
We discussed the retrospective series by Qi *et al.* during the ESCRS journal club on 1st September 2021.¹ The authors reported the safety, visual and refractive outcomes of 4,006 eyes following ISBCS. Whilst this much needed series on implementation of ISBCS in a teaching hospital setting is to be congratulated, we highlight some points of discussion here.

Evaluation of safety appears to be the primary aim of the study. Whilst surgical safety is challenging to define, a precise definition of 'safety' is lacking in this report. Fears of bilateral simultaneous intra- and post-operative complications (mainly post-operative endophthalmitis (PE) & cystoid macular oedema (CMO)) remains the main barrier to wider acceptance of ISBCS.

With regards to the intra-operative complications, the authors only report posterior capsular rupture (PCR) and zonular dialysis, and not the entire spectrum with iris damage, intraoperative floppy iris syndrome, anterior capsular tears, etc. A pre-operative quantification of intra-operative complication risk profile based on surgeon's grade (e.g., pseudoexfoliation, brunescant cataract) may add more insight into these data. This would permit an adjustment for case complexity to qualify whether a PCR rate of 0.3%, which is low compared to registry data (i.e. EUREQUO at 1.1%)², is due to selection bias (i.e., low risk cases) for ISBCS, or other factor(s).

Furthermore, the reasons for exclusion of the other ~6,000 eyes (out of ~10,000 per annum) would be helpful. It was unclear how many patients did not proceed with second eye surgery either due to "unresolved complications" – a term which needs clarification – or due to patient choice after the first surgery. It may be medicolegally debatable when the surgeon proceeds immediately to second eye surgery without disclosing the complication to the patient.

With regards to post-operative complications, recently published registry studies support the safety of ISCBS with regards to PE.^{3,4} A Swedish study found a significantly *reduced* rate of PE in ISBCS compared to unilateral surgery,³ and a US study found no difference,⁴ after multivariate analysis. This study was underpowered to detect PE considering the centre's rate of 1 in 14,493 operations, which needs to be acknowledged.¹

The authors report a 1.2% incidence of bilateral CMO in their cohort. Including patients with proliferative diabetic retinopathy and epiretinal membranes⁵ may be a contributing factor. Although CMO could not be "attributable" to ISCBS, binocular visual impairment may not occur with delayed sequential surgery since prophylactic management strategies may reduce the risk of CMO in the second eye. A similar rationale cautions against IBSCS in patients with bilateral Fuch's dystrophy. The general principles of ISBCS state that cases should fall within the competence of the surgeon. However, simply stating the inclusion of co-existing pathologies such as corneal ectasias, pterygium, and strabismus without elaborating on the severity of these pathologies and/or other patient-related systemic and social factors mandating the need for ISBCS, is inadequate and may mislead the readers. Therefore, the author's claim that their cohort "had very few complications, with none attributable to bilateral surgery" may not be fully supported by their data.

References

- 1 Qi, S. R. *et al.* Immediately Sequential Bilateral Cataract Surgery (ISBCS): An Academic Teaching Center's Experience. *Journal of cataract and refractive surgery*, doi:10.1097/j.jcrs.0000000000000750 (2021).
- 2 Segers, M. H. *et al.* Risk factors for posterior capsule rupture in cataract surgery as reflected in the European Registry of Quality Outcomes for Cataract and Refractive Surgery. *Journal of cataract and refractive surgery*, doi:10.1097/j.jcrs.0000000000000708 (2021).
- 3 Friling, E., Johansson, B., Lundström, M. & Montan, P. Postoperative Endophthalmitis in Immediate Sequential Bilateral Cataract Surgery: A Nationwide Registry Study. *Ophthalmology*, doi:10.1016/j.ophtha.2021.07.007 (2021).
- 4 Lacy, M. *et al.* Endophthalmitis Rate in Immediately Sequential versus Delayed Sequential Bilateral Cataract Surgery within the Intelligent Research in Sight (IRIS) Registry Data. *Ophthalmology*, doi:10.1016/j.ophtha.2021.07.008 (2021).