

Immediate Sequential Bilateral Cataract Surgery (ISBCS) during COVID recovery: RCOphth/UKISCRS rapid advice document

This guidance has been developed by the RCOphth COVID-19 Review Team and the UK and Ireland Society of Cataract and Refractive Surgeons (UKISCRS) in response to the pandemic and may be subject to change.

We are facing significant capacity challenges brought about by the COVID pandemic. We need to restore surgery for the visual rehabilitation of cataract patients as well as maintain safe practice in the prevention of COVID transmission.

One avenue being considered by some units for mitigating risks associated with multiple visits and to optimise and streamline services is the use of bilateral sequential cataract surgery (referred to by NICE as “bilateral simultaneous” surgery), that is the second eye surgery is performed immediately after the first eye surgery on the same list.

The NICE guidance on adult cataract surgery 2017 (1) recommends that, at the preoperative appointment, patients should be given information on bilateral “simultaneous” cataract surgery, if appropriate. It stated:

Consider “bilateral simultaneous” cataract surgery for:

- people who are at low risk of ocular complications during and after surgery or
- people who need to have general anaesthesia for cataract surgery but for whom general anaesthesia carries an increased risk of complications or distress

Discuss potential risks and benefits of “bilateral simultaneous” cataract surgery with people, which should include:

- the potential immediate visual improvement in both eyes
- how it will not be possible to choose a different intraocular lens based on first eye outcome
- complications in both eyes during and after surgery could cause long-term visual impairment
- the likely need for additional support after the operation

The GMC guidance for consent 2009 (2) requires discussion of all suitable options for treatment during the consent process. The 2015 Supreme Court judgement *Montgomery vs Lanarkshire Health Board* shifted the focus of consent towards the specific needs of the patient. Doctors must now take reasonable steps to ensure that patients are aware of any risks that are material to them, and they should inform their patients of all alternative treatments including conservative management (3).

If services have access to immediate sequential bilateral cataract surgery (ISBCS), it is important to discuss this with patients who are suitable for the procedure, explaining the potential benefits and risks. The patient should be provided with enough information to make an informed decision about

opting for ISBCS or waiting for second eye surgery. A clinician's own views on such surgery can be explained to the patient but they should not supersede the patient's own decision.

This short advice document builds on previous publications (4) and has been produced to help units develop local guidelines to safely offer ISBCS to patients if they have the wish and logistical capacity to do so. Bilateral cataract surgery performed primarily for refractive purposes or clear lens extractions for clinical reasons, are not specifically covered. As experience with the use of the technique increases, it is anticipated that the case selection criteria summarised below (indications and contraindications) may be modified as appropriate to take into account the experience of the surgeon and the unit, the needs of the patient and increasing evidence on outcomes. ISBCS should only be considered on lists manned by experienced fellow-level or consultant staff supported by an experienced multidisciplinary theatre team. The surgeon and hospital should have good track records of risk-adjusted surgical complications (PCR) and of infection (endophthalmitis).

Recommendations:

1. Case selection: indications (both of the following):
 - a. Visually significant bilateral cataract with cataract surgery indicated for both eyes in adults as per NICE and RCOphth / UKISCRS guidelines
 - b. No absolute contra-indications (see below)

2. Case selection:

Absolute contra-indications vary by unit and surgeon but include:

 - a. Concomitant surgery for glaucoma, corneal or retinal disease
 - b. Previous significant eye surgery or significant eye injury, lens luxation or phacodonesis
 - c. Increased risk of post-operative corneal failure (e.g. Fuchs' dystrophy)
 - d. Increased risk of infection (e.g. chalazion, active blepharitis, lid malposition, conjunctivitis)
 - e. Ocular co-morbidity (e.g. recurrent uveitis, pseudoexfoliation, active or significant diabetic retinopathy)
 - f. Previous refractive surgery, especially if the patient still prefers spectacle independence
 - g. Concomitant glaucoma which is uncontrolled either eye
 - h. Iodine allergy (uncertainty could be addressed with patch testing)

3. Relative contraindications:
 - a. Previous guidance suggested restricting ISBCS to patients with axial lengths in both eyes within the range 21.5 – 26.0 mm (and difference between the eyes of ≤ 1.5 mm), to minimise risk of biometry errors; with more modern biometry equipment and formulae it may be appropriate to relax this stipulation, but if so it is suggested that local audit data first confirms the accuracy of biometry in eyes with axial lengths outside these parameters
 - b. Immune compromise or immunosuppression: in pre-COVID times this may have been an absolute contraindication, and it needs extremely careful consideration and discussion with patients, requiring consideration of urgency for surgery during COVID, risks of bilateral endophthalmitis and the need to minimise attendance
 - c. Co-operation issues and increased risk for complications (e.g. tremor, reduced mental capacity/dementia, dense or white cataract). Some of these may be relaxed if general anaesthesia (GA) is indicated (e.g. for dementia, tremor) and medical co-morbidity suggests one GA to be significantly safer than two, or to avoid multiple admissions for those at higher risk of COVID in whom expedient surgery is required

4. Surgical considerations:

- a. Concomitant ocular or periocular disease should be controlled and managed before surgery
- b. There should be a clear planning as to which eye to do first
- c. To avoid wrong intraocular lenses and never events, particularly to minimise the risk of right–left eye errors, existing RCOphth/UKOA guidance (5) including using the WHO Surgical Safety operative checklist should be followed at the start of each eye as if it were a separate case. The surgical plan must be clearly differentiated for each eye (e.g. selected IOL, astigmatism management) and all checks should include reference to source biometry documentation during safety checks.
- d. In the context of high refractive error, if expedited second eye surgery cannot be assured, ISBCS may be considered for unilateral cataract, but only usually if there are safety issues or if postoperative anisometropia cannot be managed in any other way (such as contact lens wear)
- e. Topical anaesthesia is preferred, with or without sedation, or sub-tenons in one eye only. It is preferable not to “block” both eyes
- f. Complete aseptic separation of the first and second eye surgeries is mandatory to minimize the risk of postoperative bilateral endophthalmitis. The following precautions are important safety arrangements for ISBCS:
 - i. Before the operation of the second eye, the surgeon and nurse shall use scrupulous sterile routines treating each as a completely separate procedure with completely separate aseptic preparation
 - ii. Theatre team to rescrub, re-gown, re-glove and undertake repeat prepping and draping of the surgical site
 - iii. The separate instrument trays for the two eyes should go through complete and separate sterilization cycles with indicators
 - iv. There should be no physical contact with or cross-over of instruments, drugs or devices between the two trays for the two eyes at any time before or during the surgery of either eye
 - v. Consider the use of disposable surgical instrument sets
 - vi. Different batches / lots of surgical supplies should be used for each eye; this should be specified on ordering
 - vii. If possible, different IOL batches should be used for the 2 eyes; some very experienced ISBCS units do not make this stipulation, so long as the IOL manufacturer is reputable with a proven track record
 - viii. 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
- g. Careful wound architecture and low threshold for suture use
- h. Intracameral antibiotics at the end of surgery are mandatory for both eyes, with an agreed local policy with respect to patients with known or suspected drug allergies – i.e. either use intracameral antibiotics or do not proceed with ISBCS
- i. Any issues with first eye surgery must be resolved before proceeding; if there is a suggestion that there is a significant complication in the first eye (including but not limited to capsule rupture, vitreous loss, zonular dialysis or increased surgical time for some other reason) especially if it increases the risk of endophthalmitis or other adverse outcome, second eye surgery must be deferred

- j. It is important that, in training units, ISBCS does not reduce access to training opportunities. There should be particularly careful consideration of the level of trainee experience and performance, and close supervision, for trainees performing ISBCS cases. It is expected that initially a senior surgeon will do the first eye, and if uneventful it may be appropriate for a less experienced surgeon to undertake second eye surgery - this may change as units gain more experience in training on ISBCS cases.

5. Counselling and consenting

- a. The patient must be free to make an informed choice between ISBCS and delayed second eye surgery; a specific ISBCS patient information sheet and consent form can be useful in this regard
- b. The patient should understand the possible consequences of bilateral endophthalmitis, a particularly devastating complication, but also of other significant complications. The precise frequency of bilateral endophthalmitis is unknown but has been estimated as likely to be very low. However, there is not enough widespread practice of ISBCS to be able to quote an incidence figure with contemporary clinical practices (6)
- c. Patients should be specifically advised that ISBCS loses the advantage of refractive adjustment for the second eye
- d. Advise about the likelihood and potential consequences of other significant complications affecting both eyes such as cystoid macular oedema, retinal detachment, toxic anterior segment syndrome etc
- e. For outlying axial lengths, additional tailored consent is required for risk (additional complications, refractive surprise) and benefit (stereopsis, neuroadaptation)
- f. ISBCS requires surgeon led discussion and consenting; where units use non medically led consenting, these consenters need training and recorded competencies for consenting for ISBCS and there should be some discussion with the surgical team on the particular risks of ISBCS
- g. ISBCS is not suitable for one-stop models with pre-op assessment and surgery on the same day which involve consenting on the day of surgery

6. Other considerations:

- a. It is often helpful for patients to go home with a companion
- b. Both eyes of ISBCS patients should not be patched postoperatively; one eye at least should have a clear shield
- c. Patients should be able to instil post-operative drops or have arrangements for this to be done by others
- d. Results should be closely monitored and compared with national standards

For all cataract surgery, it is important at this time to follow the joint UKISCRS/RCOphth guidance (7) and undertake a discussion with the patient and family on their risk of COVID from attending hospital for cataract surgery, and to ensure COVID related factors inform the consenting discussion and the decision on if and when to undertake surgery. Clinicians should, in partnership with the patient, balance the theoretical risks of contracting or transmitting COVID with the real risks of prolonged visual morbidity and potential injuries related to poor vision, particularly when they could affect both eyes.

All COVID-19 guidance is subject to change. Please visit the [RCOphth COVID-19 web page](#) for regular updates.

References

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