Patient Selection – Evolving Practices

Björn Johansson. MD PhD FEBO
Linköping University Sweden

ASCRS instructional course:
Immediate Sequential Bilateral Cataract Surgery (ISBCS)
Current Status in the USA and the World

• Linköping University Hospital, Department of Ophthalmology
• All eye surgery except tumors, congenital cataract/glaucoma
• 2400 cataract surgeries/year, 10-25% ISBCS
• 16 specialists, 4-5 residents
• 3 operation rooms
• Excimer laser, Femtosecond laser (corneal procedures)

iSBCS guidelines for excellence in ISBCS
Cataract or refractive lens surgery should be indicated in both eyes.

Any concomitant relevant ocular or periocular disease should be managed.

The complexity of the proposed ISBCS procedure should be easily within the competence of the surgeon.

The patient should provide suitable informed consent for ISBCS, being free to choose ISBCS or DSBCS.

The risk for Right – Left eye errors should be minimized by listing all surgical parameters (selected IOL, astigmatism, etc.) for both eyes on a board visible to all in the operating room (OR), at the beginning of each ISBCS case. The WHO operative checklists should also be used if possible.

Intraocular lens power errors are minimized by having OR personnel familiar with the calculation methods used. The original patient charts should be available in the OR, and everybody passing the IOL to the surgical table should confirm the IOL choice. ISBCS nursing staff should be specifically trained and experienced.

Complete aseptic separation of the first and second eye surgeries is mandatory to minimize the risk of postoperative bilateral simultaneous endophthalmitis (BSE).

- Nothing in physical contact with the first eye surgery should be used for the 2nd.
- To the separate instrument trays for the two eyes should go through complete and separate sterilization cycles with validation.
- The separate instrument trays for the two eyes go through complete and separate sterilization cycles with validation.
- Different IOLs and different manufacturers’ lots or surgical supplies should be used, wherever possible (where the device or drug type has ever been found to be causative of endophthalmitis or toxic anterior segment syndrome). Different lots or manufacturers are available for the same device or drug type.
- Nothing should be changed with respect to suppliers or devices used in surgery without a thorough review by the entire surgical team, to assure the safety of proposed changes.
- Intracameral antibiotics have been shown to dramatically reduce the risk of post-operative endophthalmitis. Their use is strongly recommended for ISBCS.
iSBCS guidelines for excellence in ISBCS

- **8. Any complication** with the first eye surgery must be resolved before proceeding. **Patient safety and benefit** is paramount in deciding to proceed to the 2nd eye.
- **9. ISBCS patients should not be patched.** Post-operative topical drops are most effective immediately postoperatively and should be begun immediately post-op, in high doses, which can be tapered after the first few days. Other ophthalmic medications (e.g. for glaucoma) should be continued uninterrupted.
- **10. ISBCS surgeons should routinely review their cases and the international literature to be sure that they are experiencing no more than acceptable levels of surgical and post-operative complications. Membership in the International Society of Bilateral Cataract Surgeons (www.ISBCS.org) is highly recommended to keep abreast of the latest ISBCS information.**

Patient selection for ISBCS?

- No randomised trials
- No regulations from governing bodies
- No absolute requisites
- Very few absolute contraindications

- Selection changes with experience...

Beginning in Linköping...

- 1998: 10 patients enrolled in bifocal IOL study - ISBCS
- "...why not use this approach clinically?"
- 1999: Implementation in clinical routine
  - Patient left room after 1st surgery, another patient operated before 2nd eye
  - All equipment (including phaco machine) changed
  - ...and patient selection?
Beginning in Linköping...

- **ISBCS candidates:**
  - Patients with preoperative Snellen decimal visual acuity between 0.1 and 0.5 in both eyes are particularly suitable for ISBCS because of the high probability of binocular problems if one cataract is left unoperated and because lower visual acuities may indicate more severe or dense cataracts with increased risk for prolonged surgery.
  - 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.

Beginning in Linköping...

- **Contraindications**
  - Increased risk for infection (blefaritis, immune deficiency, low compliance)
  - Fuchs dystrophy
  - Active uveitis
  - Uncontrolled glaucoma
  - Low refractive predictability (keratoconus, previous corneal refractive procedure etc)
  - Diabetes mellitus with central retinopathy
  - Suspected need for mechanical pupil dilatation

Summary:

- Visual acuity 0.1-0.5 OU particularly suitable for ISBCS
- Concomitant eye disease managed
- Exclude corneal, uveal or retinal conditions that increase risks for complications such as corneal oedema, postoperative iritis, cystoid macular oedema
- Do not accept patients with increased risk for infection
- Do NOT use ISBCS as a shortcut – it does have financial and logistical benefits but those are second to patient benefit!