

Chorea as an unusual presenting feature of Anti-Phospholipid Syndrome

Saliha Ishaq,¹ Sarwat Khalil,² Ayesha Khan,³ Umair Khalid⁴

Department of Medicine,¹ Medical College,² The Aga Khan University Hospital, Ziauddin Medical College, Ziauddin University, Clifton,^{3,4} Karachi.

Abstract

Anti-Phospholipid Syndrome (APS) can manifest as primary disease or secondary to connective tissue diseases, such as Systemic Lupus Erythematosus (SLE). It is characterized by recurrent arterial or venous thrombosis, thrombocytopenia, haemolytic anaemia, or positive Coombs' test, and recurrent pregnancy loss in females. Common neurological abnormalities include stroke, cognitive deficits and white matter lesions. We present an unusual case of secondary APS associated with SLE, that presented at our clinic with chorea. To the best of our knowledge this is a first such case reported from Pakistan.

APS must be ruled out in any patient of SLE who presents with stroke or any other neurological abnormality regardless of the age at presentation. Moreover, unusual neurological presentations, such as chorea, should always be kept in mind in order to promptly diagnose and treat APS owing to its high morbidity and mortality.

Introduction

The presence of antiphospholipid antibodies (aPL) in some individuals confers a risk of Antiphospholipid Antibody Syndrome (APS) which is characterized by recurrent arterial or venous thrombosis, thrombocytopenia, haemolytic anaemia, or positive Coombs' test, and recurrent idiopathic foetal loss in females. The most important rheumatic disease associated with APS is Systemic Lupus Erythematosus (SLE).¹ We hereby present an unusual case of APS that presented at our clinic with chorea.

Case Report

A 57 year old Asian male presented at our clinic with complaints of involuntary hand movements and an abnormal gait. He was diagnosed with SLE 29 years ago, when he had developed symptoms of joint pain, fever and fatigue, and serologic work up had revealed positive Antinuclear Antibodies (ANA) and anti-double standard DNA (anti-dsDNA) antibodies. He had also undergone a renal biopsy, which showed evidence of focal segmental glomerulosclerosis. His serum creatinine levels had ranged between 1.2 mg/dl and 1.4 mg/dl during this time. There was no family history of SLE

or APS. He was managed with steroids and hydroxychloroquine for ten years, after which he went into remission, and the medications were discontinued. The patient had been doing well about 20 days prior to presentation, when he started having involuntary hand movements and altered mental status. He went to a local hospital where they treated the patient for possible stroke and started him on Aspirin, even though the MRI at that time had revealed no acute changes. He was sent home but his choreoform hand movements worsened over the next few days, for which he visited our tertiary care center for further assessment.

His physical examination was significant for choreoform movements in both the hands and unstable gait. No other abnormalities were noted. Laboratory tests were significant for mild thrombocytopenia (platelets count of 91×10^9) and elevated erythrocyte sedimentation rate (ESR) of 31 mm/hr. Serum ANA was positive and dsDNA was also elevated. IgG Anti-cardiolipin antibody was moderately elevated, but IgM was within the normal range. Rest of the work up was unremarkable. Based on his clinical presentation and diagnostic work up, he was diagnosed as a case of Antiphospholipid antibody syndrome (APS). MRI revealed multiple T2 hyperintense signals in the subcortical and paraventricular deep white matter representing small vessel ischaemia. Few old lacunar infarctions were also seen in both periventricular regions. The patient was successfully managed with low dose aspirin and a tapering short term course of prednisone. The patient's choreoform movements completely resolved within the next two weeks.

Although genetic testing for Huntington's disease was not done in our patient, the diagnosis was unlikely owing to the absence of typical clinical features [psychiatric problems (like depression, irritability), dementia, eye movements, weight loss/cachexia] and negative family history. Also MRI of the patient had revealed no caudate atrophy which is usually seen in Huntington's disease. Therefore, Huntington's disease was ruled out even though he had choreoform movements. Other common causes like Sydenham's Chorea and drug induced chorea were unlikely since the patient has no associated history. Since the patient was a known case of SLE with APL antibodies, the chorea was most likely secondary to this disease.

Discussion

Neurological manifestations are common in SLE occurring in approximately 25-75% of the patients. The pathogenesis of neuropsychiatric involvement is not exactly known but has been largely thought to be as a result of numerous factors which include autoantibody-mediated neural dysfunction, vasculopathy, and/or coagulopathy, such as that seen in APS.²

SLE has a strong association with APS.¹ Based on the guidelines,³ APS is diagnosed if the following clinical and laboratory criteria are fulfilled:

◆ Clinical — One or more episodes of venous, arterial, or small vessel thrombosis and/or morbidity with pregnancy.

◆ Laboratory — The presence of thrombocytopenia and/or antiphospholipid antibodies which may include IgG and/or IgM anticardiolipin antibodies in moderate or high titer, Anti- β 2 glycoprotein-I antibodies or antibodies detected by Lupus anticoagulant tests.

The clinical presentation, low platelet count and moderately elevated IgG anticardiolipin antibodies on laboratory work up confirmed the diagnosis of APS in our patient.

Chorea is a hyperkinetic movement disorder characterised by excessive spontaneous movements that are irregularly timed, randomly distributed and abrupt. Common causes of chorea include Huntington's disease, Sydenham's chorea, Antiphospholipid syndrome, Wilson's disease and drug induced chorea.⁴ As our patient was a known case of SLE and antiphospholipid antibodies were positive in his serum, so most likely diagnosis of chorea secondary to antiphospholipid syndrome was made. Moreover, his clinical features and laboratory data do not support any of the other differential diagnoses of chorea.

Ischaemic stroke has very strong association with APS. In a review of 2000 healthy male subjects, the relative risk of stroke at 15 years of follow-up was 2.2 in subjects with aPL.⁵ This association is much stronger in younger individuals. In a study, aPL was found in 25% of patients younger than 45 years of age who presented with stroke of unclear etiology.⁶ Besides stroke, a link between the presence of aPL and the occurrence of cognitive deficits and/or white

matter lesions is also recognized. However, the association of APS is less strong with other neurological features, of which chorea happens to be one of them.⁷ An association between chorea and antiphospholipid antibodies has been reported in the past.⁸ However, this is the first time that a presentation with chorea in APS is reported from Pakistan.

Our patient also had thrombocytopenia. A review of 13 studies of 869 patients with SLE found that thrombocytopenia was more common in those with anticardiolipin antibodies (29%) than in those without these antibodies.⁹

The presence of aPL in the serum of patients with SLE has been identified as an independent risk factor for premature death. This was illustrated in an observational study of 667 patients with SLE, 49 of whom died.¹⁰ Therefore, APS must be ruled out in any patient of SLE who presents with stroke or any other neurological abnormality such as chorea, regardless of the age at presentation. It is important to promptly diagnose and treat APS owing to its high morbidity and mortality.

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