Conclusion: The expression of c-myc oncogene in breast cancer cells implies high malignancy and a short disease-free interval.

780 POSTER

Comparison of clinical, biological and pathological characteristics in symptomatic vs asymptomatic breast cancers (BC): Study of 1969 patients (pts)

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Purpose: The aim of the present study was to compare the biological, pathological and clinical characteristics of BC in clinically palpable vs occult tumors.

Methods: A series of 1969 consecutive pts who underwent surgery for stage I and II infiltrating BC at Verona hospitals between 1.1.1992 and 30.3.1998, and had positive ultrasound and/or mammography results before surgery, were divided into two groups on the basis of the reason why they decided to do the imaging exam: group A refers to the 1320 pts with a palpable lump, group B to the 649 asymptomatic pts.

Results: As expected, group A pts had larger tumors and a higher percentage of positive nodes than group B ($p < 0.001$); they also had significantly higher grade tumors, higher Ki-67 levels and a higher percentage of ER negative tumors: all the p values were highly significant ($p < 0.001$). The differences in PgR and c-erb B2 were also statistically significant, although to a lesser degree ($p = 0.02$ and 0.03 respectively), with more PgR negative and c-erb B2 positive tumors in group A.

Conclusion: Our results suggest that smaller asymptomatic tumors are biologically different from their clinically presenting counterparts, thus confirming the hypothesis that progression towards greater malignancy can occur during the natural history of breast cancer.

781 POSTER

Detection of genomic instability in fibroadenomas using a simple method

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Purpose: Genomic instability (GI), which regroups microsatellite instability (MIN) and loss of heterozygosity (LOH), may play a role in the ethiology of breast cancer. Therefore, 26 benign breast lesions were examined for GI.

Methods: 9 microsatellite loci were amplified using the Polymerase Chain Reaction (PCR), followed by separation on non-denaturing polyacrylamide mini-gels and visualization with ethidium bromide staining. In order to validate the technique, we used two cancereous cell lines known to harbor the MIN phenotype, which were confirmed using a genetic analyser (ABI PRISM 310). Afterwards, a population of 26 paired benign breast lesions (basically composed of fibroadenomas) and normal tissue, were screened for GI.

Results: Cell lines showed GI in 8 of 9 loci analysed. Of the 26 breast lesions, 2 presented GI in one locus.

Conclusions: The technique is able to detect GI and is easily adapted to a medical background because of its simplicity and rapidity. GI could be a very early event in cancer progression.

782 PUBLICATION

Cytokine activity of tumor draning lymph nodes in breast cancer

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The spontaneous TNF production by lymphocytes, isolated from non-metastatic tumor draining lymph nodes (TDLN) studied in 16 breast cancer patients with bioassay using sensitive transformed fibroblasts L-929 cell line. These data were compared with TNF activity in the conditional mediums of 24 hour primary cultures of breast cancer, peripheral blood lymphocytes (PBL) in breast cancer patients, lymphocytes isolated from lymph nodes in nonspecific lymphadenitis, in serum of breast cancer patients and donors. The lymphocytes from TDLN demonstrated the lowest level of TNF activity (0.058 ng/ml) comparing to all other supernatant sampels. TNF activity in breast cancer cells supernatants was 0.17 ± 0.03 ng/ml, in breast cancer PBL – 0.15 ± 0.02 ng/ml. TNF level in serum of breast cancer patients was 0.85 ± 0.02 ng/ml, in serum healthy volunteers – 0.088 ± 0.014 ng/ml.

Conclusion: Obtained data may be interpreted as the evidence of down regulation of TDLN immunocytes cytokine activity by fators of breast tumor microenvironment.

783 PUBLICATION

Expression of lymphocytes activation markers of peripheral blood dependent on phases of menstrual cycle of young patients with breast cancer

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Purpose: Breast cancer is the most common cancer in patients of pre-menopausal age. In the past decade the incidents of breast cancer in young patients are increase. Prognosis of young patients is still poor. The comparative analysis of the expression of the activation markers in the peripheral blood of young breast cancer patients have done in the different phases of menstrual cycle under control.

Method: The comparative analysis of the expression of activation markers (CD30, CD38, RFB-1) of mononuclear cells of peripheral blood was established in 60 young (20–35 years old) breast cancer patients in different phases of menstrual cycle using monoclonal antibodies.

Results: Unlike the control, the maximal level of lymphocytes activation markers CD30, CD38 and RFB-1 in population of peripheral blood cells of young patients was revield only in pholiculare phase of menstrual cycle. In luteinizing phase of cycle were established the narrowing levels of natural killers and cytotoxic lymphocytes both in young patients and contol group. In breast cancer patients expression of RFB-1 antigen has the minimal level only in ovulation phase of cycle compared with control.

Conclusion: The different type of expression of the activation markers in the peripheral blood of breast cancer patients compared with healthy women of young age is discovered in different phases of menstrual cycle, that may reflect an existence of basic differences in endocrine regulation of the immune system, especially activated lymphocytes, in breast cancer patients of young age.

784 PUBLICATION

Expression of the genes of adenylate cyclase (AC) G-protein subunits in breast cancer (BC) tissue: Connection with estrogen-dependency?

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Purpose: Response of breast cancer tissue to external and local estrogen stimulation needs to be thoroughly evaluated in relation to the cross-talk with different signaling systems. Accordingly expression of the genes of AC G-proteins stimulatory ($G_{s\alpha}$) and inhibitory ($G_{i2\alpha}$) subunits was compared with age of patients, ER content and aromatase gene expression in this tissue.

Methods: In 14 BC samples expression of AC G-protein subunits and aromatase (coding region and exons I.3, I.4 and II) genes was evaluated by RT-PCR according to Itoh et al., 1988 and Santner et al., 1997. ER content in the same samples was studied by dextran-charcoal radioligand assay according to Saez et al., 1980.

Results: Expression of $G_{s\alpha}$ gene correlated positively ($\rho + 0.70$) with the age/existence of menopause in patients and with ER content in tumor tissue. $G_{i2\alpha}$ gene expression demonstrated tendency ($p = 0.07$) to positive correlation with the age of patients too and negative correlation ($\rho - 0.77$) with expression of I.3 exon of aromatase gene.

Conclusion: Expression of AC G-protein subunits genes in breast tumor tissue correlates with more old age (menopause), sensitivity to estrogens and certain signs of their local production that confirms involvement of cAMP-dependent mechanisms in the latter process.

Acknowledgements: To Dr. R. Pauley (USA) for the help with RT-PCR of aromatase gene exons and to Prof. R. Santen (USA) for useful discussions.