MS is an autoimmune central nervous system (CNS) disease, characterized by inflammation, demyelination and axon damage, while the white matter in the foreground is affected, which can also affect the cortex and deep gray matter. Although the etiology of MS is still not known clearly, the disease is thought to occur as a result of autoimmune response developed in CNS, with the contribution of environmental factors, especially viral infections, in individuals with genetic predisposition.

Salt consumption, which is emphasized while examining the autoimmunity-diet relationship, is an important issue. In two studies on salt and MS, in animals with experimental autoimmune encephalomyelitis (animal model of MS), high salt consumption has been shown to increase the symptoms of the disease by increasing the pathological T helper 17 response. As well as prospective and specific studies to be done to clarify the etiopathogenesis of the disease, descriptive statistics studies with large case series will certainly contribute to this process.

We planned a retrospective cross-sectional study with patients who applied to our clinic and who were under follow-up to evaluate the relationship of the disease with environmental factors. We aimed to examine whether there is a relation between salt consumption of the patients and disability, disease activity and radiological images.

Statistical evaluation was done with IBM SPSS 20.0 (SPSS Inc., Chicago, IL, USA) package program. The difference between the groups was determined by student-t test and one-way analysis of variance (ANOVA) for numerical variables with normal distribution, and by Mann Whitney U Test and Kruskal Wallis Test for numerical variables without normal distribution. Tukey and Dunn tests were used for multiple comparisons. Relations between numerical variables were evaluated by Spearman correlation analysis, and relationships between categorical variables were evaluated by Chi-square analysis. $p < 0.05$ was considered statistically sufficient for significance.

In this study, we analyzed 250 patients with complete data from 607 patients that we examined. We divided the patients into two groups according to their eating habits, eating salty and unsalted meals. Of the patients, 139 (55.6%) had a saline-fed 111 (44.4%) food-free history. We compared both groups in terms of EDSS, number of attacks, T2 and T1 lesions. No significant relation was found with salt consumption, T1 lesion presence, contrast-enhancing lesion number, T2 lesion number, cervical lesion number, gender, MS clinical subtype, family history, VitD, VKI and EDSS. P value in order (0,085-0,722-0,375-0,678-0,187-0,223-0,394-0,862-0,302-0,138) However, in our study, 20 of 25 people with EDSS score of 4 and above were eating salty foods. Although it did not seem statistically significant ($p = 0.070$), there was a significant arithmetical difference. Statistically insignificant reason was thought to be insufficient of the sample.

It has been demonstrated in both animal and human models that the high amount of salt in the diet causes induction in Th17 lymphocytes. Th17 lymphocytes exposed to high salt have been reported to be associated with proinflammatory cytokines and show high pathogenicity. Farez et al examined 70 RR MS patients for two years; found that the risk of attacks increased by 2.75 times and the risk of developing new lesions increased by 3.4 times compared to those who did not take the medium-high salt areas.

As a result of these data, it can be easily advised that patients should not smoke and reduce their salt consumption.