Immediate sequential bilateral cataract surgery (ISBCS) has recently attracted increased interest clinically and in peer-reviewed literature. According to some surgeons, the protocol for ISBCS is controversial. But, in my clinic, ISBCS was introduced as a routine practice in 1999, just after it had been used successfully in a multifocal IOL study. High patient satisfaction, logistical advantages, and encouraging results have motivated our continued use of this approach.

Approximately 5% to 10% of our cataract patients underwent ISBCS in the first few years after we established our technique. The rate gradually increased, stabilizing at approximately 25% to 30%. Similarly, annual reports from the Swedish National Cataract Register show a slowly increasing rate that currently lies around 4% to 5% for the whole country (Figure 1). Internationally, ISBCS is in routine clinical use in many health care systems, but use varies between nations, clinics, and even between doctors within the same clinic. This is probably exactly how it should be.

ISBCS should be undertaken only when high-quality operating room (OR) standards and sterilization routines are met. The surgeon considering ISBCS must be confident that the balance of risks and benefits is to the patient’s advantage and that the rate of intra- and postoperative complications is on an acceptably low level. Benchmarking against the international peer-reviewed literature and/or national quality registry data is highly recommended. Additionally, the International Society for Bilateral Cataract Surgeons’ General Principles for Excellence in ISBCS, accessible on the society’s Web site (www.isbcs.org), provides further information to subscribing members. For more information on these guidelines, see the article by Steve A. Arshinoff, MD, FRCSC, on page 59.

**PATIENT SELECTION**

When the safety record of a unit and/or surgeon is compatible with ISBCS, the next step is to select suitable patients. I have created a checklist for my clinic, primarily intended for use when patients are examined preoperatively by a beginning ISBCS surgeon or by another properly educated care provider (see Checklist for Immediate Sequential Bilateral Cataract Surgery).

Surgeons performing their first ISBCS cases (to whom this article is addressed) must balance indications and contraindications differently than experienced ISBCS surgeons. In fact, all contraindicating factors listed below can be regarded as relative. As the ISBCS surgeon gains experience, a patient’s total situation may motivate ISBCS even with contraindicating factors present to some degree; however, patient safety and benefit must always be paramount. Although refractive lens exchange is not specifically discussed in this article, the same reasoning is relevant for such cases.

**Indications.** First and foremost, cataract surgery should be indicated in both eyes. Therefore, a cataract judged as disturbing the quality of vision must be present in both eyes. Additionally, ISBCS is indicated in cases where the cataract surgeon believes that the rate of complications is less than the average for single cataract surgery, that the patient truly benefits from ISBCS, and that no additional waiting time or increased hospitalization is involved. The patient must be able to participate in the operation and have no major systemic illness, visual handicap, or history of medical disorders that may influence postoperative course.

**Contraindications.** The following factors must be present if ISBCS is to be performed:

1. **Surgical risk:** The risk of ISBCS must be lower than the risk of single cataract surgery.
2. **Patient safety:** The patient must be able to participate in ISBCS surgery.
3. **Patient benefit:** The patient must benefit from ISBCS.
4. **Additional waiting time:** There must be no additional waiting time involved.
5. **Hospitalization:** There must be no increased hospitalization involved.
6. **Systemic illness:** The patient must have no major systemic illness.
7. **Medical disorders:** The patient must have no medical disorders that may influence the postoperative course.

**Checklist for Immediate Sequential Bilateral Cataract Surgery**

Success with immediate sequential bilateral cataract surgery is more dependent on avoiding bad outcomes than on achieving excellent results.

**BY BJÖRN JOHANSSON, MD, PhD**

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**Figure 1.** The number (red) and percent (blue) of ISBCS performed in Sweden from 1999 to 2008.
Answer in **BOLD** font means that the patient is unsuitable for ISBCS. In that case, consider stopping the evaluation, especially if you are an inexperienced ISBCS surgeon.

Although contraindicating factors can be regarded as relative and should be judged with the patient’s total situation in mind, those listed in **ITALICS** are especially important and should be a concern even to most experienced surgeons. Novice ISBCS surgeons are advised to avoid patients with any listed contraindicating factor for their first surgeries.

### INDICATIONS

- Is there a bilateral cataract according to examination/patient record? **Yes** **No**
- Is the cataract in the better eye any of these types: posterior central subcapsular, brunescent nuclear sclerosis, or central cortical cataract? **Yes** **No**
- Is visual acuity in the better eye 0.1-0.5 with acceptable correction? **Yes** **No**

### IDENTIFYING CONTRAINDICATING FACTORS

#### Examination

- Lid margins and conjunctiva without redness or irritation? **Yes** **No**
- Clear cornea with normal endothelium? **Yes** **No**
- Well-dilated pupil free from synechiae? **Yes** **No**
- **Stable lens suspension?** **Yes** **No**
- Is the fundus possible to inspect after dilatation (hazy view acceptable)? **Yes** **No**

#### Other previous/ongoing eye disease in one or both eyes

- **Corneal endothelial dystrophy? (Severe Fuchs dystrophy?)** **Yes** **No**
- **Glaucoma with poor control or miotic therapy?** **Yes** **No**
- **Phacodonesis or subluxated lens? Completely white or dark brown lens?** **Yes** **No**
- **Chronic uveitis, or acute iridocyclitis requiring therapy more often than every 12 months?** **Yes** **No**
- **Diabetic retinopathy with maculopathy (with or without macular edema)?** **Yes** **No**
- **Exudative age-related macular degeneration in active state?** **Yes** **No**
- **Previous refractive or intraocular surgery (glaucoma surgery, vitreoretinal surgery)?** **Yes** **No**
- **Previous penetrating eye injury or severe contusion?** **Yes** **No**
- **Any other uncontrolled or unstable ocular pathology** **Yes** **No**

#### General disease

- Diabetes-related kidney failure (dialysis) or amputation because of peripheral vasculopathy? **Yes** **No**
- **Compromised immune system due to disease or treatment** (eg, leukemia, AIDS, immunoglobulin defects, immunosuppressive treatment)? **Yes** **No**
- **Dementia or psychiatric illness, including drug or alcohol abuse, leading to uncertain compliance regarding postoperative care?** **Yes** **No**
- **Ongoing infectious disease?** **Yes** **No**
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anisometropia, this is also a reason to suggest ISBCS.

ISBCS can decrease the risks connected with a repeated anesthesia procedure. When surgery is performed under general anesthesia, ISBCS can decrease the risks connected with a repeated anesthesia procedure.

If there is significant ametropia, and unilateral cataract surgery with a goal of emmetropia would lead to anisometropia, this is also a reason to suggest ISBCS.

If a patient requests quick vision rehabilitation, optimal visual quality is achieved faster with ISBCS.

Contraindications. Awareness of contraindicating factors is mandatory to avoid unwanted surprises during the learning curve. The risk for bilateral complications, especially vision-threatening ones, must be minimized. Bilateral postoperative endophthalmitis is most often discussed.9–12 However, published clinical data suggest that prevention of other bilateral complications such as corneal edema and cystoid macular edema is equally important.13,14 Ongoing infectious or infec-
tious processes are obvious contraindications for ISBCS, but it is important to rule out any patient with a condition that might prolong or make cataract surgery more cumbersome. In cases difficult to assess preoperatively such as extremely short or long eyes, eyes previously treated with corneal refractive surgery or laser, or eyes with previous trauma (injury or surgery), it is prudent to perform only one unilateral surgery and assess the result before planning second-eye surgery. If the surgeon is unsure about postoperative compliance, for instance in patients with dementia or a history of drug abuse, bilateral surgery is strongly contraindicated. Needless to say, unwilling patients shall under no circumstances undergo ISBCS.

CONCLUSION

It is important to keep in mind that the checklist presented here is primarily suggested for use by surgeons selecting their first ISBCS cases. Once experience is gathered, contraindications can be balanced more relatively. Patient safety must, however, always be paramount in every case.

It could be argued that the success of an ISBCS surgeon is more dependent on avoiding bad outcomes than achieving excellent results. Careful preoperative evaluation of indications and contraindications is therefore necessary in each case.

Björn Johansson, MD, PhD, practices in the Department of Ophthalmology, Linköping University Hospital, Sweden, and is the Secretary of the Swedish Ophthalmological Society. Dr. Johansson states that he has no financial interest in the products or companies mentioned. He may be reached at tel: +46 10 1033068; fax: +46 10 1033065; e-mail: bjorn.johansson@lio.se.