Case report

Antiphospholipid syndrome leading to venous brain thrombosis in an elderly patient

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A B S T R A C T

Antiphospholipid syndrome (APS) is a systemic autoimmune condition characterized by hypercoagulability, venous and/or arterial thromboses, and miscarriages. APS can be diagnosed according to specific criteria and is usually observed in young adults. We report a case of an elderly woman with past history of thrombosis and miscarriages who developed severe brain parenchymal hemorrhage and extensive thrombosis of the superior sagittal sinus due to APS. This case emphasizes that, although rare, APS may be diagnosed in elderly individuals and require effective anticoagulation.

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1. Introduction

Antiphospholipid syndrome (APS) is a systemic autoimmune condition characterized by hypercoagulability. APS may be clinically manifested by venous and/or arterial thromboses, and also by miscarriages.1 The clinical criteria for the diagnosis of APS were established in Sapporo, Japan, in 1998, and are thus known as the Sapporo criteria. These criteria have good sensitivity and excellent specificity, although 1–3% of systemic lupus and systemic lupus-like conditions may overlap when using the Sapporo criteria and, therefore, cause misdiagnosis of APS.2 Neurological manifestations may be related to a variety of immune-mediated vascular and inflammatory effects and, most of the time, the signs and symptoms are related to ischemia and/or thrombosis.3 Antiphospholipid antibodies may activate endothelial cells, platelets and coagulation cascades, leading to ischemic stroke and/or thrombosis in patients of all ages.1,3 However, the young adult population is the segment most affected by APS, a condition that may even present a catastrophic and fatal course.3 APS is rarely diagnosed in the elderly. In fact, APS in geriatric medicine is only very rarely considered in cases of ischemic or thrombotic disease in older patients.

2. Case report

The patient was a 78-year-old Caucasian woman, born in Spain and living in Brazil. Her medical history included breast cancer 6 years previously, high blood pressure and dyslipidemia, which were all under control. One morning in February 2013, she presented a persistent and unusual headache accompanied by hypoaesthesia on the right side of her body. She sought emergency care and underwent magnetic resonance imaging of her brain (Fig. 1). The neurologist on duty put the patient in the intensive care unit and made a diagnosis of hemorrhagic stroke. After 3 days, the patient was considerably better and was discharged from hospital. One week later, she presented a partial seizure with secondary generalization, after a day of intense headache and vomiting. The family returned her to hospital. She was hemiplegic on the right side, confused and disorientated, with aphasia. Two more magnetic resonance scans showed an extensive lesion in the left hemisphere of her brain (Fig. 1). Her blood cell count showed low levels of platelets, while serum biochemical tests did not show any abnormalities. Her brain angiogram showed a massive thrombosis in the brain venous system (Fig. 1).

The family then mentioned that she had had three previous thrombotic episodes in the left leg between the ages of 37 years and 42 years. The family also mentioned three miscarriages between the ages of 30 years and 35 years. These miscarriages had occurred many decades ago but there were no records of chromosomal disease.
Immunological serum tests confirmed the diagnosis of APS: normal values for activated prothrombin time, activated thrombin time, C-reactive protein, protein S, Leyden factor V, and rheumatoid factor; anticardiolipin antibody immunoglobulin (Ig)M = 50 MPL-U/mL (normal up to 40); anticardiolipin antibody IgG = 52 MPL-U/mL (normal up to 40); cytoplasm antinuclear factor = 1:320; antiphospholipid antibody = 1.90 (normal up to 1.24). This latter test was repeated after 12 weeks and the result remained the same. Antibodies to β2-glycoprotein I (anti-β2GPI) of IgG were 29 U/mL (reagent if >20 U/mL) and IgM were 24U/mL (reagent if >17 U/mL).

The patient received warfarin and demonstrated gradual improvement of her neurological signs and symptoms.

3. Discussion

APS is usually considered when a young adult presents thrombosis and/or repeated miscarriages. If this condition is not considered to be a possible diagnosis at a younger age, the patient will continue to have the disease and it may then manifest later in life. Reports of APS in the elderly are so rare that it might even be considered that APS does not form any part of the differential diagnosis of thrombosis in the geriatric population. However, as shown in the present case, APS can manifest at an older age in a catastrophic manner, with massive brain venous thrombosis.4,5 The success of neurological treatment will depend upon correct diagnosis and immediate and efficient anticoagulation. One important aspect to be added to the discussion is the possibility of systemic lupus and secondary APS. Although all the criteria for APS were satisfied, the positivity of antinuclear factor may direct the medical team’s attention towards systemic lupus in the elderly, which is also a rare medical condition.6-8 However, systemic lupus presents other manifestations and the present case does not fulfill the criteria for lupus. Although this diagnosis cannot be excluded completely at this point, it is unlikely.

It is also important to emphasize that cerebral thrombosis may manifest with hemorrhage as well. Thrombosis of cerebral veins or
sinuses can result in increased venular and capillary pressure. As local venous pressure continues to rise, decreased cerebral perfusion results in ischemic injury. Cytotoxic edema and disruption of the blood–brain barrier leads to vasogenic edema, that may culminate in parenchymal hemorrhage.

**Conflicts of interest**

The authors have no conflicts of interest to declare.

**References**


