An adolescent with lupus nephritis presenting with fever, lymphadenomegaly, and arthralgia: Questions

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Case report

A 17-year-old girl was admitted with complaints of malar rash, alopecia, headache, and arthralgia for the past year. Laboratory test results were as follows: Hemoglobin 10 g/dL (12–16), erythrocyte sedimentation rate (ESR) 74 mm/h, proteinuria 123 mg/m²/h (< 4), albumin 2 g/dL (3.5–4.5), direct Coombs test (+ 3), ANA 1/3200, anti-dsDNA 1/300–1/1000, anti-Sm (+ 1), C3 35 mg/dL (90–180), C4 7 mg/dL (10–49). Renal function tests and serum electrolytes were within normal range.

She was considered to have anemia of chronic disease and compensated autoimmune hemolytic anemia. Renal biopsy was compatible with class 2 and 5 lupus nephritis. She was diagnosed with systemic lupus erythematosus (SLE) according to the American College of Rheumatology (ACR) and Systemic Lupus International Collaborating Clinics (SLICC) [1, 2]. She was treated with oral prednisolone and hydroxychloroquine until renal biopsy results were available, and after that mycophenolate mofetil (MMF) (2 g/day) was added to the treatment.

She presented with fever, general malaise, and painful swellings in the right side of the neck and right armpit on the 8th day of this treatment. Physical examination was characterized by fever (38.3 °C) and tender, soft, and mobile lymph nodes of 1.5 cm in diameter in right axillary and supraclavicular regions. Ultrasonography disclosed multiple lymph node enlargement, the biggest one being 13–15 mm in diameter in these regions. Laboratory evaluation was characterized by leukocytosis (WBC

29.000/mm³), increased ESR (97 mm/h), C-reactive protein (CRP, 235 mg/L; normal range < 5), and procalcitonin (11.5 ng/mL; normal range < 0.1 ng/mL). Eosinophils and IgE levels were normal. Tests for disease exacerbation showed normalized C3 and C4 and decreased anti-dsDNA and proteinuria levels. As we could not exclude infectious etiology, we discontinued MMF and started parenteral antibiotic treatment.

Her clinical findings regressed within 48 h and the antibiotics were completed to 10 days. All cultures and serological tests for an infectious etiology including EBV, CMV, syphilis, rubella, toxoplasma, hepatitis A virus, hepatitis B virus, hepatitis C virus, human immunodeficiency virus, parvovirus, brucella, and tuberculosis were negative. MMF was restarted at the same dose and she was discharged from the hospital. Nevertheless, she was readmitted with severe immobilizing pain and prominent tenderness to palpation both in her knees and ankles after 3 days. There was no swelling, erythema, or limitation of motion in the affected joints. Joint pain was resistant to paracetamol. Her WBC count was mildly elevated (15.600/mm³), ESR 45 mm/h, and CRP 6 mg/L. There was no source of infection nor flare of disease. A change in the treatment protocol led to the improvement of symptoms within two days.

Question

What is the cause of fever, lymphadenomegaly, and arthralgia in this patient?

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflicts of interest.

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