Sustained routine practice of immediate sequential bilateral cataract surgery (ISBCS) in a post-COVID era: the Sheffield experience

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Introduction

In the 1st year post Covid recovery (between July 2020 and June 2021), safe and successful practice of ISBCS were demonstrated in 208 eyes of 104 patients in Sheffield following the RCOphth recommendations.[1,2]

Objectives

To share our experience on the sustained routine practice of ISBCS

To evaluate the cohort characteristics and safety profile

Methods

- 3687 phaco + IOLs performed from July 2021 to June 2022
- 2nd year of ISBCS analysis in our institution
- 2nd year post-COVID-19
- 12-month post-op monitoring period for all patients
- Adhering to International Society of Bilateral Cataract Surgeons (iSBCS) recommendations.[3]

Results: Demographics

ISBCS eyes (n=280 eyes)

Mean age: 73.9 ± 9.7 years; 66% being female

Mean axial length: 23.4 ± 1.48 mm

Mean ACD: 3.00 ± 0.46 mm

Pre-op Ocular Risk Factors	2020-2021 (n=208 eyes) LA (n=186 eyes, 89%)	2021-2022 (n=280 eyes) LA (n=240 eyes, 85.7%)
None ('routine')	134 (72%)	192 (80%)
High myopia (over -5D)	12 (6%)	4 (1.7%)
Poor dilation requiring pupil expander devices	4 (2%)	3 (1.3%)
On tamsulosin	4 (2%)	0
Primary open angle glaucoma	8 (4%) - 1 combined TrabEx+ goniectomy	8 (3.3%)
Short AL (<21mm)/shallow AC (<2mm) requiring pre-operative IV mannitol infusion	17 (9%)	12 (5%)
Angle closure (primary/phacomorphic)	4 (2%)	16 (6.7%)
Previous trabeculectomy	2 (1%)	0
Post-vitrectomy	0	3 (1.3%)

Results: Complications

	2020-2021 LA (n=186 eyes, 89%)	2021-2022 LA (n=240 eyes, 85.7%)
Intra-operative	(n=2/186, 1.1%)	(n=2/240, 0.8%)
PCR with vitreous loss	1, 2nd eye	1, 2nd eye
Corneal oedema	1, 2nd eye	0
Aqueous misdirection	0	1, 2nd eye
Post-operative	(n=17/186, 9.1%)	(n=15/240, 6.3%)
Endophthalmitis	0	0
CMO	8 (bilateral in 2 patients & unilateral in 4 patients)	5 (all unilateral)
Corneal oedema	2	0
IOP spikes requiring paracentesis	2	0
Retained lens matter requiring AC washout	1	1
Uveitis	2	2
VMT	1	0
FTMH requiring PPV	1	0
Posterior capsule opacification	0	3
IOL dislocation	0	2
Epithelial defect	0	2 (bilateral)

For 2021-22, all complications resolved with favourable outcomes

Results: Outcomes

	2020-2021 (n=208)	2021-2022 (n=280)
Pre-op mean LogMAR PHVA	0.41 ± 0.43	0.46 ± 0.51
Latest post-op mean PHVA	0.37 ± 0.74	0.17 ± 0.29
Mean predicted refractive deviation	0.37 ± 0.74	-0.32 ± 0.66
Within 0.5D	56.2%	60.7%
Within 1.0D	91.7%	87.4%

Results: Trainee Involvement

	2020-2021 (n=208)	2021-2022 (n=280)
Total eyes operated by trainees	67 (32.2%)	74 (26.4%)
First eye (% of the first eyes)	12 (11.5%)	20 (14.3%)
Second eye (% of the second eyes)	55 (53.4%)	54 (38.6%)

No significant difference found between consultants and trainees ($p<0.05$)

- Pre-op characteristics including risk factors
- Intra-op or post-op complication rates
- Refractive and visual outcomes

Conclusion

Our experience continued to show safe and successful practice of ISBCS in a UK academic teaching hospital with patients frequently requesting this approach.

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Reference:

1. Immediate Sequential Bilateral Cataract Surgery (ISBCS) during COVID recovery: RCOphth/UKISCRS rapid advice document.
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3. Eye Foundation of Canada. iSBCS General Principles for Excellence in ISBCS2009.