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Pregnancy-related AKI treated with dialysis: characteristics and outcomes explored.

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Objectives : To investigate the incidence and outcomes of severe cases of dialysis requiring AKI in pregnant patients
Methods : This retrospective study analyzed the data of dialysis-requiring pregnancy-related AKI admitted to Nephrology over 4 years (January 2020- December 2024). Postpartum acute kidney injury (PPAKI) was defined as AKI diagnosed from the time of childbirth to 6 weeks post-delivery, following the KDIGO guidelines. Recovery was categorized as: - Complete recovery: normal serum creatinine (<1.0 mg/dL) or a previously known baseline, with no proteinuria at the end of 3 months - Partial recovery: improved renal function with dialysis independency, but serum creatinine not returning to baseline or normal range - Non recovery: patients requiring dialysis at the end of 3 months Exclusion criteria: Patients with underlying chronic kidney disease and pre-pregnancy hypertension
Results : Out of 16,584 pregnancies, 126 (0.76%) were complicated by Acute Kidney Injury (AKI). Only 13 of the 126 women had a preexisting comorbidity. The study included 52 patients with an average age of 24±7 years. The average serum creatinine level upon presentation was 6.3±1.65 mg/dl. (Table 1) 2 patients, or 3.8%, did not survive, and 15 patients, or 28.84%, remained dependent on dialysis three months post-delivery. Interestingly, there was no significant difference in the incidence of low birth weight, small for gestational age, or preterm birth compared to those without AKI (15.6% versus 13.1%; p value=0.45). Acute cortical necrosis was reported in 12(23.06%) cases (Table 2). Among patients who did not recover from AKI, thrombotic microangiopathy was the cause in 5 cases, acute cortical necrosis in 9 cases, and severe acute tubular necrosis in 1 case. Partial recovery was observed in 12 subjects, accounting for 23.1% of cases.
Conclusions : Pregnant individuals with AKI who undergo dialysis face a higher likelihood of experiencing non-recovery or only partial recovery of their renal function

Table-1.png

Table 1 baseline characteristics

Variables	**n=52**
Age (years)	24.31±4.63
Order of Pregnancy	Primigravida- 20, multigravida-32
Antenatal care	Received- 42, Not received- 10
Rural residence	29(55.76%)
Delivery	LSCS-27, Vaginal- 25
Hemoglobin g/dl	7.8±3.51
Total leucocyte count	12.43±4.19
Serum creatinine mg/dl	5.41±3.61
Serum albumin g/dl	3.5±1.64

Table-1.png

Table 2 Causes of Renal Injury

Cause	**n=52**
Pre-eclampsia	9
Eclampsia	2
HELLP syndrome	3
Acute fatty liver of Pregnancy	1
Thrombotic microangiopathy	8 (ADAMTS13 defeciency-1, anti CFH antibody-3, CFHR3 mutation-1, variant of unknown significance-2)
Acute cortical necrosis	12
Acute tubular necrosis (Sepsis, Hypovolemia)	16