Thulium laser transurethral vaporesection versus transurethral resection of the prostate for benign prostatic obstruction: the UNBLOCS RCT

Jo Worthington, J Athene Lane, Hilary Taylor, Grace Young, Sian M Noble, Paul Abrams, Aideen Ahern, Sara T Brookes, Nikki Cotterill, Lyndsey Johnson, Rafiyah Khan, Aida Moure Fernandez, Tobias Page, Satchi Swami and Hashim Hashim on behalf of the UNBLOCS Trial Group

1Bristol Randomised Trials Collaboration (BRTC), Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK
2Bristol Urological Institute, Southmead Hospital, North Bristol NHS Trust, Bristol, UK
3Department of Urology, Freeman Hospital, Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle upon Tyne, UK
4Urology Department, Aberdeen Royal Infirmary, NHS Grampian, Aberdeen, UK

*Corresponding author h.hashim@gmail.com

Declared competing interests of authors: Paul Abrams reports grants and personal fees from Astellas Pharma Inc. (Tokyo, Japan), and personal fees from Pfizer Inc. (Walton Oaks, UK), Ipsen (Paris, France), Ferring Pharmaceuticals (Saint Prex, Switzerland), Pierre Fabre (Paris, France), Coloplast UK (Orton, UK) and Sun Pharmaceuticals Industries Ltd (Mumbai, India), outside the submitted work.

Published September 2020
DOI: 10.3310/hta24410

Plain English summary

The UNBLOCS RCT

Health Technology Assessment 2020; Vol. 24: No. 41
DOI: 10.3310/hta24410

NIHR Journals Library www.journalslibrary.nihr.ac.uk
Plain English summary

An enlarged prostate can make it difficult, or even impossible, for a man to pass urine by blocking the urine flow from the bladder. This can cause significant problems, and 25,000 men in the UK each year are treated with an operation to relieve their symptoms.

The standard operation [transurethral resection of the prostate (TURP)], which uses electricity to shave off the enlarged prostate, is successful, but it can have some complications. There is some evidence to suggest that laser surgery can lead to less blood loss and a shorter stay in hospital, but laser operations can be difficult for surgeons to carry out. This trial has looked at a procedure using a new type of laser called thulium, which uses a very similar surgical technique to TURP and has shown promising results so far.

A total of 410 men needing a prostate operation received either TURP or a laser operation. Participants were unaware of which operation they received until the end of the study to ensure a fair comparison. Seven hospitals across the UK were involved over 4 years. The trial mainly assessed the benefits of the operations using a urinary symptom questionnaire completed by participants, and by measuring the speed of passing urine after surgery.

Overall, both procedures achieved positive results, and participants expressed high levels of satisfaction with the outcomes. Participants who had either operation reported a similar improvement in urinary symptoms in their questionnaires. However, although both operations did a good job of improving the speed of passing urine, TURP was better. Participants experienced few complications, and the complications that did occur were similar after both operations, including levels of bleeding and time spent in hospital. The cost of the two operations to the NHS was also similar. Overall, we concluded that both operations are suitable for patients with prostate enlargement, with TURP showing some minor additional benefits.
Criteria for inclusion in the Health Technology Assessment journal

Reports are published in Health Technology Assessment (HTA) if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in Health Technology Assessment are termed ‘systematic’ when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

Health Technology Assessment (HTA) research is undertaken where some evidence already exists to show that a technology can be effective and this needs to be compared to the current standard intervention to see which works best. Research can evaluate any intervention used in the treatment, prevention or diagnosis of disease, provided the study outcomes lead to findings that have the potential to be of direct benefit to NHS patients. Technologies in this context mean any method used to promote health; prevent and treat disease; and improve rehabilitation or long-term care. They are not confined to new drugs and include any intervention used in the treatment, prevention or diagnosis of disease.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

This report

The research reported in this issue of the journal was funded by the HTA programme as project number 12/35/15. The contractual start date was in January 2014. The draft report began editorial review in March 2018 and was accepted for publication in February 2019. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health and Social Care. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health and Social Care.

© Queen’s Printer and Controller of HMSO 2020. This work was produced by Worthington et al. under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7TN, UK.
NIHR Journals Library Editor-in-Chief

Professor Ken Stein  Professor of Public Health, University of Exeter Medical School, UK

NIHR Journals Library Editors

Professor John Powell  Chair of HTA and EME Editorial Board and Editor-in-Chief of HTA and EME journals. Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK, and Senior Clinical Researcher, Nuffield Department of Primary Care Health Sciences, University of Oxford, UK

Professor Andréée Le May  Chair of NIHR Journals Library Editorial Group (HS&DR, PGfAR, PHR journals) and Editor-in-Chief of HS&DR, PGfAR, PHR journals

Professor Matthias Beck  Professor of Management, Cork University Business School, Department of Management and Marketing, University College Cork, Ireland

Dr Tessa Crilly  Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin  Senior Scientific Advisor, Wessex Institute, UK

Dr Peter Davidson  Consultant Advisor, Wessex Institute, University of Southampton, UK

Ms Tara Lamont  Senior Scientific Adviser (Evidence Use), Wessex Institute, University of Southampton, UK

Dr Catriona McDaid  Senior Research Fellow, York Trials Unit, Department of Health Sciences, University of York, UK

Professor William McGuire  Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads  Professor of Wellbeing Research, University of Winchester, UK

Professor John Norrie  Chair in Medical Statistics, University of Edinburgh, UK

Professor James Raftery  Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma  Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts  Professor of Child Health Research, UCL Great Ormond Street Institute of Child Health, UK

Professor Jonathan Ross  Professor of Sexual Health and HIV, University Hospital Birmingham, UK

Professor Helen Snooks  Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Professor Ken Stein  Professor of Public Health, University of Exeter Medical School, UK

Professor Jim Thornton  Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

Professor Martin Underwood  Warwick Clinical Trials Unit, Warwick Medical School, University of Warwick, UK

Please visit the website for a list of editors: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: journals.library@nihr.ac.uk