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Study of adverse outcomes in women using testosterone therapy.

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Abstract

OBJECTIVES: There are concerns that exogenous testosterone therapy may be associated with adverse cardiovascular effects, increases in risk of breast or uterus cancer and alterations in insulin sensitivity. Objective of this study was to explore the safety of testosterone therapy in actual clinical practice.

METHODS: Data from the General Practice Research Database and the Health Improvement Network was used, including computerised medical records of UK general practitioners. The study population included women aged 18+ years prescribed testosterone, administered through implants (72.2%), tablets (18.4%) or injections (7.9%). Each testosterone user was matched by age and practice to three control patients. Cox proportional hazards models were used to compare the rates of several outcomes.

RESULTS: The study population included 8412 women, 2103 testosterone users and 6309 controls. There were no statistically significant differences between the cohorts in the rates of cerebrovascular disease, ischemic heart disease, breast cancer, deep venous thrombosis/pulmonary embolism, diabetes mellitus or acute hepatitis. The rate of breast cancer was comparable between testosterone users and control patients. The rate of androgenic events was increased in the testosterone cohort (relative rate of 1.55 [95% CI 1.21-1.97]). Differences in outcomes between the cohorts were generally comparable across subgroups based on age and use of hormone therapy.

CONCLUSIONS: This study found no major increase in the risk of cardiovascular diseases or breast cancer in women using testosterone (implants, tablets, or injections), while the risk of androgenic events was increased. It would be useful to conduct similar studies at lower doses with transdermal testosterone.

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