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PROGNOSTIC RELEVANCE OF PLASMINOGEN ACTIVATOR u-PA IN HUMAN BREAST CANCER.

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Determination of Plasminogen Activator, urokinase-type (u-PA) in tumours extracts as a variable in breast cancer patients is based on the fact that invasion and metastasis is correlated with high levels of tumour-associated proteasas.

We had measured by inmuno-enzymatic assay (ELISA)level of u-PA, in 186 tissue extracts of breast cancer patients in stages I,II and III, in presence of 1% TRITON-X-100,and 57 normal breast specimens.The average and standard deviation of u-PA in extracts of cancer tissue is 4.2 +/-0.52 ng/mg protein. In extracts of normal breast tissue the level is lower than in tumoral tissue 2.28+/-0.13 ng/mg protein ($p<0.05$). In our study, breast cancer patients with high u-Pa content > 4.2 ng/mg protein,after a follow-up of 30 month showed a shorter relapse-free survival than those having tumours with lower u-PA levels $p=0.05$.

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TISSUE-TYPE PLASMINOGEN ACTIVATOR(t-PA)AND STEROID HORMONE RECEPTORS IN BREAST CANCER.

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Breast cancer patients having tumours with high plasminogen activator tissular-type (t-PA),estradiol depending protein, tend to have a better prognosis than those with low t-PA.

We have studied the t-PA antigen content in 57 normal breast specimens, 32 bening breast pathology tissue extracts and 186 breast cancer extracts in stages I, II and III. Determination of t-PA antigen were made by inmunoenzymatic assays(ELISA) in presence of 1% TRITON X-100.

The medians and ranges for tumoral breast tissue were 6.02 ng/mg protein (range 49), for benign tissue 6.94 ng/mg protein (range 28) and normal breast tissue 4.08 ng/mg protein (range 22). The difference between eachother were not statistically significant. There was a positive correlation between t-PA and estrogen receptor $p= 0.004$. In our group patients with a low t-PA content < 4 ng/mg protein, did not shown a shorter relapse-free survival.

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THE UTILITY OF FLOW CYTOMETRIC ANALYSIS ON THE PREOPERATIVE MANAGEMENT OF BREAST TUMOR.

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We have investigated the possibility of improving the cytologic diagnosis and the biological characteristics of breast tumor on 70 fine needle aspirates derived from patients with clinically suspicion of breast carcinoma, observed in our Medical Center from April to December 1992. Besides cytologic examination we have evaluated the tumor ploidy and the cell kinetic parameters of single cell suspensions derived from aspirates. All the lesions were subjected to surgery and evaluated histologically: 50 were carcinoma and 20 benign lesions. A sufficient number of cells and good quality DNA histograms (CV less than 5%) were obtained in 60 cases (90% and 75% of malignant and benign lesion respectively). Of the 50 histologically confirmed cancers, 41 (82%) were positive to cytologic examination and 40 (80%) were aneuploid or rapidly proliferating (S phase>14%). When cytologic and flow analysis results were associated, diagnosis of malignancy was evidence on 44 (88%) of the 50 total cases. 3 out 20 benign lesions evidenced diploid DNA content but an hight S-phase (false positive).

Ours data suggest that flow cytometric analysis of ploidy can provide rapid and objective information in addition to cytology for breast cancer diagnosis. The determination of cell kinetic parameters in diploid tumor can be useful to permit assessment of the proliferative characteristics.

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TISSUE POLYPEPTIDE SPECIFIC (TPS) ANTIGEN IN BREAST CANCER (BC) PATIENTS IN RELATION TO DISEASE ACTIVITY

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The serum levels of TPS, a cell proliferation marker, were studied in 119 BC pts and 59 controls using BEKI TPS ELISA kit. The pts were divided as follows: Group (Gr) A - 58 newly diagnosed pts after surgery; Gr B - 33 pts on follow-up, without active disease; Gr C - 28 pts with active disease. Median (M) level in all pts (200 U/1 24-3888) was significantly higher than in controls (53 U/1 39-103) ($p<0.001$). In Gr A, B and C 53%, 60% and 85% of pts had TPS level above cutoff point 106 (double M control) ($p0.005$). Of the pts in Gr A and B who developed metastases during median follow-up of 20 months, 80% (16/20) had elevated TPS values; 95% of these (15/16) were soft tissue or visceral metastases. These data suggest that TPS is a reliable index of BC cell proliferation and may have diagnostic and prognostic significance.

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MAMMOGRAPHIC NEEDLE LOCALIZATION BIOPSY OF NON PALPABLE BREAST LESIONS. A REVIEW OF 197 PATIENTS WITH PATHOLOGICAL CORRELATION.

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Between January 1990 and March 1993, 197 patients underwent 201 needle localization biospsies (wire-guided), using the Kopans technique for non palpable mammographic breast lesions at the Tel-Aviv Medical Center. All mammographies were evaluated by the same person. All lesions were subsequently excised and histologically examined. Data were unavailable in 9 cases. A histological confirmation of the mammographic findings was found in 173 (90.1%) biopsies. Of those, 72 (37.5%) were cancer and 101 (52.6%) were benign lesions. In 18 mammographies the lesion which was thought to be malignant turned out to be benign, i.e. a false positive of 9.4%.

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UTILITY OF A STRICT FOLLOW-UP AFTER SURGERY FOR BREAST CANCER

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In order to assess the value of a strict follow-up after surgery for breast cancer, we report the results of our experience: from 1980 to 1990, 290 women undervent radical surgery (mastectomy in 161 (55.6%), QUART in 129 (44.4%) and were regularly followed with a strict schedule combining blood tests, chest and breast X-Rays, hepatic U.S. and total body bone scans in order to identify early local (LR) or systemic (SR) recurrences. With a median follow-up of 43.5 months we found 97 (33.4%) recurrences, among which 27 (93%) LR and 70 (24.1%) SR. 21 SR (30%) and 9 LR (33%) cases were symptom-free at the moment of diagnosis We did not found any definite prognostic advantage in asymptomatic SR patients, while a better prognosis was demonstrated in early detected LR. We think that an usefull follow-up should point at an early diagnosis of potentially curable local recurrences, nairely in patients who underwent conservative surgery, thus including clinical examinations and breast X-Rays. A more complex follow-up schedule in asymptomatic patients does not appear justified in terms of cost/benefit ratio, as we found no prognostic difference between symptomatic and asymptomatic patients with SR.