



## Letters to the Editor

### Transverse Myelitis and Bilateral Optic Neuritis in a Patient With Systemic Lupus Erythematosus<sup>☆</sup>

#### *Mielitis transversa y neuritis óptica bilateral en una paciente con lupus eritematoso sistémico*

Dear Editor:

Optic neuromyelitis (ONM) or Devic's syndrome is an inflammatory demyelinating central nervous system (CNS) disease, defined by the presence of optic neuritis, transverse myelitis affecting 3 or more spinal segments and seropositivity for antibodies directed against aquaporin 4 of astrocytes (NMO-IgG), in the absence of signs of brain lesions suggestive of multiple sclerosis (MS).<sup>1</sup>

We report the case of a 34-year-old woman diagnosed with lupus erythematosus (SLE) at age 18. During the course of the disease she presented malar rash, polyarthritis, serositis, positive antinuclear antibodies (ANA), anti-native DNA antibodies (anti-DNA) and several episodes of glomerulonephritis, for which she received pulse intravenous (iv) cyclophosphamide and maintenance therapy with azathioprine, suspended when she was 29 and remained stable.

Her initial chief complaint was dysphagia caused by esophageal diverticulum. At that time she received prednisone (7.5 mg daily) and hydroxychloroquine (400 mg daily). After 48 h, she had an episode of acute low back pain and paraparesis and a few hours later it became paraplegia with areflexia, tactile and painful hypesthesia, abolished sense of position and a distended bladder. The exploration of the upper extremities was normal. To this a total blindness of the left eye (LE) and a significant decrease in visual acuity of the right eye (RE) was added. We performed magnetic resonance imaging (MRI) of brain and orbit which showed findings consistent with bilateral optic neuritis. The thoracolumbar spine MRI disclosed a lesion compatible with transverse myelitis in the segment between the D7 vertebral body and the conus medullaris. The cerebrospinal fluid analysis revealed 576 leukocytes/mm<sup>3</sup> with 95% polymorphonuclear and 0 erythrocytes/mm<sup>3</sup>. Proteins were 347.79 mg/dl with normal glucose. Cultures, Gram stain, smear, Lowenstein culture and herpes simplex 1 and 2, varicella zoster and enterovirus PCR testing were negative. The ADA was 17.1 U/l. Ophthalmologic examination revealed a bilateral afferent pupillary defect and a deficit in bilateral visual acuity (perception of large forms and hard colors in total amaurosis of the LE and RE). The fundus was normal. ANA titer was 1/1.280 and anti-DNA Ab 54 U/ml. Extractable core antibodies were negative. Complement levels were low. Coagulation was normal and anticardiolipin,

antiphospholipid antibodies and lupus anticoagulant were negative. We established a diagnosis of ONM and started treatment with methylprednisolone 1 g iv/day for 5 consecutive days, 1 g iv cyclophosphamide and 1 g/kg iv immunoglobulin for 2 consecutive days. This was repeated a month later. Five weeks later, the patient was able to distinguish large forms with her LE and to distinguish colors and count fingers with the RE. There was no improvement in mobility of the lower extremities. Cervical, thoracic and lumbar spine MRI was performed, where 2 multisegmental intramedullary lesions were observed: the first one located from D7 to the conus medullaris and showed no changes from the previous MRI, and the second in the left posterolateral region of the conus medullaris at C4–C5, both compatible with transverse myelitis.

After 6 years with continued azathioprine treatment, the patient remained paraplegic and with a significant visual deficit (blurred RE vision and able to distinguish large forms with the LE). She has had no new episodes of ONM.

ONM is a rare and severe CNS demyelinating inflammatory condition characterized by the coexistence of optic neuritis and transverse myelitis. The description in 2004 of the IgG-NMO1 allowed the establishment, in 2006, of a new diagnostic criteria to distinguish this disease from MS.<sup>2</sup> It is estimated that the annual incidence of ONM is 0.4 cases per 100 000 persons/year and prevalence in Caucasians is 4.4 cases per 100 000 population.<sup>3</sup> The course can be a single episode or recurrent and, although it may be idiopathic, it is often associated with autoimmune diseases such as SLE or Sjögren's syndrome, presence of autoantibodies, infectious agents and exposure to drugs. The involvement of B lymphocytes with the participation of NMO-IgG in relapses<sup>4</sup> has been proposed as contributing to its pathogenesis. MRI reveals hyperintense T2 images in 3 or more spinal cord segments and optic nerve damage that is enhanced after gadolinium administration. These findings differ from those observed in MS.<sup>5</sup> The immediate start of aggressive treatment with high dose IV methylprednisolone and cyclophosphamide is essential to reduce the consequences of acute episodes.<sup>6</sup> Azathioprine has been shown to reduce recurrence,<sup>7</sup> although the prognosis is generally unfavorable.

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## **Hyperparathyroidism, A Forgotten Cause of Musculoskeletal Pain\***

### ***Hiperparatiroidismo, una causa olvidada de dolor músculo-esquelético difuso***

*To the Editor,*

Endocrine disorders often have rheumatic manifestations, which can sometimes be the first characteristic of the disease. Among these disorders is hyperparathyroidism, which is classically manifested by the presence of kidney stones, fractures, pancreatitis and psychiatric disorders.<sup>1</sup> A woman aged 57 was admitted due to widespread pain, sleep disturbances, headache, fatigue and loss of function of upper and lower limbs. Nine months earlier she had been diagnosed with fibromyalgia, having been treated with fluoxetine 20 mg/day and clonazepam 1 mg/day without improvement. Laboratories prior to admission showed an erythrocyte sedimentation rate (ERS) 31 mm/h, hematocrit 35%, hemoglobin 11 mg/dl, CPK 62 U/l (VN to 165), C reactive protein (–). At the time of admission, the physical examination of the patient showed no peripheral arthritis, muscle strength was normal in the neck and pelvic girdle, and she presented positive trigger points for fibromyalgia (18/18). Analysis showed ESR 49 mm/h, serum calcium 13.5 mg/l (VN 8.5–10.5), phosphate 1.9 mg/l (VN 2.4–4.1), alkaline phosphatase 900 U/l (230–460 V). Radiographs showed radiolucent lesions in the clavicle and salt and pepper lesions of the skull. The abdominal ultrasound showed a 6 mm kidney stone at the middle calyx of right kidney. The chest CT observed lytic sack lesions, and a neck tumor formation that could be from the thyroid or parathyroid. The patient underwent a bone scan with <sup>99m</sup>Tc, which showed an increased uptake in the skull, the maxillofacial region, posterior rib areas and long bones of the lower limbs (Fig. 1A and B). The levels of parathyroid hormone (PTH) were 1900 pg/ml (VN

42–72). Diagnosed with primary hyperparathyroidism, she underwent a resection of the tumor, with a pathology report parathyroid follicular adenoma. Musculoskeletal symptoms, as well as fatigue and sleep disorders, showed marked improvement after surgical treatment. Primary hyperparathyroidism is the third most frequent endocrine disorder in women between 50 and 60 years and the most common from is the single adenoma (80%–85%), followed in frequency by 4-gland parathyroid hyperplasia (10%–15%) and to a much lesser degree by parathyroid carcinomas (less than 1%); sometimes, this disorder may be part of a hereditary syndrome such as multiple endocrine neoplasia type 1 or 2.<sup>2,3</sup> Current diagnostic methods rely on elevated serum calcium levels, found in 70%–80% of patients who are asymptomatic at the time of diagnosis and have the disease detected by the incidental presence of hypercalcemia.<sup>1,2</sup> Patients may complain of nonspecific disorders, such as fatigue, depression, weakness, memory loss, sleep disturbances and altered concentration.<sup>4</sup> The presence of arthralgia and myalgia, particularly affecting the proximal muscles of the shoulder and pelvic girdles, mimicking polymyalgia rheumatica, is frequent, and arthritis can also mimic gout or pseudogout.<sup>5,6</sup> Our patient reported sleep disturbances, fatigue, strength loss of arms and legs and generalized musculoskeletal pain; symptoms did not improve with drug therapy. Other clinical manifestations are at the neuromuscular level,<sup>7</sup> paresthesias and cramps. The improvement of symptoms after excision of the adenoma suggests the causal relationship with hyperparathyroidism. Thomas and Podduturu reported a patient with a previous diagnosis of fibromyalgia who received multiple treatments with no improvement, in whom high levels of PTH were found, receiving treatment for hyperparathyroidism, which led to the resolution of pain.<sup>8</sup> In conclusion, we believe that routine determination of serum calcium and phosphorus should be performed in patients with generalized pain syndromes in which fibromyalgia or polymyalgia rheumatica is suspected.

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