



FOCUS ON RESEARCH

IMPACT OF POST-OPERATIVE WOUND COMPLICATIONS ON LONG-TERM SURVIVAL FROM BREAST CANCER: POPULATION-BASED RETROSPECTIVE COHORT STUDY IN SCOTLAND

Researchers

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Aim

The aim of this study was to investigate whether wound complications following surgery for breast cancer are associated with overall and breast cancer-specific survival. The background to the study is that there is evidence that some of the factors involved in wound healing can stimulate tumour growth factors. A previous study has shown a higher risk of disease recurrence in patients with post-operative wound complications following surgery for breast cancer. However, that study was based on a single hospital series of just over 1,000 patients, and was too small to examine survival as an outcome.

Project Outline/Methodology

We used linked hospital discharge, cancer registration, mortality, and diabetes register records in Scotland to study the survival outcome of a large, population-based cohort of patients with and without wound complications following surgery for breast cancer.

Key Results

After exclusions, the final study population consisted of 38,645 women undergoing surgery for breast cancer, of whom 1791 (4.6%) developed a wound complication within six weeks of surgery. The median period of follow-up for the study cohort was 74 months. The unadjusted hazard ratio (HR) of death from all causes was increased slightly at 1.30 (95% confidence interval: 1.20, 1.42) for those having a wound complication after their breast surgery, relative to those having no wound complication. However, this relationship was only just marginally significant (HR 1.11; 95% CI 1.01, 1.21; P=0.023) after adjustment for patient, tumour and treatment characteristics. Furthermore, there was no statistically significant evidence of an association between wound complications and the risk of dying from breast cancer specifically.

Conclusions

Although we found a slight increase in the overall risk of dying among women who developed a wound complication after surgery for breast cancer, we think that this is most likely explained by the fact that we were not able to adjust our results for two potentially important 'confounding' factors – smoking history and body mass index – both of which are associated with the risk of developing a wound complication and with the risk of dying.

What does this study add to the field?

To the best of our knowledge, this is the first cohort study to investigate whether wound complications following surgery for breast cancer are associated with long-term survival.

Implications for Practice or Policy

In common with most research based on observational data, our study does have some limitations. Nevertheless, the results are largely reassuring.

Where to next?

Ideally, we would like to see our study replicated in a different population, preferably with information on the important potential confounding factors (smoking status and body mass index) that were not available in our data set.

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