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Diagnosis and therapy of malignant lymphedema of the arm after breast cancer treatment - Dr. C. Schuchhardt, Dr. G. Rieband (a.G.), Dr. E. Földi (a. G.).

Lymphedema of the corresponding arm is common after breast cancer treatment. In a substantial part of the patients, this is not only a side effect of previous therapy, but also a leading symptom of local tumor recurrence. This is called malignant lymphedema. We analysed 518 patients with secondary lymphedema after breast cancer treatment, seen in our hospital between 1982 to 1984. Malignant edema was seen in 119 cases (23%), it was the first sign of tumor recurrence in 57 patients. The typical history of malignant lymphedema (rapid development or sudden worsening of a preexistent edema, often pain because of plexus infiltration) is accompanied by a typical clinical picture (bulged shoulder, warming and redness as signs of inflammation, collateral veins and frequently a plexus lesion sometimes resulting in complete palsy). In addition to the clinical examination ultrasound, computerised tomography or, more recently, nuclear magnetic resonance (NMR) were used. NMR is particularly successful in differentiating between tumor and fibrotic tissue.

A complex decongestive physiotherapy (manual lymph drainage, compressive bandaging exercises) is an essential support of oncologic therapy (hormonal treatment, chemotherapy, radiation) when malignant lymphedema is confirmed. After a first treatment course of 4 weeks in 42/119 (23%) lymphedema was stable. In 49 patients edema progressed, in these patients the tumor was refractory to cytostatic treatment. Long term observation (> 3 years) could be performed on 21 patients. The treatment effect was maintained or showed only light worsening in 10 patients. 11 patients regained or surpassed the extent of edema before primary therapy.

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BREAST RECONSTRUCTION FOLLOWING MODIFIED RADICAL MASTECTOMY USING A SKIN EXPANDER
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Despite the improvement in early detection of breast cancer, 3 of 4 patients will still need a mastectomy. Even after extensive information about the possible complications 20% of the patients following modified radical mastectomy desire breast reconstruction. Between February 1984 and October 1985 52 breast reconstructions were performed in our department, 4-14 months after mastectomy (median 6 months). We report the results of reconstruction using the method of implantation of a skin expander. The prosthesis was always implanted subpectorally. If the preformed subpectoral pocket formed by the skin expander is large enough (700ccm volume) the final implant (mainly Hartley prosthesis) allows modelling of an ideal shape and the result looks very natural. The average age of the patients was 44 years. The stage of the disease was in 6 patients carcinoma in situ, 28 patients were stage I, 15 stage II and 3 stage III. A proportion of the patients had received adjuvant chemotherapy before reconstruction surgery, 4 patients were irradiated. 12% of the patients developed complications: postoperative hemorrhage, infection of the wound tissue, wound dehiscence and capsule fibrosis (Baker I and II). An important finding was the incidence of capsule fibrosis was significantly lower when compared with reconstruction without using a skin expander.

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THE USE OF TISSUE EXPANDERS IN BREAST RECONSTRUCTION
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Breast Reconstruction (BR) especially when performed immediately after mastectomy leads to frequent Capsular Fibrosis (CF). To prevent CF tissue expanders (TE) were introduced.

BR with the use of TE is a three stage procedure. First, the implantation of the TE under the muscle immediately or delayed after mastectomy followed by gradual expansion of the skin by filling the TE every 1 - 2 wks. with saline to the required size. Second, after 2 - 3 mths. or after chemotherapeutical treatment the TE is exchanged for a permanent implant. Third, 2 - 3 mths. later the Nipple Reconstruction (NR) is performed.

BR using a TE was performed on 30 pts. with breast cancer T1 - 4, N1 - 2, M0, 26 immediately, 4 delayed. Average pts. age was 43,5 yrs. (31 - 73 yrs.). All pts. had undergone modified radical mastectomy for breast cancer. 1 pt. had irradiation to the chest wall and axilla prior to BR. 3 immediate complications (10%) were observed, 1 (3,3%) haematoma, 2 (6,6%) seroma. 11 pts. (36,6%) showed late complications, i.e. CF, 7 of these pts. (23,3%) minor, 3 pts. (10%) medium and 1 pt. (3,3%) major CF. 2 TE deflated caused by external trauma. There was no spontaneous deflation. 1 TE could not be filled due to heavy irradiated skin, another technique for BR was used. During stage 2 6 TE (20%) showed noticeable loss of saline without any defect, 3 TE showed less than 10% loss of saline, 2 TE more than 10% (11 - 13%).

Up to now the TE was exchanged for a permanent implant in 19 pts.. Of these pts. only 1 pt. (5,2%) developed a minor CF. In 10 pts. the exchange is planned for the near future. 1 pt. refused the exchange. 6 pts. (20%) wanted to have the NR done during stage 2. 9 pts. (30%) refused NR.

22 pts. (73,4%) were very pleased with the result, 5 (16,6%) were pleased and 3 (10%) dissatisfied.

After average observation time of 6,9 mths. (1 - 14 mths.) no local recurrences were observed. There were no infections at all.

Conclusion: The use of TR in immediate or delayed BR with alloplastic implants is a very good method for preventing CF, but not in skin damaged by irradiation.

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DO TUMORMARKER DETERMINATIONS CONTRIBUTE TO AN EARLY DIAGNOSIS OF CANCER ?
K.Mross, G.Bandlow

The term tumormarker has come to be applied to any means which helps to discriminate between one type of cancer and other normal or disease states in a clinical useful way. At present there is no test that would be reliably detect cancer in the general sense at early stage but there are still some tumormarkers present, associated with particular tumors and those can be decisive in primary diagnosis but mainly in symptomatic patients and under these circumstances it is not a very early diagnosis.

The main field of application is the monitoring of the post-surgical follow-up period to detect early relapse and the monitoring of cancer patients with disseminated disease to determine the response to treatment procedures. It should be clear that tumormarkers are in use for a diagnostic problem - the diagnosis of early relapses and the estimation of the response after/during anti-cancer treatment.

To determine exactly the clinical value it is urgent to introduce obligatory tumormarker sampling procedures into clinical anti-cancer drug trials (phase II and phase III studies) to evaluate in a prospective manner the diagnostic value of single tumormarkers and combinations of different tumormarkers.

The success of any application of tumormarkers in the clinic depends on the degree of discrimination between cancer and non-cancer conditions and it looks like that the monoclonal antibody technique will provide much progress and improvements in this field of oncology research.

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