Factors Associated with Hormone Replacement Therapy Use

Keating NL, Cleary PD, Rossi AS, Zaslavsky AM, Ayanian JZ. Use of hormone replacement therapy by postmenopausal women in the United States. Ann Intern Med 1999;130:545–53.

Study Overview

Objective. To examine sociodemographic, clinical, and psychological factors associated with current use of hormone replacement therapy (HRT).

Design. Random-digit telephone survey followed by a self-administered written survey.

Setting and participants. A national population-based cohort selected from all U.S. households listed in telephone directories. The participants were a probability sample of 495 postmenopausal women between 50 and 74 years of age in 1995 who had no personal history of breast cancer.

Main outcome measures. Use of HRT (eg, estrogen) in the past 30 days.

Main results. Current use of HRT was reported by 37.6% of women, with rates of 58.7% among those who had undergone hysterectomy and 19.6% among those who had not ($P = 0.001$). History of hysterectomy was the personal characteristic most strongly associated with use of HRT. After stratification for hysterectomy, use of HRT was associated with younger age, higher education and income levels, white race, marital status, and geographic location. Use was more common among college graduates (odds ratio [OR], 3.72; 95% confidence interval [CI], 1.29 to 10.71) and less common among women with diabetes mellitus (OR, 0.17; CI, 0.05 to 0.51). Other cardiac risk factors and most psychological characteristics, including depression, worry about illness, and somatic amplification, were not associated with HRT use. Use of HRT was associated with having a regular physician, regular use of calcium supplements, and physical activity. In a multivariate analysis, use of HRT was more common among women in the South (adjusted OR, 2.67; CI, 1.08 to 6.59) and West (OR, 2.76; CI, 1.01 to 7.53) than in the Northeast.

Conclusion

Sociodemographic factors such as education and geographic location may be more strongly associated with use of HRT than clinical factors such as risk for cardiovascular disease, which had no impact on likelihood of HRT use.

Commentary

Practice guidelines of the American College of Physicians note that women who have undergone hysterectomy and postmenopausal women with risk factors for heart disease may gain preventive benefits from HRT use; a more recently published decision analysis suggests that nearly all postmenopausal women, especially those with risk factors for heart disease, will benefit from HRT [1,2]. Yet in this study, having cardiovascular risk factors was not associated with HRT use, and having diabetes, which increases women's risk of heart disease to the level of that in men [3], was associated with lower HRT use.

The geographic variation in HRT use may be telling. Such variation across the United States typically has been found when clinical uncertainty exists about the relative benefits and risks of a therapy [4]. Overall, the benefits and risks of HRT are not fully understood. Randomized trials have shown that use of HRT improves lipid profiles and bone density in postmenopausal women but does not reduce the incidence of cardiovascular events in women with existing cardiovascular disease [5,6]. Yet observational studies have shown that women who use HRT have a substantially decreased risk for coronary artery disease, osteoporosis and fractures, and death but may have an increased risk for breast cancer [7,8].

Applications for Clinical Practice

If clinical trials can confirm the benefits of HRT observed in observational studies, the women most likely to benefit from HRT will need to be identified and educated about the issues surrounding therapy. Moreover, it will be important to understand the sociodemographic characteristics (eg, lower