**Introduction**

Behçet’s disease (BD) is an infrequent systemic inflammatory process with an autoimmune basis that primarily affects young, white men. It is usually manifested as recurrent oral and genital ulcers, polyarthritis, skin (eritema nodosus, folliculitis, pathergy, pustules, and papules) and eye alterations (anterior or posterior uveitis, retinal vasculitis). Other organs may be affected, among them the nervous system. Its ethiopathogenesis is not clear and there are no genetic or biological markers for their diagnosis or follow-up.1

**Clinical observation**

A 28-year-old male patient was admitted to our hospital with fever, headache, nausea, malaise, and myalgias lasting for 48 h,
accompanied by bilateral dysesthesia and clumsiness of the upper right extremity.

The general physical examination and the vital signs were normal, except for the presence of fever. The neurological examination showed sixth cranial nerve paresis, upper right extremity paresis, neck stiffness, and papilledema.

In the Emergency Room a complete laboratory analysis was normal except for an erythrocyte sedimentation rate of 25 mm/h. A lumbar puncture was performed which showed an opening pressure of cerebrospinal fluid (CSF) of 23 cm of water; 140 leukocytes, with 90% mononuclear cells; 85.6 mg/dL of protein, and glucose 45 mg/dL. The microbiologic CSF exams (gram stain, ink stain and direct antigen testing) were negative.

Faced with the clinical data and tests performed in the ER, wide-spectrum empirical antibiotic treatment was begun, in spite of which symptoms persisted. Two days after hospitalization, a painful scrotal ulcer appeared. The patient was reinterrogated and admitted a history of oral ulcers at least on 3 occasions in the past year and recurrent folliculitis. A magnetic resonance of the nervous system was performed that showed hyperintense lesions in the potentiated T2 sequences in the left paramedical region of the protuberance, which presented a nodular enhancement after the infusion with gadolinium, as well as a filling image of the left transverse sinus compatible with thrombosis (Figure). The rest of the serological, immunological, and microbiological studies were negative. Intravenous treatment with high-dose steroids and anticoagulants was begun, with the symptoms disappearing. Azathioprine was opted for in the long term but the lack of compliance on the part of the same patient. Currently, the relationship between the appearance of thrombogenic episodes, due to a thrombophilia probably unleashed by primary endothelial dysfunction, and parenchymal manifestations in the midst of a vasculitis assumedly generated by immune complexes, is unknown.4,5 Physiopathology of the parenchymal manifestations is not exactly known because anatomoclinical series are not very extensive. Some anatomoclinical studies have shown areas of meningoencephalitis with low grade chronic lymphocyte infiltrates, as well as perivenular and periarteriolar neutrophilic, plasmocytuc and lymphocytic infiltrates and zones of multifocal necrosis which tend to localize on the stem and spinal cord.4 There can also be peripheral nervous system affection (mononeuritis multiplex, polyradiculoneuritis, myositis).7 Occasionally, neuropsychiatric manifestations can be seen (depression, dementia, psychosis, chorea), as well as vestibular, gastrointestinal, vascular (thromboflebitis, thoracic aneurism), cardiac (pericarditis, myocarditis), renal, and urological (urethritis, epididimitis) affection.

The treatment of the neurological manifestations of BD is controversial because of the clinical and physiopathological heterogeneity, the difficulty in predicting the clinical progression and the absence of controlled trials. Large intravenous doses of methylprednisolone are usually used for treating flares in addition to background immunosuppressants in order to avoid relapse.8 There is no evidence on which immunosuppressant is most useful for neuroBehçet cases, and their use is based on empirical observations. The most commonly used drugs are azathioprine, methotrexate, or monthly boluses of cyclophosphamide; the use of cyclosporine is not recommended because worsening of neurological manifestations has been associated to it.3,10 The selection of the drug is based on operational criteria and recommendations from task forces and expert consensus, more than on solid scientific evidence. Regarding other drugs employed for eye or systemic manifestations of BD, such as mycophenolate mofetil, infliximab, or etanercept, there is no current information available on its potential use in neuroBehçet.11,12

Discussion

Nervous system involvement occurs in 5% of cases of BD and is exceptional at the moment of diagnosis. In addition, it is rare that the neurological observations precede classical manifestations such as ulcers or uveitis.2 The central nervous system can be affected in several ways; as parenchymal alterations (aseptic meningoencephalitis, with predominant rhombencephalitis and myelitis) and extraparenchymal or secondary, due to the appearance of thrombotic arterial or venous episodes that affect the central nervous system. The latter suppose approximately 20% of cases of neuroBehçet in most of the described series.1 It is exceptional that both manifestations coexist in the same patient. Currently, the relationship between the appearance of thrombogenic episodes, due to a thrombophilia probably unleashed by primary endothelial dysfunction, and parenchymal manifestations in the midst of a vasculitis assumedly generated by immune complexes, is unknown.4,5 Physiopathology of the parenchymal manifestations is not exactly known because anatomoclinical series are not very extensive. Some anatomoclinical studies have shown areas of meningoencephalitis with low grade chronic lymphocyte infiltrates, as well as perivenular and periarteriolar neutrophilic, plasmocytuc and lymphocytic infiltrates and zones of multifocal necrosis which tend to localize on the stem and spinal cord.4 There can also be peripheral nervous system affection (mononeuritis multiplex, polyradiculoneuritis, myositis).7 Occasionally, neuropsychiatric manifestations can be seen (depression, dementia, psychosis, chorea), as well as vestibular, gastrointestinal, vascular (thromboflebitis, thoracic aneurism), cardiac (pericarditis, myocarditis), renal, and urological (urethritis, epididimitis) affection.

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Figure. A) Transversal fluid-attenuated inversion recovery (FLAIR) sequence; hyperintense cerebral and stem image (white arrow). B) Coronal FLAIR sequence; left transverse sinus thrombosis (white arrow).
Regarding anticoagulant treatment, its use is also controversial and, once again, there are no controlled trials available. Most of the authors agree on the use of anticoagulant or antiplatelet agents, with or without steroids, for the treatment of thrombosis of the cerebral venous sinuses, but there is no consensus on which drug to use (sodium heparin, low molecular weigh heparins, oral anticoagulants, antiplatelet drugs) nor the time they should be employed, making it important to perform an individualized recommendation in each case based on the experience of the medical team and the patients preferences.

Conclusions

The diagnosis of BD is clinical and in order to facilitate such a process, diagnostic criteria have been developed. The case we present is an extremely rare presentation of BD, with affection of the nervous system manifested by severe rhombencephlitis and simultaneous thrombosis of the cerebral venous sinuses. In the largest series published to date, this coincidence has been seen in less than 1% of neurobehçet cases. This process must be suspected in all cases of aseptic lymphocytic meningoencephalitis or cerebral venous thrombosis without other prothrombotic risk factors.

References