Ricardo Hsieh, J Clin Exp Dermatol Res 2016, 7:4 (Suppl)
http://dx.doi.org/10.4172/2155-9554.C1.035

8th Clinical Dermatology Congress

August 24-25, 2016 Sao Paulo, Brazil

RTKs and transcription factors proteins analysis in a series of head and neck mucosal melanoma

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Head and Neck Mucosal Melanoma (HNMM) is rare, accounting 1% of all melanomas in the USA and 6% in Japan. It is known that receptor tyrosine kinase (RTK) signaling mediates the development and progression of melanoma; its development is a complex process involving activation of proto-oncogenes and loss of tumor suppressors. The MERTK, AXL and TYRO3 functionally engage in cooperative or distinct signaling cascade and there is evidence that they play a key role in melanoma pathogenesis. C-kit plays a key role in melanocytic development, migration and proliferation; its mutations seem to be more common in mucosal and acral melanomas. Moreover, Bcl-2 oncogene encodes a family of anti-apoptotic proteins and it is overexpressed in melanomas, proto-oncogene C-myc is a transcriptional factor and plays crucial role both in driving cell proliferation and promoting apoptosis, its overexpression has been associated to melanoma progression and oncogene SOX10 cooperates with other transcription factors to direct the development and differentiation of melanocytes. These three nuclear markers are associated to melanoma's metastatic risk. We studied MERTK, AXL, TYRO3, BCL-2, C-myc and SOX10 in 29 FFPE Head and Neck cases organized in TMA by Alkalin Phosphatase Immunohistochemistry technique. We observed positive expression in: 4/29 MERTK, 29/29 AXL and TYRO3, 15/29 CKIT, 27/29 Bcl-2, 28/29 SOX10, 16/29 C-myc. According to our results, loss of MERTK and CKIT proteins expression seems to play an important role in the HNMM pathogenesis and BCL-2 and SOX10 should be good adjunctive biomarkers for HNMM, further molecular biology studies should corroborate this present study.

Biography

Ricardo Hsieh was graduated from the Department of Dermatology, Medical School of University of Sao Paulo and obtained his Master's and PhD degree. He is currently a Post-doctoral fellow at Department of Pathology, Dental School and Associate Research Scientist at Institute of Tropical Medicine.

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