

Characteristics of multiple sclerosis relapses and factors affecting relapses frequency in patients with immunomodulatory therapy

M. Bozhenko

Department of Neurology, Danylo Halytsky Lviv National Medical University, Ukraine

Our objective was to estimate the relapses of MS and the influence of seasonal and climate factors on patients in the Volyn region - the region with the highest MS morbidity in Ukraine. The study included 100 MS patients (27 males and 73 females) with relapsing-remitting course. The average age of patients was 38.59 (σ -8.8) years (20-57), the average time from diagnosis in these patients was 9.643 (σ -6.23) years, the average EDSS rate was 2.957 (σ -1.31). 47% of them were employed, 53% were unemployed, 76% were married, and 24% were not married. From the first symptoms prior to the diagnosis of MS on average passed 2227 days, if first symptoms began after 2010, time to diagnosis was reduced to 462 days. There were 243 relapses from 2012 to 2017. The average duration of the last relapse was 11,215 (σ -6,188) days. 19% of patients had visual, 82% - pyramidal, 50% - cerebellum, 32% - sensory, 36% - pelvic organs function disorders and 21% had cognitive impairment. The peak of relapses is in the beginning of spring (March-30), then gradually decreases until the middle of summer (July-14). And again it grows from the beginning of the winter (Dec. -26). Amount of relapses was higher in the low-vitamin D period compared to the other two seasonal periods (99, 77,67 respectively). We found a significant strong correlation between the number of relapses and the radiation balance level (-, 998, *p 0, 05). The lower radiation balance level correlates with the higher number of MS relapses.