عنوان مقاله:

Expression of Th۱ and Th۲ Cytokine and Associated Transcription Factors in Peripheral Blood Mononuclear Cells and Correlation with Disease Severity

محل انتشار:

مجله گزارش های بیوشیمی و زیست شناسی مولکولی, دوره 6, شماره 1 (سال: 1396)

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خلاصه مقاله:

Background: Psoriasis is a T cell-mediated autoimmune disease with elevated level of pro-inflammatory cytokines belonging mainly to Th۱ pathway. We investigated whether treatment with micronutrients along with methotrexate (MTX) is able to modulate mRNA expression of Th۱ and Th۲ patterns and its correlation with disease severity. Methods: Thirty plaque type psoriasis patients with Psoriasis Area and Severity Index (PASI) higher than ۱۰ recruited; ۱۵ non- micronutrients taker (NMT) patients, treated by MTX daily (۰.۲-۰.۳ mg/kg/week) and ۱۵ micronutrients taker (MT) patients treated by MTX plus micronutrient supplement daily for ۱۲ weeks. Blood samples collected at baseline and after ۱۲ weeks. Taqman quantitative real-time polymerase chain reaction was applied to analyses the expression of Th۱ (T-bet, IL-۱۲, IFN- γ) and Th۲ (GATA-۳, IL-۴) pathway. Disease severity measured under PASI scoring system. Results: Significant clinical improvement in MT group was accordance with significant down-regulation of Th۱ and up-regulation of Th۲ studied markers (P<۰.۰۵). Respect to PASI-۷۵ cut-point, expression of IFN-γ in MT group with upper PASI-۷۵ was significantly lower than in related patients in NMT group (P=۰.۰۵). Also mRNA expressions of GATA۳ and IL-۴ in MT group with upper PASI-۷۵ were significantly higher than patients in NMT group respectively (P=۰.۰۵, P=۰.۰۴) Conclusion: According to significant attenuating of PASI score correlated with upregulation of Th۲ pathway in favor of MT group, consumption of micronutrients in combination MTX in psoriasis patients are suggested. Our results contribute to a better understanding of methotrexate immune-pathogenesis mechanisms and its correlation to clinical .response in psoriasis

کلمات کلیدی:

Cytokine, Gene expression, Methotrexate, Micronutrients, Psoriasis, Transcription factor