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LETTER TO THE EDITOR

PANDEMIC INFLUENZA A/H1N1 VIRUS IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Dear Editor,

A new outbreak of flu, called pandemic influenza A/H1N1, has been reported throughout the world, affecting thousands of patients. Here, the authors describe for the first time a patient with systemic lupus erythematosus (SLE) and antiphospholipid syndrome who developed an A/H1N1 infection and had a positive outcome.

A 22-year old female patient, with SLE since the age of seven, characterized by malar rash, alopecia, arthritis, pericardial effusion, renal disease, anti-dsDNA and anti-ribosomal P antibodies, had been using chloroquine diphosphate (250 mg/day), azathioprine (150 mg/day) and prednisone (5 mg/day), without active lupus at the time. At the age of 20 she had a stroke, with various positive dosages of IgG (64 and 28GPL) and IgM (120 and 36MPL) anticardiolipin antibodies; she was treated with aspirin (300 mg daily). The patient came to our emergency room on August 11th, 2009, with a dry cough and fever. The physical examination revealed diffuse wheezing and snoring, with a normal respiratory frequency. The chest radiography revealed no pulmonary or pleural changes. SpO2 was 97%. A diagnosis of tracheobronchitis was performed, and antibiotic treatment with ceftriaxone (2 g/day) and clarithromycin (1 g/day) was also introduced. At that time, Brazil was at the peak of the pandemic influenza A/H1N1 outbreak and, due to the patient's immunosuppressed state, oseltamivir was added (75 mg twice daily for five days), and a respiratory isolation was initiated. At that moment, the white blood cell count was 13,100 (neutrophils 8700, lymphocytes 2200 and monocytes 2000); platelets 302,000; creatine kinase (CK) 131 U/L (reference: 26-192 U/L); creatinine 0.61 mg/dL (reference: 0.7-1.2 mg/dL); lactate dehydrogenase (LDH) 515 U/L (reference: 240-480 U/L); and C-reactive protein (CRP) 25.7 (reference: < 3 mg/L), which reached 50.4 mg/L after three days. The liver enzymes showed a slight increase in aspartate aminotransferase (AST) at 35 U/L (reference: < 35 U/L); alanine aminotransferase (ALT) 41 U/L (normal: < 31 U/L); alkaline phosphatase 137 U/L (reference: 35-104 U/L); and gamma-glutamyltransferase (gamma GT) 253 U/L (reference: 5-36 U/L). The abdominal ultrasound was normal. The serologies for hepatitis B and C, HIV, syphilis, rubella and toxoplasmosis were negative. Lupus remained inactive throughout the period, with activity index SLEDAI = 0, negative anti-dsDNA and anti-ribosomal P, and normal complement levels (C3: 140 mg/dL and C4: 36 mg/dL). The real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) in nasopharyngeal secretions was positive for the RNA of pandemic influenza A/H1N1. The patient remained hospitalized in respiratory isolation for nine days. By the end of this time, the patient was asymptomatic and was discharged. At this time, her blood tests showed normal liver enzymes, CK 74U/L, creatinine 0.70 mg/dL and CRP 2.68 mg/L. Currently she is asymptomatic, using chloroquine, azathioprine and aspirin in the same dosages as previously and her prednisone has been reduced to 2.5 mg/day.

An outbreak of a new influenza, called pandemic influenza A/H1N1, was reported in March 2009 by the World Health Organization. Later, it spread to 74 countries in a pandemic scenario, with a fatality rate of 0.5%[3]. In Brazil, 9,249 (20%) patients presented infection with novel influenza A (H1N1) virus. Seasonal influenza A infection was confirmed in 1,152 (2.5%) patients[2]. Individuals identified as being at high risk for complications and high mortality in pandemic influenza A/H1N1 infection are those under the age of two years old or more than 60 years old, pregnant women, those with chronic diseases such as chronic obstructive pulmonary disease, heart failure, and obesity and immunocompromised patients. This latter group includes two major problems: firstly, that there is an increased risk of mortality, and secondly, that two cases of oseltamivir resistance in immunosuppressed patients were already described and had prolonged viral shedding[1]. Lupus is an autoimmune disease characterized by immunosuppression due to different factors, including leukopenia and the use of immunosuppressive drugs. These findings, in theory, point out that lupus patients are at risk of contracting pandemic influenza A/H1N1 infection; however, to date, no cases of this infection have been described in these patients.

In summary, this study describes for the first time a patient with SLE who had a mild infection caused by pandemic influenza A/H1N1 virus and had a satisfactory outcome. It is noteworthy that this infection in immunocompromised patients has been poorly studied, and more cases or case series must be published in order to clarify the history of this infection in SLE patients.

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