A case of maternal renal failure on hemodialysis

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Objective

To present a case report of a pregnancy with renal failure on hemodialysis.Chronic renal failure is defined as a permanent reduction in the glomerular filtration rate (GFR) and usually occurs when the GFR is below 25 ml/min. The patient had a class IV lupus nephritis as a part of a multi-organ autoimmune disease. 50% of SLE patients develop LGN within 5 years of the diagnosis and there is an increased risk of a flare during pregnancy (due to hormonal and immune changes). This is associated with risks of a preterm delivery, pre-eclampsia, maternal mortality, fetal/neonatal death, and intrauterine growth restriction. Pre-eclampsia, however, should be differentiated from a lupus flare and other pregnancy-specific conditions presenting with hypertension and proteinuria.

Methods

This is a case report.

Results

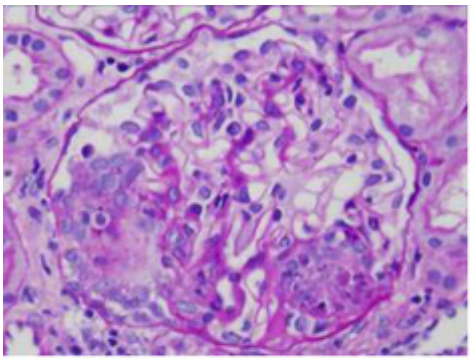
We present a 33 years old, G8P5, 8 weeks pregnant. (4 living children, 1 SB at 28 weeks due to placental abruption, the last pregnancy was terminated at 27 weeks due to sever preeclampsia in 2007, 2 abortions at 20 weeks and in the 1st trimester, respectively). In 2007 she delivered at 27 weeks of pregnancy due to severe preeclampsia with a good outcome. Postnatal follow-up showed proteinuria of 6.7 g/24hrs, microscopic haematuria, thrombocytopenia, low C3 and C4, positive anti-ANA, DS anti-DNA more than 300. The kidney biopsy reported class IV lupus nephritis with crescents which was subsequently treated with steroids, cyclophosphamide, mycophenolate mofetil and plasmaphoresis. The function of the kidneys has further deteriorated with creatinine levels of 500-700 and proteinuria of 8 g/24hrs. A second kidney biopsy was performed. Twelve glomeruli were examined in total, two of which were sclerosed, five had cellular crescents and four were noted to have fibrous crescents. The patient had been treated with IV immunoglobulin, plasma exchange, Rituximab and haemodialysis since March 2008 (3 sessions/week). She had been admitted several times due to lupus flares. She had deliberately stopped all her medication by herself for the past 2 years as she was keen to conceive. The booking weight was 50 kg and the BP was well controlled with labetalol but subsequently increased after 28 weeks during the current pregnancy. The examination was unremarkable, apart from the presence of masses on the chin and the forehead, and a mild lower-leg oedema. The patient was fully counselled regarding the risks and the eventual outcome by an MD team. Dialysis sessions were increased to 6 times a week. SLE and anti-phospholipid tests were all negative. An investigation performed revealed raised PTH. She was on several medications such as Prednisolone 5 mg, Folic acid 5 mg, Aspirin 100 mg, Labetalol 200 mg bid, Hydroxychloroquine 200 mg BID, Azathioprine 50 mg daily, Alfa-calcidiol 0,25 mcg daily. (vit D analogue), Cinacalcet 60mg (calcium-mimetic), Regular heparin (1000 units of unfractionated heparin daily during dialysis). She was seen regularly by the MD team of obstetricians, nephrologists, rheumatologists and dietitians and the plan was to be delivered at 34 weeks under an IV hydrocortisone cover and close monitoring of BP and fluid balance. At 32+2 weeks she experienced abdominal pain and vaginal bleeding (placental abruption) and had an emergency CS and subsequent tubal ligation. The baby weighed 1700 g with Apgar score of 8, 9, 10 and normal cord pH.The infant was admitted to NICU because of the prematurity and discharged in a good condition. The patient was admitted to HDU for observation and started hemodialysis the next morning and gradually return to non-pregnant dialysis regimen in 2 weeks.

Conclusion

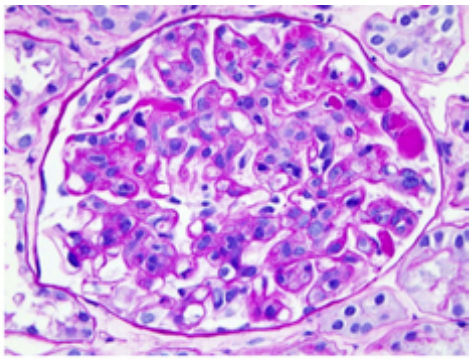
Poor prognostic features are maternal age more than 35 years, history of more than 5 years on dialysis, delayed diagnosis of pregnancy.In pregnancy the frequency of the dialysis sessions needs to be increased. The immunosuppressive therapy is relatively safe in pregnancy. Statins, ACE inhibitors, ARB and Cytotoxic medication should be stopped at least 3 months before pregnancy.

Stages of Chronic Kidney Disease of all Types		
Stage	**Qualitative Description**	**Renal Function (mL/min/1.73 m²)**
1	Kidney damage-normal GFR	≥90
2	Kidney damage-mild ↓ GFR	60-89
3	Moderate ↓ GFR	30-59
4	Severe ↓ GFR	15-29
5	End-stage renal disease	<15 (or dialysis)

Class IV is divided into diffuse segmental (IV-S) when>50% of the involved glomeruli have segmental lesions, and diffuse global (IV-G) when>50% of the involved glomeruli have global lesions.



Segmental



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