FPIN's Clinical Inquiries

Hormone Therapy for Postmenopausal Women with Urinary Incontinence

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Clinical Question

Does hormone therapy improve urinary incontinence in postmenopausal women?

Evidence-Based Answer

Postmenopausal women should not receive oral hormone therapy for treatment of urinary incontinence. Hormone therapy is associated with worsening urinary incontinence in postmenopausal women who are incontinent at baseline (Strength of Recommendation [SOR]: A, based on a systematic review) and is associated with an increased risk of developing urinary incontinence in those who are continent at baseline (SOR: A, based on two large randomized controlled trials [RCTs]).

Evidence Summary

In a 2009 Cochrane review of 33 trials including 19,313 women with urinary incontinence, women receiving oral estrogen had worse urinary incontinence than those receiving placebo (relative risk [RR] = 1.32; 95% confidence interval [CI], 1.17 to 1.48). Those receiving both oral estrogen and progesterone also had worse incontinence than those receiving placebo (RR = 1.11; 95% CI, 1.04 to 1.18). However, 1,262 women who received topical estrogen experienced improved urinary incontinence (RR = 0.74; 95% CI, 0.64 to 0.86). No serious adverse effects were reported, although some women experienced vaginal bleeding, breast tenderness, or nausea.[1]

Two large studies examined the effects of hormone therapy on postmenopausal women who were continent at baseline. The first study analyzed data from the Women's Health Initiative, a double-blind, placebo-controlled RCT that included 9,180 postmenopausal women 50 to 79 years of age who were continent at baseline. Participants were randomized to receive placebo or treatment with oral conjugated equine estrogen (Premarin) alone or with a combination of conjugated equine estrogen and medroxyprogesterone acetate (Provera). Urinary incontinence was assessed at baseline and at one year. Hormone therapy increased the incidence of all types of urinary incontinence in women who were continent at baseline. The risk was greatest for stress incontinence and least for urge incontinence *(Table 1)*.[2]

The second study analyzed 1,208 continent women in the Heart and Estrogen/Progestin Replacement Study, a large double-blind, placebo-controlled RCT.[3] During 4.2 years of treatment, 64 percent of women randomly assigned to receive oral conjugated equine estrogen and medroxyprogesterone acetate reported weekly urinary incontinence, compared with 49 percent of those assigned to placebo. The odds ratios for women receiving hormone therapy compared with placebo were 1.5 for urge incontinence (95% CI, 1.2 to 1.8; $P < .001$) and 1.7 for stress incontinence (95% CI, 1.5 to 2.1; $P < .001$). The increased risk of incontinence in the hormone therapy group was evident at four months and persisted throughout the four-year treatment period. No follow-up was done after the treatment period.

Recommendations from Others

The American College of Obstetricians and Gynecologists states that combined hormone

Table 1. Incidence of Urinary Incontinence in Postmenopausal Women After One Year of Hormone Therapy

Type of incontinence	*Risk with oral CEE and MPA*	*Risk with oral CEE (alone)*
Stress	RR = 1.87 (95% CI, 1.61 to 2.18)	RR = 2.15 (95% CI, 1.77 to 2.62)
Mixed	RR = 1.49 (95% CI, 1.10 to 2.01)	RR = 1.79 (95% CI, 1.26 to 2.53)
Urge	RR = 1.15 (95% CI, 0.99 to 1.34)	RR = 1.32 (95% CI, 1.10 to 1.58)

NOTE: *Data for women who were continent at baseline.*

CEE = conjugated equine estrogen (Premarin); CI = confidence interval; MPA = medroxyprogesterone acetate (Provera); RR = relative risk.

Information from reference 2.

therapy and unopposed estrogen therapy have been found to increase the incidence of urinary incontinence in women without symptoms at baseline. No comment was made on the use of topical vaginal estrogen.[4] The American Urological Association has no recommendation on the medical treatment of incontinence.[5] The National Collaborating Centre for Women's and Children's Health does not recommend the use of systemic hormone therapy for the treatment of urinary incontinence.[6]

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