What is the association between spontaneous or induced abortion and the development of breast cancer?

METHODS

Data sources: Medline, EMBASE/Excerpta Medica, and PubMed (to 2003); review articles; and discussions with colleagues.

Study selection and assessment: published or unpublished epidemiological studies that included >100 women with incident invasive breast cancer in countries with liberal abortion laws; and systematically sought information on every woman’s reproductive history, specifically previous spontaneous and induced abortions.

Outcome: breast cancer.

MAIN RESULTS

53 studies (n = 83 000) met the inclusion criteria: 13 prospective cohort and record linkage studies (n = 44 000) and 40 retrospective population or hospital case-control studies (n = 39 000). Only the results of prospective studies are reported here. A nested case-control approach was used to pool individual data from 12 prospective studies by randomly selecting up to 4 controls for each case (matched for age at diagnosis and geographical region). Analyses were stratified by study centre within study, age at diagnosis, parity, and age at birth of first child. Women with breast cancer had a mean of 2.4 births, and their average age was 50 years. Meta-analysis of 12 prospective studies that had data on both spontaneous and induced abortion showed that women who had ≥1 pregnancy ending in spontaneous or induced abortion did not have an increased risk of developing breast cancer (table). Relative risks did not differ according to number or timing of spontaneous or induced abortions.

CONCLUSION

Spontaneous or induced abortion is not associated with developing breast cancer.

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Relative risk of breast cancer (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous abortion</td>
<td>0.98 (0.92 to 1.04)</td>
</tr>
<tr>
<td>Induced abortion</td>
<td>0.93 (0.89 to 0.96)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary.
†Relative risk of breast cancer associated with ≥1 pregnancy ending as an abortion compared with never having had such a pregnancy. Relative risk <1 indicates a reduced risk of breast cancer. Analyses stratified by parity and age at first birth.
Review: spontaneous or induced abortion is not associated with development of breast cancer

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