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Therapeutic Plasmapheresis in Severe Lupus Nephritis with Acute Kidney Injury: A Case Series.

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Objectives : Therapeutic plasmapheresis (TPE) has been described as treatment for lupus nephritis and is practiced as an adjunct to immunosuppression in severe lupus nephritis (LN) with acute kidney injury (AKI). We aim to study the clinical characteristic and outcomes of TPE in severe LN in our centre.
Methods : This retrospective study included all patients who had undergone TPE with biopsy proven LN from January 2018 until December 2023. Data was collected and analysed using SPSS version 17. Results are expressed in mean ± standard deviation (SD) unless stated otherwise.
Results : 8 patients with LN underwent TPE over a 5 year period. Mean age was 25.6±9.24 years. Indications were crescentric LN in 50% followed by thrombotic microangiopathy (25%), pulmonary hemorrhage (12.5%) and treatment resistance (12.5%). All patients required hemodialysis for their AKI. All patients had active hematological disease at time of TPE. Baseline hemoglobin was 8.15±1.48g/dL, hematocrit 24.2±4.9%, platelet of 200±128.4x10^3/uL, urea 21.6±6.7mmol/L, creatinine 461±174µmol/L, and creatinine clearance (CrCl) 18±7.6mL/min. Urea and creatinine at end of TPE was lower at 17.2±8.3mmol/L, 387±311µmol/L with CrCl of 31.8±24mL/min. Post treatment only CrCl was significantly lower (p=0.03). Urea and creatinine were lower (p value = 0.01, <0.01) at 6 months post TPE. Anti double stranded DNA (dsDNA) was positive in 88% pre TPE. Only three patients had post dsDNA sent. Average sessions were 7 with range from 5 to 11. TPE were done either daily or every other day. One patient was lost to follow up at one month post TPE. Outcomes at 6 months varied with 25% achieving normal renal function while 37.5% developed chronic kidney disease. 25% went on to develop end stage renal disease requiring regular dialysis.
Conclusions : This case series demonstrates that in patients with severe LN and AKI, TPE may play a role as adjunct therapy to reduce the disease burden.