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General Medicine

PERSISTENT THROMBOCYTOPENIA IN A CASE OF ANTIPHOSPHOLIPID ANTIBODY SYNDROME- A CASE REPORT

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ABSTRACT The association between antiphospholipid antibodies (aPL) and clinical problems goes beyond what is stated in the antiphospholipid syndrome (APS) classification criteria, namely thrombosis and pregnancy morbidity [1,2] and thrombocytopenia is the most common non-criteria hematologic manifestation of aPL with a frequency ranging from 20 to 50 %. Primary ITP in general are asymptomatic or presents with bleeding manifestation [3]. Thrombocytopenia is rarely severe, and hemorrhage is far less common than thrombosis. A 26 year old boy presented to medicine OPD with hypertension. Past history suggested persistent thrombocytopenia on various visits and unprovoked deep vein thrombosis (DVT) in the lower limb in the past. There were no bleeding manifestations. Complete blood count was normal apart from thrombocytopenia. Renal function and Liver function was normal. Echocardiography and renal artery doppler showed no abnormality. On further evaluation was diagnosed strong positivity for lupus anticoagulant by DRVVTA(111.70sec), cardiolipin antibody IgG (90.12GPL),beta 2 glycoprotein IgG (39.71U/ml) and hence diagnosed to have antiphospholipid syndrome. The patient was treated initially with antihypertensives , low molecular weight heparin and was started on oral anticoagulants with INR maintained between 2-3.Thrombocytopenia eventually improve with antithrombotic therapy. The findings of this study indicate that in cases with persistent thrombocytopenia with thrombosis formation, antiphospholipid antibody syndrome should be considered and evaluated. Treatment with anti-thrombotic drugs will improve the thrombocytopenia and further thrombotic events.

KEYWORDS : thrombocytopenia, antiphospholipid antibody syndrome, deep vein thrombosis, male APLA, hypertension

INTRODUCTION

The association between antiphospholipid antibodies (aPL) and clinical problems goes beyond what is stated in the antiphospholipid syndrome (APS) classification criteria, namely thrombosis and pregnancy morbidity [1,2]. The most common non-criteria hematologic manifestation of antiphospholipid antibody syndrome is thrombocytopenia with a frequency ranging from 20 to 50 %. Primary ITP in general are asymptomatic or presents with bleeding manifestation [3]. Thrombocytopenia in aPL is rarely severe, and hemorrhage is far less common than thrombosis. However, it may constitute a clinical problem with increased bleeding risk when antithrombotic drugs are considered. Furthermore, thrombocytopenia itself represents a risk factor for thrombosis in aPL-positive patients. Therefore, it is important to consider APLA workup in patients with persistent thrombocytopenia in the setting of thrombosis. Thus, we present a case of antiphospholipid syndrome presenting as persistent thrombocytopenia .

CASE REPORT

A 26 year old male presented with fever and thrombocytopenia and had been diagnosed with dengue fever and was treated conservatively. After one year he had swelling of left lower limb for 1week. Venous doppler of left lower limb showed left iliofemoral deep vein thrombosis .Patient was treated with unfractionated heparin and started on oral anticoagulants (Tablet Acenocoumarol 1mg) .Later, after 2 years he was admitted with history of fever and productive cough for one week .Complete hemogram showed low platelet count of 72000 ,sputum acid fast bacilli was negative and computed tomography chest showed consolidation and left lower lobe cavity . Patient was then started on empirical anti-tubercular treatment for 6months.

After a period of one year he presented with giddiness for 3 days and was been diagnosed with high blood pressure .His blood pressure was 180/100mmHg , pulse rate was 80/min, regular in rhythm .Systemic examination was unremarkable. Examination of fundus revealed no abnormal findings .His complete blood count showed low platelet count of 90,000, liver function tests , renal function tests were all within normal limits . His two dimensional echocardiography and renal artery doppler was normal. APLA workup showed strong positivity for lupus anticoagulant by DRVVTA(111.70sec), cardiolipin antibody IgG (90.12GPL),beta 2 glycoprotein IgG (39.71U/ml). He was then diagnosed with primary APLA syndrome and was treated with low molecular weight heparin 60 mg for 3 days and discharged with oral anticoagulants tab acenocoumarol 2mg OD to maintain PT/INR between 2-3. Blood pressure was under control and was on Amlodipine 5mg twice daily , Prazosin 5mg BD and antiplatelets Aspirin 75mg OD was also started. He was then advised to review after 12 weeks , during his review his lupus anticoagulant and cardiolipin was persistently high with INR 2.5 ,normal Bleeding and clotting time and platelets of 1 Lac.

DISCUSSION

APLA diagnosis is based on clinical and laboratory criteria. Clinical criteria primarily include thromboembolism or pregnancy morbidity, whereas laboratory findings includes raised titres of antiphospholipid antibodies – on 2 or more occasion with an interval of 12 weeks.

Low platelet count is most common hematologic manifestation that is not included in criteria of diagnosis for APLA. Incidence is between 30 and 46% among APS patients and is usually mild (70-120 × 109/L) and does not require clinical intervention. About 5 to 10 percent of patients have severe thrombocytopenia (platelet count < 50 × 109/L) . It's interesting to note that thrombocytopenia is unusually unrelated to haemorrhagic problems in APLA syndrome patients. In our situation, deep vein thrombosis was also observed coupled with persistent thrombocytopenia.

The aetiopathogenesis for thrombocytopenia in APLA syndrome is multifactorial . Thrombocytopenia in these patients may be due to immune-mediated clearance of platelets [4], decreased platelet production, increased platelet pooling and increased platelet consumption .Several theories suggest that interaction between antiphospholipid antibodies and platelet triggers platelet aggregation and thrombosis [5]. Antiphospholipid antibodies can bind platelets, enhancing platelet aggregation and activation in the presence of subthreshold amounts of thrombin, adenosine diphosphate, or

collagen, according to in vitro and in vivo observations. The intracellular events following platelet binding remain incompletely elucidated, but activation of arachidonic acid and thromboxane production and expression of glycoprotein IIb/IIIa have all been shown to occur following antiphospholipid antibody binding to platelets . Despite being a criterion in the original classification of the APLA syndrome, thrombocytopenia was not included in the most recent proposed classification. It is extremely important to assess thrombocytopenia in connection with APLA syndrome to determine the likelihood that thrombosis would develop in the future. According to platelet counts, individuals with APLA syndrome were separated into three groups in one study: normal, moderately thrombocytopenic (50-100 109/L), or severely thrombocytopenic (50 109/L); the rates of subsequent thrombosis were, respectively, 40%, 32%, and 9% [6]. This study shown that with the APLA syndrome, moderately reduced platelet counts do not prevent thrombosis. Antithrombotic prophylaxis should therefore be taken into account [7]. When antithrombotic medication was started, the patient in our research who had persistent thrombocytopenia began to improve.

Patients with APLA syndrome experience thromboembolic consequences despite having low platelet counts; therefore, before antithrombotic medication may be used, the platelet count must be raised to at least 30000-50000 cells /cumm. Glucocorticoids, intravenous immunoglobulin, immunosuppressive medications (azathioprine and cyclophosphamide), and more recent medications like rituximab are all available as treatments [8,9].

Our case was a young boy with APLA syndrome with persistent thrombocytopenia with unprovoked DVT. Patient was successfully started on antithrombotic treatment and responded well with good recovery of platelet count.

CONCLUSION

Thrombocytopenia is the common non criteria hematological manifestation in APS. Primary ITP with APLA presents with bleeding manifestation whereas thrombocytopenia secondary to APLA has an elevated thrombotic tendency, not bleeding risk. Thus, whenever a patient presenting with persistent thrombocytopenia in the background of thrombosis, antiphospholipid syndrome should be considered ,evaluated and treated accordingly. Treatment with anti-thrombotics will improve the thrombocytopenia and further thrombotic events.

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