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ORAL

Axillary surgery in patients with breast cancer being treated by breast conservation: A randomised trial of node sample or axillary clearance

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Aim: To determine whether axillary node sampling could allow a selective approach to the treatment of the axilla and reduce morbidity.

Method: 466 patients with operable breast cancer being treated by breast conservation were randomised to a level III axillary clearance or a 4 node sample. Radiotherapy to the axilla was given only to the node sample patients with proven axillary involvement. Careful assessment of range of movement, muscle power and swelling of the upper limb was made pre-operatively and at 6, 12, 24 and 36 months. Survival and locoregional recurrence analysed on an "intention to treat basis". Morbidity was assessed by treatment received.

Results: No difference in survival or axillary recurrence at mean follow-up of 65 months. Morbidity showed a complex pattern with the node sample group having the least morbidity. Radiotherapy to the axilla was associated with limitation of flexion, lateral and medial rotation. Axillary clearance was associated with an increase in the girth and volume of the upper limb.

Conclusion: A selective approach to the treatment of the axilla based on nodal status determined by node sampling is safe and associated with a reduction of morbidity.

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POSTER

Increased risk of tumor recurrence following breast conserving therapy (BCT) in hereditary breast cancer as compared with sporadic breast cancer (BC)

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Purpose: The overall recurrence rate of ipsilateral breast tumor (IRR) after BCT ranges from 1–2% per year. We investigated the occurrence of IR after BCT in the subset of hereditary/familial BC (H/FBC) because conclusive data hereover are lacking so far, while this is essential for an optimal therapeutic strategy.

Methods: The occurrence of IR after BCT was investigated in: 1) 87 H/F BC pts, and 2) 174 sporadic BC pts. Hereditary/familial pts were BC pts from BRCA1/2 families (26 pts) or HBOC families (≥ 3 first degree relatives with B/OC) (61 pts). Sporadic BC pts were selected from the institutional cancer registry, and matched for age and year of diagnosis (median 1989, range 1980–93).

Results: Median age of BC pts was 45 yrs (range 23–78), median follow-up was 5.4 yrs for H/F and 5.7 yrs for sporadic pts. There were no significant differences between the 2 groups with respect to: menopausal and ER/PR status, tumor stage, histology. An IR was observed in 19 H/FBC pts (19.5%), location: at/near tumor bed in 11 pts (58%), elsewhere (21%) and diffuse/unknown (21%) each in 4 pts. Twenty-one sporadic BC pts (12%) developed an IR, located: at/near scar in 12 pts (57%), elsewhere in 2 pts (9.5%) and diffuse/skin in 7 pts (33%). Two yrs after BCT, the IRR was 0.04 in both groups. At 5 yrs, however, this was 0.14 for hereditary and 0.07 for sporadic pts. Furthermore, the IRR after 10 and 13 yrs became 0.3 and 0.49 respectively for H/F BC pts, in contrast with 0.16 and 0.2 respectively for sporadic pts ($p = 0.05$).

Conclusion: an IR after BCT is more often seen in hereditary/familial pts as compared with sporadic BC pts. This difference becomes apparent at 5 yrs after BCT, and further increases in the period thereafter. The impact of this IR on metastases and overall survival should be further investigated.

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POSTER

Predicting nodal status in patients with T1 breast cancer

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Purpose: Axillary dissection in the management of T1 breast cancer is much debated. In this retrospective study, various histological characteristics were compared with nodal status in an attempt to identify significant corre-

lations. These might thus indicate which of these patients need axillary surgery.

Method: The study focused on 639 patients with invasive cancers not greater than 20 mm in greatest diameter. Size and tumour grade were compared with the presence of vascular invasion and of positive nodes.

Results: For tumours of all grades, 66.3% with vascular invasion (VI) had positive nodes, compared to 16% without VI ($p < 0.0001$). Indeed, positive nodes were found in 50% of grade 1 tumours with VI compared to 11.9% without ($p = 0.004$), 65.7% of grade 2 tumours with VI compared to 15.5% without ($p < 0.0001$) and 74.2% of grade 3 tumours with VI compared with 26.1% without ($p < 0.0001$). Following multivariate analysis, there was a highly significant relationship between vascular invasion and nodal status ($p < 0.0001$) and a significant relationship between tumour size and nodal status ($p = 0.006$). However, after adjustment for vascular invasion, there was no relationship between tumour grade and nodal status.

Conclusion: The decision to proceed to axillary surgery in T1 breast cancer could be based on the presence of vascular invasion and, to a lesser extent, on tumour size. Tumour grade alone is not a useful predictor of nodal status.

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POSTER

The effect of immediate volume replacement with latissimus dorsi miniflaps on the outcome of breast-conserving surgery

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Significant volume loss during breast conserving surgery (BCS) can be anticipated in patients with small breast: tumour ratios limiting the use of BCS in women with smaller breasts or larger tumours. Our early experience with autogenous immediate volume replacement (IVR) at the time of BCS produced encouraging results and has led us to refine and modify the technique, extending its role in clinical practice. The evolution of the technique has been examined, with particular reference to patient and tumour selection, technique and modifications, histopathological findings, and post-operative course.

Between 1991–1997, 62 patients (42 (28–60) yr) underwent BCS and IVR using a latissimus dorsi miniflap (LDMF) (follow up 43 (3–72) months). Tumours (diameter 22 (5–40) mm) were located in the upper outer quadrant (29) centre (15) upper inner quadrant (17) and lower outer quadrant (1) of the breast. Operations lasted 129 (80–245) min, resecting specimens of 144 (37–345) g. Margins were positive in 8/62 specimens (12.9%) and local recurrence was recorded in 5/62 (8%), 4 of whom had not received radiotherapy. One local recurrence was treated by mastectomy (1.8% of whole group) and 4 were treated by re-excision and delayed radiotherapy.

Immediate LDMF reconstruction extends the role of BCS and avoids mastectomy in selected patients.

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POSTER

A prospective study of intra-operative localisation of sentinel lymph node in patients with breast cancer using dye technique

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Background: Ipsilateral axillary sentinel lymph node(s) (SLN) is the presumptive initial site of breast carcinoma metastases, and its histological characteristics may reflect the status of other nodes in the axilla. This study, using patent blue dye, is designed to assess the accuracy of SLN in predicting residual axillary node status.

Patients and Methods: A prospective study of 100 patients. Following induction, 5 ml diluted patent blue dye was injected around the primary tumour or its previous biopsy cavity. 45 patients underwent axillary sampling; 18 were sampled followed later by clearance, and 37 underwent primary clearance. All nodes were histologically routinely examined.

Results: The SLN was identified in 89 patients (89%). Three patients were falsely negative (3%); the first had had previous axillary surgery, the second had multifocal tumour and the third had large lymph nodes totally replaced by metastases. The sentinel nodes in 86 patients (86%) correctly predicted the status of remaining axillary nodes. This prediction rate was 80% for the first 50 patients and 92% for the last 50 in the study.

Conclusion: SLN is an excellent predictor of axillary node status. The technique improves with experience. Patient characteristics which should exclude use of the technique are discussed.