Laser eye surgery for the correction of refractive errors - early assessment briefs (Alert)

Swedish Council on Technology Assessment in Health Care

Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
Primary questions: What improvements in visual acuity can patients expect following refractive surgery? How are other measures of visual quality affected? What complications appear, how common are they, and what do they mean for the patient? Which method is most cost-effective?

Authors' conclusions
Assessments of three surgical methods to correct errors of refraction in the eye (PRK, LASEK, and LASIK) yield similar results in myopia up to 6 diopters. In 96% to 99% of the cases, surgery results in visual acuity of 0.5 or more in the operated eye. The corresponding results in hyperopia up to +3.5 diopters are 87.1% to 89.5% for PRK, 90.3% to 90.7% for LASEK, and 93.2% to 97% for LASIK. The percentages reaching full visual acuity (1.0 or more) are substantially lower. These conclusions are rated as Evidence Grade 1*.

The surgical procedures are associated with some risk for permanent side effects, eg, greater sensitivity to glare and increased contrast. Although many different complications have been reported, individually they are very uncommon. Vision loss (measured as two lines or more on the eye chart; a general measure of complications) is unusual with moderate errors of refraction. These conclusions are rated as Evidence Grade 1*.

There is insufficient* scientific evidence to draw firm conclusions on the cost-effectiveness of these methods. Considering treatment outcomes, complication risks, and surgical costs, LASIK would appear to be the most cost-effective. This, however, does not apply to high levels of refractive error.

Project page URL
http://www.sbu.se/Published

INAHTA brief and checklist

Indexing Status
Subject indexing assigned by CRD

MeSH
Cornea /surgery; Corneal Surgery, Laser; Keratotomy, Radial; Laser Therapy; Refractive Errors /surgery

Language Published
Swedish

Country of organisation
Sweden