Membranous Expression of panCD66, CD66 a, CD66 b, and CD66 c and their Clinical Impact in Acute Leukemia

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CD66 and its isoforms modulate several physiologic processes and have a role in aggressiveness of malignancies. We aimed to investigate the expression of pan CD66, CD66 a, b, and c and their clinical implication in acute leukaemia. This study included 85 cases, 50 AML, 33 ALL and 2 mixed lineage leukaemia cases from King Abdullah Medical City, Saudi Arabia. PanCD66, CD66 a, CD66 b and CD66 c were detected by flowcytometry at diagnosis and panCD66 was reanalysed at day28. The expression rate of panCD66 and CD66 c was 51.8% in B-ALL and was significantly correlated with the BCR/ABL gene, P-value 0.037. CD66 a was detected in 11.1% of B-ALL cases and was significantly associated with shorter overall survival (OS), P-value 0.045. In AML, the expression rates were 40%, 28% and 32% for panCD66, CD66 b and CD66 c respectively. CD66b was significantly correlated with favourable cytogenetics and prolonged OS, with P-values of 0.001 and 0.025, respectively. CD66 c was correlated with CD25 positivity, with a P-value of 0.003. The expression levels of panCD66 at diagnosis and day 28 were significantly correlated, with a P-value of <0.0001. Accordingly, pan CD66 can be added to the panel for MRD. CD66c is a suitable target for monoclonal antibody therapy in B-ALL and AML. However large-scale studies are needed to verify their association with cytogenetics, CD25 expression and survival.

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