Investigation of the relationship between the resistance to the treatment of beta interferon in Iranian female and male with Multiple sclerosis

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Introduction: Multiple sclerosis (MS) is a chronic inflammatory autoimmune disease of the central nervous system.Myelin nerves in these areas is relieved. MS is the one of the leading causes of neurological disability in young people. The beta interferon is the best drug to reduce recurrence and progression of disease. The response to treatment is not the same in all patients, and sometimes it may be related to genetic and gender.Glutamate receptor 3 is a protein that in humans is encoded by the glutamate receptor-3 gene(GRM3) located onXq52_52.

The aim of this study is compare GRM3 geneassociated with resistance to beta interferon therapy in men and women with multiple sclerosis according to their gender.

Materials and Methods: In this clinical trial study,021 patients with MS were selected based on the Expanded Disability Status Scale (EDSS) changes and the number of attacks in one year.They were divided in two responders and non-responders groups which were subjected to treatment with beta interferon drugs.Variations in GRM3 gene and its relation to the treatment of patients was studied by PCR RFLP technique and restriction enzyme DraII.The enzyme cuts not mutation crop arears05225525in GRM3 gene.It is expected that visible band on agarose gel33after digestion in responder women 5 and 3,non-responder women 0band and in responder men 5

and non-responder men 0band to be.
Results: We realized that in women:8332%, 0131%,8235% andin men:2231%,3231%,1% one, two and three bandsrespectively showed.
Conclusion: Statistical testsshowed significant correlation between male and female patientsand the number of bands observedon agarose gel.(P<1012) .
Key words: Multiple Sclerosis,beta interferon,Glutamate receptor3,DraII