

Expression of CD64 on Surface of Circulating Monocytes in Systemic Lupus Erythematosus Patients: Relation to Disease Activity and Lupus Nephritis

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CD64 is a type of integral membrane glycoprotein known as FC receptor that binds monomeric IgG-type antibodies with high affinity. It is more commonly known as FC gamma receptor 1 (FC γ R1) and it is expressed on monocytes surface. The goal of this study was to investigate the association of CD64 expression on the surface of peripheral blood monocytes of systemic lupus erythematosus patients with disease activity, and lupus nephritis. 30 SLE patients were enrolled into this study. They were subdivided into: 15 SLE patients with lupus nephritis and 15 SLE patients without lupus nephritis. In addition, 25 age and sex matched healthy volunteers were enrolled as controls. Disease activity was defined by SLE Disease Activity Index (SLEDAI) score and the renal Systemic Lupus Erythematosus Disease Activity Index (rSLEDAI) score. Surface expression of CD64 on peripheral blood monocytes was evaluated by Flowcytometry. Renal biopsies of Lupus nephritis was evaluated using the International Society of Nephrology/Renal Pathology Society (ISN/RPS) classification scheme. There was a statistically significant difference in surface expression of CD64 on circulating monocytes ($P>0.001$) in SLE patients with nephritis especially those with class II/III as compared to SLE without nephritis and healthy controls. The mean fluorescent intensity of CD64 staining correlated positively with markers of systemic inflammation, lupus nephritis, SLEDAI and rSLEDAI scores. In conclusions, surface expression of CD64 on circulating monocytes reflects systemic inflammation, renal injury and could be used as a rapid approach and good biomarker for disease activity and lupus nephritis in SLE patients.