

19<sup>th</sup> Global

# Nephrologists Annual Meeting

May 14-15, 2018 | Rome, Italy

## Role of therapeutic plasma exchange in reducing ABO antibody titers in patients undergoing ABO incompatible live donor renal transplant

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Renal transplants across ABO blood groups have been made possible by the implementation of antibody titer reduction techniques. We conducted a study over three years on patients (O blood group: 17, other blood groups: 11) who underwent ABO incompatible renal transplant and were subjected to therapeutic plasma exchange of 1 plasma volume using 5% human albumin and fresh frozen plasma of AB blood group on haemonetics MCS+ cell separator. TPE procedures followed by low dose IVIG were continued on a daily basis till the target titer of  $\leq 8$  was reached. Following transplant, further TPE procedures were done in case of rising antibody titers (beyond eight) with or without graft dysfunction or in case of derangement of the renal profile in the form of increasing creatinine and/or decreased urine output. The baseline titers ranged from 16-512 (median=64) and the transplant day titer ranged from 1-8 (median=1). A total of 231 TPE procedures were done for these 34 patients out of which, 162 procedures (88 on O group donors, 74 on others) were done in the pre-transplant period (mean=4.8/patient) and 69 procedures (mean=2.1/patient) were done after the transplant. Post-transplant period, O blood group recipients had 21 and other blood group recipients had 48 procedures. The titer decreased by one serial dilution per TPE procedure for anti-A and 1.1 serial dilutions per TPE procedure for anti-B. With an average of 4-5 TPE procedures pre-transplant and 2-3 TPE procedures post-transplants, favorable outcomes can be achieved in majority of the patients.

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