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Case Report

Pregnancy with lupus nephritis: a case report

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ABSTRACT

Systemic lupus erythematosus (SLE) is an autoimmune connective tissue disorder that commonly affects women of childbearing age. Lupus nephritis in pregnancy increases risk of maternal and fetal morbidity and mortality. Active disease during pregnancy and disease flares can lead to poor outcome. Higher rates of fetal loss, preterm birth, intra-uterine growth restriction (IUGR), and neonatal lupus syndromes, gestational diabetes, osteoporosis, avascular necrosis, hypertension, preeclampsia, eclampsia, stroke, HELLP syndrome, and maternal death are major issues. There is difficulty in recognizing disease flare because of normal physiological changes during pregnancy. Preeclampsia mimics disease symptoms of lupus nephritis and presents confusion in diagnosis. Management option is limited to few safer drugs. Lupus nephritis with antiphospholipid antibodies presents with refractory fetal loss and complete heart block associated with anti-Ro antibodies. A multidisciplinary approach, with close medical, obstetric and neonatal monitoring, is essential for optimal outcomes. Our aim is to report a case of primigravida 37 years old with controlled lupus nephritis.

Keywords: Anti-phospholipid antibodies, Complete heart block, Fetal loss, Lupus nephritis, Pre-eclampsia, Systemic lupus erythematosus

INTRODUCTION

Lupus is a chronic inflammatory and multisystem disease which damages the tissues and cells by autoimmune and immune complexes.¹ Pregnancy in women with SLE is a high-risk condition. Despite considerable improvement in health facilities, there has been high maternal and fetal morbidity and mortality. The rate of pregnancy loss has decreased from 43% to 17% in recent years.² Preconceptional counseling is an essential element of pregnancy planning. Disease should be under control for at least 6 months prior to conception. Active SLE at the time of conception is known to be the strongest predictor of adverse pregnancy outcomes.³ Maternal flares are associated with increased pre-maturity⁴, and active nephritis has been shown to be an independent factor for fetal mortality.^{4,5} The main complications are higher rates of fetal loss, preterm birth, intra-uterine growth

restriction (IUGR), neonatal lupus syndromes, gestational diabetes, osteoporosis, avascular necrosis, hypertension during pregnancy, preeclampsia, eclampsia, stroke, HELLP syndrome, and maternal death. Thyroid disease is also associated with higher risk of pre-term birth in SLE pregnancy.⁶

A multidisciplinary approach, with close medical, obstetric and neonatal monitoring, is essential for optimal outcomes. Early detection of threats to maternal and fetal well-being, with judicious use of appropriate medications, is essential to achieve good results.

CASE REPORT

A 37-year-old primigravida with an intrauterine pregnancy of 18 weeks with 4 years of controlled Lupus nephritis (Type II and V) reported to obstetrics

department of IKDRC, Ahmedabad. She was on Hydroxychloroquine 200mg once a day, Azathioprine 50 mg twice a day, Prednisolone 10 mg once a day and Aspirin 75mg once a day. She was continued this medication throughout her pregnancy. Her temperature, blood pressure, pulse, respiratory rate was within normal limits. The examination of heart, chest, lymph node, neurological system was unremarkable. Initial laboratory values of CBC, RFT, LFT, coagulation profile, electrolytes were in normal limits. ANTI ds DNA were positive and C3 and C4 levels were normal. Anti-cardiolipin antibody-M, anti-cardiolipin antibody-G was found negative. Urine analysis showed proteinuria and 24 h urinalysis showed 750 mg/day of proteinuria. Ultrasonography of right kidney showed moderate hydronephrosis; Left Kidney showed minimal hydronephrosis. At 20 weeks anomaly scan was normal and patient was followed up every 2 weekly till 28 weeks and weekly thereafter. At 28 weeks ultrasonography showed IUGR. At 34 weeks Doppler was normal; there was iugr and fetal presentation was breech. NST was reassuring. Lower segment Caesarean section was planned after 37 weeks. Baby cried immediately after birth with normal Apgar score and no signs of neonatal lupus. Inj. oxytocin 20IU in 500 ml DNS was started. The surgery was uneventful with minimal blood loss. After full recovery patient was shifted to the ward and all medications on which patient was maintained antenatally for lupus nephritis were restarted after 24 hours.

DISCUSSION

An essential component is pre conceptional counseling and disease control prior to pregnancy. Some of the drug therapies are teratogenic and fetotoxic. The risks involved may be minimized by appropriate timing of pregnancy and optimization of therapy prior to conception. NSAIDs have increased risk of fetal congenital defects in first and second trimester and impaired fetal renal function with use after 20 weeks of gestation. Hence, caution needs to be exercised when using NSAIDs during early pregnancy.^{7,8} Steroid exposure should be limited to a minimum during the pregnancy. High doses during pregnancy are associated with an increased risk of diabetes, hypertension, pre-eclampsia and premature rupture of membranes and fetal congenital anomalies¹⁰. However, in the case of disease flares, short courses of high doses and/or intravenous pulse methylprednisolone can be used. Hydroxychloroquine should be continued in all pregnant women with SLE. The risk of CHB and neonatal lupus syndromes was also significantly reduced in at-risk pregnancies with sustained use of hydroxychloroquine.^{9,10}

Azathioprine is one of the only few immunosuppressive agents that has documented safety during pregnancy.¹¹ Cyclophosphamide, methotrexate, and mycophenolate, are contraindicated during pregnancy and should be discontinued at least 3 months before conception. Other

immunosuppressive drugs with no reported increase in fetal risk are the calcineurin inhibitors, tacrolimus and cyclosporine.¹² Specific monitoring and treatment protocols are required in high risk situations such as presence of specific antibodies (aPL and anti-Ro). Low dose aspirin alone is recommended for asymptomatic women with only persistently positive aPL and no prior event.^{13,14}

The group with recurrent early losses or one or more late fetal loss; Aspirin, in combination with prophylactic doses of heparin, significantly reduces the risk of pregnancy loss in this group. Pregnancy with anti-Ro antibodies has high risk of Congenital Heart Block in neonates. An important management issue is of recognizing disease flare in pregnant SLE patients. Complement levels rise by 10–50% during normal pregnancy and may appear to remain in the 'normal' range, despite disease activity. Thus, the trend of complement levels becomes more important than absolute values. Mok et al, reported that proteinuria is an important factor that causes fetal loss, our case also had proteinuria but she had a successful delivery and a healthy baby.¹⁵ SLE is not a contraindication for pregnancy but the patients should be followed closely by an obstetrician, pediatrician and nephrologist. And also the patient needs to be informed about the pregnancy progress in SLE.

CONCLUSION

Advancing technology and better understanding of the disease have improved outcomes in lupus pregnancies over the last few years. Pregnancy can be successful in most women with lupus nephritis. Pregnancy in SLE should be planned and a management strategy should be agreed in full consultation with the patient, prior to conception. Women with SLE frequently need treatment throughout pregnancy. It is essential that the maternal disease is well controlled prior to, during and after pregnancy to ensure the best possible outcome for the mother and child. SLE requires a multidisciplinary approach for its diagnosis and successful management.

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