



Title	Randomized Evaluation of Alternative Electrosurgical Modalities to Treat Bladder Outflow Obstruction in Men With Benign Prostatic Hyperplasia
Agency	NCCHTA, National Coordinating Centre for Health Technology Assessment Mailpoint 728, Boldrewood, University of Southampton, Southampton SO16 7PX, United Kingdom; Tel: +44 2380 595586, Fax: +44 2380 595639
Reference	Health Technol Assess 2005;9(04). Feb 2005. www.ncchta.org/execsumm/summ904.htm

Aim

To compare and evaluate the clinical and cost effectiveness of a new electrosurgical modality, transurethral vaporization of the prostate (TUVP), versus standard treatment, transurethral resection of the prostate (TURP).

Conclusions and results

TURP and TUVP were both effective in producing a clinically important reduction in the International Prostate Symptom Score (IPSS) and positive change in the IPSS Quality of Life (QoL) questions. The success rate for relief of symptoms, defined as a >5 reduction in IPSS at 6 months was 85% for TURP and 74% for TUVP. Neither the success of the treatment nor the change in aggregated IPSS differed significantly between the groups. Improvement was sustained to 24 months after treatment with no significant difference between groups. The effectiveness of both treatments was equivalent when assessed through improvement in objective measures of urinary tract function, reduction in prostate size, and the change in health questions of SF-36. There was no change from baseline for other domains of SF-36 or EuroQoL. An adverse event was defined as any undesirable experience that the patient had, whether considered procedure-related or not. The absolute incidence of adverse events was similar between the groups. The incidence of severe or prolonged bleeding was less with TUVP. TURP and TUVP are broadly equivalent in direct NHS resource use. In particular, staff costs, theatre use and capital equipment costs are the same. This study did not show any significant difference in inpatient stay or use of outpatient resources between the groups. The disposable electrodes used for TUVP are more expensive than reusable TURP electrodes.

Recommendations

TURP and TUVP are equivalently effective in improving the symptoms of benign prostatic enlargement, and the improvement lasts for at least 2 years. TUVP is associated with less morbidity due to hemorrhage than TURP. Reduced bleeding after transurethral surgery

to the prostate does not significantly reduce hospital stay when patients are managed by staff accustomed to managing patients after TURP. Replacing TURP by TUVP would not produce a significant cost benefit to the NHS unless the inpatient stay could be reduced at least 1 day.

Methods

Randomization involved a sealed envelope system. Patients with symptoms and those in retention were randomized separately to ensure even distribution. They were randomized as close as possible to the time of their operation. TURP was performed and patients were managed according to the usual practice of the clinical team. TUVP was performed with the most promising available equipment using a technique described in the literature. Postoperative management after TUVP was left to the ward team, who were not necessarily informed to which treatment arm the patient had been allocated. Patients were assessed clinically, by questionnaire, and investigation at baseline, 2 months and 6 months after randomization. A postal questionnaire was sent to each patient at 2 years. For the economic evaluation, direct costs from the NHS viewpoint were collected.

Further research/reviews required

Further research is needed to determine why patients stay in hospital after transurethral surgery to the prostate and how the length of stay can be reduced. A larger observational study/audit is required to assess the incidence of infrequent adverse events after TUVP. Until the results are available, TUVP should not replace TURP in the NHS. Patients in this study should be followed to establish whether the durability of improvement is similar to 5 years and beyond.