

Auckland Cataract Study III: Refining Preoperative Assessment With Cataract Risk Stratification to Reduce Intraoperative Complications



REPLY

THE AUTHORS THANK DR GANDHI FOR HIS PERTINENT, insightful response to our recent publication.¹ We agree that in high-volume public practice worldwide, cataract pathways may be disjointed, involving a variety of personnel in addition to the operating surgeon. Therefore, greater vigilance at the preoperative stage may improve surgical safety.

Modern phacoemulsification surgery is extremely successful and, as the correspondent correctly highlights, it has “become all too easy to trivialize”; nonetheless, visually significant intraoperative and postoperative complications do occur. Our research group has analyzed aspects of phacoemulsification outcomes for 2 decades.^{1–4} Notably, our early studies highlighted that systemic and ocular comorbidities were common in the elderly undergoing public hospital cataract surgery.² In order to assess risk and maximize cataract surgery outcomes in the current teaching hospital environment we have used, and modified, risk stratification protocols such as the Buckinghamshire and Muhtaseb systems^{3,4} to develop the New Zealand Cataract Risk Stratification (NZCRS) system.¹

As the correspondent notes, risk stratification instruments have a focus on anterior segment pathology, but these systems are also specifically designed to address intraoperative complications and short-term outcomes.^{1,3,4} In relation to postoperative adverse events, poorer visual outcomes have long been linked with posterior segment ocular comorbidity, as Dr Gandhi cogently addresses. Our data suggest that the Buckinghamshire risk assessment system (which scores for diabetes) has stronger correlation with postoperative complications but the Muhtaseb instrument better predicts intraoperative complications,^{3,4} hence our decision to develop the NZCRS system around the latter system.¹ The evolving NZCRS system is designed to be efficient and practical in a busy clinical setting; hence only validated risk factors are included, but this incorporates elements other than anterior segment, including older age (>88 years), previous vitrectomy, and ability of patient to comply with surgical technique.¹ While not included in the risk stratification per se, in clinical practice other ocular comorbidities such as diabetic retinopathy, age-related macular degeneration, glaucoma, and prior uveitis are routinely recorded.

We believe preoperative cataract risk stratification enables better counseling, appropriate allocation of higher-risk cases, and reduced intraoperative complications.^{1,3,4} However, discussion of risks and benefits is an individual process that must include dialog and consideration of salient posterior segment pathology. Glaucoma, diabetic retinopathy, and age-related macular degeneration can certainly limit vision postoperatively, or, as noted by the correspondent, “erode” visual acuity over time. Notably, we reported postoperative cystoid macular edema to be >3.0% in our prospective studies,^{1–4} and 2 years postsurgery 10.3% of eyes developed new vision-threatening ocular pathology.⁵ Interestingly, the contemporary treatment of retinal pathology, such as repeated intravitreal injections, may also be a risk for intraoperative cataract complications and endophthalmitis.⁶

Ultimately, we agree with Dr Gandhi that proper preoperative assessment, including risk stratification, may ensure that the higher-risk cases are operated upon by surgeons with the necessary expertise. The ongoing development of risk stratification tools should, when appropriately applied, continue to reduce complications in the world’s most common surgical procedure—cataract surgery.

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CONFLICT OF INTEREST DISCLOSURES: SEE THE ORIGINAL article for any disclosures of the authors.

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