عنوان مقاله:

Association of HLA-DRA and IL2RA Polymorphisms with the Severity and Relapses Rate of Multiple Sclerosis in an Iranian Population

محل انتشار:

مجله گزارش های بیوشیمی و زیست شناسی مولکولی, دوره 9, شماره 2 (سال: 1399)

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خلاصه مقاله:

Background: Multiple sclerosis (MS) is a multifactorial condition in which many genetic and environmental factors interfere. The association between genes involved in the immune system and MS was previously reported. The aims of this study were to evaluate 14 SNPs of HLA-DRA, 14 SNPs of IL2RA with severity of MS through Expanded Disability Status Scale (EDSS) and Annualized Relapse Rate (ARR). Methods: 102 patients with MS referred to Sina hospital in Tehran, Iran, were diagnosed and studied based on McDonald’s guideline, clinical signs, and brain imaging procedures. All patients were included in the study following informed consent. Genotyping study of 14 variants in the

HLA-DRA, and 14 variants in IL2RA was conducted by Sanger sequencing. Disease outcomes including EDSS and ARR were registered. Outcome measures between different genotypes of each SNPs were compared separately. Results: Among 14 SNPs in IL 2RA the genotypes of rs12722489 showed a significant association with ARR in two consecutive years. Mean ARR1 was 1.06±1.12, 0.20±0.34 and 0.31±.50 for AA, GA, and GG genotypes, respectively (p value= 0.008). Mean ARR2 was 1.5±1.08, 0.28±0.40, and 0.42±0.55 for AA, GA, and GG, respectively (p value= 0.001). Regression analysis showed a significant association between rs12722489 with ARR1 and ARR2, removing the potential confounding mediators. No significant association was found between SNPs in HLA-DRA with the attack .rate and severity of MS. Conclusions: The rs12722489 of IL-2RA has an association with ARR, but not with EDSS

کلمات کلیدی:

Annualized Relapse Rate, Expanded Disability Status Scale, HLA, Multiple Sclerosis, SNP