Limbic Cognitive and Psychotic Disorders as onset of Multiple Sclerosis: a case report

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Objectives

Cognitive and Behavioural symptoms are common in Multiple Sclerosis (MS), but they rarely represent the onset and predominant manifestation of the disease. The limbic system, relevant to memory and emotions, can be easily overlooked in conventional magnetic resonance imaging (MRI). We report a case of psychiatric and cognitive onset of multiple sclerosis in which MRI has revealed limbic pathway lesions and multiple lesions in white matter in patient affected by multiple sclerosis.

Materials

A 30 years-old woman was admitted in our department in July 2014, presenting with a sneaky memory disorder begun about two years before associated with “grimaces” of the face and psychotic somatoform delirium with visual and auditory hallucinations. The neurological examination showed awkward gait associated with choreic movements of the trunk and upper limbs, hypotonus spread to the four limbs; the talking revealed form and content disturbance of the thought and emotional lability.

Results

Extensive neuropsychological evaluation showed the presence of slowness of thought, deficit of verbal fluency and long-term memory and a lack of attention and working memory. Brain MRI showed in T2 and Flair multiple hyperintense lesions interesting the frontal periventricular white matter, corona radiate, corpus callosum, caudate nuclei, lenticulo-striate and mammulo-thalamic lesions as part of limbic pathway and infratentorial midbrain lesions.

After administration of gadolinium two lesions showed enhancement and the site and number of lesions were compatible with demyelinating disease. Therefore the patient was submitted to lumbar puncture that revealed the presence of oligoclonal bands in cerebrospinal fluid. Other exams were negative and the patient received diagnosis of multiple sclerosis. After introduction of haloperidol she had a great improvement and reduction of choreic movements and psychotic status.

Discussion and conclusions

Our case shows an atypical onset of multiple sclerosis characterized by cognitive and psychotic symptoms associated with lesions in limbic pathway. Instead of cortical and frontal lesions we correlate the syndrome to lesions in limbic pathway and in particular in thalamus nuclei. A relatively high frequency of lesions involving the limbic tracts may explain memory deficits and emotional dysfunction commonly experienced by patients with MS. A choreic syndrome, as onset symptom of multiple sclerosis is never reported in literature, and it is probably related to lenticulostriatal nuclei lesion.

Bibliography