

Prostatic Artery Embolisation Versus Transurethral Resection of the Prostate for Benign Prostatic Hyperplasia: 2-yr Outcomes of a Randomised, Open-label, Single-centre Trial

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BACKGROUND

Prostatic artery embolisation (PAE) for the treatment of lower urinary tract symptoms secondary to benign prostatic obstruction (LUTS/BPO) still remains under investigation.

OBJECTIVE

To compare the efficacy and safety of PAE and transurethral resection of the prostate (TURP) in the treatment of LUTS/BPO at 2 yr of follow-up.

DESIGN, SETTING, AND PARTICIPANTS

A randomised, open-label trial was conducted. There were 103 participants aged ≥ 40 yr with refractory LUTS/BPO.

INTERVENTION

PAE versus TURP.

OUTCOME MEASUREMENTS AND STATISTICAL ANALYSIS

International Prostate Symptoms Score (IPSS) and other questionnaires, functional measures, prostate volume, and adverse events were evaluated. Changes from baseline to 2 yr were tested for differences between the two interventions with standard two-sided tests.

RESULTS AND LIMITATIONS

The mean reduction in IPSS after 2 yr was 9.21 points after PAE and 12.09 points after TURP (difference of 2.88 [95% confidence interval 0.04-5.72]; $p = 0.047$). Superiority of TURP was also found for most other patient-reported outcomes except for erectile function. PAE was less effective than TURP regarding the improvement of maximum urinary flow rate (3.9 vs 10.23 ml/s, difference of -6.33 [-10.12 to -2.54]; $p < 0.001$), reduction of postvoid residual urine (62.1 vs 204.0 ml; 141.91 [43.31-240.51]; $p = 0.005$), and reduction of prostate volume (10.66 vs 30.20 ml; 19.54 [7.70-31.38]; $p = 0.005$). Adverse events were less frequent after PAE than after TURP (total

occurrence $n = 43$ vs 78 , $p = 0.005$), but the distribution among severity classes was similar. Ten patients (21%) who initially underwent PAE required TURP within 2 yr due to unsatisfying clinical outcomes, which prevented further assessment of their outcomes and, therefore, represents a limitation of the study.

CONCLUSIONS

Inferior improvements in LUTS/BPO and a relevant re-treatment rate are found 2 yr after PAE compared with TURP. PAE is associated with fewer complications than TURP. The disadvantages of PAE regarding functional outcomes should be considered for patient selection and counselling.

PATIENT SUMMARY

Prostatic artery embolisation is safe and effective. However, compared with transurethral resection of the prostate, its disadvantages regarding subjective and objective outcomes should be considered for individual treatment choices.

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