SUCCESSFUL PREGNANCY OUTCOME IN ADVANCED RENAL DISEASE : A CASE REPORT

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INTRODUCTION

Pregnancy related acute kidney injury is a major cause of maternal and fetal morbidity and mortality in developing countries. But with improvement in antenatal and postnatal care its incidence has declined from 22% in 1960s to 9 % in 1980s and down to 3-7% in 2000s.

It usually occurs due to obstretical complications such as septic abortion, placenta, uterine hemorrhage, intrauterine death and puerperal sepsis in previous normal kidneys.

It is uncommon complication of pregnancy but is associated with significant morbidity and mortality

Antineutrophil cytoplasmic antibody associated vasculitis are a small vessel multisystem vasculitis characterized by necrotising inflammation of blood vessel wall and the presence of ANCAs. Pregnancy in patients with anti-neutrophili cytoplasm antibody associated vasculitis is associated with high risk of fetal and maternal complications.

DISCUSSION

Acute kidney failure is the abrupt loss of kidney function resulting in retention of urea and nitrogenous waste products and dysregulation of extracellular volume and electrolytes.

Various diagnostic criterias were developed for its diagnosis.In 2012 KDIGO released its clinical practice guidelines for AKI which built off of RIFLE and the AKIN criteria.However diagnosis of AKI in pregnancy is more challenging than in non pregnant state due to physiological changes and increase in glomerular filteration rate ,a reduction in serum creatinine during pregnancy occurs.So a baseline value of renal function tests is needed for diagnosis.

AKI mostly occurs during second trimester of pregnancy , however pregnancy related AKI can occur during any trimester or in postpartum period . Antineutrophil cytoplasmic antibody associated vasculitis is systemic autoimmune disease causing small vessel vasculitis and inflammatory damage with predilection for kidneys,lungs and upper airways.

The most common manifestation of disease was pulmonary involvement that included alveolar hemorrhage, pleural effusion, and respiratory failure requiring intubation.Other serious maternal complications were renal involvement including AKI ,proteinuria, hematuria and need for short term and long term hemodialysis, acute limb ischemia, acute mesenteric ischemia, cardiomyopathy and infection in women treated with steroids and immunosuppressants.The outcome of majority of pregnancies resulted in live birth however premature and SGA infants were common.

Laboratory abnormalities include anemia ,leukocytosis, eosinophilia, AKI, presence of proteinuria and hematuria.Other than this presence of ANA, antidsDNA, RF, serum ANCA,serum myeloperoxidase may aids in diagnosis. Tissue biopsy taken from nasal cavity, kidney, skin, lung, vascular and myocardium also aids in diagnosis.Immunosuppression with combination of agents like corticosteroids,cyclophosphamide,azathioprine and plasma exchange were the mainstay for treatment that may have teratogenic effects. Efficacy and safety of newer emerging drugs like iv immunoglobulins and rituximab is uncertain.Previously due to high rates of fetal loss and poor outcome dialysis was usually not permitted.However now its now recognised that increased dialysis intensity improves successful pregnancy outcomes although certain complications are aggravated like preeclampsia,polyhydramnios,IUGR,prematurity and low birth weight.

CONCLUSION

Antineutrophilic cytoplasmic antibody associated vasculitis is associated with high rates of maternal and fetal related complications due to undelying disease and chronic immunosuppression.However with appropriate councelling and close monitoring successful pregnancy outcome can be seen.

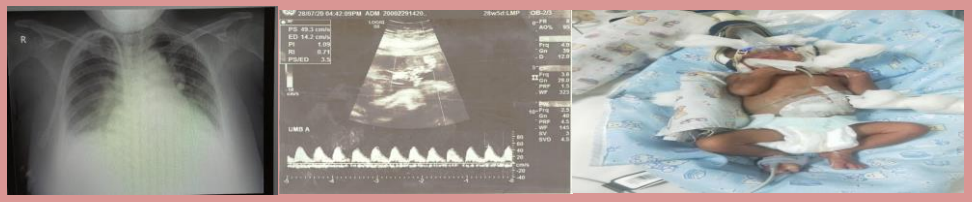
CASE SUMMARY

29 years Primigravida 26+3 weeks of gestation with chronic hypertension with superimposed preeclampsia with beta thalassemia trait with moderate anemia with acute renal failure with ANCA associated vasculitis was admitted with c/o acute onset breathlessness. After nephrologist consultation was started on hemodialysis.She gave history of transfusion of 10 units blood in view of severe anemia (hb-3.4g%) in a duration of less than one month last month only.

On examination:Vitals were stable.

P/A-uterus 24-26 weeks size,relaxedFHR-148 bpm

Hemodialysis was done every alternate days.She was kept on following medications- tab lobet (dose altered) ,tab prazosin ,tab dexamethasone later changed to tab prednisolone ,later clonidine was also added,inj erythropoietin. 3 units BT was done after admission



INVESTIGATIONS :

Hb- 7 g/dl, TLC/platelet- WNL, serum creatinine- 7.98 mg/dl ,sickling-negative , urine R/M -protein ++ ,24 hr urine albumin-raised , ICT -negative , LDH-raised, C3-97.4 , C4-23.6 , dsDNA /ANA/C-ANCA-negative , P-ANCA-postive.

USG obstretics initially was within normal limits later showing high resistive flow with increased RI and PI values and early diastolic notch in right U.A.USG abdomen s/o acute kidney injury.USG done 15 days after admission (25/7/2020) suggested gross pleural effusion likely due to AKI.

Renal biopsy done to rule out vasculitis s/o global to complete sclerosis and multifocal chronic interstitial inflammation.

Renal artery doppler s/o both kidneys showing mild increased cortical echogenicity.no hydrureteonephrosis or calculus.color doppler showing normal flow in parenchyma of both kidneys.Covid test done came positive after 20 days of admission.

Inj mgso4 was given for neuroprotection and a preterm,alive female baby of 1.09kg delivered by breech by emergency LSCS on 4/8/20 at 2:10 pm.Baby was shifted to NICU and now currently doing well.

Postoperatively was kept on higher antibiotics (inj vancomycin,inj meropenem).3 units BT was done.BP was not controlled on antihypertensives -tab lobet, tab amlodipine ,tab Lasix and was revised to tab prazopress,tab nicardia,tab lobet and increased dose of tab Lasix.She developed covid related lung affliction(pneumonia) which was managed with dexamethasone.she was also started on tab favipiravir.She also developed depreesive symptoms for which psychiatric consultation was taken.

Patient was discharged with hemodialysis thrice a week and antihypertensives.

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