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REGIONAL CHEMOTHERAPY AND BREAST CONSERVATION
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Since January 1989, we propose to any T1-T2-T3 breast cancer patient, a new protocole as an alternative to standard treatment schedule. This protocole presents the following sequence: full staging including axillary dissection; intra-arterial chemotherapy (mitoxantrone + melphalan), combined with systemic chemotherapy (epirubicine + cyclophosphamide) in high risk patients (T3, N+, ER-, SBR 3); subcutaneous mastectomy with immediate prosthetic replacement; adjuvant systemic chemotherapy in high risk patients; hormonotherapy.

The 23 first patients (25 treated breasts) included 16 cases non suitable for standard breast conservative treatment; the complications of regional chemotherapy were mild and 15 patients presented a complete clinical remission; after subcutaneous mastectomy, 5 patients needed a second surgical procedure, but the aesthetic results are good to excellent in 19 cases; after a mean follow up of 30 months, 20 patients are disease free, though one died from liver metastases, one presents bone metastases, and one had a local recurrence followed by mastectomy.

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CEA, MCA AND CA 15.3 AS INDEPENDENT PROGNOSTIC FACTORS (IPF) IN PRIMARY BREAST CANCER

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Aim of this study is to investigate to possible correlation with serum levels of CEA, MCA and CA 15.3 and some known prognostic factors to use these markers as IPF. CEA, MCA and CA 15.3 were determined preoperatively in 124 patients (pts) with primary breast cancer. Cut off was: CEA=5 (MEIA); MCA=11 (EIA); CA 15.3=30 (EIA).

CEA showed pathological values in 8.8% of pts, MCA in 23.3% of pts and CA 15.3 in 20.8% of pts. We didn't find any significant correlation with their elevation and menopausal status, tumor size, number of positive nodes. We didn't find any significant correlation with pathological values of MCA and CA 15.3 and receptor status, whereas CEA elevation was correlated with negative estrogen ($p=0.024$) and progesterone receptors ($p=0.016$). These data, even if it's necessary to value a larger number of pts to confirm them, suggest that it could assume a possible use of MCA and CA 15.3 as IPF.

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CA 15-3, CERULOPLASMIN (CRL) AND TISSUE POLYPEPTIDE SPECIFIC ANTIGEN (TPS) AS TUMOUR MARKERS IN FEMALE BREAST CANCER

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The diagnosis and classification of human breast cancer is mainly based upon clinical and pathological evaluation of the lesion. The tumour markers may be useful supplements for the assessments of diagnosis, stage, and prognosis; and for monitoring response to treatment and early detection of metastases. Serum concentration of CA 15-3, CRL and TPS were measured in 90 women; 15 controls, 16 patients with benign breast disease (BBD), 31 patients in remission and 28 patients with active breast cancer. The results of the CA 15-3, CRL and TPS estimates were separated into 4 groups. The patients not in remission were found to have significantly higher levels of CA 15-3 ($p<0.0001$) and CRL ($p<0.0001$) compared with the other 3 groups. The difference between the patients in remission, BBD and the control group was not statistically significant ($p>0.05$) for CA 15-3 and CRL. The difference for TPS between the patients in remission and the patients with active breast cancer was not statistically significant ($p>0.05$). The highest sensitivity for active breast cancer detection was obtained by the combined use of tumour markers. We concluded that there may be an advantage in using panels in the follow up of breast cancer patients, although so far such tests have too low a sensitivity to be of practical value in screening.

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Evaluation of serum tissue polypeptide specific antigen levels in breast cancer patients
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 The aim of the present study was to evaluate the clinical value of TPS in sera from patients with breast cancer and patients with benign breast disease. TPS levels were determined by the M3 TPS-IRMA antibody. The serum TPS had been assayed from normal subjects ($n=21$) benign breast disease ($n=20$), and stage I ($n=8$), stage II ($n=21$), stage III ($n=14$) stage IV ($n=27$) breast cancer patients prior to any therapy. Mean serum TPS levels were: normal 52.1 ± 21.9 u/l, benign breast disease 49.4 ± 22.1 u/l, stage I 66.9 ± 13.1 u/l, stage II 101.8 ± 44.2 u/l, stage III 146.9 ± 74.3 u/l and stage IV breast cancer 757.5 ± 615.8 u/l. Stage IV patients had a significantly mean level of TPS than stage I-III with no overlap of confidence limits. The preliminary results suggest that TPS is a useful tumor marker in detecting the early metastasis or progressive condition of breast cancer.

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BRAIN METASTASES FROM BREAST CANCER: PREDICTIVE FACTORS FOR LONG-TIME SURVIVAL.

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The data of 45 patients who were treated between 1983 and 1993 with standard radiotherapy (nine of them postoperatively) were analysed, in order to find prognostic factors for survival.

In 33 cases 10×3 Gy in 2 weeks were given. In 9 cases 20×2 Gy in 4 weeks were administered, and 3 patients received an additional boost of 5×2 Gy. Patients' median age was 53 years and the median Karnofsky-index was 5.8.

33 % had no further metastases and 58 % solitary brain metastases. In 62.5 % (only RT) vs. 87.5 % (OP + RT) a partial or complete remission was obtained. In multivariate analysis Karnofsky performance status, interval between primary tumor and development of brain metastases, dose of corticosteroids during RT and surgical resection were prognostic factors.

The 2-year-survival rate was 3 % (RT) vs. 33 % (OP + RT). The 5-year-survival rate was 0 % vs. 11 %. Median survival was 770 days after OP + RT. 584 d (CR), 198 d (PR) and 345 d (NC) were observed after RT only (differences n.s.). Patients with two favourable prognostic factors had a 2-year-survival rate of 45 %, compared to 0 % in case of two unfavourable factors.

Conclusion: In selected cases OP + RT seems to be superior to RT alone and may result in long lasting local remission and prolonged survival, especially in case of favourable prognostic factors, but a randomized trial with larger groups of patients is necessary in order to verify these results.

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HAEMOSTATIC CHANGES; PLASMA LEVELS OF ALPHA2-ANTIPLASMIN-PLASMIN COMPLEX (APP) AND THROMBIN-ANTITHROMBIN III COMPLEX (TAT) IN FEMALE BREAST CANCER

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 Disorders of haemostasis in patients with malignancies have been reported. This phenomenon is based on several mechanisms, such as ability of the tumour to alter the coagulation system by producing blood clotting factors or decreasing their inhibitors, by increasing fibrinolysis and by inducing an alteration of blood vessels in relation to the state of local invasion. Plasma levels of APP and TAT, and serum level of CA 15-3 were determined in 57 patients with breast cancer (28 in remission and 29 patients with active breast cancer) and 13 healthy women. In patients with active breast cancer, significantly elevated plasma levels of APP, a marker of activation of the fibrinolytic system, were found, as compared to other groups ($p=0.0226$). In addition, we observed a poor correlation between plasma levels of APP and those of CA 15-3 ($r=0.24$; $p=0.038$). Plasma levels of TAT, reflecting the activation of thrombin, were also a significantly elevated in patients with active breast cancer ($p=0.0041$) and also significant correlation between CA 15-3 and TAT ($r=0.24$; $p=0.041$) was found. We concluded that the increase in APP and TAT levels might reflect enhanced activations of both coagulation and fibrinolytic systems in patients with active breast cancer.