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Oestrogen therapy for urinary incontinence in post-menopausal women.

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Abstract

BACKGROUND:
It is possible that oestrogen deficiency may be an aetiological factor in the development of urinary incontinence in women. This is an update of a Cochrane review first published in 2003 and subsequently updated in 2009.

OBJECTIVES:
To assess the effects of local and systemic oestrogens used for the treatment of urinary incontinence.

SEARCH METHODS:
We searched the Cochrane Incontinence Group Specialised Register of trials (searched 21 June 2012) which includes searches of MEDLINE, the Cochrane Central Register of Controlled Trials (CENTRAL) and handsearching of journals and conference proceedings, and the reference lists of relevant articles.

SELECTION CRITERIA:
Randomised or quasi-randomised controlled trials that included oestrogens in at least one arm in women with symptomatic or urodynamic diagnoses of stress, urgency or mixed urinary incontinence or other urinary symptoms post-menopause.

DATA COLLECTION AND ANALYSIS:
Trials were evaluated for risk of bias and appropriateness for inclusion by the review authors. Data were extracted by at least two authors and cross checked. Subgroup analyses were performed by grouping participants under local or systemic administration. Where appropriate, meta-analysis was undertaken.

MAIN RESULTS:
Thirty-four trials were identified which included approximately 19,676 incontinent women of whom 9599 received oestrogen therapy (1464 involved in trials of local vaginal oestrogen administration). Sample sizes of the studies ranged from 16 to 16,117 women. The trials used varying combinations of type of oestrogen, dose, duration of treatment and length of follow up. Outcome data were not reported consistently and were available for only a minority of outcomes.The combined result of six trials of systemic administration (of oral systemic oestrogens) resulted in worse incontinence than on placebo (risk ratio (RR) 1.32, 95% CI 1.17 to 1.48). This result was heavily weighted by a subgroup of women from the Hendrix trial, which had large numbers of participants and a longer follow up of one year. All of the women had had a hysterectomy and the treatment used was conjugated equine oestrogen. The result for women with an intact uterus where oestrogen and progestogen were combined also showed a statistically significant worsening of incontinence (RR 1.11, 95% CI 1.04 to 1.18).There was some evidence that oestrogens used locally (for example vaginal creams or pessaries) may improve incontinence (RR 0.74, 95% CI 0.64 to 0.86). Overall, there were around one to two fewer voids in 24 hours amongst women treated with local oestrogen, and there was less frequency and urgency. No serious adverse events were reported although some women experienced vaginal spotting, breast tenderness or nausea.Women who were continent and received systemic oestrogen replacement, with or without progestogens, for reasons other than urinary incontinence were more likely to report the development of new urinary incontinence in one large study.One small trial showed that women were more likely to have an improvement in incontinence after pelvic floor muscle training (PFMT) than with local oestrogen therapy (RR 2.30, 95% CI 1.50 to 3.52).The data were too few to address questions about oestrogens compared with or in combination with other treatments, different types of oestrogen or different modes of delivery.

AUTHORS' CONCLUSIONS:
Urinary incontinence may be improved with the use of local oestrogen treatment. However, there was little evidence from the trials on the period after oestrogen treatment had finished and no information about the long-term effects of this therapy was given. Conversely, systemic hormone replacement therapy using conjugated equine oestrogen may worsen incontinence. There were too few data to reliably address other aspects of oestrogen therapy, such as oestrogen type and dose, and no direct evidence comparing routes of administration. The risk of endometrial and breast cancer after long-term use of systemic oestrogen suggests that treatment should be for limited periods, especially in those women with an intact uterus.

Update of

- Cochrane Database Syst Rev. 2009;(4):CD001405.