observed that thread cushion technique used in management of aphakia after complicated phacoemulsification was effective and safe. The BCVA showed a notable improvement. Furthermore, it seems to be an appropriate method to create a sufficient bed for IOL stability when capsular support is not available. This approach is especially useful for displaced or subluxated IOLs that require minimal manipulation to be repositioned or replaced.