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Frontotemporal dementia and motor neuron disease

Demencia frontotemporal y enfermedad de motoneurona

Dear Editor:

Degenerative diseases are the most common cause of dementia in our environment and, within these cases, 5-10% are frontotemporal dementias (FTD)^{1,2}. This percentage increases when patients are younger than 65 years old, being the second leading cause of pre-senile dementia³. The major neurochemical alterations are deficits in serotonin and dopamine². According to Diagnostic and Statistical Manual of Mental Disorders (4th ed.) (DSM-IV) criteria, the diagnosis of FTD is mainly clinical, consisting of behavioural alterations, psychotic disorders and language disorders, among others, aided by neuroimaging and neuropsychological tests¹.

An association with other neurodegenerative diseases has been noted, including motor neuron disease (MND), a scarcely frequent³ association, which is clinically characterised by frontal and neurological signs⁴. FTD associated with MND is classified according to whether the condition is the first, second or both motor-neurons, and amyotrophic lateral sclerosis (ALS) is the most frequent form⁴.

We present the case of a patient with FTD, with an evolution of 1 year, who developed MND.

A 59-year-old woman, right handed, with no family history of neurodegenerative disease or personal history of psychiatric illness. Only a mild dyslipidemia can be highlighted. The patient had suffered from alterations in personality, talkativeness, daytime sleepiness, easy laughter, great difficulty in crying and psychotic disorders for

1 year: "the paintings in her house talked to her, and an impairment of speech had appeared in the last month".

Physical examination, with cardiopulmonary auscultation, was normal. Neurological examination showed that the patient was oriented in all three areas; she presented mild dysarthria, normal cranial nerves, except for a slight left hypoglossal paresis with some fasciculation in that territory; without myoclonus, ataxia and dysmetries; the strength, tone, sensation and reflexes were normal in the limbs and there were no fasciculations. Gait was also normal. In the neuropsychological study, the results were: MMSE, 29/30; clock test, 9/10; verbal fluency, 12; Trail Making A, 48 s; FAB, 13. Additional tests performed (biochemical, haemogram, serology (including HIV), thyroid hormones, vitamin B12 and folic acid) were normal.

Cranial computed tomography (CT): temporal atrophy. Cerebral and cervical magnetic resonance imaging (MRI): temporal atrophy and small meningioma of the right frontal sulcus; the rest was normal. Conduction studies of motor and sensory nerves were normal and no blockages were observed. The electromyographic study of muscles dependent on the cervical, lumbosacral and bulbar regions revealed a diffuse and asymmetric neurogenic pattern, with greater expression in the left side, with mild to moderate acute denervation activity. Thus, the patient met the DSM IV diagnostic criteria for frontotemporal dementia, associated in this case with motor neuron disease.

The great importance of the social impact of FTD, as of MND, its pre-senile onset, higher frequency in cases of family history (up to 50% in FTD), the burden on caretakers and the possibility of carrying out genetic advice and study³ (up to 20% of patients with an association of these two diseases may have a history of ALS and up to 40% of FTD⁵), makes us give more importance to this association since, although rare, in recent years it is being noted that it is becoming more important, perhaps because it was previously underdiagnosed.

The FTD diagnosis is mainly clinical; we rely on the DSM-IV criteria, consisting of personality changes, alterations in behaviour and in language, among others. Greater relevance should be given to psychotic disorders such as paranoid delusions, which barely receive importance in most studies. However, one study has observed it in up to 30.3% of patients as a first complaint, and in up to 69.2% in the first visit¹.

We must remember that with the use of imaging techniques it is possible to find frontotemporal atrophy in 62% and even decreased glucose metabolism in frontal areas^{3,6}. However, this is not always the case and we may not find atrophy or, as in this case, an atrophy of temporal areas in isolation, without a frontal condition.

The incidence of FTD in Spain is 14/100,000 inhabitants, and the incidence of ALS is 5-6/100,000 in Western European countries; only 2% do develop the ALS-dementia complex^{7,8}. This indicates that it is highly unlikely for the two diseases to occur together, but there are studies showing that in up to 10% of FTD cases, where there was no MND clinic, a motor-neuron condition can be observed^{4,9}.

In our case, we noticed the speech alteration described by the patient's family, which led us to objectify the hypoglossal paresis and thus to search for MND, as she presented no other clinical manifestations that made us think of it.

Both diseases usually occur almost simultaneously and, when this happens, have a severe, rapid progression^{6,10}. In this patient, contrary to what has been described, the MND appears (currently, subclinical) after 1 year of evolution of the FTD, no doubt of slow evolution, which confers her better prognosis than expected. Although at present she only presented affection of the lower motor neuron, she will most likely end up suffering first motor neuron lesions.

The prognosis in these cases, where both neurodegenerative diseases coexist, is very unfavourable; it can vary between 4 and 10 years³. For all these reasons, it is vitally important to search for such an association, to anticipate all the processes that may be necessary in the case of future complications, specific to the disease progression.

Ultimately, this case highlights that the occurrence of MND is not always simultaneous with that of FTD, nor must it be accompanied by a terrible evolution. We therefore consider that, in patients with FTD, adequate clinical monitoring and thorough neurological examination designed to accept that signs of motor-neuron disease might coexist

are of great importance. This requires keeping it in mind in our differential diagnoses when faced with a cognitive impairment of the frontal type.

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PANDAS: adult variant

PANDAS, variante del adulto

Dear Editor:

Streptococcal infection in childhood is usually benign and with a self-limited presentation, although a small percentage of children may develop neurological and/or neuropsychiatric disorders¹. Sydenham chorea (SC) is the best known of these

entities, but PANDAS (Paediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal throat infection) is another well-defined syndrome in which tics and obsessive-compulsive disorder (OCD) may be caused by beta-haemolytic group A streptococci (BHGAS) infection. SC is the neurological manifestation of rheumatic fever (RF) and, although it is true that there may be overlap between this entity and PANDAS, the latter is well distinguished from SC by the absence of carditis (with equal prevalence in the general population) and chorea infection itself^{2,3}.