Review: Terazosin improves urologic symptoms in benign prostatic hyperplasia

Wilt TJ, Howe RW, Rutks IR, MacDonald R. **Terazosin for benign prostatic hyperplasia.** Cochrane Database Syst Rev. 2002;(4):CD003851 (latest version 14 Sep 1999).

QUESTION

In men with benign prostatic hyperplasia (BPH), does the nonuroselective α-blocker terazosin improve urologic symptoms?

DATA SOURCES

Studies were identified by searching MEDLINE (1966 to 2001), the Cochrane Library, and the Prostatic Diseases and Urologic Malignancies Group specialized register; and reviewing bibliographies of relevant studies and reviews.

STUDY SELECTION

Studies were selected if they were randomized controlled trials (RCTs) in any language comparing terazosin with placebo, phytotherapy, or pharmacologic or surgical therapies in men with symptomatic BPH and had a treatment duration ≥ 4 weeks.

DATA EXTRACTION

2 reviewers independently extracted data on methodological quality, study design, patient characteristics, enrollment criteria, outcomes, adverse effects, and dropouts. The main outcome was change in urologic symptoms measured by validated symptom scores (Boyarsky Symptom Score, American Urological Association [AUA], and International Prostate Symptom Score [IPSS]) (AUA and IPSS scales are identical), presented as the percentage absolute improvement from baseline.

MAIN RESULTS

17 RCTs (5151 men, mean age 65 y) met the inclusion criteria. 10 RCTs compared terazosin with placebo, 7 with other α-blockers, 1 with finasteride (also had a placebo group), and 1 with transurethral microwave thermotherapy. Study durations ranged from 4 to 52 weeks. A random-effects model was used to pool results where possible. Urinary symptom scores improved more in men who received terazosin than in those who received placebo (6 RCTs). The pooled mean percentage improvement in urinary symptoms using the Boyarsky Symptom Score was greater in those who received terazosin (4 RCTs, 37% vs 15%). In 2 RCTs that investigated the effect of terazosin withdrawal on BPH symptoms, symptom scores were better in men who continued to receive terazosin (15% to 25%) than in men who withdrew from terazosin and received placebo (41% to 63%). In 4 of 5 flexible dose-escalation trials, symptom improvement was greater with terazosin (31% to 38%) than placebo (10% to 18%). 1 RCT compared terazosin with finasteride: For improvement in AUA symptom scores, terazosin was better than finasteride (38% vs 20%) and similar to terazosin and finasteride combined (38% vs 39%). Terazosin was similar in urologic symptom improvement to tamsulosin (4 RCTs), alfuzosin (1 RCT), doxazosin (1 RCT), and prazosin (1 RCT). Terazosin did not show as much improvement from baseline in the IPSS as did transurethral microwave thermotherapy (1 RCT, 42% vs 65%).

CONCLUSIONS

In men with benign prostatic hyperplasia, terazosin improves urologic symptoms more than placebo or finasteride and is similar in effectiveness to other α-blockers. 1 trial comparing terazosin with transurethral microwave thermotherapy showed terazosin to be less effective.

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COMMENTARY

BPH is a common problem for older men that can adversely affect quality of life. The rigorous literature synthesis by Wilt and colleagues provides convincing evidence that terazosin helps men with moderately symptomatic BPH. Terazosin was more effective than placebo or finasteride in reducing symptom scores and improving peak urinary flow. Combination therapy with terazosin and finasteride was no more effective than terazosin alone. However, finasteride, a 5α-reductase inhibitor that can shrink prostate tissue, may still be useful for men with very large (> 60 mL) prostates (1). In addition, finasteride, unlike terazosin, has been shown to reduce the probability of surgery and acute urine retention (2).

All α-blockers improved urologic symptoms. However, terazosin, which inhibits vascular α-adrenergic receptors, often caused orthostatic hypotension, dizziness, and asthenia; 6% to 24% of study patients withdrew for adverse events. Tamsulosin, the only uroselective α-1 blocker, caused less vasodilatation and fewer than 1% of patients withdrew for adverse events. However, the studies reviewed used 0.2-mg doses of tamsulosin; side effects occur more frequently with the prescription-strength doses (0.4 to 0.8 mg) available in the United States (3).

Terazosin was less effective than transurethral microwave thermotherapy, a minimally invasive urologic procedure for BPH that is not widely available. Terazosin would probably be even less effective than transurethral resection of the prostate (TURP), the gold standard treatment for BPH that can reduce symptom scores by 66% and improve peak urine flow by 54% (4). However, TURP requires hospitalization, and treatment complications are common. Terazosin is a relatively effective and safe alternative for managing moderately symptomatic BPH in primary care practice.

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