Complication Rates of Phacoemulsification with Intraocular Lens Implantation Surgery in an Office-Based Setting versus Ambulatory Surgery Center

Purpose

In the United States, cataract surgeries are standardly carried out in ambulatory surgery centers or hospital operating rooms. In recent years there has been increased interest in office-based settings for cataract surgery. However, there is limited research regarding the rate of adverse events in office-based settings as compared to those same surgeries performed in a surgery center. This study aims to analyze the rate of complications of cataract or refractive lens exchange surgery performed in an office-based setting compared to an ambulatory surgery center. This study hypothesizes that the rate of complications in an office-based setting will not be significantly higher than the rate of complications in an ambulatory surgery center.

Methods

All surgeries were performed by the same physician between two centers: an ambulatory surgery center (ASC) and an office-based setting (OBS).The study retrospectively reviewed 679 surgeries performed at an ASC and 656 performed in an OBS. Surgeries were performed between January 2021 through June 2024 for ASC and September 2022 through June 2024 for OBS. Adverse events recorded during each surgery included endophthalmitis, unplanned vitrectomy, TASS/iritis, persistent corneal edema, a return to the operating room, and a call to 9/11 or referral to hospital. The data sets between the two sites were analyzed and the rate of total complications was compared.

Results

Of the 656 surgeries performed in an OBS, 7 total adverse events occurred (1.07%) with individual complications including 3 unplanned vitrectomies (0.46%), 2 returns to OR (0.30%), 1 retina referral (0.15%), and 1 call to 9/11 (0.15%). Of the 679 surgeries performed in an ASC, 22 total adverse events occurred (3.24%) with individual complications including 1 event of endophthalmitis (0.15%), 6 unplanned vitrectomies (0.88%), 9 returns to OR (1.33%), 5 retina referrals (0.74%), and 1 event of persistent corneal edema (0.15%). The total complication rate of OBS was significantly lower than the total complication rate of ASC: $X^2(1, N=1335) = 7.4$, $p=.006$

Conclusions

These results not only support our hypothesis that the rate of adverse events of cataract surgeries performed in an OBS are not higher than cataract surgeries performed in an ASC, but our findings suggest office-based settings may be associated with a significantly lower rate of adverse events compared to ASC.