(S120) PREVALENCE OF ANTINUCLEAR ANTIBODIES AND THEIR IMPACT ON RESPONSE TO IMMUNOMODULATORY THERAPY IN RELAPSING-REMITTING MULTIPLE SCLEROSIS

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Background: Multiple sclerosis (MS) is an autoimmune, demyelinating disease of the central nervous system white matter. Previous studies have estimated the prevalence of antinuclear antibodies (ANAs) to be between 20% and 80% in MS, higher than in the general population. It has been noted that in untreated MS patients, the presence of ANAs is associated with clinical exacerbations as well as increased magnetic resonance imaging (MRI) disease activity. There have also been reports of nuclear autoantigens in MS lesions, suggesting that ANAs may have some pathogenetic relevance. Objectives: We proposed to evaluate the prevalence of ANAs and their effect on response to immunomodulatory therapy in relapsing-remitting MS (RRMS) patients. Methods: A list of patients seen between 2000 and 2008 at UT Southwestern Medical Center with an ICD-9 code of RRMS and a CPT code of ANAs was assembled. All patients with ANAs, a diagnosis of RRMS, and at least 2 years of follow-up were selected as our cases. We then identified 40 ANA-negative patients, who were age- and sex-matched to act as controls. All patient charts were analyzed for number of relapses occurring during a follow-up period of 2 to 5 years. Results: We identified a total of 107 RRMS patients receiving follow-up in our clinic. Of these, 20 patients (18.7%) were found to have a positive ANA titer. The average annualized relapse rate (ARR) of the ANA-positive patients was 0.25. The average ARR for the control patients was 0.16. Additionally, we looked at subgroups of ANA-positive patients based on titer: <1:160, 1:160, and >1:160. The average ARRs for these subgroups were 0.09, 0.28, and 0.33, respectively. We performed a one-way analysis of variance to test the hypothesis that the average mean values across categories of subgroups were equal. Statistical analysis was performed using WINKS SDA software. There was no statistically significant difference in average ARR between the ANA-positive and control patients or the subgroup analysis (P = .52). Conclusions: The presence of ANAs in RRMS patients was similar to that in previous prevalence studies; however, the presence of ANAs did not statistically alter or correlate with disease activity.

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