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A SURVEY OF THE MANAGEMENT OF BREAST CANCER IN ENGLAND AND WALES

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The management of breast cancer remains controversial. In order to obtain an overview of the way that the surgeons manage the disease in the U.K. a postal survey was undertaken of 985 general surgeons. A 61% response rate was obtained. The majority (85%) would use FNAC to obtain a tissue diagnosis. The majority of surgeons would now treat a patient with a T1 tumour by breast conservation. Comparisons with previous surveys have shown a decline in the use of mastectomy for small cancers. 83% would biopsy the axilla, although opinion is divided as to the extent of such a procedure. Opinion is also divided with regard to the treatment of breast cancer in the elderly, and treatment of an incompletely excised tumour. Follow up was thought to be worthwhile by 90%, but few surgeons now perform follow up investigations apart from mammography. The study shows wide variations in the way surgeons manage breast cancer. We argue that management should now be concentrated in the hands of specialist breast surgical teams, and that more patients should be entered into clinical trials, in order to achieve consensus in management.

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BREAST CANCER DETECTION BY Tc-99m MIBI MAMMOSCINTIGRAPHY. Lastoria S., Varrella P., Mainolfi C., Maurea S., Vergara E., Piccolo S., Dragone V., Salvatore M. National Cancer Institute, Napoli, ITALY.

Tc-99m MIBI concentrates in a wide variety of human tumors including breast cancer. In this study we evaluated the diagnostic accuracy of this scintigraphic test in 92 women with suspected breast cancer. Images were collected during the first 15 min at 2 and 4 hours post iv injection of 740 MBq of Tc-99m MIBI. The scintigraphic results were compared to mammographic and pathological findings. By histology 72 lesions were classified as tumor whose size ranged from 0.6 to 7 cm and 20 as benign diseases. Tc-99m MIBI significantly accumulated in 66/72 tumors (92%) with an elevated gradient vs. the surrounding normal tissue and contralateral glands, allowing successful external imaging. In 18 patients involved lymph nodes of external (n=15) and internal (n=3) mammary chains were detected as well as distant metastases (n=6). Conversely, 5 out of 7 fibroadenomas and one out of 13 fibrocystic dysplasia showed positive tracer uptake.

Histology	N°	MIBI results		Mammographic Findings		
		Pos.	SENS	Pos.	Suspicious	Dubious
Cancer	72	66	92%	48	16	8
< 1 cm	8	4	50%	4	2	2
1-2.5 cm	40	38	95%	21	13	6
2.5-5 cm	12	12	100%	11	1	0
> 5 cm	12	12	100%	12	0	0
Benign Les.	20	6	---	0	0	20

These data suggest that MIBI mammoscintigraphy is able to diagnose primary breast cancer <1 cm in size as well as involved nodes playing a major clinical role especially in those cases where mammography is not diagnostic.

Key Words: Breast Cancer, Radionuclide Imaging, MIBI.

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EXPRESSION OF TGFβ ISOFORMS IN BREAST CANCER

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Transforming growth factor betas (TGFβs) have effects on epithelial cell proliferation, and have been implicated in the inhibition of growth of tamoxifen-treated breast cancer cells. Our study aimed to detect expression of TGFβ mRNA isoforms 1, 2 and 3 in a series of human breast cancers and to further relate these expression patterns to clinical, biological and pathological parameters. Using an RNAase protection assay, 86 breast cancers were tested for TGFβ expression. Of these, 83 (96.5%) expressed TGFβ₁, 70 (81.4%) expressed TGFβ₂ and 83 (96.5%) expressed TGFβ₃, with patterns of expression varying between tumours. On analysis, those tumours expressing TGFβ₁ were significantly more likely to be free of lymphatic invasion, (p<0.05), although expression of all three TGFβs by tumours showed a tendency to be associated with lymph node involvement. In those tumours not treated with tamoxifen (39), lack of expression of TGFβ₂ correlated significantly with hormone receptor positivity (p<0.05), and in the tamoxifen-treated tumours (45), expression of all three TGFβ isoforms was strongly associated with lymph node involvement (p<0.01). These results suggest that TGFβ has biological significance in breast cancer and its outcome.

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REDUCED MITOGENIC STIMULATION OF PERIPHERAL BLOOD MONONUCLEAR CELLS AS A PROGNOSTIC PARAMETER FOR THE COURSE OF BREAST CANCER.

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In the present study, the proliferation of peripheral blood mononuclear cells (PBMC) in response to mitogenic stimulation with phytohemagglutinin (PHA) was assessed prospectively in 90 patients with stage I to III breast cancer. Whereas PHA-induced proliferation of PBMC derived from patients with breast cancer preoperatively was significantly decreased, when compared with data obtained in healthy control individuals (p<0.001), the degree of the defect depended upon the tumor burden, as manifested by tumor size and axillary lymph node involvement (p<0.003, respectively). It dropped significantly in patients, who received adjuvant chemotherapy consisting of cyclophosphamide, methotrexate and fluorouracil after an observation period of six months (p<0.001), but not in patients under adjuvant therapy with tamoxifen only. After an additional six months (i.e. twelve months after surgery), PHA-induced proliferation of PBMC was similar in patients after adjuvant chemotherapy and in those under continued adjuvant tamoxifen treatment (p>0.01), but in all patients still significantly decreased as compared to healthy controls (p<0.001). When data obtained preoperatively and after 12 months were compared it was found that out of 23 patients, whose PBMC had experienced a drop in their PHA-induced proliferation, 14 (61%) had developed metastatic disease within the subsequent 24 months, whereas out of 59 patients, who showed an increase of this parameter, 58 patients remained free of disease, and only one (2%, p<0.0001) had relapsed. To conclude, the initial degree of PHA-induced stimulation of PBMC correlated with the clinical stage of breast cancer (i.e. tumor size and lymph node status), but not with age or hormone receptor status. Furthermore, the course of this variable during the disease in the individual patient constituted a good marker for relapse of the disease.

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LOCAL RECURRENCE OF BREAST CANCER AFTER RADICAL MASTECTOMY : BIOLOGICAL AND PATHOLOGICAL PARAMETERS

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Radical mastectomy is a surgical technique born to remove completely the tumoral mass including surrounding tissues also if macroscopically free. However the presumed radicality of this kind of resection is not able to eliminate fully the risk of local recurrence. In fact the incidence of local failure after radical mastectomy, reported by various authors, ranged between 1% and 20%. We considered in this study a consecutive series of 257 patients with breast cancer which underwent a modified radical mastectomy, without subsequent radiotherapy. In particular we studied some biological and histopathological parameters as prognostic factors for local recurrence. Fifteen (5.8%) of the 257 patients had experienced a local recurrence as the primary site of treatment failure. About the biological and histopathological characteristics of the cases with local failure we found that the most of them had a tumour size between 2 and 5 cm.; 60% had axillary lymph nodes involvement and 63% had no hormonal receptors for oestrogen or progesterone. In the 88% of these patients the tumoral cells presented a low or medium differentiation and 60% had a neoplastic involvement of peritumoral lymphatic vessels. Regarding the patients's characteristics we found that patients younger than 40 presented the higher rate of local recurrence (22.7%) with a significance decrease of this percentage in the older classes of age (7.3% in 40-50th, 4.1% in 50-60th and 4.3% in patients older than 60). From the analysis of these findings is possible to identify some patients and tumoral characteristics which could be suggestive of an increased risk of local failure, like age, tumour size, nodal involvement, grading, hormonal receptors, neoplastic embolism of the lymphatic vessels. Certainly we need much more analysis and studies, if possible in greater groups of patients and for longer period of follow-up, which could better contribute in the identification of risk of local recurrence.

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