



Prevalence of post-traumatic stress disorder in Russian population of MS patients

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Background and aims

Patients with multiple sclerosis (MS) have an increased risk of developing disease-induced post-traumatic stress disorder (PTSD). The study aimed to assess the prevalence of PTSD and socio-demographic characteristics of MS patients in Russia.

Methods

724 MS patients have been screened at the MS Centre (Saint-Petersburg, Russia) using Trauma Screening Questionnaire. 61 patients had PTSD symptoms that developed in connection with the underlying disease.

The control group included 67 random patients with MS who had no PTSD symptoms. The Dissociative Experiences Scale (DES) was used to measure dissociative symptoms. To assess subjective distress caused by a traumatic event the Impact of Event Scale-Revised (IES-R) was used.

Age, sex, MS duration, MS course, Expanded Disability Status Scale (EDSS), disease-modifying therapy (DMT), presence of relapse at the time of the study, level of education, employment and marital status was assessed.

Mann-Whitney U-test and Pearson's chi-squared test with Yates' continuity correction with Bonferroni-Holm method for multiple comparisons were conducted to determine statistically significant differences between patients with and without PTSD.

Results

The prevalence of PTSD was 8.4% among MS patients.

MS patients with PTSD had higher scores in all IES-R subscales (intrusion, avoidance, hyperarousal) ($p < 0.001$) and on the DES ($p < 0.001$).

There were no statistically significant differences in median age, MS duration, EDSS score and MS course, sex, DMT, presence of relapse at the time of the study, level of education, employment and marital status between the two groups.

Socio-demographic characteristics are shown in the Table 1.

Table 1. Socio-demographic characteristics of MS patients in Russia

	Patients without PTSD (n = 66)	Patients with PTSD (n = 61)	p-value
Sex	Female – 43 (65.2%) Male – 23 (34.8%)	Female – 46 (75.4%) Male – 15 (24.6%)	1.0*
Age (years), median (25 th , 75 th percentiles)	30.5 (26, 35)	31 (25, 39)	1.0
MS course	RRMS – 59 (89.4%) SPMS – 6 (9.1%) PPMS – 1 (1.5%)	RRMS – 59 (96.7%) SPMS – 1 (1.6%) PPMS – 1 (1.6%)	1.0**
MS duration, (months), median 25 th , 75 th percentiles)	29 (12, 64.8)	45 (12, 85)	1.0
EDSS, median 25 th , 75 th percentiles)	3 (2.1, 4)	3.5 (2.5, 4)	1.0
Disease-modifying therapy	No DMT – 13 (19.7%) Interferons – 24 (36.4%) Glatiramer acetate – 5 (7.6%) Natalizumab – 19 (28.8%) Teriflunomide – 2 (3%) Ocrelizumab – 3 (4.5%)	No DMT – 7 (11.5%) Interferons – 23 (37.7%) Glatiramer acetate – 16 (26.2%) Natalizumab – 15 (24.6%) Teriflunomide – 0 Ocrelizumab – 0	0.21**
Presence of relapse	Yes – 31 (47%) No – 35 (53%)	Yes – 34 (55.7%) No – 27 (44.3%)	1.0*
Level of education	Higher – 40 (60.6%) Vocational – 11 (16.7%) Secondary general – 9 (13.6%) Basic general – 1 (1.5%) Incomplete higher – 5 (7.6%)	Higher – 39 (63.9%) Vocational – 17 (27.9%) Secondary general – 2 (3.3%) Basic general – 1 (1.6%) Incomplete higher – 2 (3.3%)	1.0*
Employment status	Employed – 48 (72.7%) Unemployed – 18 (27.3%)	Employed – 36 (59%) Unemployed – 25 (41%)	1.0*
Marital status	Single – 32 (48.5%) Married – 28 (42.4%) Divorced – 3 (4.5%) Widowed – 0 Live-in relationship – 3 (4.5%)	Single – 32 (52.5%) Married – 23 (37.7%) Divorced – 4 (6.6%) Widowed – 1 (1.6%) Live-in relationship – 1 (1.6%)	1.0**

* – Pearson's Chi-squared test with Yates' continuity correction was used;

** – Fischer's Exact test was used; Bonferroni-Holm method for multiple comparisons was conducted.

Conclusion

Multiple sclerosis is a potential stressor that can cause PTSD. The lack of correlation between PTSD and the duration of MS, the degree of disability of patients, as well as socio-demographic data was found. The presence of PTSD is confirmed by clinical characteristics and high scores in all IES-R subscales, as well as higher indicators of the level of dissociation.