

## Commentary: Immediate sequential bilateral cataract surgery during the COVID-19 pandemic

Ophthalmic surgeons have instituted many changes in practice during the ongoing COVID-19 pandemic as elaborated by excellent editorial.<sup>[1]</sup> The move to a more digitized and virtual eye-care delivery, online education tools, online electronic consultation, consolidating in-person visits for eye checkup/eye surgery, and increased spacing between patients have become the norm for eye surgery. Cataract surgery and IOL implantation is the most commonly performed surgical procedure in ophthalmology. The one change in practice that could have the most significant benefit in reducing infection exposure risk is immediate sequential bilateral cataract-IOL surgery (ISBCS). Immediate sequential bilateral cataract-IOL surgery is less expensive, reduces personal protective equipment (PPE) use, is more efficient for surgeon(s) and patients, minimizes repeated visits to hospitals and provides faster binocular recovery of vision for the patient.<sup>[2]</sup>

Immediate sequential bilateral cataract-IOL surgery has been debated for several years, while the evidence in its support has grown over time.<sup>[3]</sup> According to a few published studies, hospitals achieve higher productivity and cost savings of more than 30% when performing ISBCS instead of delayed sequential bilateral cataracts surgery (DSBCS).<sup>[4-7]</sup> The new normal of the COVID-19 pandemic era requires extra spacing to maintain physical distancing, periodical cleaning of equipment, and increasing time between patients, resulting in increased costs. When considering the additional patient costs for travel, family and the caregiver's time, and absence from work with the extra postoperative visits to the eye hospital and recovery requirements of DSBCS, the cost efficiency is even greater with ISBCS.<sup>[8]</sup>

In a published study in the current issue of the *Indian Journal of Ophthalmology*,<sup>[9]</sup> the authors assessed visual outcomes and patient satisfaction for senior resident-performed ISBCS versus DSBCS during the COVID-19 pandemic; when minimizing healthcare-related exposures for patients and providers are paramount.

This was a retrospective cohort study of all ISBCS and DSBCS patients who underwent senior resident-performed cataract surgery from May to September 2020 at a single academic institution. Outcome measures were final corrected distance visual acuity (CDVA), final manifest refraction (MRx), incidence of intraoperative and postoperative complications, total number of visits, and patient satisfaction assessed postoperatively by telephone questionnaire.

Results of this study suggested that 14 (22 eyes) and 28 (56 eyes) patients underwent senior resident-performed ISBCS and DSBCS, respectively. Final CDVA was 20/25 or better in 21 (95%) ISBCS and 51 (91%) DSBCS eyes ( $p = 0.670$ ). Deviation of final MRx from target refraction was within 0.50 D in 17 (77%) ISBCS and 47 (84%) DSBCS eyes ( $p = 0.522$ ). There was no significant difference in intra-operative ( $p = 1.000$ ) or postoperative ( $p = 1.000$ ) complications. ISBCS patients

averaged 3.5 fewer visits than DSBCS patients (5.9 vs 9.5,  $P < 0.001$ ). All ISBCS and 20 DSBCS patients (87%) reported they were overall "very satisfied" or "satisfied" with their experience ( $p = 0.701$ ). Five of the six senior residents responded that they preferred performing ISBCS over DSBCS. The authors concluded that early experience of their retrospective study demonstrates that senior resident-performed ISBCS is as safe and effective as DSBCS, with the added benefit of averaging fewer in-person visits. Residency programs should consider offering senior resident-performed ISBCS to select patients during the COVID-19 pandemic.

The authors elaborated the possible risk and benefits of ISBCS in the discussion. The ISBCS, when performed with all the necessary safety precautions (using all aseptic precaution, use of 5% Povidone-iodine to clean the eye, use of separate set of instruments and use of intracameral antibiotics at the end of surgery, etc.) and patient selection criteria, can be a good option. This can be especially useful for patients (with bilateral advanced/mature cataracts) who want to recover their vision and lifestyle as soon as possible. The ISBCS can be useful for those with poor mobility, Down syndrome, Parkinsonism, and other conditions in which an additional trip to the operating theater may pose a high risk.

While India is under the second deadly wave of COVID-19 Pandemic, now more than ever before, most cataract surgeries are being delayed. It is time the ophthalmic leaders of India should consider ISBCS as an excellent alternative to DSBCS in the right eye hospital or day care surgical setting. ISBCS can help to decrease surgical scheduling and follow-up visits of the elderly patients.

However, each ophthalmic facility must analyze whether it has the aforementioned safety requirements in place and whether its operating surgeons have the necessary expertise to avoid intra-operative and postoperative complications that may represent an obstacle rather than a clear path to proper adoption. It is time for All India Ophthalmic Society (AIOS) and other ophthalmic societies to advocate for patient safety, quality of life, and formulate the consensus and guidelines for performing the second-eye surgery on the same day as the first-eye surgery.

With the COVID-19 crisis upon us, the ophthalmic societies and ophthalmic leaders of India must rethink the delivery of eye-care to minimize the backlog of cataract. Just like digitized medicine, virtual eye care, and artificial intelligence, ISBCS may help to enhance eye care and will help minimize the backlog of cataracts in a country like India.

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## References

- Honavar SG. Enduring the second wave – Safe and sustainable ophthalmic practice during the troubled times. *Indian J Ophthalmol* 2021;69:1023-4.
- Rush SW, Gerald AE, Smith JC. Prospective analysis of outcomes and economic factors of same-day bilateral cataract surgery in the United States. *J Cataract Refract Surg* 2015;41:732-9.
- Malvankar-Metha MS, Chen YN, Patel S, Leung AP, Merchea MM, Hodge WG. Immediate versus delayed sequential bilateral cataract surgery: A systematic review and meta-analysis. *PLoS One* 2015;10:e0131857.
- O'Bart DP, Roberts H, Naderi K, Gormley J. Economic modelling of immediately sequential bilateral cataract surgery (ISBCS) in the National Health Service based on possible improvements in surgical efficiency. *BMJ Open Ophthalmol* 2020;5:e000426
- O'Brien JJ, Gonder J, Botz C, Chow KY, Arshinoff SA. Immediately sequential bilateral cataract surgery versus delayed sequential bilateral cataract surgery: Potential hospital cost savings. *Can J Ophthalmol* 2010;45:596-601.
- Malvankar-Mehta MS, Filek R, Iqbal M. Immediately sequential bilateral cataract surgery: A cost-effective procedure. *Can J Ophthalmol* 2013;48:482-8.
- Leivo T, Sarikkola A-U, Uusitalo RJ. Simultaneous bilateral cataract surgery: Economic analysis; Helsinki Simultaneous Bilateral Cataract Surgery Study report 2. *J Cataract Refract Surg* 2011;37:1003-8.
- Arshinoff SA, Bastianelli PA. Incidence of postoperative endophthalmitis after immediate sequential bilateral cataract surgery. *J Cataract Refract Surg* 2011;37:2105-14.
- Chen TA, Chen SP, Ahmad TR, Pasricha ND, Parikh N, Ramanathan S. Resident-performed immediate sequential bilateral cataract surgery during the COVID-19 pandemic. *Indian J Ophthalmol* 2021;69:1579-84.

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