CD133 in acute myeloid leukemia

Wesam Ahmed A.ElKader Seif

By the close observation and searching; the percentage of different tumors is rapidly growing up by a scaring value, from those tumors the AL and the AML percentage which affect mostly the older age.CD133 is a stem cell marker found to be present in many cancers. The interest in this molecule has grown exponentially, since it appears to be an important cell surface marker widely used to identify and isolate stem cells from various sources. It is a five pentaspan transmembrane glycoprotein called to be the molecule of the moment for its importance. It has two alleles AC133-1 and AC133-2.In this study we select the CD133 to test its value in the diagnosis of AML cases by using the flow cytometry and consequently the appropriate treatment and the prognosis of these cases. The present study aimed to evaluate its association with the different demographic, clinical and laboratory data, as well as its relation to disease outcome.The current study was carried out on 40 patients; 30 newly diagnosed AML patients and 10 control patients. All patients were subjected to complete history taking, thorough clinical examination and laboratory investigations including: complete hemogram, bone marrow aspiration with examination of Leishman-stained peripheral blood and bone marrow smears and immunophenotyping.CD133 expression was not associated with any the studied demographic and clinical data except for the bone pains affecting the patients.As for FAB classification of AML cases and the relation with CD133; FAB M3 and M4 have significant correlation with CD133 expression.Statistically, there are significant associations between CD133 expression and some of the studied prognostic factors of patients representing the reversed relation between it and TLC, Hb and PLT. Moreover, concerning the monoclonal antibodies there are significant associations between CD133 and HLA-DR, CD3, CD7 and TDT, high significance for CD13, and very high significance for CD34.CD133 in acute myeloid leukemia 2011