TITLE: Plasma Vaporization for the Treatment of Benign Prostatic Hypertrophy: Clinical and Cost-Effectiveness, and Safety

DATE: 19 November 2013

RESEARCH QUESTIONS

1. What is the evidence for the clinical effectiveness of plasma vaporization of the prostate compared with the use of GreenLight laser for the treatment of patients with benign prostatic hypertrophy?

2. What is the evidence for the safety of plasma vaporization of the prostate for the treatment of patients with benign prostatic hypertrophy?

3. What is the evidence for the cost-effectiveness of plasma vaporization of the prostate compared with the use of GreenLight laser or transurethral resection for the treatment of patients with benign prostatic hypertrophy?

KEY MESSAGE

One randomized controlled trial and six non-randomized studies were identified regarding the safety of plasma vaporization of the prostate for the treatment of patients with benign prostatic hypertrophy. No studies were identified regarding the clinical or cost-effectiveness of plasma vaporization of the prostate compared with the use of GreenLight laser for the treatment of patients with benign prostatic hypertrophy.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 11), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. The search was also limited to English language documents published between January 1, 2008 and November 5, 2013. Internet links were provided, where available.
The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and economic evaluations.

One randomized controlled trial and six non-randomized studies were identified regarding the safety of plasma vaporization of the prostate for the treatment of patients with benign prostatic hypertrophy. No relevant health technology assessments, systematic reviews, meta-analyses, or randomized controlled trials were identified. No studies were identified regarding the clinical or cost-effectiveness of plasma vaporization of the prostate compared with the use of GreenLight laser for the treatment of patients with benign prostatic hypertrophy.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One randomized controlled trial and six non-randomized studies examined the safety of transurethral plasma vaporization of the prostate.

Five studies examined the use of transurethral plasma vaporization of the prostate alone. The authors reported the following:

- good functional results following the procedure,
- no significant intra- or postoperative complications,
- no blood transfusions were needed,
- postoperative short and long term bleeding were not significant,
- few hemorrhagic complications, even with patients on anticoagulant therapy,
- no complications within the first year of follow up,
- and IPSS and bother scores were significantly reduced at three months.

In two studies where transurethral plasma vaporization was compared with traditional transurethral resection of the prostate, functional results were reported to be not significantly different between groups at three months, and quality of life scores were similar between groups.

The authors of all the included studies concluded that transurethral plasma vaporization of the prostate was safe.

No studies were identified regarding the clinical or cost-effectiveness of plasma vaporization of the prostate compared with the use of GreenLight laser for the treatment of patients with benign prostatic hypertrophy.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials

Safety


Non-Randomized Studies

Safety


Economic Evaluations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Randomized Controlled Trials – other comparators


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Additional References
