

Quill on Scalpel

Plume et scalpel

THE ROLE OF AXILLARY NODE DISSECTION IN INVASIVE BREAST CANCER

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With the advent of molecular biology, a number of oncogenes, such as *p53*, *Bcl-2* and *HER-2-neu*, and angiogenesis have been studied as potential prognostic markers for breast cancer. Despite their popularity they have yet to displace the single most important prognostic variable for survival of patients with breast cancer: axillary lymph node status. Although axillary lymph node dissection (ALND) yields this information, its associated morbidity and cost to the patient and society have forced many to re-evaluate its routine use and to try to identify patient subgroups in whom ALND may be omitted. The paper in this issue by Singhal and colleagues (page 377) attempts to identify such subgroups in a small cohort of patients from the Ontario Breast Screening Program. Although they study a wide range of clinicopathologic variables, Singhal and colleagues are unable to identify patient subgroups with a sufficiently low incidence of axillary nodal metastases to justify the recommendation of omitting ALND. Nevertheless, they do identify grade and tumour palpability as important predictors of lymph node involvement, and it is likely that with a larger patient population, they might have identified patient subgroups in which ALND could be omitted. Silverstein and colleagues studied 1543 ALNDs and

identified lymphatic invasion, nuclear grade, palpability and tumour size as predictors of nodal involvement. On the basis of their data, they recommended that ALND could be omitted in T1a and nonpalpable T1b lesions.¹ Although promising, such a retrospective analysis leaves the clinician with a certain uneasiness, since as many as 15% of T1a lesions may have axillary nodal involvement, which would definitely have an impact on the choice of adjuvant therapy.

Thus, to eliminate the morbidity of ALND without losing the prognostic information it provides, efforts are being made on noninvasive or minimally invasive techniques. A noninvasive technique that holds promise is the technetium-99m-sestamibi scintimammography, which can be used to detect both the primary cancer and axillary lymph node involvement. Taillefer and colleagues studied this technique in 65 consecutive women² and found that the sensitivity of scintimammography to detect metastatic lymph nodes was 84.2% (3 false-negative results out of 22) and the specificity was 90.0% (2 false-positive results out of 22). Even more exciting is the technique of sentinel lymph node mapping. Originally developed by Donald Morton and colleagues³ for melanoma this technique has now been applied to breast cancer with encouraging results. Albertini and associates recently

showed that a combination of a vital blue dye and filtered technetium-labelled sulfur colloid successfully identified the sentinel node (first nodes draining the primary tumour in the regional lymphatic basin) in 92% of women.⁴ After localization, 18 women (32%) were found to have metastatic disease with no evidence of "skip" metastases. In 67% (12 of 15) of women having metastatic disease, the sentinel lymph node was the only site of disease. These data have been further confirmed by a recently published study by Guiliano and associates.⁵ They showed that the sentinel node was identified in 100 of 107 women and that it was 100% predictive of axillary status. These studies confirm the clinical value of sentinel lymph node mapping, making the need to identify patient subgroups in whom to omit ALND unnecessary.

Although retrospective studies like that of Singhal and colleagues, as well as techniques such as sentinel lymph node mapping are interesting and exciting, they raise an important question: as our indications for chemotherapy in breast cancer broaden, will there be a need to determine axillary lymph node status at all? In other words, will ALND alter patient management. Since chemotherapy, with or without tamoxifen, is routinely used in many institutions for tumours 1 to 2 cm in diameter and uninvolved

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axillary nodes, one may argue that sentinel node mapping should only be done for tumours less than 1 cm in dimension, since it is only in this subgroup that a positive finding would alter the treatment plan. This question remains unanswered, but it behooves all surgeons to ask whether or not ALND will alter patient management before embarking on this costly procedure, which may cause serious morbidity.

References

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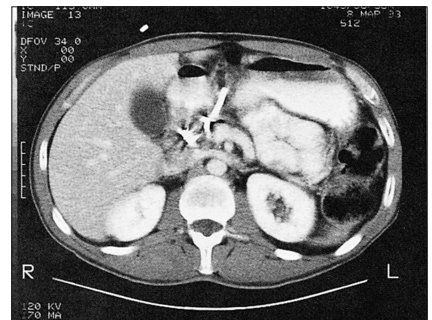
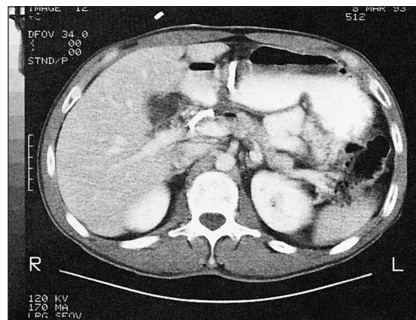
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SESAP Question / Question SESAP

ITEM 270

A 27-year-old man underwent celiotomy for blunt abdominal trauma. Injury to his duodenum and pancreas was noted and his postoperative course was complicated by development of a pancreatic pseudocyst. This was drained percutaneously, but drainage at the rate of 500 mL/day has persisted over the last three months. The last pancreatogram is shown.



The appropriate therapy would now be

- (A) continued observation
- (B) Roux-en-Y loop to the drainage tract
- (C) low-dose radiation therapy
- (D) distal pancreatectomy
- (E) endoscopic retrograde cholangiopancreatogram and dilatation

For the incomplete statement above select the one completion that is BEST.

For the critique of item 270 see page 376.

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