

Conversion Time from Optic Neuritis to Clinically Definite Multiple Sclerosis: search for predictors

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Introduzione

Multiple sclerosis is an important cause of neurological disability in young people; for this reason it is very important to know the predictors of the progression of the disease. In this study we analyzed the predictors that main influence the rate of progression from Optic Neuritis to Clinically Definite Multiple Sclerosis. The link between Optic Neuritis (ON) and Multiple Sclerosis (MS) is always a matter of study. The evidence of predictors related of a more rapid conversion to a Clinically Definite Multiple Sclerosis (CDMS) could be a useful tool for a more reliable prognosis of ON at presentation. The present study was aimed to identify possible predictors of a more rapid conversion from ON to a clinically definite MS based on the analysis of the neuroradiological, laboratory and neurophysiological parameters collected at the first observation (due to a first isolated episode of ON)

Metodi

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We retrospectively selected n° 45 patients with CDMS who had had optic neuritis as symptom of onset and analyzed the complete set of data from the different investigations performed at the first observation : RMN supratentorial, subtentorial and spinal cord lesions, Oligoclonal Bands (OCB) and Link Index > 0.7; Visual evoked potential (VEP).

Risultati

The mean time interval between the respective diagnoses of ON and CDMS was 3,15 yr ± 3,81 yr, range 0-15 yr. An higher number of supratentorial lesions at the onset of ON (7,17 yr if non lesions; 4,03 yr if 1-3 lesions; 2,14 yr if > 3 lesions ; p< 0,007) and/or presence of spinal cord lesions (4,11yr if no lesions; 1,95 yr if 1 or more lesions; p <0,05) were found as being associated with a more rapid conversion from ON to CDMS. No correlation was found for subtentorial lesions (3,12 yr if no lesions; 3,23 yr of 1 or more lesions; p:0,939). We analyzed 33 CSF: no correlation was found between presence of OCB and Link Index >0,7 (R² 0,047; P: 0,225) and time to the conversion when analyzed separately; a significant correlation was found only when the two parameters were considered together (4,08 yr vs 1,44 yr; p < 0,01).

Conclusioni

The presence of a higher number of soprantentorial lesions (>3) and/or presence of spinal cord lesions can be considered as predictors of a more rapid conversion from ON to a clinically definite Multiple Sclerosis (CDMS). The simultaneous presence of OCB and Link Index > 0,7 – when taken together - are also strong predictors of a more rapid conversion from ON to CDMS

