Case Report

Diagnosed Systemic Lupus Erythematosus in Pregnancy with Osteonecrosis of Femoral Head and Successful Pregnancy Outcome

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Abstract

SLE carries high risks during pregnancy and may affect both mother and fetus. The patients are advised for planning conception due to the adverse effects of long term corticosteroid treatment for SLE. Osteonecrosis of the femoral head in SLE is rarely reported during pregnancy. In spite of higher complications related to SLE in pregnancy here we report a case of 27 year old pregnant woman with diagnosed SLE and osteonecrosis of the femoral head along with the successful pregnancy outcome.

Key Words: Corticosteroids, Osteonecrosis, Pregnancy, Systemic lupus erythematosus, Trauma

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Introduction

Systemic lupus erythematosus (SLE) is a life threatening autoimmune disorder mainly affecting females of reproductive age. SLE patients during pregnancy are referred as “high risk patients”. It increases the risks for abortion, intrauterine death, intrauterine growth restriction (IUGR), stillbirth, preterm delivery, premature rupture of membranes, preeclampsia and eclampsia.[1]

The better prognosis for both mother and child has been observed when SLE remains quiescent for at least six months prior to conception. It has remained challenging to differentiate disease flares during SLE pregnancy from normal physiologic changes related to pregnancy. Flares during pregnancy can occur in any trimester due to rise in the levels of estrogen, prolactin, and cytokines and require close monitoring. The better understanding of the pathogenesis of SLE and the judicious prescription of immunosuppressive drugs has improved the survival and prognosis of SLE. Hence, a multidisciplinary approach with medical, obstetric, and neonatal monitoring is important for a better outcome.[2]

Case Report

A 27 year old woman gravida 3, para 2^{+0} presented with the 34+3 weeks of gestational amenorrhea, backache and severe fatigue. The patient had history of femoral fracture following a fall on the bathroom floor 12 days prior to admission. She was a known case of SLE for past 11 years with cutaneous manifestations on the upper extremities and axilla for two years and alopecia from one year. Later she developed decrease hearing in the right ear and ocular manifestations for which she underwent laser treatment (she could not remember diagnosis and did not provide documentation). The patient also complained of shortness of breath, low grade fever and chest pain from past few years. Her treatment comprised daily doses of 55 mg of Prednisolone which she took regularly for past 11 years till she come to know about her pregnancy. She reduced dose of Prednisolone to 15 mg per day

during her pregnancy without getting advice from the consultant. The patient also received intravenous iron therapy for iron deficiency anemia during pregnancy. She had normal vital signs on admission. Physical examination revealed gingival hyperplasia, discomfort on eye movement and boutonniere deformity in fingers of right hand. Laboratory investigations revealed raised serum levels of alkaline phosphatase (138 U/L), uric acid (7 mg/dl) and ESR (120mm/1hr). Urine analysis showed urine albumin 3+ on dipstick. The patient was given injection enoxaparin sodium and dexamethasone covers and advised for emergency caesarean section. Emergency lower (uterine) segment caesarean section was done at 35 weeks due to indications of previous 2 caesarean sections, SLE manifestations and limb fracture. The patient delivered alive baby boy with an APGAR score of 7 at 10 minutes.

Figure 1: SLE manifestations in the presented patient

A. Axillary lesions
B. Boutonniere deformity
C. Alopecia
D. Cutaneous lesions

Discussion

SLE is related to adverse pregnancy outcomes. Two lupus autoantibodies, anticardiolipin antibody and lupus anticoagulant increases the risk of abortion in women affected with SLE. It is advised that patients with SLE must plan pregnancy when the disease is in remission state for at least 6 months prior, due to possible adverse outcomes. If pregnancies occur during the active state of disease or a major organ involvement, it may result in poor maternal and fetal outcomes[2, 3] SLE flares are managed with non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids; whereas major organ involvement may require treatment with azathioprine. Cyclophosphamides are contraindicated in pregnancy. Prophylactic corticosteroids for the prevention of SLE flares in pregnancy are not advised.[2]

Our patient was on Prednisolone before pregnancy, but she herself abruptly reduced dose of it without consultation considering it as harmful for the fetus during pregnancy. Prednisolone (corticosteroids) has anti-inflammatory functions and play key role in the treatment of SLE. It is considered safe in pregnancy as only 10% of its crosses placenta. Although long term corticosteroids have beneficial effects in patients with involvement of vital organs in SLE, but it has some serious life threatening side effects such as fluid retention, weight gain, hypertension, ophthalmic complications, infections, steroid-induced diabetes, osteoporosis and osteonecrosis.[4] Osteonecrosis or avascular necrosis of the femoral head is a rare finding in pregnancy.[5] Long term use of corticosteroids induces osteoporosis, increasing risks for osteonecrosis of the femoral head. It occurs as a result of reduced blood supply to bone leading intravascular coagulation and fat embolism, though mechanisms are still unclear.[6, 7] The most frequent cause of osteonecrosis is trauma. Our patient presented with long term corticosteroids intake along with a recent history of trauma in pregnancy increasing risks for fracture.

In a case report by Adikari M et al, a patient with features of chronic inflammatory disorder developed bilateral osteonecrosis in femoral heads and later progressed to SLE over next few years. Interestingly, in that patient diagnostic criteria for SLE were not met in pregnancy nor she was on corticosteroids therapy earlier.[8] Gontero et al, in his study comprising 158 SLE patients found 15 patients (9.5 %) to suffer from osteonecrosis involving 34 joints; out of which 26 occurred in hips, 4 in knees and 4 in shoulders.[9]

Conclusion

In conclusion, it is very rare to find osteonecrosis of femoral head in pregnancy and various factors in

combination may contribute in its occurrence; however, it is very important to manage SLE patients during pregnancy as high risk patients with proper prescription and dose adjustments of corticosteroids on individual basis altogether with pre-conception counselling for planning pregnancy.

References

1. Chen D, Lao M, Zhang J, Zhan Y, Li W, Cai X, et al. Fetal and Maternal Outcomes of Planned Pregnancy in Patients with Systemic Lupus Erythematosus: A Retrospective Multicenter Study. Journal of Immunology Research. 2018;2018:7.
2. Mohindra R, Marwah S. Systemic lupus erythematosus in pregnancy - intricate, but wieldy. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2015;4(2):295-300.
3. Cojocaru M, Cojocaru IM, Silosi I, Vrabie CD. Manifestations of Systemic Lupus Erythematosus. Maedica. 2011;6(4):330-336.
4. Amissah-Arthur MB, Gordon C. Contemporary treatment of systemic lupus erythematosus: an update for clinicians. Therapeutic Advances in Chronic Disease. 2010;1(4):163-175.
5. Nassar K, Rachidi W, Janani S, Mkinsi O. Aseptic necrosis of the femoral head after pregnancy: a case report. The Pan African Medical Journal. 2016;24:195. doi: 10.11604/pamj.2016.24.195.7325
6. Chan KL, Mok CC. Glucocorticoid-Induced Avascular Bone Necrosis: Diagnosis and Management. The Open Orthopaedics Journal.2012;6:449-547. doi: 10.2174/1874325001206010449
7. Mendiratta V, Khan A, Solanki RS. Avascular Necrosis: a rare complication of Steroid therapy for Pemphigus. Indian Journal of Dermatology. 2008;53(1):28-30.
8. Adikari M, Gunawardane A, Illangantilaka S, Atukorale H, Rubasinghe J. A case of systemic lupus erythematosus presenting as bilateral avascular necrosis of femur. BMC Research Notes. 2016;9(1):392. Doi 10.1186/s13104-016-2198-9
9. Gontero RP, Bedoya ME, Benavente E, Roverano SG, Paira SO.Osteonecrosis in systemic lupus erythematosus. Reumatología Clínica. 2015;11(3):151-155.