

## Case Report

# Antiphospholipid Syndrome (APS) and Successful Pregnancy Outcome: A Case Report

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## Abstract

Antiphospholipid Syndrome (APS) is an autoimmune multisystemic disorder characterized clinically by recurrent thrombosis and pregnancy morbidity and serologically by the presence of Antiphospholipid antibodies (aPL) including Anticardiolipin (aCL) and anti-2glycoprotein I (anti-2GPI) antibodies and Lupus Anticoagulant (LA). Diagnosis requires a high index of suspicion during evaluation of women with recurrent pregnancy loss and vascular thrombosis. Low dose aspirin combined with heparin can reduce morbidity and improve the pregnancy outcome. Here we report a case of a 32 year old lady having APS who presented with arthritis, recurrent miscarriages and venous thrombosis.

**Keywords:** Antiphospholipid syndrome; Antibody; Bad obstetric history

## Introduction

Antiphospholipid Syndrome (APS) is an autoimmune multisystemic disorder characterized clinically by recurrent thrombosis and pregnancy morbidity and serologically by the presence of Antiphospholipid antibodies (aPL) including Anticardiolipin (aCL) and anti-2glycoprotein I (anti-2GPI) antibodies and Lupus Anticoagulant (LA).

In the general population, APS is the most common cause of acquired thrombophilia and is a recognized risk factor for the development of Deep Vein Thrombosis (DVT) with or without pulmonary embolism, new strokes in individuals below the age of 50 and recurrent fetal loss.

APS is classically characterized by vascular thromboses or obstetric morbidity in association with the presence of aPL antibodies. Vascular thromboses include venous thromboses resulting clinically in deep venous thrombosis and/or pulmonary emboli while arterial thromboses may present with ischemia affecting limbs, cerebral vascular accidents or transient ischemic attacks and small-vessel thrombosis may result in cutaneous ulceration

For the diagnosis of APS are included unexplained or repeated pregnancy loss at around 10 weeks of gestation and positive aCL IgM and IgG or LAC antibodies on at least 2 occasions 6 weeks apart.

Obstetric manifestations of APS include fetal loss with loss after 10 weeks of gestation being more strongly associated with APS, placental insufficiency potentially resulting in decreased

gestational weight or fetal distress and preterm delivery and development of pre-eclampsia Treatment with aspirin and heparin improve the pregnancy outcome.

## Case Report

A 32 years old women presented at the "Rheumatology Clinic" after a history of premature stillbirth at 30<sup>th</sup> weeks of gestation with six month history of arthritis, involving hand, feet and wrist joints, morning stiffness lasting up to 1 hour.

The symptoms started at the 5<sup>th</sup> month of pregnancy, after being hospitalized with Covid with high fever and joint pain. Her past medical history included 2 spontaneous abortions between 6<sup>th</sup> and 9<sup>th</sup> weeks of gestation, 1 extrauterine tubar pregnancy and 1 premature stillbirth at 30<sup>th</sup> weeks of gestation. Past medical record revealed that she had hypothyroidism after episode of hyperthyroidism which was treated with Thyrozol, high Complement C4, positive ANA, positive ATG, normal renal and heparin function tests and high CRP. She received treatment with various NSAIDs, prednisolone and antimalarial drugs.

At the clinic she was found afebrile. There was no rash, oral ulcer or lymphadenopathy. She had swelling and tenderness in MCP and PIP joints. Other examination findings were unremarkable.

Her Hb was 12gm/dl, normochromic, normocytic, normal total and differential WBC and platelet count, CRP was 185mg/L. Urine was normal as well as creatinine. ANA was positive but anti-ds DNA, anti-sm antibodies and RF were negative. Anti-

phospholipid (aPL) antibody (done by ELISA) was positive. Abdominal ultrasound revealed normal findings.

Treatment was started with Plaquenil a 200mg 1x1, Prednisolon a 20mg 2x1 and Aspirin a 100mg 1x1. About one year under the therapy she conceived. She was on regular follow up with rheumatologist and gynaecologist. The therapy with anti-malarial drugs was stopped and started after 12<sup>th</sup> weeks of gestation. There was no flare throughout the pregnancy and she delivered a male baby of 1.800gr by Caesarean section at 36<sup>th</sup> weeks of gestation. No perinatal complication occurred.

### Discussion

Early pregnancy loss occurs in 17.1% and late pregnancy loss occurs in 6.7% of pregnancies in women with established APS while 35% of successful pregnancies were premature and 13.7% had intrauterine growth restriction. APS may affect any organ of the body and display a broad-spectrum of manifestations. These include deep venous thrombosis (31.7%), thrombocytopenia (21.9%), pulmonary embolism (9%), transient ischaemic attacks (7%), stroke (13.1%), myocardial infarction (2.8%), skin ulcers (3.9%) and rarely a catastrophic syndrome characterized by widespread vascular occlusion (0.8%). In our case, the patient had arthritis, hyperthyreosis and recurrent abortions which was highly suggestive of secondary APS. Etiology of aPLs the mechanism initiating the production of aPLs remain unknown. However, like other autoimmune conditions, APS is considered to derive from a combination of environmental (infectious agents, trauma and drugs) and genetic factors. Further, studies with cytomegalovirus in mice indicated that a limited number of aPLs induced by various bacterial and viral products might be pathogenic in predisposed individuals. With proper management, more than 70% of pregnant women with APS deliver a viable live infant.

Present therapy for the thrombotic aspects of the APS–lupus complex is anticoagulation with heparin and low dose aspirin. Standard steroid and immunosuppressive therapy seem to have little effect on antibody levels.

Heparin is usually started in the early first trimester after confirmation of presence of a live embryo by ultrasonography. In one study only low dose aspirin was used for prevention of

pregnancy loss, which was started one month before conception and continued throughout the pregnancy. Prior to therapy the rate of live-born babies was 6.1%, and after therapy it was 90.5%.

Most investigators recommend preconceptional aspirin because of its beneficial effect on early stages of implantation.

We treated our case of secondary APS with antimalarial, low dose aspirin and LMWH. She conceived and delivered a healthy baby without any complication.

### Conclusion

In APLA positive cases with recurrent miscarriages majority of fetal losses occurred after the appearance of cardiac activity. APLA should be looked for particularly in those cases where miscarriages occur after the appearance of fetal cardiac activity. Routine screening of pregnant women for APS is not recommended as the prevalence is low. However, aCL and LAC antibodies must be checked in women presenting for evaluation of recurrent pregnancy loss.

Management of APS is aimed to improve maternal and fetal outcome. It can be achieved by preconceptional counseling, multidisciplinary approach and careful monitoring of pregnancy.

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