

Poster

Cerebrospinal fluid immunology in patients with late-onset multiple sclerosis (LOMS)



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ABSTRACT

Motivation: The aim of this study is to determine the existence of an immunological factor that determines the late onset of multiple sclerosis. In this abstract we present the first results obtained from the statistical analysis of the anonymized database.

Methods: We studied health care database of 9187 cases aged between 18 and 70 years. The patients were divided according to the result of the Immunoglobulin G Oligoclonal Bands (BOCG) analysis. The qualitative analysis of IgG was performed by isoelectrofocuss and immunodetection. A positive result is indicative of MS pathology (McDonald Criteria, 2017). Before the analysis of BOCG, IgG quantification is performed by nephelometry. From the quantitative data we obtain the Tibbling Link or IgG index. IgG index below 0.5 are not pathological for MS, between 0.5-0.7 may or may not be pathological, and above 0.7 is considered pathological. After including the variables of sex, age, BOCG and intrathecal secretion (SIT) analysis results, a preliminary statistical analysis of the database was carried out to observe the differences in the cohorts.

Results: Of the total population studied, 37.2% were positive for BOCG. An initial statistical analysis was carried out comparing different variables respect to the group of positive BOCG cases. A first group with ages between 18-49 years, considered with a more frequent age of onset, and a second group with a later age of onset, between 50-70 years. For our cohort with positive bands, we obtained a ratio of 2:1 of women to men, lower than that described in the article by Pérez Carmona et al. This ratio is maintained for both age groups. Respect to the quantification of IgG, no differences were observed for IgG index between patients of late-onset age (1.10), respect to those of frequent-onset age (1.08). In the case of patients with negative bands, a clear difference is found, with a mean IgG index of 0.56.

Conclusions: The results obtained up to now are preliminary and do not seem to differentiate late-onset cases from cases with earlier onset of the disease. More long-term variables are being evaluated. It should be noted that there is also an increase in the albumin content in the CSF of cases in group 2, aged between 50 and 69 years, which implies a possible dysfunction of the blood-brain barrier that will have to be evaluated later since, in some cases, it could alter the calculation of the CSF IgG index since albumin is the main protein in this fluid.

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