Preservation of the intercostobrachial nerve during axillary node clearance for breast cancer reduced sensory deficits


Question
In women having axillary surgery for invasive breast cancer, does preservation of the intercostobrachial nerve (ICBN) prevent sensory loss?

Design
Randomised controlled trial with 3-month follow-up.

Setting
Hospital in Manchester, England, UK.

Patients
120 women (median age 58 y) who were having axillary node clearance for invasive breast cancer. Exclusion criteria were previous axillary surgery, radiotherapy to the axilla, shoulder trauma or previous shoulder surgery, or known pathologic findings in the shoulder. 106 patients (88%) were available for review at 3 months.

Intervention
Patients were allocated to preservation (n = 60) or sacrifice (n = 60) of the ICBN.

Commentary
Axillary nodal involvement in breast cancer can only be assessed accurately by histological examination of excised nodes. Axillary surgery causes morbidity and conveys no advantage of excised nodes. Axillary surgery can only be assessed accurately by histological examination of excised nodes. Axillary surgery can only be assessed accurately by histological examination of excised nodes.

ICBN preservation involved particular caution being taken during the lateral dissection of the axilla where the nerve was most likely to be accidentally divided.

Main outcome measures
Sensory symptoms (pain, numbness, diminished sensation, and altered sensation) and sensory deficit (normal, diminished, loss, and paraesthesia) as measured by light touch.

Main results
In the 60 patients allocated to ICBN preservation, the nerve was preserved in 39 (65%). Surgeons reported technical difficulty in half of the procedures in which the nerve was preserved. Sensory symptoms of pain, numbness, and diminished sensation were less common with ICBN preservation than ICBN sacrifice at discharge (P ≤ 0.05), but differences were no longer seen for any symptoms at 3 months (Table). Fewer patients who were allocated to ICBN preservation had some sensory deficit at 3 months than did those who were allocated to ICBN sacrifice (P ≤ 0.05), but the groups did not differ for paraesthesia (P = 0.77)* (Table).

Conclusion
In women having axillary surgery for invasive breast cancer, preservation of the intercostobrachial nerve reduced sensory deficits at 3 months but not sensory symptoms.

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Abbreviations defined in Glossary; RRR, NNT, and CI calculated from data in article.

Intercostobrachial nerve preservation vs division during axillary node clearance for breast cancer at 3 months†

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Preservation</th>
<th>Division</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>16%</td>
<td>24%</td>
<td>34% (-43 to 70)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Some sensory</td>
<td>63%</td>
<td>84%</td>
<td>25% (5.5 to 43)</td>
<td>5 (3 to 24)</td>
</tr>
<tr>
<td>Deficit</td>
<td>6%</td>
<td>7%</td>
<td>19% (-209 to 79)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Paraesthesia</td>
<td>6%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

†Abbreviations defined in Glossary; RRR, NNT, and CI calculated from data in article. Denominators provided by author.

The ICBN can usually be identified during an axillary clearance, and preservation of this nerve does not appear to affect local recurrence (1). Moreover, it seems to reduce postoperative numbness and therefore should be preserved, unless preservation compromises disease removal.

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References