



Original Article

The 'Prostate Embolisation AS first-line therapy compared to medication in treatment naïve men with prostate enlargement, a randomised Controlled trial' (P-EASY ADVANCE): a randomised controlled trial of prostate embolisation vs medication for BPH

Nicholas Brown^{1,2} , Anthony Kiosoglous³, Stephanie Castree², Sepinoud Firouzmand², Rhiannon McBean², Duncan G. Walker², Sean Wallace², Boon Kua³, Troy Gianduzzo³, Rachel C. Esler³, Peter Campbell³, Joseph Schoeman³ and John Yaxley^{1,3} 

¹The University of Queensland, ²I-MED Radiology, Brisbane, and ³Urology Craft Group, The Wesley Hospital, Auchenflower, Queensland, Australia

Objective

To compare prostate artery embolisation (PAE) to the combination of tamsulosin and dutasteride therapy as a potential first-line therapy for obstructive benign prostatic hyperplasia (BPH) in treatment-naïve patients in the 'Prostate Embolisation AS first-line therapy compared to medication in treatment naïve men with prostate enlargement, a randomised Controlled trial' (P-EASY ADVANCE).

Patients and Methods

A total of 39 men with enlarged prostates, moderate–severe lower urinary tract symptoms (LUTS) and obstructed/equivocal urodynamic studies (UDS), and who had no prior treatment for BPH, were randomised to receive either combined medical therapy with tamsulosin and dutasteride (medication) or PAE. Follow-up UDS, International Prostate Symptom Score (IPSS), uroflowmetry and ultrasound were performed at short- to medium-term intervals following interventions and compared to baseline.

Results

The medication and PAE treatment groups had similar baseline characteristics, including prostate volumes (87.8 and 85.4 mL respectively), maximum urinary flow rate (Q_{max} : 6.5 and 6.6 mL/s, respectively), IPSS (19.5 and 21, respectively) and obstructed UDS (79% and 74%, respectively). Both interventions improved voiding and bladder outflow obstruction from baseline, with more patients unobstructed after PAE (63%) compared to medication (28%) ($P = 0.03$). PAE patients had significantly greater reductions in prostate size ($P < 0.001$), incomplete emptying ($P = 0.002$), total IPSS ($P = 0.032$), Q_{max} ($P = 0.006$) and quality of life ($P = 0.001$). Altered ejaculation, erectile dysfunction and nausea were more common in the medication group.

Conclusion

Prostate artery embolisation was more effective than combined medical therapy at reducing urinary obstruction, decreasing prostate volume and improving LUTS in patients with BPH who had not previously been treated. This is the first randomised control study to compare PAE and combined medical therapy in exclusively treatment-naïve patients and raises the potential of PAE as an alternative early treatment option for BPH. Further randomised comparative trials are planned to further validate the role of PAE in mitigating obstructive BPH.

Keywords

benign prostatic hyperplasia, embolisation, medical therapy, urinary tract symptoms, urodynamics