Hormone therapy increased incidence and severity of urinary incontinence in healthy postmenopausal women

Hendrix SL, Cochrane BB, Nygaard IE, *et al.* Effects of estrogen with and without progestin on urinary incontinence. *JAMA* 2005;**293**:935–48.

Clinical impact ratings GP/FP/Primary care ★★★★★★ Gynaecology ★★★★★☆

This article contains extra text on the EBM website

Q In healthy postmenopausal women, what is the effect of hormone therapy (HT) on urinary incontinence (UI)?

METHODS

Design: randomised, placebo controlled trial (Women's Health Initiative [WHI]).

Allocation: concealed.*

Blinding: blinded {clinicians, participants, data collectors, outcome assessors, and monitoring committee}†.*

Follow up period: 1 year.

Setting: 40 US clinical centres.

Participants: women who were 50–79 years of age and postmenopausal. Exclusion criteria: breast cancer, other invasive cancer in past 10 years, venous thromboembolism, hypertriglyceridaemia, or condition with poor prognosis. 16 608 women {mean age 63.3 y}† were in the oestrogen plus progestin trial, and 10 739 women (mean age 64 y)† were in the oestrogen alone trial.

Intervention: combination HT: conjugated equine oestrogen (CEO), 0.625 mg/day, plus medroxyprogesterone acetate (MPA), 2.5 mg/day (n=8506), or placebo (n=8102). CEO alone: CEO, 0.625 mg/day (n=5310), or placebo (n=5429).

Outcomes: incident UI at 1 year and severity of UI at 1 year among women with UI at baseline.

Patient follow up: 86% (CEO plus MPA) and 84% (CEO alone). Analysis by intention to treat.

*See glossary.

†Writing Group for the Women's Health Initiative Investigators. *JAMA* 2002;**288**:321–33.

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MAIN RESULTS

The table shows the results. See complete table at www.evidence-basedmedicine.com.

CONCLUSION

In healthy postmenopausal women, hormone therapy increased the incidence and severity of urinary incontinence.

Commentary

The report by Hendrix *et al* is the latest surprising finding to come out of the WHI trials of HT in healthy postmenopausal women. UI is a common problem after menopause and increases steadily with age. Until recently, HT had been among recommended therapies for UI, based on a mixture of small trials, observational studies, and the documented benefits of oestrogen on genital symptoms such as atrophic vaginitis and dyspareunia. The WHI results, however, confirm earlier findings of the HERS trial,¹ which reported that oestrogen and progestin were not only ineffective but actually worsened symptoms of existing UI. WHI extends those findings to unopposed oestrogen and to previously asymptomatic women, in whom HT increased incident UI.

The biological mechanisms remain to be elucidated, but these findings from 2 large, well done randomised controlled trials using validated measures of incontinence probably close the door on HT as a therapy for UI. In retrospect, the increase in UI after menopause seems primarily to be a function of age rather than hormonal changes.² Clinicians should advise women about behavioural therapies such as pelvic exercises and weight loss and target additional therapies to the specific type of incontinence (stress v urge).³

These findings probably don't affect the primary remaining indication for HT, treating bothersome menopausal symptoms. HT remains an option for younger women with troublesome hot flashes and sleep disturbances, since incontinence was uncommon in this trial and not clearly affected by HT in women closer to menopause. Clinicians should follow recommendations to use the lowest effective dose for the shortest time needed to relieve symptoms and periodically reassess need for therapy.

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1 Grady D, Brown JS, Vittinghoff E, *et al.* *Obstet Gynecol* 2001;**97**:116–20.

2 US Department of Health and Human Services. *NIH News* March 23, 2005. www.nih.gov/news/pr/mar2005/od-23.htm (accessed 16 Jun).

3 Nygaard IE, Heit M. *Obstet Gynecol* 2004;**104**:607–20.

HT (conjugated equine oestrogen [CEO] with or without medroxyprogesterone acetate [MPA]) after menopause*

Outcomes at 1 year	Trial	HT	Placebo	RRI (95% CI)	NNH (CI)
Incident stress urinary incontinence (UI)	CEO + MPA	16%	8.7%	87% (61 to 118)	14 (10 to 19)
	CEO alone	17%	8.5%	115% (77 to 162)	11 (8 to 16)
Incident urge UI	CEO + MPA	11.4%	10.8%	15% (–1 to 34)	Not significant
	CEO alone	14%	12%	32% (10 to 58)	27 (15 to 84)
Relative risk (CI)					
Worsened amount of UI	CEO + MPA	1.20 (1.06 to 1.36)			
	CEO alone	1.59 (1.39 to 1.82)			
Worsened frequency of UI	CEO + MPA	1.38 (1.28 to 1.49)			
	CEO alone	1.47 (1.35 to 1.61)			

*HT = hormone therapy. Other abbreviations defined in glossary; RRI, NNH, and CI calculated from data in article.