Higher incidence of isolated brain metastases in ovarian cancer patients with previous early breast cancer.

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Abstract

BACKGROUND: The pathogenesis of brain metastasis as a relatively rare complication of epithelial ovarian cancer is poorly understood. Some observations suggest that brain metastases from ovarian cancer are becoming more common and that ovarian cancers, which metastasize to the brain, may have a different biological pattern.

METHODS: Data were extracted from the Edinburgh Ovarian Cancer Database on a cohort of patients managed at the Edinburgh Cancer Centre (UK) between 1998 and 2004. The incidence of brain metastases was compared between patients with previous treatment for early breast cancer and patients without previous treatment for early breast cancer. Baseline characteristics, the time to cancer antigen 125 relapse, the time to brain metastasis, and the radiological pattern of relapse were also compared between these patients.

RESULTS: We demonstrate a higher incidence of serous histology (P = 0.02) in patients in remission from early breast cancer and that the incidence of brain metastases in this group is 11.6% compared with 1.1% in patients without prior breast cancer (relative risk = 10.5, P < 0.001). Brain metastases were clinically evident after 45.6 months in patients with previous breast cancer compared with 21 months in patients without previous breast cancer (P = 0.008). Among the patients who developed brain metastases, isolated retroperitoneal lymph node recurrence was noticed in patients in remission from early breast cancer but rarely in other patients.

CONCLUSIONS: Ovarian cancer patients with a history of early breast cancer have a higher incidence of brain metastases and a different pattern of disease recurrence. We speculate that a higher incidence of breast cancer early onset mutations in patients with previous early breast cancer underlies these observed differences.

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