A roller coaster journey of pregnancy with lupus nephritis

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Abstract

Systemic lupus erythematosus (SLE) is an autoimmune disease, that primarily affects young females. In SLE patients, pregnancy remains a perilous situation affecting both maternal and foetal outcomes. The biggest issue is the 3-5 times higher risk of preeclampsia, complicating 16-30% of SLE pregnancies. In SLE, additional specific risk factors include active or history of lupus nephritis, anti-phospholipid antibodies, declining complement levels, and thrombocytopenia. The purpose of this case report is to have a glimpse into the odyssey of a woman from the commencement of developing lupus to successfully attaining motherhood which is a parity score of 2 with a living second child and loss of a first child. Frequent monitoring is needed to revise treatment strategy at every visit with a holistic multidisciplinary approach for better foetal & maternal outcomes.

Keywords: lupus nephritis, pre-eclampsia, prednisolone, azathioprine, fetal growth retardation

Introduction

Pregnancy complicated by systemic lupus erythematosus poses grave danger on maternal and foetal health with increased risk of foetal loss, preterm birth, Fetal Growth Restriction and neonatal lupus syndromes as major foetal issues [1]. Maternal flares are associated with increased prematurity [2], and active nephritis acts as a solid and independent predictor of poor foetal outcome [2, 3]. Active disease six months preconception, history of lupus nephritis and discontinuation of anti-malarial significantly increase the risk of flares during the pregnancy [4-7]. There has also been association of thyroid disease with high risk of preterm birth in SLE pregnancy [8]. The biggest issue is the 3-5 times higher risk of preeclampsia, complicating 16-30% of SLE pregnancies [9-11]. Our intent behind this case report is to supervise and guide meticulously a woman diagnosed with SLE to accomplish her pregnancy journey.

Case report

A 30-year-old woman diagnosed with biopsy-proven class II lupus nephritis since 2013 subsequently progressed to class IV; V lupus nephritis treated with Euro lupus regimen (6 low doses intravenous cyclophosphamide pulses) following which she was put on tab Azathioprine and tab Losartan was started for chronic hypertension in 2015. Her lupus improved by November 2016 to flare up in 2017, for which she received steroids, mycophenolate mofetil and low dose diuretics and then again switched to azathioprine following remission along with Levothyroxine (50 mcg) for newly diagnosed hypothyroidism. She first visited our institute at 18 weeks of gestation in 2019 following spontaneous conception in the remission phase. Along with routine antenatal care, she was advised tablet Prednisolone 5 mg /7.5 mg on alternate days, Azathioprine 50 mg once daily, Hydroxychloroquine 200 mg twice daily. She continued Losartan till ten weeks of gestation. She had 1st episode of high blood pressure at 24 weeks; hence Labetalol and Nifedipine were started, but doses escalated at 26 weeks of pregnancy due to uncontrolled high B.P. She got admitted at 30+4 weeks of gestation due to persistently raised B.P. with foetal Doppler changes suggestive of absent diastolic flow. Repeat Doppler after 48 hours documented reversal of diastolic flow in umbilical artery for which she underwent emergency Caesarean was done in July 2019 and a live preterm female baby of 840 grams was born but succumbed after a month due to septic shock. Post-delivery, she received Preconception counselling from our department and re-switched to tablet Losartan for five months. She took a conscious decision of conceiving again and discontinued Losartan from January 2020. She spontaneously conceived on 4th March 2020 after eight months interval.

Apart from routine antenatal care, she took progesterone support, aspirin (150 mg) and Levothyroxine (62.5 mcg) along with all previously prescribed medications as advised by a rheumatologist. Her first trimester was uneventful with normal laboratory and ultrasonography reports and negative anti dsDNA, anticardiolipin antibody M & G and normal C3, C4 levels. At 22 weeks, she was kept on Nifedipine (10mg) TDS and Labetalol (100mg) B.D. for high blood pressure. Her anomaly scan and foetal Echocardiography were normal so were her blood and urine parameters. Growth scan at 30+3 weeks of gestation documented a Single live intrauterine foetus of 29+2 weeks with normal Doppler indices. She was given parenteral iron at 31 wks for anaemia correction as her haemoglobin was 7.2 gm/dl along with antenatal steroid coverage. Spot urinary protein was raised, i.e., 27 mg/dl, spot

urinary creatinine was 56 mg/dl & urinary Albumin Creatinine Ratio was 0.48:1. 24 hours urinary protein was significantly raised, i.e. 536.4 mg/24 hours. She was admitted at 35+1 weeks because of superimposing preeclampsia on chronic hypertension. USG revealed SLIUF of 33 weeks gestation weighing 2.152 kgs with adequate liquor and increased diastolic flow in foetal MCA and CPR of 1 with mild prominence of foetal large bowel loops. 24 hours urinary protein was 1472 mg/ 24 hours, urinary ACR- 1.77 with normal complement levels. An elective LSCS was done after anaesthesia clearance and negative Covid report with an uneventful intra-operative period. An alive, preterm female baby weighing 1.6 kgs with an Apgar score of 9/10 was born and shifted to NICU because of low birth weight, prematurity & lupus workup. Postoperatively, she was treated with parenteral antibiotics, lupus medications and Tab Metoprolol (50 mg) because of high B.P. readings as per nephrology consultation. Postnatal USG abdomen and ECHO of the baby were normal. The baby improved clinically with a negative sepsis screen, and both were discharged in satisfactory condition on a postoperative day 6. The patient was doing well with the same medications, and her baby gained 2.2 kgs weight with normal growth milestones on follow up after 4 weeks.

Discussion

Preconception counselling in SLE should be done regarding apt timing of pregnancy, disease control and stoppage of teratogenic drugs. Close antenatal surveillance, minimum possible steroid dose with the continuation of Hydroxychloroquine, Azathioprine throughout the pregnancy should be the mainstay treatment [12-14]. Use of low dose aspirin in SLE patients is indicative of lower risk of thrombosis in spite of less evidence [15, 16]. In our case, our patient was in the remission phase for the last 5 years, which was a predictor for successful pregnancy outcome. Lack of Preconception counselling, delay in seeking early antenatal care and failure to substitute Losartan in the early period could be attributed to her first loss, which was taken care of in the subsequent pregnancy where additionally aspirin was started since beginning with Preconceptional discontinuation of Losartan. Rheumatology and nephrology consultations were taken regularly, thereby emphasizing on the multidisciplinary approach.

Conclusion

SLE is not a contraindication for pregnancy. With the advent of new technologies anda better understanding of the disease process, pregnancy outcomes have improved remarkably. Pregnancy should be planned carefully in SLE patients with emphasizing equally on informed Preconception counselling & optimum disease control for satisfactory outcomes.

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