evaluate the prognostic value in addition to clinicopathological parameters and patient survival.

Methods: In this retrospective study formalin fixed and paraffin embedded tissue specimen of 75 patients with breast cancer were immunohistochemically stained. Specific anti-E-cad monoclonal antibody, HECD-1, and anti-K18-antibody, CK2, were used. The staining intensity was compared with clinico-pathological values and follow-up datas spanning 80 months.

Results: A definitive positive staining was observed in 21 (28%) specimens for E-cad and 15 (20%) specimens for K18. The survival rate in the E-cad-positive group (81%) and in the K18-positive group (93%) was much higher than in the E-cad-negative or K18-negative groups (both 48%). E-cad and K18 were independent from each other and independent from lymph node status, tumor size/grading and estrogen status. The relative risk to die due to breast cancer within 80 months was decreased in groups positive for K18 (0.08), E-cad (0.28), and ER (0.49). A positive lymph node status increased the relative risk (3.66).

Conclusion: These results suggest that E-cad and K18-expression can serve as independent prognostic indicators for the invasive potential of breast cancer.

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Immunohistochemical studies on oncogene products (C-erbB-2) and p53 protein in human breast cancer: Is it significant for tumor evolution?

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Purpose: The prognostic value of membranal C-erbB-2 oncoprotein and p53 protein was determined in a study of 93 cases of breast tumors surgically removed. For a correct evaluation the relationship beetwen these markers and tumor size, histological and malignancy grade and limph node metastases was done.

Methods: 93 patients with different stages and types of breast carcinomas were analysed immunohistochemically with specific antibodies on paraffin-embedded material, for both c-erbB-2 and p53 proteins on serial sections of 4 μm. C-erbB-2 staining was rated by counting the number of positive cells and the intensity of the reaction. The markage with MoAb for p53 overexpression was established by numbering the stained nuclei. We used MoAb Do-7 Dako, Denmark for p53 and anti c-erb B-2 oncogene protein from Boehringer-Mannheim.

Results: C-erbB-2 oncoprotein was overexpressed in 74 cases and p53 protein in 80 cases. C-erbB-2 is more specifically as an early factor for poor prognosis while p53 proteins owerexpression is a long term factor poor prognosis.

Conclusions: The simultaneous determination of c-erbB-2 oncoprotein and overexpression of p53 protein seems to have a prognostic significance for breast cancer patients. We consider that is of much interest to focus the studies for small-size tumors and the axillary lymph node status. The membrane c-erbB-2 level seems to be an important independent prediction for the prognosis.

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Possible causes of breast cancer in women working at coke-chemical factory (CCF)

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Purpose: Unfavorable influence on reproductive system of factors associated with coke-chemical manufacture is well known. We studied risk factors for breast cancer in women working at CCF.

Methods: Mammologic and general examination of 1379 women working at CCF with age range from 20 to 54 years was performed. Women with breast cancer and women from conrol group underwent extended examination including assesment of hormonal and immune status.

Results: Breast cancer was revealed in 3 cases. Women with breast cancer were found to have significantly more risk factors compared with control (15.9 + 10.6 versus 14.8 + 6.1, p < 0.05) according to WHO's 56 criteria of breast cancer risk, proposed in 1984. These women had worked in principal workshops for 10–15 years and had reproductive age. Most important factors were a high fat diet and vitamine deficient diet, somatic pathology – obesity, hypertension, hepatocholecystitis and neuro-endocrine syndroms. No one had first degree relatives with cancer. Two women had A (II) blood group. One woman had hyperprolactinemia (785 mM/l) with

relative hyperestrogenemia. All women with breast cancer had decreased amount of T-cells (CD3+) – 61.10 + 0.51 versus 72.10 + 4.40 (p < 0.01) and IgA antibodies – 2.68 + 0.24 versus 4.62 + 0.90 (p < 0.05).

Conclusion: For development of breast cancer were found to be important length of service at CCF and background disturbances of health most prominent in hormonal and immune systems.

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Determination of fibrin D-dimers in patients with breast cancer after cytotoxic chemotherapy

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Purpose: The biologic behaviour of cancer cells relates to tumor burden, tumor invasiveness as well as some factors of the fibrinolytic pathway.

Methods: The aim of the present study was to monitor changes in the serum levels of fibrin D-dimers in patients with breast cancer undergoing cytotoxic chemotherapy separated into two groups; group A: patients receiving adjuvant chemotherapy and group B: patients undergoing chemotherapy with advanced/metastatic disease. D-dimers were determined with the Latex method (Diagnostica Stago); normal values: <0.5 μg/ml.

Results: Elevated D-dimer values were found in 4/20 (20%) patients in group A (range: 5–36 μg/ml) and in 14/20 (70%) patients in group B (range: 11–102 μg/ml) (P < 0.01) before the initiation of chemotherapy. The study is ongoing and further patient accrual is in progress and data will be presented regarding changes in D-dimer serum levels during or after cytotoxic chemotherapy. In particular, interest should be given to patients receiving adjuvant chemotherapy and show elevation of D-dimer levels.

Conclusion: Serum D-dimer levels may prove to constitute an important prognostic factor in patients with breast cancer receiving chemotherapy in the adjuvant setting or for advanced/metastatic disease.

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Prognostic value of cathepsin D in breast cancer (BC) patients

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Purpose: to assess the prognostic value of cathepsin D quantification on yumour cytosols as a biological marker in BC patients.

Pts and Methods: 147 pts with primary BC were selected for study; median follow-up was 5 yrs. Mean age 59 yrs (range 25–88); postmenopausal 72%; T1: 32%; T2: 44%; T3–T4: 24%. N0: 45%; N1–3: 26%; N > 4: 29%. Histologic type: ductal Ca: 88%; Lobullar Ca: 8%; histologic grade SBR1: 7%; SBR2: 59%; SBR3: 34%. Cathepsin D was quantified on tumour cytosols by CIS radioimmunoassay. Results were compared according to pt and tumour characteristics.

Results: Mean cathepsin D value was 70 pmol/mg cytosolic prot. (range 0–706). With regard to pt and tumour characteristics, cathepsin D mean level was higher in premenopausal women (p = 0.007). Tumour size, nodal invasion and hormone-receptor status were the main prognostic factors for disease free (DFS) and overall surviva (OS) 1.5-year OS was 70% and DFS was 58%. In multivariate analyses, DFS and OS were shorter for cathepsin D levels >30 pmol/mg prot (p = 0.01) and (p = 0.04) respectively.

Conclusion: in our series, cathepsin D levels >30 pmol/mg prot is and independent factor for DFS and OS in breast cancer patients.

309   PUBLICATION

Influence of prognostic factors on overall and disease free survival in male patients with primary carcinoma of the breast

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Purpose: To determine the value of prognostic factors (age, stage of disease, extent of lymph node involvement, histological grading and hormone receptor status) in male patients.

Patients and Methods: In 31 male patients (mean age 65.7 years, SD ± 11.5) with breast cancer therapy regimen included postoperative