The clinical effectiveness and cost-effectiveness of second-eye cataract surgery: a systematic review and economic evaluation

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Plain English summary

Effectiveness of second-eye cataract surgery

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Cataract operations are the most frequent elective surgical procedure conducted in the NHS. In patients who have cataracts in both eyes, surgery to replace the lens in the worst-affected eye is a cost-effective way to improve vision and may also improve quality of life. However, it is unclear whether or not lens replacement surgery in the second eye provides enough further benefit to be considered worthwhile by patients and cost-effective for the NHS. We conducted rigorous systematic reviews of existing studies of the clinical effectiveness and cost-effectiveness of second-eye cataract surgery and its impacts on patients' quality of life, and developed an economic model to estimate the cost-effectiveness of second-eye cataract surgery in the NHS. Three randomised controlled trials of clinical effectiveness, three cost-effectiveness studies and 10 quality-of-life studies met our inclusion criteria. The clinical effectiveness trials were all conducted before 2005 and included patients in their 70s who already had good vision after one cataract operation. Clinically important improvement after second-eye surgery was observed for stereopsis (depth perception) and, in one trial, in the mental health component of quality of life. Studies did not provide evidence that second-eye surgery had a significant impact on other measures of clinical vision, quality of life and vision-related functional ability, possibly because of limitations of the outcome instruments employed. Our economic model shows that second-eye surgery would be considered cost-effective under conventional willingness-to-pay thresholds used in the NHS, tested under a range of scenarios and assumptions, using the best available evidence.

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