Methylated SFRP1,2 and CD25 Expression in Acute Myeloid Leukemia Play an Important Role in the Pathogenesis of the Disease and in Turn in its Treatment

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Abstract:

Objectives: Recently, hyperactivation of the Wnt signaling pathway has been implicated in leukomogenesis, so we studied the epigenetic dysfunction of SFRP1,2 and expression of interleukin2 receptor α chain (IL2Rα, also known as CD25) and its prognostic impact in acute myeloblastic leukemia (AML). Methods: We studied the methylation profile of SFRP1,2 in AML cells by methylation-specific polymerase chain reaction (MSP) and the hyper expression of IL2Rα (CD25) by flowcytometry. Results: We analyzed the methylation profile of SFRP1,2 in 40 de novo AML patients. The percentage of hypermethylation in the patient samples were 37.5% for SFRP1, 12.5% for SFRP2. CD25 was positive in 12(30%) of 40 patients AML. We found that in patients whom 60 years and younger with intermediate risk cytogenetics in de novo AML, hypermethylation of SFRP1 and CD25 were accompanied with relapse (P=0.024). Conclusion: Our data indicates that in a subgroup of AML patients, hypermethylation of SFRP1 and high expression of CD25 predict relapse.

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