Acute lupus myelitis affecting the clonus medullaris

Sir,

Acute transverse myelopathy (ATM) is a rare manifestation of systemic lupus erythematosus (SLE). An SLE patient who developed ATM involving the clonus medullaris during the course of her disease is here reported. The occurrence of lupus myelitis in this region of the spinal cord is exceptionally rare.

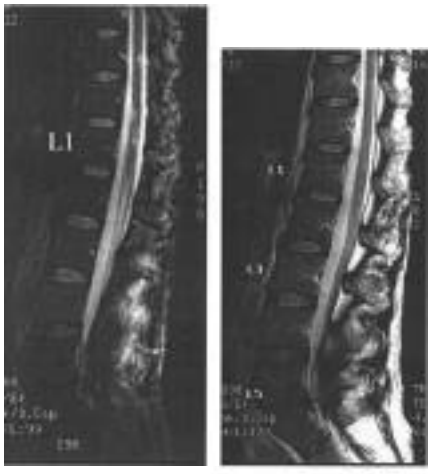
A 37-year-old Chinese woman with a 7-year history of SLE was admitted because of a major flare of her disease with fever, arthritis, skin rash, myositis, seizure, haemolytic anaemia and heavy proteinuria (4 g/day). A renal biopsy revealed diffuse proliferative nephritis. She was positive for anti-Sm, anti-Ro and anti-nRNP. Complement levels were depressed (C3 23 mg/dl [NR 60 - 130], C4 7 mg/dl [NR 13 - 60]) while the anti-ds DNA titre was grossly elevated (> 450 IU/ml [NR < 35]). She was treated with i.v. pulse methylprednisolone (1 g/day for 3 days), followed by oral prednisolone 40 mg/day. Her fever subsided and there was an initial improvement of the hemoglobin and arthritis.

Three weeks later the patient developed sudden urinary retention and bilateral lower limb weakness. Physical examination showed bilateral foot drop and hypotonia of both lower limbs with absent knee and ankle jerks. Muscle power was diminished to grade 2 on the right side and grade 3 on the left, the proximal and distal muscles being similarly affected. The plantar response was normal. Her anal tone was increased and she became catheter-dependent. A nerve conduction study confirmed bilateral polyradiculopathy involving the lumbosacral plexus. A cerebrospinal fluid (CSF) examination was normal, including a negative oligoclonal IgG band. Magnetic resonance imaging (MRI) of the spinal cord revealed swelling and multiple hyperdense signals at the lower thoracic cord and the clonus medullaris (Fig. 1a) which was compatible with multiple areas of vasculitis. There was no evidence of vascular thrombosis. Her IgG-anticardiolipin antibody (ACA) was moderately elevated (23 U/ml [NR < 10]), but the IgM-ACA and lupus anticoagulant were repeatedly negative.

The patient soon lapsed into high fever and mental confusion. A brain MRI showed vasculitic lesions involving the frontal lobe. Because she was immobilized, a large, deep sacral pressure sore rapidly developed and became infected. Septicaemia also developed from a catheter-related urinary tract infection. In view of the intercurrent sepsis, further steroid pulses were considered to be risky. Prednisolone was augmented to 60 mg/day and oral cyclophosphamide (50 mg/day) was added, together with broad spectrum antibiotics. The patient gradually recovered over the next 5 weeks, as she was weaned off the urinary catheter. However, some residual weakness of the right leg remained, which necessitated a tripod for walking. A repeat MRI after her recovery showed resolution of the hyperdense T2 signals (Fig. 1b).

Myelopathy is a rare complication of SLE. The cervical and thoracic cords are most commonly affected. Involvement of the lumbosacral cord is exceptional and a lesion at the clonus medullaris is extremely rare. Our SLE patient developed bilateral lower weakness and sphincter dysfunction with mixed upper and lower motor neuronal signs, which are characteristic of a lesion at the clonus medullaris. Because of sepsis, aggressive immunosuppressive treatment was not given and it is not clear whether this may have contributed to her delayed and incomplete neurological recovery.

The pathogenesis of lupus myelopathy is unclear. The most common pathological changes of the spinal cord include ischaemic necrosis, peripheral white matter degeneration, and cord compression by subdural haematoma (1). Immune complex-mediated vasculitis does not seem to be the sole mechanism, as evidence of complement activation is not universally present (2-4). Lavalle *et al.* (5) reported a strong association between ATM and antiphospholipid antibodies. The authors postulated that lupus myelitis may be related to vascular thrombosis or to a direct interaction between antiphospholipid antibodies and spinal cord phospholipids. Despite the presence of a moderately positive IgG-ACA in our patient, the absence of MRI evidence of cord thrombosis and her improvement after immunosuppressive treatment did not suggest ischaemia to be the chief mechanism for the spinal cord dysfunction.



(a) **(b)**

Fig. 1. (**a**) T2-weighed MRI image of the spinal cord showing hyperdense signals at T11 and the clonus medullaris, representing multiple areas of vasculitis; (**b**) MRI of the same patient 8 weeks after immunosuppressive treatment.

There are no pathognomic tests for lupus myelopathy. Structural lesions must be excluded first. CSF abnormalities such as pleocytosis, elevated protein and suppressed sugar levels are present in most cases (1, 2, 4, 6). However, in a recent series by Chan *et al.* (7), none of their SLE patients undergoing lumbar puncture for myelitis demonstrated CSF abnormalities. Around 38% of our SLE patients with acute transverse myelopathy did not show abnormal CSF findings (8). Thus, the absence of CSF abnormalities, as in the present patient, cannot exclude the possibility of myelitis.

MRI is a useful investigation for lupus myelitis, since it is both non-invasive and sensitive. However, abnormal MRI signals may not be exclusively present (8, 9). The specificity and sensitivity of MRI in the diagnosis of lupus myelitis has yet to be evaluated in larger patient series. The optimal treatment strategy for ATM in SLE is unknown as controlled trials are lacking. High dose corticosteroid and i.v. pulse cyclophosphamide has gained wide acceptance recently (2, 3, 5, 10). Early and prompt aggressive immunosuppressive treatment may be associated with a better functional outcome (4, 6, 11).

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Vasculitis and oral and genital ulcers: Behçet´s syndrome or HIV infection?

Sir,

Rheumatic diseases in the course of human immunodeficiency virus (HIV) infection are not common. Septic arthritis and psoriatic arthritis are the most frequent rheumatic syndromes described (1, 2). Vasculitis is being increasingly reported in the setting of HIV infection. Behçet's syndrome is a disease with protean vasculitic manifestations that has been occasionally described in association with HIV infection (3-6). We present a case of Behçet's syndrome and HIV infection.

A 40-year-old Caucasian woman was admitted to hospital with a 15-day history of swelling and pain of the right ankle, right knee and right wrist. She complained of recurrent oral and genital ulceration. Her past medical history revealed that she used to be an intravenous drug abuser (heroin). She abandonned the habit 5 years ago.

On physical examination there were erythematous papules, vesicles and ulcers (0.5 cm in diameter) on both arms and legs. Several ulcers were noted on the buccal mucosa and vagina. Arthritis was present on the right knee, ankle and wrist. The rest of the physical examination was normal.

Laboratory findings included: ESR 60 mm/hr, haemoglobin 99 g/L, and leucocyte count 7.02 x 10^9/L with a normal differential. Electrolytes, BUN, creatinine and a liver function test were within the normal range. Rheumatoid factor (nephelometry) and antinuclear antibodies (rat substrate) were negative. HLA was not determined. Pathergy was not present. A chest x-ray was normal. Knee aspiration yielded a yellow fluid with 1840/mm^3 WBC (6% polymorphonuclear, 15% lymphocytes, 79% monocytes). Crystals were not observed and a culture was negative. A skin biopsy was performed and microscopic examination showed a leukocytoclastic vasculitis. HIV serology (enzyme linked inmunosorbent assay and Western blot analysis) was positive and CD4 lymphocytes were 174 mm^3. Plasma HIV-1 RNA (Amplicor, Roche Molecular System, Inc., Madrid) was of 357.476 copies/ml. Cultures from the genital ulcers were negative. Biopsy of the oral ulcers showed an eroded epidermis and lymphocytic and monocytic inflammatory infiltrates in the dermis. There was no evidence of malignancy or infection. An ophthalmological examination was normal.

Treatment with prednisone (40 mg daily) was begun and her symptons improved quickly. Retroviral treatment with estavudine, amivudine and indinavir was added. When prednisone was tapered to 10 mg, the arthritis and oral and genital ulcers recurred.

The association of Behçet's syndrome and HIV infection is rare. We performed a literature search (Medline 1985-1997) and found 4 other cases (3-6), whose characteristics are summarized in Table I. All patients fulfilled the international criteria for Behçet's disease, except for the one reported in reference 5 (oral and genital ulcers) (7). The association of Behçet's syndrome and HIV infection is controversial. The two diseases share many clinical features, namely arthritis, oral and genital ulcers and vasculitis. Interestingly enough, in a Spanish study HIV serology (ELISA) was performed on a cohort of 23 patients with Behçet's disease and negative results were obtained in all cases (8). There are no epidemiological studies to suggest an association between the two diseases, but considering the cases reported in the literature, an association between HIV infection and Behçet's disease may exist (3-6).

Table I. Characteristics of patients with Behçet's disease and HIV infection.

	Age	Sex	Race	Transmission	Stage
Reference 4	33	male	white	heterosexual	B1
Reference 3	25	male	white	i.v. drug abuser	A2
Reference 5	69	male	white	heterosexual	A2
Reference 6	27	female	black	heterosexual	B3

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Highly positive dsDNA antibodies in minocycline-induced lupus

Sir,

We read with great interest the cases reported by Knights *et al*. dealing with the condition of minocycline-induced arthritis (1). We would like to report the first case of minocycline-induced lupus associated with high titers of dsDNA antibodies.

A 22-year-old female was admitted in August 1997 for a four-week history of jaundice and abdominal pain. Her past medical history included facial acne for which she had been taking minocycline 100 mg daily for 2 years. Two weeks before her hospitalization, she stopped minocycline on her own initiative because her acne was improving.

On admission she had no fever, arthralgia, myalgia, nor cutaneous involvement (except for a slight facial acne). Her physical examination was normal. Laboratory studies revealed acute hepatic cytolysis (ALAT 12N,