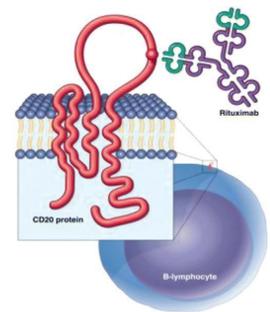


POSTER PRESENTATION

The effect of rituximab on mood disorders in Multiple Sclerosis

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INTRODUCTION

Mood disorders are the most concurrent problems in multiple sclerosis (MS) that have a great influence on the quality of life of these patients.

Objective: Disease-modifying drugs (DMDs) could have some positive or negative psychological effects. Rituximab is a drug commonly used as DMD in MS and its effects on mood have not been fully elucidated.

AIM

In this study, we evaluated the effect of rituximab on mood in MS patients.

METHODS

In this prospective study, all patients who were going to receive the first dose of rituximab from January 2019 to April 2020 in Fars province, south of Iran were enrolled. Questionnaires were filled out before treatment, 3 months after the first course, and 1 month after the second course (7 months later). The tool and process of collecting was HADS score questionnaire whose validity has been measured in Persian and in Iranian society using the opinion of experts and its accuracy and validity in MS has been evaluated by experts.

- Inclusion criteria:

MS patients who have referred for the first dose of rituximab and have a maximum EDSS of 5.

- Exclusion criteria:

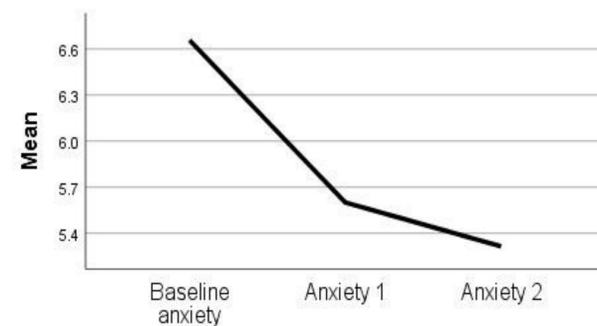
- 1- Patients with chronic incurable diseases such as cancer
- 2- Patients taking antipsychotic drugs.
- 3- Patients with a history of any psychiatric illness except anxiety and depression
- 4- Patients who have received corticosteroids in the past month.
5. Patients with EDSS more than 5. Data entry and analysis were done using SPSS version 22.

RESULTS

from 108 patients who filled out the questionnaire, 70 patients had inclusion criteria. Among the 70 patients studied in the study, 52 (74%) were female and 18 (26%) were male. The minimum age for men was 20 years and the maximum was 53 years, and the minimum age for women was 19 years and the maximum was 52 years. The mean age of all patients was 36.4. The mean age was 35.9 for all women and 37.8 for men.

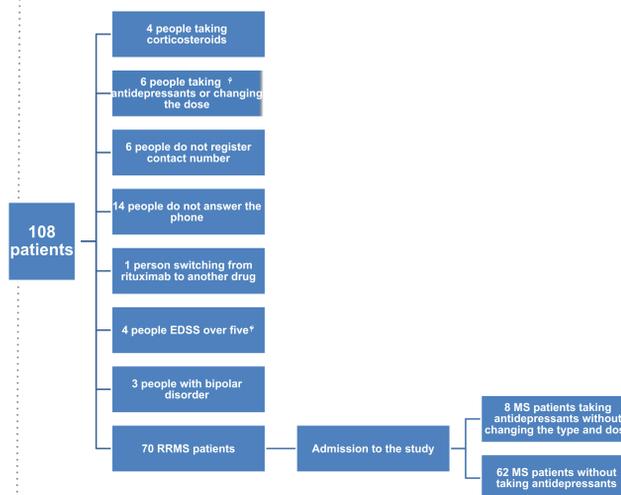
Mean differences of the HADS scale for depression were 0.54 (CI: -0.24- 1.33; p=0.17) after the first and 0.73 (CI: -0.49-1.55; p=0.30) after the second course of rituximab regarding the base scale which were not significant. For the anxiety, the mean scale at baseline was 6.6 which significantly decreased to 5.6 (p-value=0.039) after the first and 5.3 (p-value=0.005) after the second course.

Change in Anxiety scales during treatment

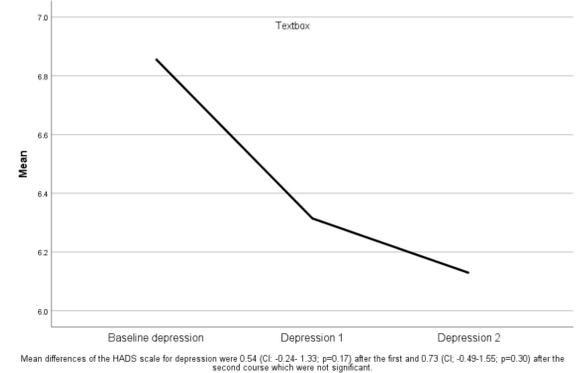


Changes in anxiety scales during treatment; the mean scale at baseline was 6.6 which significantly decreased to 5.6 (p-value=0.039) after the first and 5.3 (p-value=0.005) after the second dose.

Patient selection flowchart



Change in depression scales during treatment



Structure of HADS score

Score	Mean	95 % C.I.
Anxiety Total score	12.0	11.7 to 12.4
I feel tense or wound up	1.9	1.8 to 2.0
Feeling as if something bad will happen	2.0	1.9 to 2.1
Worrying thoughts	1.8	1.7 to 2.0
I can sit at ease and feel relaxed	1.3	1.2 to 1.4
Feeling like butterflies in the stomach	0.8	0.7 to 0.9
I feel restless	1.8	1.6 to 1.9
Sudden feelings of panic	2.4	2.3 to 2.5
Depression Total score	9.1	8.9 to 9.4
I enjoy things I used to enjoy	0.8	0.7 to 0.9
I can laugh and see funny things	0.6	0.5 to 0.7
I feel cheerful	2.3	2.2 to 2.4
I feel slowed down	1.6	1.4 to 1.7
I have lost interest in my appearance	2.2	2.1 to 2.3
I look forward with enjoyment	1.1	1.0 to 1.2
I can enjoy a book, radio or TV	0.7	0.6 to 0.8

CONCLUSIONS

According to this study, rituximab could have positive effects on both anxiety (statistically and clinically) and depression (clinically) in M.S patients. As a result of our data, only one dose of rituximab could improve significantly the anxiety of these patients. Due to the high prevalence of anxiety and depression in MS patients, this issue can help and be considered by a neurologist in choosing the type of medication and treatment regimen. Also, according to the statistics obtained from this study, at the beginning of the study, 22.5% of patients had moderate to severe anxiety and 24% had moderate to severe depression for which they did not receive any treatment. So, with proper attention to this matter and diagnosis and treatment and, if necessary, timely referral to a psychiatrist can help reduce these problems of MS patients and their quality of life. Improve.

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