

# PROSPECTIVE, CONSECUTIVE, COMPARATIVE STUDY OF CENTURION® COMPARED WITH INFINITI® PHACOEMULSIFICATION SYSTEMS: IMPROVED SURGICAL AND VISUAL OUTCOMES

**Purpose:** To evaluate Surgical Outcomes (SOs) and Visual Outcomes (VOs) in cataract surgery comparing the Centurion® phacoemulsification system (CPS) with the Infiniti® phacoemulsification system (IPS).

**Methods:** Prospective, consecutive, no-exclusions, comparative study of Nuclear Sclerosis (NS) Grade, Cumulated Dissipated Energy (CDE), preoperative Corrected Distance Visual Acuity (CDVA), and CDVA at one month were recorded. SOs and VOs were documented prospectively until one month postoperatively.

**Results:** There were 207 and 205 eyes each in the CPS and IPS subcohort respectively. CDE was 13.50% less in the whole CPS compared with the whole IPS subcohort. In eyes with NS grade 3 or greater, CDE was 28.87% less with CPS (n = 70) compared with IPS (n = 44) (P = .010). Surgical complications were not statistically different between the two subcohorts (P = .083), but in the one case of vitreous loss using the CPS, CDVA (VOs) of 6/4 was achieved at one month. The mean CDVAs at one month for NS grade 3 and above cataracts were -0.17 logMAR (6/4) in the CPS and -0.15 logMAR (6/4) in the IPS subcohort respectively (P = 0.033).

**Conclusions:** CDE was 28.87% less, and VOs were significantly improved, in denser cataracts in the CPS compared with the IPS. Surgical facility was subjectively better for the surgeon with the CPS. The Authors recommend the CPS for cases with denser nuclei. CPS may assist novice phacoemulsification surgeons.