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Original Article

APLS and Recurrent Pregnancy Loss- A Case Series

Dr.Ariba[1*]; Dr. Ahmad Ghayas Ansari[2]; Dr.M.Aslam[3]

[1] Junior Resident, Dept. Of Medicine, Jawaharlal Nehru Medical College, Aligarh, U.P
[2] Junior Resident, Dept. Of Medicine, Jawaharlal Nehru Medical College, Aligarh, U.P
[3] Associate Professor, Dept. Of Medicine, Jawaharlal Nehru Medical College, Aligarh, U.P

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ABSTRACT

Objectives: This is a Case Series of 3 patients of APLS with varied presentations who were diagnosed and improved following treatment. Antiphospholipid antibody syndrome is a heterogenous autoantibody mediated acquired thrombophilia, which is associated with severe life-threatening complications during pregnancy.
CASES: Case 1: A 29 yr old female presented to us with Generalised edema over body and shortness of breath over the past 2 months, with severe anemia and a history of 2 pregnancy losses at 4 weeks and at 10 weeks of pregnancy. On evaluation, she was diagnosed as SLE with Class V Lupus Nephritis and Secondary APLS.
Case 2: A 35 yr old female presented with multiple episodes of GTCS, had a history of 3 abortions at 4, 6 and 10 weeks of pregnancy, and had an episode of Left sided Hemiparesis 2 years back. MRI was suggestive of chronic venous infarcts and she was diagnosed as a case of Primary APLS.
Case 3: A 20 yr old primigravida presented with Antepartum eclampsia, she suffered from an Intrauterine Death and post LSCS, she developed sudden onset weakness of Left side of her body. On evaluation for hypercoagulable state, was diagnosed with APLS.
Results and Conclusions: Clinicians should have a high index of suspicion of APLS in patients with history of recurrent abortions or Intra uterine death with unexplained cause.

Key Words: *Antiphospholipid antibody syndrome, spontaneous miscarriage, maternal thrombosis, low-dose aspirin, low molecular weight heparin.*

***Corresponding Author**
Dr. Ariba
Junior Resident, Dept. of Medicine, Jawaharlal Nehru Medical College, Aligarh, U.P

INTRODUCTION

Antiphospholipid antibody syndrome is a heterogenous autoantibody mediated acquired thrombophilia, which is associated with severe life-threatening complications during pregnancy. This is the most important treatable cause of recurrent pregnancy loss.

Antiphospholipid Syndrome (APLS) is an autoimmune disorder of hypercoagulable state that is marked by the presence of antibodies that attack phospholipid-binding proteins, characterized by vascular thrombosis and pregnancy complications especially recurrent spontaneous miscarriages and, less frequently, maternal thrombosis.[1]

2. PRESENTATION OF CASES

- **2.1. CASE 1**- A 29 yr old female presented to us with Generalised edema over body and shortness of breath over the past 2 months, with severe anemia and a history of 2 pregnancy losses at 4 weeks and at 10 weeks of pregnancy 2 years and 3 years back respectively. She also complained of alopecia and multiple joint pains.

Investigations	Values
CBC	Hb- 4.7,Plt -81,000, WBC- 5.13 k
RFT	S.Cr.-2.5, BUN- 56
Urine-Routine Microscopy	Blood- 3+, Protein- 2+
Total Urinary Protein	Traces
GBP	Mixed Nutritional Deficiency Anemia with a retic count of 2.8%
USG-Abdomen	Moderate ascites with pericardial effusion

Investigations	Values
Thyroid Profile	Hypothyroid- T3- 0.77, T4- 6.63, TSH- 15.28
Anti-Thyroglobulin	+++
ANA	+ (>1:40)
APLA Panel	Lupus anticoagulant +, anti cardiolipin antibody ++
Iron Profile	Transferrin Saturation- 18%
Renal Biopsy	Lupus Nephritis- Class IV/V

- On evaluation, she was diagnosed as a case of SLE with Class V Lupus Nephritis and Secondary APLS.
- **2.2. CASE 2**- A 35 year old female presented with multiple episodes of Generalised tonic clonic seizures to emergency for the first time. She had a history of 3 abortions at 4, 6 and 10 weeks of pregnancy, and had an episode of Left sided Hemiparesis 2 years back.

Investigations	Values
CBC	Hb- 10.8, Wbc- 5.3k, Plt- 1,24,000
RFT	Within normal Limits
Urine -R/M	Protein- 3+
Thyroid Profile	Hypothyroid- T3- 1.25, T4- 7.23, TSH- 27.08
Anti-TPO	+++ >1300 (~60)
Anti-Thyroglobulin	++ 368 (~60)

Investigations	Values
ANA	++
Anti-dsDNA	++
APLA Panel	IgM and IgG cardiolipin antibodies ++
Eye Exam	Sup. BRAO without cilioretinal artery occlusion
MRI Brain	Venous Infarct inv. Parasagittal B/L high parietal lobes

- MRI Brain was suggestive of chronic venous infarcts and on further investigations she was diagnosed as a case of Primary APLS and was started on anticoagulation.

- **2.3. CASE 3**- A 20 yr old primigravida presented with Antepartum eclampsia, she suffered from an Intrauterine Death at 34 weeks and post LSCS, she developed sudden onset weakness of Left side of her body. CECT Head was suggestive of an acute infarct of the right parieto-occipital lobe, with patchy areas of subacute infarct involving Left parietal lobe in parafalcine region, Bilateral parietal lobes with effacement of posterior horn of right lateral ventricle.

Investigations	Values
CBC	Hb- 8, Plt – 2,18, WBC- 6.3k
RFT	WNL
Urine R/M	WNL
PT/INR	WNL

CECT HEAD	Acute infarct of the Right parieto-occipital lobe, with patchy areas of subacute infarct inv. B/L parietal Lobes
APLA Panel	Lupus anticoagulant ++, IgM+ Anticardiolipin antibodies

- She was evaluated for hypercoagulable state and was diagnosed with APLS.

3. DISCUSSION

The presence of pregnancy morbidity and thromboembolic consequences in the context of an elevated antiphospholipid antibody titer defines APLA. APLA syndrome without any underlying disease is termed asprimary APLA syndrome and secondary antiphospholipidantibody syndrome is associated with SLE.[2]

Antiphospholipid impede trophoblast invasion and decrease hCG secretion, which may explain miscarriages and fetal death in the second trimester. These conditions are linked to severe growth restriction, oligohydramnios, and early-onset preeclampsia, which may be caused by aberrant placentation linked to thrombosis.[3,4]Fetal loss may be caused by abnormalities in decidual spiral arteries, including as constriction, intimal thickening, acute arthrosis, and fibrinoid necrosis.[5]Some authors state thatantiphospholipid activates endothelial cells and complementsystem and hence cause pregnancy loss.

APLS is the most important treatable cause of recurrent pregnancy loss and should be considered in all such patients. Several other features called as the non-criteria manifestations can be associated with thrombotic and obstetrical APS.[6] These include immune thrombocytopenia and/or autoimmune hemolyticanemia, livedo reticularis, APS nephropathy, and neurological disorders like multiple sclerosis-like disease,seizure and chorea.[7,8]

The standard-of-care treatment consists of low-dose aspirin and prophylactic low molecular weight heparin.[9] In refractory cases, the addition of hydroxychloroquine, low-dose prednisone or IVIG improve pregnancy outcomes. [1,10]

4. CONCLUSION

Clinicians should have a high index of suspicion of APLS in patients with history of recurrent abortions or Intra uterine death with unexplained cause. Resources for detection of APLS should be made readily available in resource limited settings. Management of APLS involves improving maternal and fetal outcomes, prevention of thrombosis with close monitoring of patient on anticoagulant could be challenging,[11] but can be well managed with early diagnosis and treatment.

5. AUTHORS' CONTRIBUTIONS

Corresponding Author Ariba: Literature search, Clinical studies, Data acquisition, Data analysis, Statistical analysis, Manuscript preparation, Manuscript editing, Manuscript review, Guarantor.

Author Ahmad: Data acquisition, Data analysis, Statistical analysis, Manuscript preparation. Author M. Aslam: Concepts, Design, Definition of intellectual content

6. CONSENT

As per international standard or university standard, parental(s) written consent has been collected and preserved by the author(s).

7. ETHICAL APPROVAL

The protocol of the study was approved by the Institutional Ethical Committee and the study was conducted as per the standards of Good Clinical Practice and the Helsinki Declaration.

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