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An Indonesian Woman Pregnancy with Anti-Phospholipid Syndrome and Systemic Lupus Erythematosus: A Case Report

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ABSTRACT

Woman pregnancy with antiphospholipid syndrome (APS) and systemic lupus erythematosus (SLE) is a rare case. An Indonesian woman pregnancy, 29 years old, complained of right-sided chest pain, cough, short breath, melena, and joint discomfort. She has had two abortions in the past 2 years. The patient previously had anemia with hemoglobin of 5 mg/dL and received 4x PRC transfusions. Echocardiography and chest CT scan with contrast revealed a right ventricle thrombus. Laboratory examination presented with APS and suspected autoimmune hemolytic anemia (AIHA). Patient received PCR transfusion of 250 mL twice daily with initially dexamethasone of 5 mg at admission, lansoprazole of 30 mg twice daily, Sucralfate of 15 mL thrice daily, Methylprednisolone of 8 mg once daily, Hydroxychloroquine 200 mg once daily, Enoxaparin of 0.6 mL twice daily, and acetylsalicylic acid of 80 mg once day. After treatment, she had an improved Hb of 10.3 g/dL and was discharged. Despite clinical improvement, she had a third abortion. The challenge in APS Management is to increase fetal and maternal growth and prevent thrombus formation with close monitoring of anticoagulant use. Patients who experience recurrent abortions need to be considered for APS and/or SLE possibility.

Keywords: *Abortion, antiphospholipid syndrome, pregnancy, systemic lupus erythematosus*.

1. INTRODUCTION

Systemic lupus erythematosus (SLE) is a multifaceted chronic relapsing systemic inflammatory autoimmune disease of unknown etiology. The disease has always been a severe diagnosis in women, being a multisystem pathology that is classically encountered during the childbearing age, posing severe systemic comorbidities [1]. Pregnancy affects the maternal immune system through various mechanisms to ensure fetal survival. SLE patients are often found to experience worsening conditions during pregnancy. During pregnancy, SLE patients can experience flare-ups and pregnancy complications [2, 3]. However, SLE patients are also susceptible to thrombolytic complications [4].

Anti-phospholipid Syndrome (APS) is an uncommon autoimmune disease characterized by arterial, venous, or microvascular thrombosis, pregnancy morbidity, or non-thrombotic manifestations in patients with persistently positive antiphospholipid antibodies [5, 6]. Previous studies reported that the incidence of APS patients in SLE was approximately 6.5% of all SLE cases [4]. Meanwhile, the prevalence of women's pregnancy with APS and SLE is not explicitly known and is an uncommon case [7]. Therefore, we are interested in reporting an Indonesian woman's pregnancy with APS and SLE

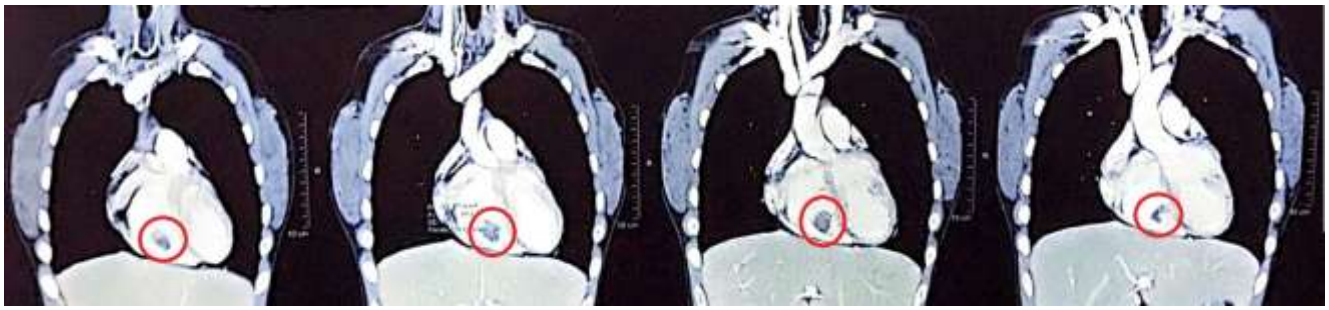
2. CASE PRESENTATION

An Indonesian woman, 29 years old, complained of right-sided chest pain, cough, shortness of breath, melena, and joint discomfort. She had right-sided chest pain for one month, which had been recurring and worsened in the last week. While she also had a cough without phlegm for one month, she had melena for the last 5 days. Meanwhile, she has experienced intermittent generalized joint discomfort, especially around the hands and ankles. She has no medical history, including hypertension, diabetes, heart disease, tuberculosis (TB), asthma, and allergies. She had two abortions in the last 2 years, and the gestational age was less than three months. A few days ago, she underwent treatment at a regional hospital and received a blood transfusion (pack red cells/PRC) of 250 mL four times and Xarelto of 20 mg once daily.

On physical examination, she presents weakness and is pale while pregnant with a gestational age of 7 weeks based on a pregnancy test kit, and an ultrasound confirmed this. Echocardiography revealed a right ventricular thrombus with a size of 1.4×1.7 cm and mild mitral regurgitation. Chest CT scan with contrast revealed a right ventricle thrombus (Fig. 1). Laboratory examination presented abnormal including hemoglobin (Hb) of 7.1 g/dL, mean corpuscular volume (MCV) of 80.6 fL, mean corpuscular hemoglobin (MCH) of 27.1 pg, anti-nuclear antibody (ANA) test of 104 AU/mL, anti-double stranded deoxyribonucleic acid (anti-dsDNA) of 43.05 UI/mL, complement 3 (C3) of 55 mg/dL, complement 4 (C4) of 16.9 mg/dL, lupus anticoagulant 1 (LA1) of 115.1, lupus anticoagulant 2 (LA2) of 43.1, ratio LA1/LA2 of 2.67, direct coombs test (DCT) of positive, and indirect coombs test (ICT) of positive. Therefore, she was diagnosed with APS and suspected anemia hemolytic autoimmune (AIHA).

The patient received NaCl 0.9% of 500 mL twice daily, PCR transfusion of 250 mL twice daily with initially administrated of 5 mg dexamethasone, lansoprazole of 30 mg twice daily, Sucralfate of 15 mL thrice daily, Methylprednisolone of 8 mg once daily, Hydroxychloroquine 200 mg once daily, Enoxaparin of 0.6 mL twice daily, and acetylsalicylic acid of 80 mg once daily. On the 2nd day, melena ceased, the stool was brown-colored, and treatment continued. On the 3rd day, melena was stopped with Hb level of 8.9 mg/dL.

On the 7th day, the patient had an increased Hb of 10.3 g/dL and was discharged. In the 1st month, she complained that both soles of her feet felt pain on the edges, especially when waking up, and both knees felt pain when doing activities. She had a spontaneous abortion and underwent a curettage surgery. Then, she received ferrous sulfate 200 mg twice daily, calcium lactate 500 mg twice daily, folic acid 20 mg once daily, warfarin 3 mg once daily, methylprednisolone 8 mg once daily, and hydroxychloroquine 200 mg once daily. Her condition is stable, meaning that no joint pain was experienced in the 3rd and 6th months.



3. DISCUSSION

Management of APS during pregnancy should aim to avoid early pregnancy loss, normalize placental and fetal circulations to prevent early birth from preeclampsia and growth restriction and preventing maternal vascular thrombosis in pregnancy and postpartum. Using appropriate treatment strategies, the likelihood of successful pregnancy in APS is about 70% [8]. A previous study recommended unfractionated heparin (UFH) or low-molecular-weight heparin (LMWH), and oral vitamin K antagonists (VKA), especially warfarin, with a target INR of 2-3 as initial therapy for venous thromboembolism in APS. There are no clear guidelines regarding the duration of antithrombotic administration in APS. However, many experts consider lifelong treatment necessary in most patients due to the risk of recurrence [9, 10].

The risk of recurrent thrombotic events is insignificant, with thrombotic recurrence rates ranging from 1.7% to 9.6% per patient yearly. There are no clear guidelines regarding the best therapy for patients with recurrent thrombotic events. The target INR in VKA >3 is not superior to a target range of 2–3 in preventing recurrence, and there is insufficient evidence to demonstrate the benefit or harm of VKA in combination with antiplatelet therapy or dual antiplatelet therapy compared with antiplatelet agents alone for the prevention of secondary thrombosis. Long-term direct oral anticoagulant (DOAC) administration is more beneficial than oral VKAs at a fixed dose regimen without laboratory monitoring. DOACs are recommended for treating deep vein thrombosis and PE, but future studies are needed to compare their efficacy in thrombotic APS [9, 11].

Hydroxychloroquine (HCQ), traditionally an antimalarial drug, has been widely used in the treatment of patients with autoimmune conditions, mainly SLE, where it has been associated with the prevention of flares and better survival through its immunomodulatory effects, including anti-inflammatory, anti-aggregate and immunoregulatory properties. Original studies of fetal morbidity and mortality in APS suggested the pathogenesis was thrombotic and possibly through trophoblast inhibition. However, recent animal models and in vitro studies have suggested that inflammatory processes, including increased cytokine production, complement deposition, and immune cell activation, may cause the etiology of adverse pregnancy events in APL. Recently, HCQ has been shown to reverse the APL inhibition of trophoblast IL-6 secretion and APL inhibition of cell migration. Also, it has been reported that HCQ restores trophoblast fusion affected by APL. These studies suggest HCQ may improve pregnancy outcomes in women with aPL, especially in those with recurrent pregnancy loss refractory to conventional treatment. The European League Against Rheumatism (EULAR) recommendations for managing SLE support the safety and efficacy of HCQ during pregnancy [12, 13].

APS prognosis is associated with significantly higher risks of pregnancy-induced hypertension, fetal loss, abortion, thrombosis, and preterm delivery. The risk of neonatal mortality, the risk of having a small infant for gestational age, premature infants, and infants with severe complications who were admitted to neonatal ICU were significantly higher with APS. Another study involving 15 cases of APS during pregnancy showed that 50% of catastrophic APS appear. Hemolysis, elevated liver enzyme, and low platelets (HELLP syndrome) were seen in 53% of the participants. Women with multiple antibody-positive pregnancies were associated with worse outcomes, including significantly lower live births and higher pregnancy-induced hypertension [14]. Nevertheless, antithrombotic therapy, including aspirin and heparin, has improved the prognosis in these pregnant women with APS [15].

4. CONCLUSION

Care providers need to be more vigilant and have a high suspicion of APS in patients with recurrent abortions. Management of APS involves improving maternal and fetal outcomes and preventing thrombosis with close monitoring of patients on anticoagulants could be challenging. Meanwhile, woman pregnancy with APS and SLE is a rare case where flare-ups often occur when pregnancy is a challenge

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