Eur J Cancer, Vol. 29A, No. 6, p. 801, 1993.
Printed in Great Britain

0964-1947/93 $6.00 + 0.00

Comments and Critique

Axillary Surgery in Breast Cancer—There Still is a Debate

THE IMPORTANCE of axillary dissection in the treatment of primary breast cancer is still not viewed consistently by all surgeons. Opinions seem to depend on whether one's point of view begins with an anatomical or a biological perspective. The presence of involved axillary nodes will stimulate many surgeons to pursue an axillary clearance in the hope of improving outcomes. We know that this may help delay locoregional recurrence, but it does not change the incidence of distant disease-free survival or overall survival [1]. The idea that an axillary clearance has importance must be examined against this biological background.

Axillary nodes are a reflection of the tumour burden in the body, but are not themselves the source of distant metastases. In fact, the concept of an axillary clearance is a surgeon's conceit. The so-called apex of the axilla is nothing more than the point at which the clavicle obstructs the surgeon's progress along the chain of lymph nodes and renders it technically impossible to proceed further. In physiological terms there is always one more lymph node, since the lymphatics from the breast combine with those draining the arm to pass behind the clavicle, and over the first rib to join those from the head and neck and enter the thorax. There is nothing biologically important about this technical limit, witness the frequent appearance of involved supraclavicular nodes in patients who failed after Halsted radical mastectomy.

It is much more important to have a biological approach. Once the disease is in the axilla the main preoccupation should be with systemic treatment. The National Surgical Adjuvant Breast Project (N8ABP) defines axillary dissection as removal of level 1 and level 2 lymph nodes. This gives an accurate sampling so that staging of the patient can be performed with confidence. With the fairly recent demonstration that node-negative patients also benefit from adjuvant therapy [2, 3, 4], and with the continuing evaluation of more biological predictors of long-term outcome, it will become less necessary to perform axillary dissection for staging purposes. Clinical trials are now underway to determine whether node-negative patients do best with the same chemotherapy regimens as node-positive patients. If so, this will diminish the indications for axillary staging surgery, since patients will in effect, receive "unified" therapy. Furthermore, current investigations of preoperative chemotherapy such as NSABP protocol B-18 or the Italian [5] and French [6] studies may further undercut the need for information from the axilla.

In fact, selecting patients for adjuvant therapy based on axillary lymph node findings only helps to choose the patients who can be defined as at highest risk. We should actually be pursuing the identification of those groups of patients who will, in fact, benefit the most from such therapy. These may not be one and the same [7]. The highest risk patients, those with many lymph nodes involved, do not seem to benefit at all from current adjuvant programs, and new research thrusts such as bone marrow transplantation programs are currently being investigated for these patients. In cases where significant expectation of regional recurrence exists, radiation to the axillary and supraclavicular nodes can easily be given after axillary dissection but it is well-known that this has only regional benefit. There is no impact on distant metastases or long-term survival from this therapy.

If the benefits of tumour size reduction demonstrated by Bonnadona [5] and the suggestion of improved disease-free survival reported by Mauriac [6] are confirmed by the NSABP protocol B-18, there may be a significant shift toward initial or preoperative chemotherapy and axillary node dissection will become even less clinically important than now. We will need to use biological determinants of tumour responsiveness to select, with greater accuracy, which patients should receive which adjuvant therapy [7].

Rather than debate on when and how to do an axillary node dissection our energies should be directed at the more biological aspects of the question. How can we best identify those patients who are most likely to benefit from adjuvant therapy?

R.G. Margolese
McGill University
Jewish General Hospital
Montreal
Quebec H3T 1E2
Canada

Received 25 Sep. 1992; accepted 17 Nov. 1992

1. Fisher B, Redmond C, Fisher E, *et al.* Ten year results of a randomized clinical trial comparing radical mastectomy and total mastectomy with or without radiation. *N Engl J Med* 1985, **312**, 674–681.
2. Fisher B, Redmond C, Dimitrov NV, *et al.* A randomized clinical trial evaluating sequential methotrexate and fluorouracil in the treatment of patients with node-negative breast cancer who has estrogen-receptor-negative tumors. *N Engl J Med* 1989, **320**, 473–478.
3. Mansour EG, Gray R, Shatila AH, *et al.* Efficacy of adjuvant chemotherapy in high-risk node-negative breast cancer. *N Engl J Med* 1989, **320**, 485–490.
4. The Ludwig Breast Cancer Study Group. Prolonged disease-free survival after one course of adjuvant chemotherapy for node-negative breast cancer. *N Engl J Med* 1989, **320**, 491–496.
5. Bonadonna G, Veronesi U, Brambilla C, Ferrari AL, *et al.* Primary chemotherapy to avoid mastectomy in tumors with diameters of three centimeters or more. *J Natl Cancer Inst* 1990, **82**, 1539–1545.
6. Mauriac MD, Avril A, Dilhuydy JM. Effects of primary chemotherapy in conservative treatment of breast cancer patients with operable tumors larger than 3 cm. *Ann Oncol* 1991, **2**, 347–354.
7. Mittra I. Has adjuvant treatment of breast cancer had an unfair trial? *Br Med J* 1990, **302**, 1317–1319.