



Title **Stapled Haemorrhoidectomy (Haemorrhoidopexy) for the Treatment of Haemorrhoids: A Systematic Review and Economic Evaluation**

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Aim

To determine the safety, clinical effectiveness, and cost effectiveness of circular stapled hemorrhoidopexy (SH) compared to conventional excisional hemorrhoidectomy (CEH) in treating hemorrhoids.

Conclusions and results

The review included 27 RCTs (n=2279; 1137 SH; 1142 CEH). All had some methodological flaws; only two reported recruiting patients with second, third, and fourth degree hemorrhoids, and only 37% reported using an appropriate method of randomization and/or allocation concealment. Compared to CEH, SH was associated with less pain in the immediate postoperative period, shorter operating times, a more rapid return to normal activity, and fewer unhealed wounds at 6 weeks, but a higher rate of residual prolapse, and prolapse and reintervention for prolapse, in the longer term (1 year and beyond). SH and CEH did not differ in the incidence of postoperative complications, bleeding, pain after the 21st postoperative day, or reinterventions for pain. Given the paucity of long-term data, the absolute and relative rates of recurrence and reintervention for both techniques remain uncertain.

Economic assessment showed similar costs and QALYs for CEH and SH; the average difference in costs between the procedures was 19 pounds sterling (GBP) and the difference in QALY was -0.001 favoring CEH over 3 years. The superior quality of life due to less pain after SH was offset by the higher rate of symptoms over the follow-up period. The additional cost of the staple gun is likely to be offset by savings in operating time and hospital stay. Some training may be required to use the staple gun, but this is not expected to have major resource implications. The results were particularly sensitive to the valuation of utility in the early postoperative period. Probabilistic sensitivity analysis showed that, at a threshold ICER of between GBP 20 000 and GBP 30 000 per QALY, SH had a 45% probability of being cost effective.

Recommendations

Given the clinical evidence and results of the economic analysis, the choice between SH and CEH should be based primarily on the patient's priorities and preferences (reduced pain and rapid return to normal activities in the short-term, versus reduced risk of recurrence in the longer-term) and the surgeon's preference. See Executive Summary link at www.hta.ac.uk/project/1544.asp.

Methods

See Executive Summary link at www.hta.ac.uk/project/1544.asp.

Further research/reviews required

An adequately powered, good-quality RCT is required, comparing SH with CEH, recruiting patients with second, third and fourth degree hemorrhoids, and having a minimum follow-up of 5 years to ensure adequate evaluation of reintervention rates. The effectiveness of SH in patients with fourth degree hemorrhoids and patients with co-morbid conditions should be evaluated. All treatments for hemorrhoids (conservative, nonsurgical, and surgical) need to be reviewed, including a comparison of reintervention rates. Other areas for research are utilities of patients up to 6 months postoperatively, the trade-offs of patients for short-term pain versus long-term outcomes, and the ability of SH to reduce hospital stays in a real practice setting. See Executive Summary link at www.hta.ac.uk/project/1544.asp.