J Cancer Sci Ther 2013, 5:10
http://dx.doi.org/10.4172/1948-5956.S1.030

OMICS Group Conferences
Accelerating Scientific Discovery

3rd World Congress on
Cancer Science & Therapy

October 21-23, 2013 DoubleTree by Hilton Hotel San Francisco Airport, CA, USA

Biomarkers of proliferation, survival, and migration of human breast tumor cells: Future perspectives

Labovsky V, Martinez L. M, Calcagno M. L, Davies K. M, Wernicke A, Garcia-Rivello H, Fernández Vallone V. B and Chasseing N. A
Institute for Experimental Biology and Medicine, Argentina

Background: Despite recent major advance in the understanding of the mechanisms of breast cancer (BC) progression and in the development of novel therapeutic modalities, BC remains the second leading cause of mortality among women. Mortality is almost invariably due to metastasis. The different histological subtypes of BC and molecular maker expression (ER, PR and HER2) have strong prognostic and predictive values but are not enough to prevent that BC patients (BCP) develop a relapse and metastasis. So the aim of this work was the simultaneous evaluation of the expression of biomarkers related to BC progression and metastasis (OPG, TRAIL, TRAIL receptores (R) [R1, R2, R3 y R4], RANKL, RANK (RANKL-R), SDF-1, CXCR-4 (SDF-1-R), IL-6, IL-6-R, MCSF and M-CSF-R in BC cells together with the study of classic prognostic parameters (age, ER, PR, HER2, tumor size and histological grade) in BCP. Regarding the expression of these biomarkers in BC cells, the results are contradictory.

Material and methods: This was a prospective cohort study. We included surgical biopsy samples from 19 BCP with primary infiltrative ductal carcinoma, early clinical stage (I-II) and sentinel lymph node negative. Moreover, non-malignant breast tissues (10) were analysed and used as a control. The biomarkers were evaluated by immunohistochemistry on biopsy of breast tissues. Clinicopathological information was retrieved from pathology and medical records.

Statistical analysis: Fisher's exact test was used to analyze associations between categorical variables in BCP and controls. Kappa coefficients were used to evaluate the degree of concordance between two categorical variables measured in the same individuals (biomarkers and classical parameters). Mann-Whitney test was used to determine differences in continuous or at least ordinal variables (biomarkers and classical parameters) between the two groups. Software: InfoStat and SPSS 18.0. The threshold for significance was set at p=0.05

Results: BC samples exhibited significant higher prevalence of the expression of R3, R4, RANK, IL-6, CXCR4 and SDF-1 than non-malignant breast tissues (p=0.0002, p=0.0003, p=0.0239, p=0.0087, p=0.0019 and p=0.0403, respectively). On the other hand, R2, found in 65% of BC samples (3/19), was associated with age (p=0.0451). R2 expression was positive in BCP with age mean of 71.5y (range 55-81y). R1, R2 and MCSF expression in BC samples was associated with HER2 [Kappa coefficients: -0.253(-0.445;-0.061); 0.354(0.036;0.672) and -0.354(-0.578;-0.129), respectively]. No statistically significant association was found between the rest of non-classical biomarkers and clinicopathological parameters.

Biography

Labovsky V has studied the molecules implicated in the regulation of the proliferation, survival, migration and future bone metastasis during breast tumor-progression and the importance of MSC, for 5 years, during which time she has authored 5 articles in international journals (*Breast Cancer Res Treat-2012, Clin Exp Metastasis-2012, Cancer Cell Int-2012, Differentiation-2010 and Stem Cells Dev-2010*). She has participated in different congresses ("Tumor Microenvironment Complexity: Emerging Roles in Cancer Therapy", Orlando-2011; "3rd Joint Meeting of ECTS & IBMS", Atenas-2011 and "Metastasis and the Tumor Microenvironment", Philadelphia-2010. She has served on the reviewer for the BMC Cell Biology.

16vivian@gmail.com

An update on Cervical cancer

Mahmood Rasool[1], Sara Zahid[2], Arif Malik[2], Abdul Manan[2], Irshad Begum[2], Mahmood Husain Qazi[2], Adeel Chaudhary[1], Mohammed Hussain Alqahtani[1], Mohammed Amjad Kamal[1] and Ishfaq Ahmed Sheikh[1]
[1]King Abdulaziz University, Jeddah, Saudi Arabia
[2]The University of Lahore, Pakistan

Cervical cancer generally grows slowly due to uncontrolled cell growth and take many years for dysplasmia to cancerous stage in the tissues of the cervix if left untreated. 80 per cent cases belong to squamous cell carcinoma while adenocarcinoma is less common type of cervical cancer. Gardisil vaccine is available to prevent and treat it since 2006. Human papillomavirus infection is strongly related with the cervical cancer which is the most common gynecological malignancy. Different risk factors exaggerate the onset and progression of cervical cancer to malignant and metastatic state. Recent results of identifying the underlying molecular pathways and mechanisms involved in cervical cancer provide clues regarding the new bio markers that proved to be supportive in monitoring the lesion with a high risk of progression in cytological smears and histological specimens.

meu.fabg@hotmail.com