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Tamoxifen is not associated with increased CV event rate

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Keywords

Angina, cardiovascular disease, fatal myocardial infarction, nonfatal myocardial infarction, tamoxifen

Context

In 1998 a report (see Additional information) in the Journal of the American Medical Association suggested that the adverse cardiovascular effects of tamoxifen treatment might outweigh its potential benefits. However, a new analysis of data from a national registry reveals no increased incidence of cardiovascular (CV) events with prophylactic tamoxifen, even in women with heart disease.

Significant findings

The investigators report that CV event rates (defined as fatal and nonfatal myocardial infarction [MI], unstable angina, and severe angina) were not significantly different between women assigned to receive tamoxifen and those assigned to receive placebo, independent of pre-existing coronary heart disease (CHD). Among women without CHD (6074 on tamoxifen versus 6072 on placebo), risk ratios (95% confidence intervals [CI]) for tamoxifen users were 1.75 (0.44-8.13) for fatal MI, 1.11 (0.55-2.28) for nonfatal MI, 0.69 (0.29-1.57) for unstable angina, and 0.83 (0.32-2.10) for severe angina. In women with CHD (516 on tamoxifen versus 532 on placebo), risk ratios (95% CI) for tamoxifen users were 0.00 (0 to 1.58) for fatal MI, 1.25 (0.32 to 5.18) for nonfatal MI, 2.26 (0.87 to 6.55) for unstable angina, and 1.39 (0.23 to 9.47) for severe angina. "There was no evidence that the lack of association between tamoxifen and cardiovascular events was related to an early increase in risk that may have been offset by a late decrease in risk", the authors state.

Comments

Given the increasing popularity of tamoxifen for the prevention and treatment of breast cancer, longer-term clinical trials are needed to further elucidate its long-term CV effects, the authors admit. Dr Reis said he was "a little surprised" that the drug did not have a beneficial effect in women at low risk but was even more surprised that it did not have an increased rate of events in high-risk women. "The take-home message is that even women at high risk of heart disease do not need to be concerned about a negative effect of tamoxifen on the heart."

Methods

The authors used data from the National Surgical Adjuvant Breast and Bowel Project Breast Cancer Prevention Trial (BCPT). In this trial, 13388 women at increased risk for breast cancer were randomly assigned to either tamoxifen 20 mg/day or placebo. CV follow-up was available for 13194 women, 1048 of whom had prior clinical coronary heart disease.

Additional information

Hulley S, Grady D, Bush T, Furberg C, Herrington D, Riggs B, Vittinghoff E: **Randomized trial of estrogen plus progestin for secondary prevention of coronary heart disease in postmenopausal women. Heart and Estrogen/progestin Replacement Study (HERS) research group.** *JAMA* 1998, **280**:605-613.

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