DIFFICULT DIAGNOSIS OF NEUROINFECTION IN A LUPUS PATIENT WITH NEUROPSYCHIATRIC SYMPTOMS – A CASE OF NEUROTUBERCULOSIS WITH CATASTROPHIC OUTCOME

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BACKGROUND

Although the incidence of infectious meningitis in systemic lupus erythematosus (SLE) is low, a mortality rate of more than 40% has been reported. Frequently, discriminating the infection and lupus flare is challenging, given that manifestations of infection are quite similar to those of neurolupus.

CASE REPORT

A 37-year-old man with a 7-year history of SLE (cutaneous lupus, polyarthritis, positive anti-cell antibody and anti-dsDNA by *Crithidia luciliae*) was admitted with mental confusion and weakness. He was being treated with hydroxychloroquine (4 mg/kg/day), azathioprine (1 mg/kg/day) and prednisone (20 mg/day) and had poor medication adherence. He had been complaining of fever (39 °C), prostration and headache over two weeks. Vomiting, mental confusion, gait disturbance and bladder retention developed in the last five days. On examination, he was febrile (41 °C) with disorientation and asymmetrical lower limb paraparesis, without mucocutaneous lesions or synovitis. At emergency department, spinal epidural abscess was suspected and empirical treatment with ampicillin, ceftriaxone, acyclovir and dexamethasone was introduced. Brain CT was normal and cerebrospinal fluid (CSF) analysis revealed 635 leucocytes (65% neutrophils), increased protein (169), low glucose (4), low adenosine deaminase (4) and negative results for gram stain, direct exams for BAAR and fungi and aerobic cultures. Cerebrospinal fluid viral PCR panel, multiplex PCR for mycobacteria and other cultures were in progress. Laboratory tests were remarkable for lymphopenia (540/mm³), C-reactive protein 8 mg/L, low C4 (6.4 mg/dL) with normal C3 (91 mg/dL), positive anti-dsDNA (2.5; ELISA cutoff < 1), anti-SSA/Ro > 174, anti-SSB/La > 100 and urine with leukocyturia and nondysmorphic hematuria. Blood cultures were negative and renal function was normal. Tests for HIV, syphilis, hepatitis B and C were negative. Spinal MRI and chest CT were normal. Initially, cranial MRI could not be obtained due to psychomotor agitation. Despite treatment, he presented with worsening (left eyelid ptosis and mydriasis). So, vancomycin, fluconazole and antituberculosis therapy were added to the treatment schedule. Facing the disease severity and possibility of lupus activity along with the infection, neurology team also introduced intravenous pulse dosing of methylprednisolone 1 g/day. After 48 h, brain MRI was performed and showed meningeal enhancement and secondary vasculitis. Cerebrospinal fluid PCR result was then available and positive for *Mycobacterium tuberculosis*. Methylprednisolone was tapered. Unfortunately, there was clinical deterioration and the patient died after 7 days.

CONCLUSION

This case highlights that persevering search for infection must be carried out in SLE patients with neurological symptoms. High fever, high corticosteroid dose, and abnormal CSF are important clues for the coexistence of infectious meningitis, especially tuberculous meningitis.

KEYWORDS

Systemic lupus erythematosus, Tuberculosis, Neuropsychiatric lupus.