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

Interaction of the extracellular matrix component hyaluronan with its receptors CD44 and RHAMM affects tumor growth

Silvia E. Hajos
University of Buenos Aires, Argentina

Tumor microenvironment influences tumor growth, therefore extracellular matrix components (EMC) are important players in such process. Hyaluronan (HA) is a major component of the ECM, implicated in tumor survival and progression upon interaction with its receptors CD44 and RHAMM. Their involvement in growth of different kind of solid tumors have been reported. However, little is known about the role of HA in hematological malignancies. In this lecture, I will describe the results obtained in our laboratory on the presence and function of such ECM components using two different models: a) sensitive and resistant human leukemic cell lines, b) tissue from patients with gestational trophoblastic disease (GTD). Up to now, we demonstrated that HA induced cell proliferation on K562 vincristine (VCR) sensitive and Kv562 VCR resistant leukemic human cell lines. This effect was mediated by CD44 and activation of both PI3K/Akt and MEK/ERK pathways on K562, whereas on Kv562 it was mediated by RHAMM and PI3K/Akt activation. HA synthesis inhibition decreased cell proliferation and sensitized Kv562 to the effect of VCR, in both cases with senescence induction. Oligosaccharides obtained from HA (oHA) inhibited the effect sensitizing Kv562 cells to VCR by Pgp inhibition. GTD constitutes a group of disorders that arises from the placental trophoblast including hydatiform mole, choriocarcinoma (CC) and placental-site-trophoblastic-tumor, representing malignant fetal allografts in maternal tissues. We analyzed the presence and distribution of HA, CD44 and RHAMM in tissues collected from the Pathology Service of Hospital Durand, Bs As, Argentina. We found different subcellular distribution of RHAMM in GTD tissues while HA and CD44 were related to the stroma only in CC, suggesting that such molecules are involved in the pathogenesis of GTD. We are working to elucidate their involvement in migration, invasion and metastasis processes as well as in immune response modulation.

Biography

Silvia E. Hajos has being investigating the role of CD44 and hyaluronan on tumor growth for the last 14 years. During her career, she published 100 peer-reviewed reports and presented almost 210 communications to different Immunology and Cancer meetings. She was also director of numerous Ph.D. theses at the University of Buenos Aires (UBA). Actually, she is a consultant Professor of Immunology at the Faculty of Pharmacy and Biochemistry, UBA, and is also a member of the National Research Council (CONICET) of her country. She has served on various review committees, including evaluation at Union for International Cancer Control.

shajos@ffyb.uba.ar

Keratocystic odontogenic tumours of the jaws and associated pathologies: A 10-year clinicopathologic audit in a referral teaching hospital in Kenya

Simiyu Benjamin
University of Nairobi, Kenya

Aim: To establish the pattern of occurrence and the clinicopathological features of keratocystic odontogenic tumour (KCOT) over a 10-year period

Materials and Methods: Patients from the University of Nairobi Dental Hospital treated for KCOT were included in the study over a 10-year period. The study highlights the demographic, clinico-radiological and histological features of these tumours.

Results: A total of 22 confirmed cases of KCOTs were recorded with equal gender prevalence; (M:F = 1.44:1). The age range of the patients was from 10 to 69 years with a peak in the second decade of life (mean = 27.5 yrs). Of the 22 cases, 15 (68.2%) occurred in the mandible of which eight (53.3%) involved the body, five (33.4%) the angle and ramus. Six (27.3%) occurred in the maxilla, and one (4.5%) was in both jaws and was associated with Gorlin-Goltz Syndrome. The most common presenting complaint in most patients was swelling 54.6%, and in 18.2% was incidental finding. Eight (36.4%) cases showed satellite cysts upon pathologic evaluation. Thirteen (59.1%) cases were managed by surgical excision, while nine (40.9%) were managed by enucleation.

Conclusion: Based on the outcome of this study, KCOT present mostly in body, angle and ramus of the mandible and its peak is in the second decade of life.

savedbenja@yahoo.com