Qualitative flow cytometric analysis of Malaysian myelodysplastic syndromes (MDS) patients.

ABSTRACT

Myelodysplastic syndromes (MDS) are a group of haematological malignancies categorized by ineffective hematopoiesis that result in dysplasia. Although morphological diagnosis is a traditional and standard technique that is used for the diagnosis of MDS, the heterogeneous blood and bone marrow characteristics of MDS patients can potentially obscure the right diagnosis. Thus, we have utilized flow cytometric immunophenotyping as a supportive mechanism to obtain a more accurate and faster method for detection of abnormal markers in MDS. Flow cytometry was used for analyzing bone marrow samples from newly diagnosed MDS patients to investigate the abnormal antigen expression patterns in granulocytic, monocytic, erythroid, lymphoid lineages and myeloid precursors. The results were compared with those obtained from cases that had Idiopathic Thrombocytopenic Purpura (ITP) as a control. The most common abnormality found in the granulocytic lineage was the decrease of CD10. Low expressions of CD13 were the most frequent abnormality in the monocytic lineage. The erythroid lineage was found to have low expression of CD235A+/CD71+, reduce of CD71 and decreased CD235a. In conclusion, this method is useful for confirming cases in which it is difficult to make a diagnosis by morphology.

Keyword: Myelodysplastic Syndromes; Flow cytometry; Immunophenotyping.