The effect of hormone replacement therapy on the sensitivity of screening mammograms.

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Abstract

AIM:
The use of hormone replacement therapy (HRT) can lead to various changes on the mammogram including increasing density. The object of this study was to assess the effect of HRT on the sensitivity of mammographic screening by comparing HRT usage in women with screen detected breast cancers with HRT usage at the time of screening in women presenting with interval cancers.

METHODS:
The West of Scotland Breast Screening Programme serves a population of 180,000 women aged 50-64 years old. Between May 1988 and December 1995, 1461 breast cancers were detected by the screening programme in 1441 women over the age of 50 and 372 interval breast cancers presented in 371 women screened between these dates. HRT usage at the time of screening was noted with details of age, postcode and the time between screening and diagnosis in the case of the women with interval cancers.

RESULTS:
Among women under 65 years old, screened between 1988-1993, 12.3% of women with screen detected cancers and 22.2% of women with interval cancers were using HRT (P<0.001). Further analysis demonstrates that interval cancer rate is related to age as well as HRT use. After adjusting for age at time of screening, deprivation category and year of screening, the relative risk of a woman using HRT having an interval cancer compared with that of a woman not using HRT is 1.79. The relative risk of an interval cancer arising in the first year after screening for a woman on HRT is 2.27.

CONCLUSION:
The use of HRT and being of an age below 60 years are both risk factors for
presenting with an interval cancer after mammographic breast screening. Our results indicate that the use of HRT leads to a decrease in the sensitivity of mammographic screening.