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[Intervention Review]

Testosterone for peri and postmenopausal women

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ABSTRACT

Background

The question of whether adding testosterone therapy to conventional postmenopausal hormone therapy (HT) is effective or safe is unresolved. Therefore, we aimed to determine the efficacy and safety of testosterone therapy for postmenopausal women using HT.

Objectives

To determine the benefits and risks of testosterone therapy for postmenopausal women taking HT.

Search methods

We searched the Cochrane Menstrual Disorders and Subfertility Group Trials Register (searched 21 July, November 2008), *The Cochrane Library* (2008, Issue 3), MEDLINE (1966 to July 2008), EMBASE (1980 to July 2008), Biological Abstracts (1969 to 2008), PsycINFO (1972 to July 2008), CINAHL (1982 to July 2008), and reference lists of articles. We also contacted pharmaceutical companies and researchers in the field.

Selection criteria

Studies included randomised comparisons of testosterone plus HT versus HT alone in peri or postmenopausal women.

Data collection and analysis

Two review authors independently assessed the quality of the trials and extracted data. For dichotomous outcomes, a Peto odds ratio (OR) and its 95% confidence interval (CI) were calculated. For continuous outcomes, non-skewed data from valid scales were synthesized using a weighted mean difference or standardized mean difference. If statistical heterogeneity was found, a random-effects model was used and reasons for the heterogeneity were explored and discussed.

Main results

Thirty-five trials with a total of 4768 participants were included in the review. The median study duration was six months (range 1.5 to 24 months). Most of the trials were of adequate quality with regard to randomisation and concealment of allocation sequence. The major methodological limitations were attrition bias and lack of a washout period in the crossover studies. The pooled estimate suggested that the addition of testosterone to HT regimens improved sexual function scores and number of satisfying sexual episodes for postmenopausal women. Significant adverse effects were decreased high-density lipoprotein (HDL) cholesterol levels and an increased incidence of hair growth and acne. The discontinuation rate was not significantly greater with the addition of testosterone therapy (OR 0.99, 95% CI 0.83 to 1.19).



Authors' conclusions

There is good evidence that adding testosterone to HT has a beneficial effect on sexual function in post-menopausal women. However, the combined therapy is associated with a higher incidence of hair growth and acne and a reduction in HDL cholesterol. These adverse events may differ by the different doses and route of testosterone administration. There is insufficient evidence to determine the effect of testosterone in long term use.

PLAIN LANGUAGE SUMMARY

Testosterone for perimenopausal and postmenopausal women

There is good evidence that adding testosterone to hormone therapy (HT) has a beneficial effect on sexual function in postmenopausal women. However, the combined therapy is associated with a higher incidence of hair growth and acne and a reduction in high-density lipoprotein (HDL) cholesterol. These adverse events may vary with different doses and routes of administration of testosterone. Adding testosterone to HT did not increase the number of women who stopped HT therapy.