Successful Outcome of Pregnancy in Lupus Nephritis during Drug-Free Remission

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Abstract

Lupus nephritis is a common and devastating manifestation of Systemic lupus erythematosus, occurring in over half those diagnosed with SLE. Renal involvement represents a poor prognostic factor in patients with SLE.

The management of lupus nephritis has evolved considerably, and the outcome of the treatment has improved over the last three decades. Treatment is guided by the disease severity, based on the histopathological and clinical manifestation. Pregnancy in SLE with nephritis had poor outcomes for many years but with newer treatment and improved compliance with the treatment, it has been observed that outcomes have improved. Here we present an interesting case of Lupus Nephritis and the successful outcome of pregnancy.

Case report

A 24-year woman, mother of a one-year-old child presented with the symptoms of polyarthralgia, morning stiffness and intermittent fever for 2 weeks. Her routine blood workup showed increased CRP and ESR. Her urine microscopy showed proteinuria along with elevated renal parameters. Her further workup included autoimmune panel and renal biopsy and was diagnosed with Lupus Nephritis WHO stage III. Her ANA was 1 in 2560; Sm, RNP and dsDNA were high in the profile. Urine PCR was 2.6

She was started on immunosuppressive therapy with Mycophenolate and corticosteroids along with hydroxychloroquine and ACE inhibitors. After induction therapy, she expressed a desire to conceive. Hence for maintenance therapy, Rituximab was suggested and screened for it.

Her APLA antibody screen came back negative. Immunoglobulins showed high IgG.

Rituximab was given 1gm two doses in a fortnight and continued on hydroxychloroquine, Steroids and Ramipril. Mycophenolate was stopped.

She improved gradually for 4months and all other medications were tapered. Her ANA was 1 in 320 and her profile was negative. Urine PCR 0.3 during the follow-up period she was maintained in remission with hydroxychloroquine 200mg and aspirin once she got pregnant.

After 12 months following the rituximab, she got conceived and had repeat ANA profile which all came back negative.

Once she got conceived she had regular obstetrician review with blood, fetal ECHO and USG. She had an elective cesarean section (previous LSCS) and got delivered a live baby. The baby was screened for neonatal lupus too.

In Summary, she had achieved disease remission after Rituximab (both systemic and renal) and never needed steroids all along with her pregnancy. She achieved immunological remission too.

Discussion

Treatment for lupus nephritis is complex and therapeutic options are likely to have teratogenic effects. For example, Mycophenolate mofetil and cyclophosphamide, frequently used for proliferative forms of LN, are contraindicated during pregnancy. Both induction and maintenance regimens are commonly based on corticosteroid therapy, azathioprine, and calcineurin inhibitors (e.g., cyclosporine and tacrolimus), which have acceptable safety profiles in pregnancy. Specific pros and cons for each class/agent for their use in pregnancy are as follows. [1]

In that meta-analysis, RTX was ranked as the most effective therapy for LN patients, especially for refractory patients when compared to standard treatment or patients who experience a new flare-up after intensive immunosuppressive treatment. Similarly, a recent meta-analysis demonstrated that RTX induced remission of LN in patients who do not enter remission with standard therapies [2]

A meta-analysis reported the presence of antiphospholipid antibodies in approximately one-quarter of lupus pregnancies [3].Because the risk of pregnancy loss has been correlated with the number of positive tests for different antiphospholipid antibodies, screening for the presence of these antibodies during the initial evaluation of all lupus pregnancies is recommended[4].

In patients with complex clinical courses, the importance of a collaborative and multidisciplinary management approach must be emphasized. Furthermore, management must occur at a tertiary referral center with experience of managing critically ill high-risk obstetric patients.

Learning points

1. SLE can be managed with Biosimilar drugs in selected patients.
2. Remission can be achieved in renal lupus too.
3. A successful outcome of pregnancy in SLE can be achieved without steroids (biosimilar use may have helped)

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