

To Compare the Visual Outcome, Safety and Efficacy of Phacoemulsification and Small-Incision Cataract Surgery (SICS) at CEITC, Bangladesh

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Abstract : Purpose: To compare the safety, efficacy and visual outcome of phacoemulsification vs. manual small-incision cataract surgery (SICS) for the treatment of cataract in Bangladesh. Objectives: 1. To assess the Visual outcome after cataract surgery 2. To understand the post-operative complications and early rehabilitation 3. To identified which surgical procedure more attractive to the patients 4. To identify which surgical procedure is occurred fewer complications. 5. To find out the socio-economic and demographic characteristics of study patients Setting: Chittagong Eye Infirmery and Training Complex, Chittagong, Bangladesh. Design: Retrospective, randomised comparison of 300 patients with visually significant cataracts. Method: The present study was designed as a retrospective hospital-based research. The sample size was 300 and study period was from July, 2012 to July, 2013 and assigned randomly to receive either phacoemulsification or manual small-incision cataract surgery (SICS). Preoperative and post-operative data were collected through a well designed collection format. Three follow-up were done; i) during discharge ii) 1-3 weeks & iii) 4-11 weeks post operatively. All preoperative and surgical complications, uncorrected and best-corrected visual acuity (BCVA) and astigmatism were taken into consideration for comparison of outcome Result: Nearly 95% patients were more than 40 years of age. About 52% patients were female, and 48% were male. 52% (N=157) patients came to operate their first eye where 48% (N=143) patients were visited again to operate their second eye. Postoperatively, five eyes (3.33%) developed corneal oedema with >10 Descemet folds, and six eyes (4%) had corneal oedema with <10 Descemet folds for Phacoemulsification surgeries. For SICS surgeries, seven eyes (4.66%) developed corneal oedema with >10 Descemet folds and eight eyes (5.33%) had corneal oedema with < 10 descemet folds. However, both the uncorrected and corrected (4-11 weeks) visual acuities were better in the eyes that had phacoemulsification (p=0.02 and p=0.03), and there was less astigmatism (p=0.001) at 4-11 weeks in the eye that had phacoemulsification. Best-corrected visual acuity (BCVA) of final follow-up 95% (N=253) had a good outcome, borderline 3.10% (N=40) and poor outcome was 1.6% (N=7). The individual surgeon outcome were closer, 95% (BCVA) in SICS and 96% (BCVA) in Phacoemulsification at 4-11 weeks follow-up respectively. Conclusion: outcome of cataract surgery both Phacoemulsification and SICS in CEITC was more satisfactory according to who norms. Both Phacoemulsification and manual small-incision cataract surgery (SICS) shows excellent visual outcomes with low complication rates and good rehabilitation. Phacoemulsification is significantly faster, and modern technology based surgical procedure for cataract treatment.

Keywords : phacoemulsification, SICS, cataract, Bangladesh, visual outcome of SICS

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