

Commentary - Should immediate sequential bilateral cataract surgery be the norm in the COVID-19 era?

Coronavirus-2019 pandemic has created numerous hurdles in the delivery of ophthalmic care and resulted in the postponement of thousands of elective cataract surgeries. It has also generated a renewed interest in immediate sequential bilateral cataract surgery (ISBCS). Purported benefits of ISBCS include increased surgical efficiency, reduced healthcare costs, fewer patient visits to the hospital and faster visual rehabilitation.^[1] While some countries like Finland have endorsed the practice for many years, others like the United Kingdom are contemplating its implementation in limited routine cases to address the challenges brought forth by the pandemic.^[2] In this issue, Bhalla *et al.*^[3] have reviewed the benefits of ISBCS with emphasis on its relevance in the pandemic era.

The major concerns with ISBCS include the potential risk of bilateral vision-threatening complications, and the inability to assess the visual outcomes after the first eye surgery. Those advocating ISBCS assert that the fear of bilateral endophthalmitis is largely unfounded as its occurrence is extremely rare with the adoption of modern surgical techniques and aseptic precautions.^[1] However, most of the incidence figures cited are from western studies and may not be valid for developing countries like India. Moreover, the risk of cluster endophthalmitis after cataract surgery remains a grim reality, especially in developing countries. Cluster infections in the setting of ISBCS can be catastrophic with the potential to cause bilateral blindness in all the patients affected.^[4] Only one large series evaluating the outcomes of ISBCS has been reported from India.^[5] In the absence of sufficient evidence regarding the efficacy and safety of ISBCS in developing countries, its widespread practice may not be universally advisable.

Visual and refractive outcomes of ISBCS are comparable to delayed sequential bilateral cataract surgery (DSBCS) with the use of modern optical biometers.^[1] Many eye-care centers in developing countries; however, still rely on the less accurate ultrasonic biometers. Postoperative refraction of the first eye plays an important role in refining the second eye intraocular lens power in these settings. Sequential surgery also allows the surgeon to determine the appropriate refractive target for the second eye, based on the first eye outcome, while planning micro-monovision or monovision. DSBCS also provides the surgeon with an opportunity to evaluate symptoms such as dysphotopsia after the first eye surgery and choose a different IOL design for the second eye if necessary.^[6] Dysphotopsia has been reported in up to 25% of the patients undergoing multifocal IOL implantation and can be extremely bothersome when affecting both eyes after ISBCS.^[7]

Femtosecond laser-assisted ISBCS presents another dilemma for the surgeon. Performing the femtosecond laser steps in both the eyes first may compel the surgeon to proceed with the second eye phacoemulsification, regardless of the surgical outcomes of the first eye. Alternatively, performing laser-assisted steps followed by phacoemulsification in each

eye sequentially may compromise the operating room (OR) efficiency.

While ISBCS has been associated with decreased overall costs to the healthcare system, third-party players or insurance companies remain the major beneficiaries, not surgeons or patients.^[6] The guidelines for performing ISBCS require each eye to be treated as a separate case, with new set of equipment, consumables and operative setup, leading to most of the costs being duplicated. Moreover, additional expenditure may be required to recruit an extra workforce in order to ensure the maintenance of complete aseptic separation of both eyes, check that the consumables used are from separate batches, and tackle other logistic issues in the OR. Furthermore, a significant proportion of the patients in the developing countries are not covered by health insurance, and the strain of having to pay for both procedures at once may increase the financial burden on them.^[8]

Another rationale for propagating ISBCS in the current scenario is to expedite the clearance of cataract backlog. It should be recognized that the adoption of ISBCS may initially prolong the waiting list, as fewer patients in total would be operated on in each OR session. This may be detrimental in a country like India where cataract is the leading cause of blindness in the older population.

From the surgeon's perspective, bilateral vision loss in a patient after ISBCS, could be a medicolegal catastrophe in the absence of established guidelines from the authorized regulatory bodies. Operative complications make the surgeons vulnerable to legal action, as justifications like better patient convenience and cost efficiency may serve as a poor defense.^[1]

Majority of cataract surgeries in developing countries like India are still performed in peripheral small rural or semi-urban ophthalmic setups that may lack the necessary infrastructure to ensure safe and efficacious practice of ISBCS. Under these circumstances, the proposed benefits with ISBCS may not offset the potential risks, given that cataract surgery remains an elective procedure, and an emergency warranting bilateral cataract surgery is extremely rare. At this juncture, ISBCS should be practiced in settings where well-established guidelines and practice protocols are in place, and the institutions have the requisite infrastructural support and standard operating procedures to allow its proper implementation.

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