

Real-World Outcomes of Cataract Surgery at a Tertiary Hospital in Al-Baha, Saudi Arabia: A Retrospective Cohort Study

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ABSTRACT

To evaluate real-world visual outcomes, intraocular pressure (IOP) changes, complication rates, and surgeon-level performance following cataract surgery at a tertiary hospital in Al-Baha, Saudi Arabia. Retrospective cohort study. King Fahad Hospital, Al-Baha, Saudi Arabia. Medical records of all patients who underwent cataract surgery between January and December 2024 were reviewed. Demographic characteristics, systemic and ocular comorbidities, surgical technique, anesthesia type, intraoperative and postoperative complications, and surgeon identifier were recorded. Preoperative and postoperative visual acuity (converted to logMAR) and IOP were analyzed. Statistical comparisons were performed using nonparametric tests and analysis of covariance where appropriate. A total of 230 patients were included (median age 66 years; 54% male). Phacoemulsification with posterior chamber intraocular lens implantation was performed in 98.3% of cases. Median visual acuity improved significantly from 1.00 to 0.17 logMAR ($p < 0.001$), while IOP remained stable ($p = 0.22$). Intraoperative complications occurred in 2.6% of surgeries; no postoperative complications were documented during the available follow-up period. Hypertension was significantly associated with intraoperative complications ($p = 0.004$). Postoperative visual outcomes were comparable across surgeons, although intraoperative complication rates varied significantly at the surgeon level. Cataract surgery at this tertiary center resulted in substantial visual improvement, stable IOP, and a low intraoperative complication rate. Hypertension and surgeon-level factors were associated with intraoperative events, emphasizing the importance of optimized perioperative management and continuous surgical audit.

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