

# 11<sup>th</sup> INTERNATIONAL CONFERENCE ON CENTRAL NERVOUS SYSTEM

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## Evaluation of the one-year effectiveness and side effects of *rituximab* in patients with multiple sclerosis

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Multiple sclerosis (MS) is an inflammatory disease affecting the central nervous system and leading to neurological defects. Rituximab is a medication that is administered intravenously for treating MS. The present study examined the one-year effectiveness and side effects of rituximab.

**Methodology & Theoretical Orientation:** This quasi-experimental clinical trial was conducted in Kermanshah (2018-19). Patients were treated with rituximab for one year. At the beginning of the study, the EDSS (Expanded Disability Status Scale) score and active lesions based on Magnetic Resonance Imaging (MRI) for patients were evaluated. Also, the patients were followed up in terms of relapse and medication side effects in this year. At the end of the year, EDSS score and MRI were evaluated again. The data were analysed by SPSS-25 software.

**Findings:** 44 patients with MS including 29 (65.9%) female and 15 (34.1%) males were studied. 22 patients had RRMS and 22 patients had progressive-relapsing MS (PRMS). In RRMS patients, the EDSS score was significantly reduced ( $P = 0.010$ ) but in PRMS patients EDSS was non-significantly increased ( $P = 0.148$ ). In both RRMS and PRMS patients, the number of MRI lesions was lower than at the beginning of the study and this decrease was not significant ( $P > 0.05$ ). More Immediate side effects occurred in RRMS patients (13.6% vs. 4.5%) and more delayed side effects were observed in PRMS patients (54.5% vs. 36.3%).

**Conclusion & Significance:** rituximab caused a greater reduction in EDSS in the treatment of RRMS than PRMS and its use had few side effects.

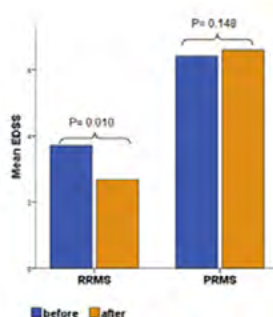


Figure1. Comparison of EDSS before and after treatment by type of MS

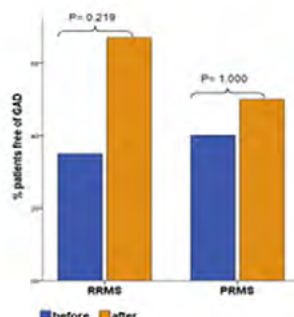


Figure2. Comparison of the proportion of patients without lesions on MRI before and after treatment by type of MS

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## Recent Publications

1. Prevalence of Multiple sclerosis and its clinical and demographic characteristics in Kurdish populations in western Iran (2020) N Razazian, S Eskandarieh, S Siabani, D Afshari, MA Sahraian, O Khezri, Multiple Sclerosis and Related Disorders.2022; 57, 103441
2. One-year Effectiveness and Side Effects of Fingolimod in Multiple Sclerosis Patients
3. N Razazian, P Ahmadi, M Rezaei, N Fakhri. Journal of Mazandaran University of Medical Sciences.2021; 31 (203), 173-179
4. The impact of physical exercise on the fatigue symptoms in patients with multiple sclerosis: a systematic review and meta-analysis. N Razazian, M Kazemina, H Moayedi, A Daneshkhah, S Shohaimi. BMC neurology.2020; 20 (1), 1-11

## Biography

Nazanin Razazian has conducted an MS registry in Imam Reza Hospital, a referral hospital in Kermanshah, west of Iran. To date, she has enrolled 1780 patients with MS. She has been involved in running a neurology residency program at Kermanshah University of Medical Sciences in 2008. She supervised more than 30 residents. She has experience in teaching medical students. Her publication record includes more than 50 papers, most of which are focused on the Pharmacological and Nonpharmacological treatment of Multiple Sclerosis. A part of her research involves using exercise as a nonpharmacological symptomatic treatment for MS patients. Her recent projects are focused on the complications of COVID-19 in MS patients. The other outstanding article is about cerebral vein thrombosis in the west of Iran. It discusses the association between a mutation in factor V Leiden and cerebral venous thrombosis in the Kurdish population.

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