



ORIGINAL RESEARCH PAPER

Ophthalmology

COMPARITATIVE CROSS SECTION STUDY OF VISUAL OUTCOMES BETWEEN SICS AND PHACOEMULSIFICATION

KEY WORDS: Cataract, SICS, Phacoemulsification

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ABSTRACT	Purpose: To compare the postoperative visual outcomes between SICS and phacoemulsification. Methods: A cross-sectional study done on 100 patients scheduled for intraocular cataract surgery were divided into two groups of 50 patients each in SICS group and Phacoemulsification group. The patients were examined in detailed especially in terms of visual outcome on 1st week, 2nd week and 6th week post operatively Results: After 6 weeks post-operatively ,38% of the study participants in MSICS group had visual acuity of 6/12, 58% of the study participants in PHACO group had visual acuity of 6/9 by 6th week. Better visual acuity was observed in the PHACO group with statistical significance. Conclusion: Cataract procedures, SICS and PHACO, both had excellent visual outcomes with low complication rates. Phacoemulsification was found to be superior to SICS because the surgically induced astigmatism was less with fewer postoperative complications and shorter time taken for visual rehabilitation.
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INTRODUCTION Senile cataract is an age related, vision impairing disease characterized by gradual, progressive thickening of the lens. It is one of the world's leading causes of avoidable blindness. All techniques of cataract extraction are being modified to achieve best uncorrected visual acuity and early rehabilitation. Phacoemulsification and small incision cataract surgery (SICS) are the most commonly done procedures. Phacoemulsification is considered the gold-standard procedure for cataract. However, SICS has emerged as a popular procedure of choice in the surgical treatment of cataracts as it is less expensive compared phacoemulsification . It may be considered a better procedure for doing mass surgeries. The purpose of this comparative hospital based study was to assess the visual outcome in the post-operative SICS and Phacoemulsification.	- Patients with complicated cataract. - Severely ill and debilitated Patients. - Patient who had complication during surgery - Patients with pre-existing ocular pathology and psychiatric abnormalities
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MATERIALS AND METHODS Study Duration - 6 months Sample Size - Total 100 patients Study Design - A Cross-Sectional Observational Study Study Site - M. V.J. Medical College and Research Hospital	RESULTS 1st week post-operative vision:22% of the study participants in MSICS group had visual acuity of 6/24. 40% of the study participants in PHACO group had visual acuity of 6/9. Better visual acuity was observed in the PHACO group with statistical significance.
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A comparative cross section study will be conducted on patients undergoing cataract extraction surgery by SICS & Phacoemulsification method at MVJ Medical college, Bengaluru. In this study 50 consecutive patients scheduled for intraocular cataract surgery were randomly divided into two groups of 25 patients each in SICS group and Phacoemulsification group. All the patients in both the groups were above the age of 40 years with visually significant age related uncomplicated cataract, without any other ocular comorbidity problems. The patients were examined in detailed especially in terms of visual outcome on day 1st ,2nd and 6th week post operatively in two different groups of patient.

6/60	6	12.0%	1	2.0%	
CF	2	4.0%	3	6.0%	

1ST WEEK POST-OPERATIVE VISION

VISION	MSICS N	MSICS %	PHACO N	PHACO %
6/6	3	6.0%	5	10.0%
6/9	7	14.0%	20	40.0%
6/12	10	20.0%	13	26.0%
6/18	6	12.0%	3	6.0%
6/24	11	22.0%	5	10.0%
6/36	5	10.0%		
6/60	6	12.0%	1	2.0%
CF	2	4.0%	3	6.0%

Inclusion Criteria - Patients consenting for the study. - Patients of age more than 40 years diagnosed with senile cataracts. - Patients whose surgery was uneventful	
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Exclusion Criteria Patients not consenting for the study.	
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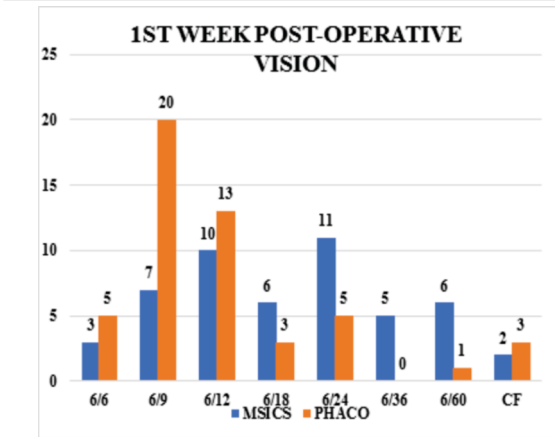


Figure 19: 1st Week Postoperative Vision

2nd week postoperative vision: 32% of the study participants in MSICS group had visual acuity of 6/12. 60% of the study participants in PHACO group had visual acuity of 6/9. Better visual acuity was observed in the PHACO group with statistical significance

Table 9: 2nd Week Post-operative Vision

2ND WEEK POST- OPERATIVE VISION	MSICS		PHACO		P VALUE
	N	%	N	%	
6/6	2	4.0%	5	10.0%	0.001
6/9	10	20.0%	30	60.0%	
6/12	16	32.0%	6	12.0%	
6/18	12	24.0%	5	10.0%	
6/24	9	18.0%	4	8.0%	
6/36	1	2.0%	-	-	

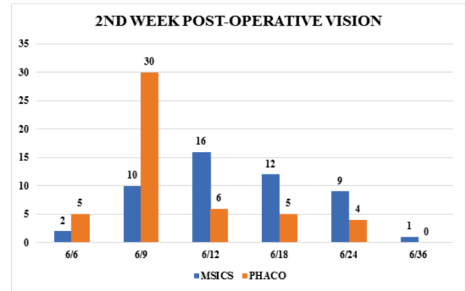


Figure 20: 2nd Week Post Operative Vision

6th Week Postoperative Vision: 38% of the study participants in MSICS group had visual acuity of 6/12. 58% of the study participants in PHACO group had visual acuity of 6/9. Better visual acuity was observed in the PHACO group with statistical significance.

Table 10: 6th Week Post-operative Vision

6TH WEEK POST- OPERATIVE VISION	MSICS		PHACO		P VALUE
	N	%	N	%	
6/6	1	2.0%	10	20.0%	0.001
6/9	15	30.0%	29	58.0%	
6/12	19	38.0%	8	16.0%	
6/18	11	22.0%	3	6.0%	
6/24	4	8.0%	-	-	

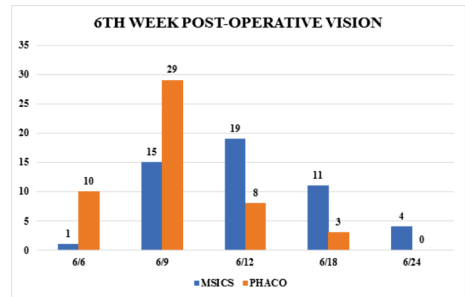


Figure 21: 6th Week Postoperative Vision

DISCUSSION

Cataract is the most common cause of visual disability. Phacoemulsification and small incision cataract surgery (SICS) are the most done procedures for the cataract. Phacoemulsification, though gold standard procedure comes at a greater cost especially in the settings of Lower Middle-Income Countries such as India. Small incision cataract surgery (SICS) is a better alternative to phacoemulsification and cost-effective procedure. The present study was done among 100 cataract patients with an aim to compare the visual outcomes between phacoemulsification and SICS procedure. In the present study, in the first week and second week of follow up, better visual acuity was observed in the PHACO group with statistical significance. The best corrected visual acuity (BCVA) in the present study, at the end of 6 weeks, 38%

of the study participants in MSICS group had visual acuity of 6/12 and 58% of the study participants in PHACO group had visual acuity of 6/9 which shows that BCVA was observed in the PHACO group compared to SICS group with statistical significance.

CONCLUSION

Cataract procedures, SICS and PHACO, both had excellent visual outcomes with low complication rates. Phacoemulsification was found to be superior to SICS because the surgically induced astigmatism was less with fewer postoperative complications and shorter time taken for visual rehabilitation.

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