

# Challenges in immediate sequential bilateral cataract surgery: a systematic Cochrane review

## Desafios na cirurgia de catarata bilateral sequencial imediata: uma revisão sistemática da Cochrane

Richard Yudi Hida<sup>1,2,3,4</sup> 

1. Department of Ophthalmology, Universidade Federal de São Paulo, São Paulo, SP, Brazil.

2. Department of Ophthalmology, Hospital das Clínicas, Universidade de São Paulo, São Paulo, SP, Brazil.

3. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

4. Discipline of Microbiology, Department of Pathology, Faculdade de Ciências Médicas da Santa Casa de São Paulo, São Paulo SP, Brazil.

### Article reference of the review

Dickman MM, Spekrijse LS, Winkens B, Schouten JSAG, Simons RWP, Dirksen CD, et al. Immediate sequential bilateral surgery versus delayed sequential bilateral surgery for cataracts. *Cochrane Database Syst Rev.* 2022;4(4):CD013270.

<https://doi.org/10.1002/14651858.CD013270.pub2>

Cataract surgery or refractive lens exchange has advanced to become one of the most commonly performed surgical procedures in the world today, with minimal relevant complications when performed correctly. Its safety, outcomes, and cost-effectiveness have been thoroughly studied. Despite its safety, most patients requiring cataract surgery for both eyes undergo delayed sequential bilateral cataract surgery (DSBCS), in which the procedure is performed on separate days for each eye.

Recently, immediate sequential bilateral cataract surgery (ISBCS), which can be performed as a separate procedure for each eye on the same day, has gained popularity among surgeons worldwide as an alternative to DSBCS.

However, there is a clear need for reliable evidence regarding the safety, effectiveness, and cost-effectiveness of ISBCS compared to DSBCS for patients requiring cataract surgery.

This Cochrane review, which included 276,260 participants from 14 studies (7,384 for ISBCS and 268,876 for DSBCS) have concluded some interesting points:

- ISBCS was more cost-effective than DSBCS.
- No relevant conclusion was found regarding complications,
- No relevant differences were found in visual outcomes,
- No relevant differences were found in infection rates.
- The amount of evidence is very limited for all issues.
- Safety must be the main priority.

The Cochrane review also discusses some critical issues associated with ISBCS:

- The lack of post-operative data of the first eye to guide intraocular lens selection in the second eye.
- Higher risk of bilateral vision loss.
- Difficulties to persuade physicians to adopt cost-effective practices.
- Limitations on the interpretations of the recent articles
- The need of strict clinical practice policies and protocols for infection control.
- Lack of safety data for immediate sequential bilateral refractive clear lens exchange.

Due to lower cost and income, ISBCS can be discouraging to some surgeons. Moreover, there are no differences in clinical outcomes between ISBCS and DSBCS. In addition, evidence favoring ISBCS is limited, and further studies are required to clarify relevant concerns and more comprehensive list of risks and benefits.