

## Abstract

### Introduction

Multiple Sclerosis (MS) is a chronic , progressive and demyelinating disease of central nervous system and is a major cause of morbidity and mortality which affects people in the productive and reproductive age. It is a major concern of every health system, health providing centers, insurance companies, medical services and of course the whole society worldwide. Relapsing-Remitting MS (RRMS) is the most common clinical phenotype of disease that characterized with relapses and remissions. So there are many drugs modifying disease's progressive course and reducing relapses. The aim of present study was to evaluate relapse rate in patients with RRMS due to alterations in disease modifying drug (DMD) regimens.

### Methodes and Materials

In a descriptive-analytical study, all patients with RRMS who were referred to MS Society of East Azerbaijan province by one of researchers, and were under treatment with imported disease-modifying drugs such as Avonex, Betaseron and Extavia and then for various reasons, the drug was switched to Iranian products of CinnoVex and Ziferon, were studied. Patients were in three groups, in group A; Avonex changed into CinnoVex, in group B; Betaseron changed into Ziferon, and in group C; Extavia changed into Ziferon. Demographic features, Relaps rate, and MRI changes were evaluated.

### Results

In group A 23 patients, in group B 29 patient, and in group C 19 patients were studied. Mean relapse rate in group A before and after drug change was  $1.91 \pm 0.66$  per year and  $2.43 \pm 0.72$  per year, respectively. In group B, mean relapse rate before and after drug change was  $2.24 \pm 0.83$  and  $2.62 \pm 0.97$  per year, respectively. And was  $2.05 \pm 0.62$  per year and  $2.47 \pm 0.96$  per year before and after drug change, respectively, in group C. The difference of relapse rate before and after drug change was statistically significant in group A ( $P=0.004$ ), where as it was not statistically significant in groups B and C.

### **Conclusion**

The results of present study showed that domestic medications of DMT are safe and effective as productions of other pharmaceutical companies and could be acceptable alternatives. Using domestic products of Cinnovex and Ziferon are economically beneficial for patients and community and are easily accessible for patients.

**Key words:** *Relapse Rate, Relapsing-Remitting Multiple Sclerosis, Disease Modifying Drug, Drug change.*