

Title:

Association between miR-155, its polymorphism and ischaemia-modified albumin in patients with rheumatoid arthritis.

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Abstract

Rheumatoid arthritis (RA) is a chronic immune-mediated inflammatory disease. We aimed to measure the level of miR-155 and its genetic variant rs767649 in patients with RA and to evaluate their relationship with ischaemia-modified albumin (IMA). The study was performed on 99 patients with RA (group I) and 58 healthy control participants (group II). Quantitative realtime PCR was used to assess the expression of serum miR-155 in addition to its functional variant rs767649. IMA levels were measured by enzyme-linked immunosorbent assay. Significant overexpression of miR-155 and higher levels of IMA were detected in patients with RA compared with those in controls ($P < 0.001$). The fold change in miR-155 was significantly positively associated with IMA ($r = 0.362$, $P = 0.001$) in patients with RA. Significant differences in the frequency of miR-155 (rs767649) genotypes and alleles were noted between patients with RA and controls. MiR-155 and IMA levels were significantly associated with the genotype distribution of miR-155 (rs767649) in patients with RA and were higher in patients with the TT genotype. MiR-155 and its functional variant rs767649 might play an important role in susceptibility to the increased risk of RA, stressing the role of miR-155 as a therapeutic target in the treatment of RA. Additionally, IMA levels were increased and correlated with miR-155 and its SNP rs767649 in Egyptian patients with RA.