The consequences of waiting for cataract surgery: a systematic review

CRD summary
This review concluded that a wait time for cataract surgery of less than 6 weeks seemed to carry lower visual loss, better quality of life and fewer falls, whereas wait times of 6 months or longer were associated with poorer prognoses. The review had some methodological weaknesses and the available evidence was limited, therefore the conclusions need to be taken with caution.

Authors' objectives
To review the evidence about the relationship between wait time for cataract surgery and clinical outcomes.

Searching
MEDLINE, HealthSTAR, EMBASE, the Cochrane CENTRAL Register, the Cochrane Database of Systematic Reviews (Issue 2, 2005), EconLit, NHS EED, HTA, CBCA Fulltext, Scopus, TRIP and the Cochrane EPOC Register of trials were searched from 1990 to May or June 2005. Conferences proceedings of the Association for Research in Vision and Ophthalmology, the American Academy of Ophthalmology, the European Association for Vision and Eye Research and the Canadian Ophthalmology Society, as well as the bibliographies of relevant articles, were checked to identify additional relevant studies. Only studies performed in Canada, or comparable countries such as the UK or Australia, were included.

Study selection
Study designs of evaluations included in the review
No inclusion criteria for the study design were specified. Randomised controlled trials (RCTs), prospective cohort or case-control studies, and observational studies were included.

Specific interventions included in the review
To be eligible, studies needed to evaluate the effect of the waiting time for cataract surgery, regardless of the definition of wait time used.

Participants included in the review
Studies of adults with cataracts were eligible for inclusion. Studies had to use standard methods of examination and diagnosis to be included.

Outcomes assessed in the review
No inclusion criteria for the outcomes were specified. The reported outcomes varied across the included studies. The extracted outcomes included vision acuity, quality of life, the patient's degree of satisfaction and adverse events.

How were decisions on the relevance of primary studies made?
Two reviewers independently selected studies from full-text versions, with any disagreements resolved through discussion or by consultation with a third reviewer.

Assessment of study quality
The quality of the RCTs was assessed on the basis of adequacy of randomisation, blinding, and descriptions of withdrawals and drop-outs, using the Jadad scale. Each study was allocated a score from 0 (lowest) to 5 (highest). Studies scoring 3 or more were considered to be high quality. The quality of cohort and case-control studies was assessed on the basis of selection and comparability of the study groups, and the ascertainment of either the exposure or outcome of interest using the 'star' rating system of the Newcastle-Ottawa Scale. Each study was assigned 0 up to 9 stars. The authors did not state how many reviewers performed the validity assessment.
Data extraction
One reviewer extracted the data from the primary studies onto standardised forms, and a second reviewer subsequently verified the data abstraction.

Methods of synthesis
How were the studies combined?
The data were presented narratively. Data from RCTs and prospective studies were also tabulated.

How were differences between studies investigated?
Differences in the study design, populations and outcomes were discussed in the text.

Results of the review
Twenty-seven studies were included: 2 RCTs, 3 prospective cohort studies and 22 descriptive studies.

The 3 prospective cohort studies scored 5, 8 and 9 stars, respectively, for quality, while both RCTs received a Jadad score of 3.

Only the results of 10 of the 27 included studies were discussed. Of these, 2 studies reported a decrease in visual acuity with increased wait time; a third study reported no relationship between visual acuity and wait time. One cohort study reported that the Cataract Surgery Priority Criteria Tool was a significant predictor of increased visual function and acuity.

One RCT reported a decrease in the number of falls with expedited surgery.

Two RCTs reported an increase in quality of life with expedited surgery, with one also reporting an increase in physical activity and confidence. However, 2 cross-sectional studies reported no effect on quality of life.

Three studies reported a significant association between increasing wait time and a decrease in patient satisfaction.

Authors' conclusions
Patients who wait for more than 6 months for cataract surgery may experience negative outcomes during the wait period, including vision loss, reduced quality of life and an increased rate of falls.

CRD commentary
This review used a broad definition with respect to the participants, outcomes and interventions; there were no inclusion criteria relating to study design. Several relevant databases were searched and specific attempts were made to locate unpublished studies, thereby reducing the risk of publication bias. The potential for publication bias was not assessed. It was not stated if any language restrictions were applied, therefore language bias cannot be ruled out. Two reviewers performed the full paper study selection and data extraction; however, it was not clear whether the screening of titles and abstracts and the study quality assessment were performed in duplicate, therefore error and bias cannot be ruled out during these stages of the review. Given the clinical heterogeneity between the included studies, the decision to combine the studies in a narrative synthesis was appropriate. As the authors acknowledged, the small number of trials and participants included is a major limitation of the review. Given the limited evidence available, the conclusions need to be taken with caution.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: Further studies are needed to evaluate factors that might affect wait times.
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