

CAHE *Allied Health News in Review*

Is physiotherapy effective in the management of urinary incontinence (UI) in women?

Article Hypothesis

'PT treatment resolves symptoms of urinary incontinence in women'; posted by JL Harris on *Topix*, 21 March 2008 (<http://www.topix.com/med/physical-medicine-rehabilitation/2008/03/physical-therapy-treatment-resolves-symptoms-of-urinary-incontinence-in-women>)

The origin of evidence: This news report was based on a systematic review conducted by researchers from the: University of Minnesota and Minneapolis Veterans Affairs Center for Chronic Disease Outcomes Research (USA). Funding was received from the Agency for Healthcare Research and Quality (USA).

The objectives of the evidence (research): To synthesise evidence on the effectiveness of non-surgical clinical interventions used to treat UI in community-dwelling women.

The nature of the evidence (research): Systematic review and meta-analysis (where appropriate) of randomised controlled trials (RCTs) that compared various non-invasive, active interventions with placebo, sham, regular care or no active treatments. In addition, three Cochrane systematic reviews that reported the effects of drug treatment for UI were updated (anticholinergic drugs for overactive bladder, adrenergic drugs for UI and serotonin & nor-adrenaline re-uptake inhibitors for stress UI). Publications were excluded if they were secondary data analyses, case reports, case series, or RCTs that did not report patient outcomes or which utilised surrogate outcomes.

Participants involved in the research: Eligible trials involved women with: mixed UI, predominant symptoms of stress UI, urodynamic stress UI, predominant urge UI, overactive bladder with urge UI, or minimal UI.

Interventions utilised: Eligible interventions included: bladder training, education & behavioural training/advice, pelvic floor muscle training, biofeedback, electrical stimulation, injectable bulking agents, medical devices, hormone therapy, adrenergic drugs, anticholinergic drugs, and duloxetine.

Outcome measures: Prevalence of UI; improvement of UI; and continence after interventions in the active treatment and control groups (primary outcome of interest however was long-term continence (> 6-months duration at follow-up)).

Key findings: Ninety-six RCTs were considered eligible for analysis. Compared with regular care (not defined), pelvic floor muscle training plus bladder training resolved UI (pooled risk difference: 0.13 [95% CI: 0.07-0.20]). Whilst pelvic floor muscle training alone resolved or improved UI compared with regular care, the effect size was inconsistent across studies. Different injectable bulking agents and medical devices were associated with similar continence and improvement rates. There was some evidence for electrical (magnetic) stimulation to resolve urge UI.

Oral hormone administration increased rates of UI compared with placebo in most RCTs; comparatively, transdermal or vaginal oestrogen resulted in inconsistent improvement of UI. Adrenergic drugs did not resolve or improve UI. Oxybutynin or tolterodine resolved UI compared with placebo (pooled risk difference: 0.18 [95% CI: 0.13-0.22]). Duloxetine compared with placebo improved (pooled risk difference: 0.11 [95% CI: 0.07-0.14]) but did not resolve UI, with no significant dose-response association.

Validity of methodology and reliability of the conclusions: *OQAQ[‡] Score for this review: 16/18-points (partially fulfilled criteria: search strategy, blind assessment of eligible trials).*

The researchers searched across multiple databases (Medline (via PubMed), CINAHL, and Cochrane) for English-language only publications between 1990 and May 2007. Methodological quality was assessed using the following criteria items: participant selection, length & loss of follow-up, use of intention-to-treat principle, masking of the treatment status, randomisation scheme, adequacy of randomisation & allocation concealment, and justification of sample size. Considered overall, the authors reported that the methodological quality of reviewed RCTs was 'good' with the main deficiency identified being allocation concealment. Heterogeneity was however a feature between studies on account of variations in investigated populations, interventions, and outcome measures.

Clinical implications: On the basis of the review the authors reported that:

- Pelvic floor muscle training would resolve 490 cases of stress UI, 80 cases of any UI, and 167 cases of stress or urge UI per 1000 treated women;
- Magnetic stimulation therapy would resolve 390 cases of urge UI;
- Intensive lifestyle changes would avoid 54 cases of stress UI per 1000 treated women
- The administration of tolterodine (extended-release, 4 mg), would resolve 202 cases of urge UI per 1000 treated women.

On account of the absence of reviewed RCTs of pharmacologic agents failing to report on long-term continence in preference for surrogate tests, further investigation was necessary before robust inferences could be made re: these interventions.

Reference: Shamliyan T, Kane R, Wyman J et al (2008): Systematic review: randomized, controlled trials of nonsurgical treatments for urinary incontinence in women. *Annals of Internal Medicine* 148: 459-473.

Blogs and health reports logged on *Topix* can be accessed at :

<http://www.topix.com/med/physical-medicine-rehabilitation>

[‡]Oxman A, Guyatt G (1991): Validation of an index of the quality of review articles. *Journal of Clinical Epidemiology* 44: 1271-1278.

CONTACTS

www.unisa.edu.au/cahe
 karen.grimmer-somers
 @unisa.edu.au
 Telephone (08) 8302 2769
 Facsimile (08) 8302 2766

University of South Australia
 GPO Box 2471
 Adelaide SA 5001
 Australia

CRICOS Provider Number
 001218