Beyond barriers: Navigating the transplant terrain with pre-transplant DSA using low dose desensitisation protocol in live donor renal transplantation.

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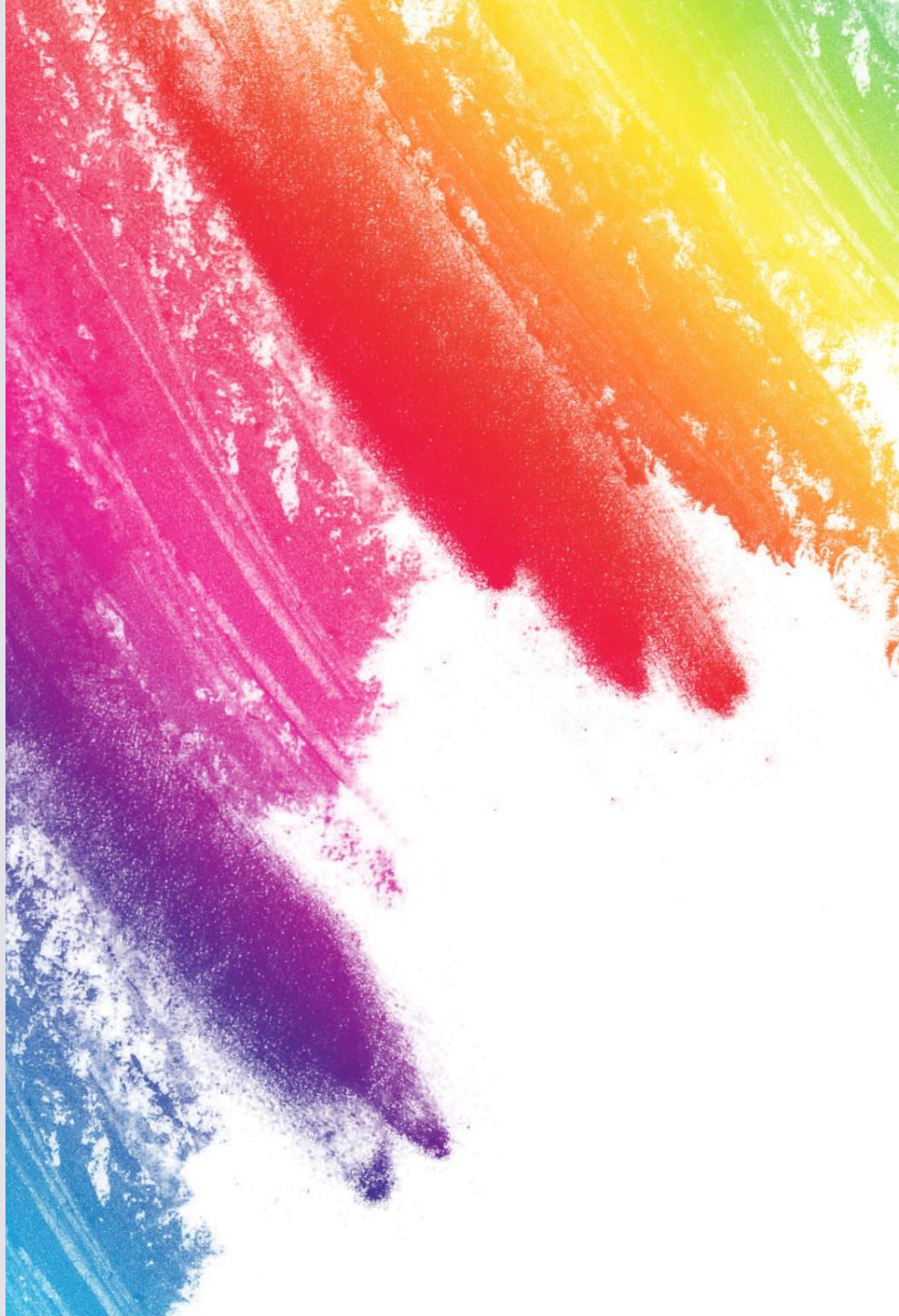


INTRODUCTION

Given the current organ scarcity, living donor kidney transplantation is increasingly performed across HLA or ABO antibodies barrier. It is controversial whether all donor-specific antibodies detected by the solid phase single antigen bead assay negatively affect kidney transplantation outcomes.

Our study aims to provide valuable insights into the clinical relevance of pre-transplant DSAs and inform decision-making in renal transplantation to optimise patient outcomes

CONFLICTS OF INTEREST: There are no financial conflicts of interests to disclose

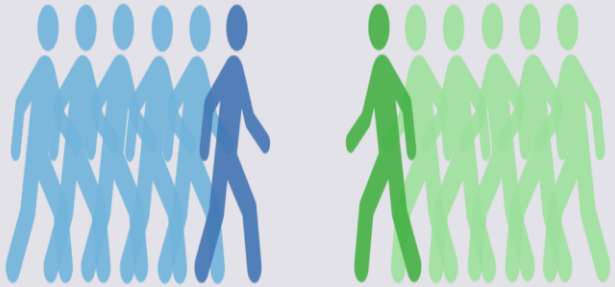
AIMS AND OBJECTIVES

1. Investigating whether the presence of pre-transplant DSAs correlates with higher rates of rejection, graft failure, or other adverse outcomes post-transplant.

2. Assessing the effectiveness of desensitisation in improving transplant outcomes for sensitised patients.

3. Tracking patients with pre-transplant DSAs at 3 months and 1-year post-transplant to understand the long-term implications on graft function and patient survival.

MATERIALS AND METHODS



We retrospectively reviewed all adult kidney transplant recipients who had undergone a transplant at our centre between January 2021 and March 2023. These patients were then divided by SAB reactivity into 2 groups in the setting of negative cross-match.

1. Those with DSA
2. Those without DSA

Desensitisation was done with plasmapheresis and IVIG before transplantation. The primary endpoints were estimated glomerular filtration rate and the occurrence of proteinuria at 3 months and one-year post-transplant. Secondary endpoints include graft loss (defined as return on dialysis), patients' death with a functioning graft, the occurrence of biopsy-proven rejection.

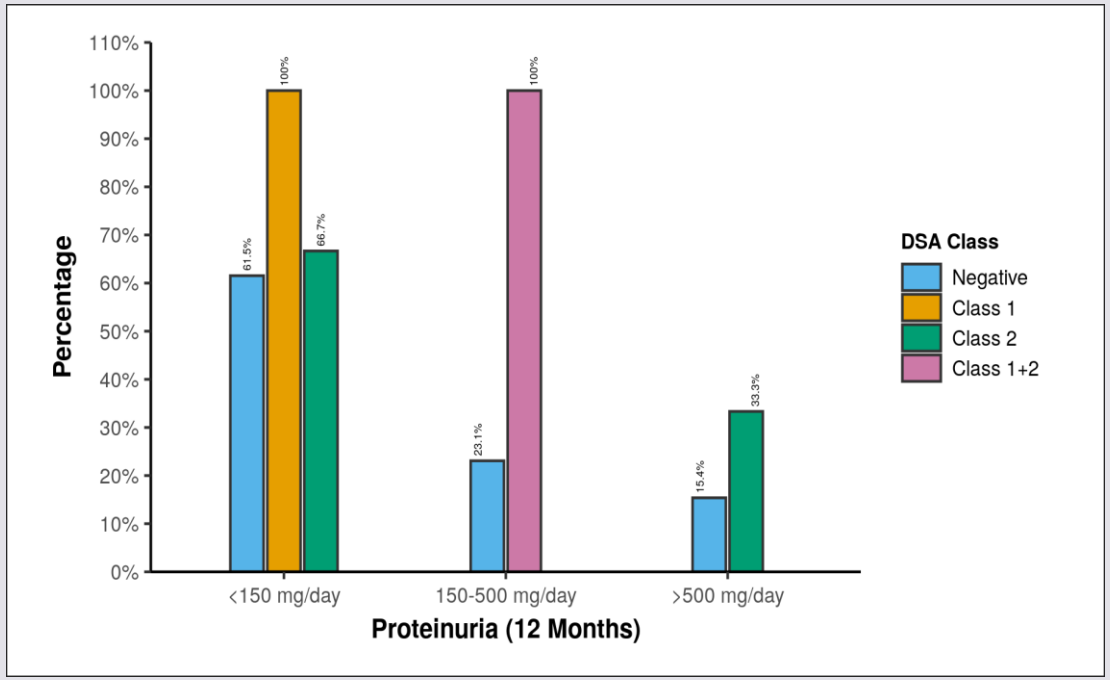
RESULTS

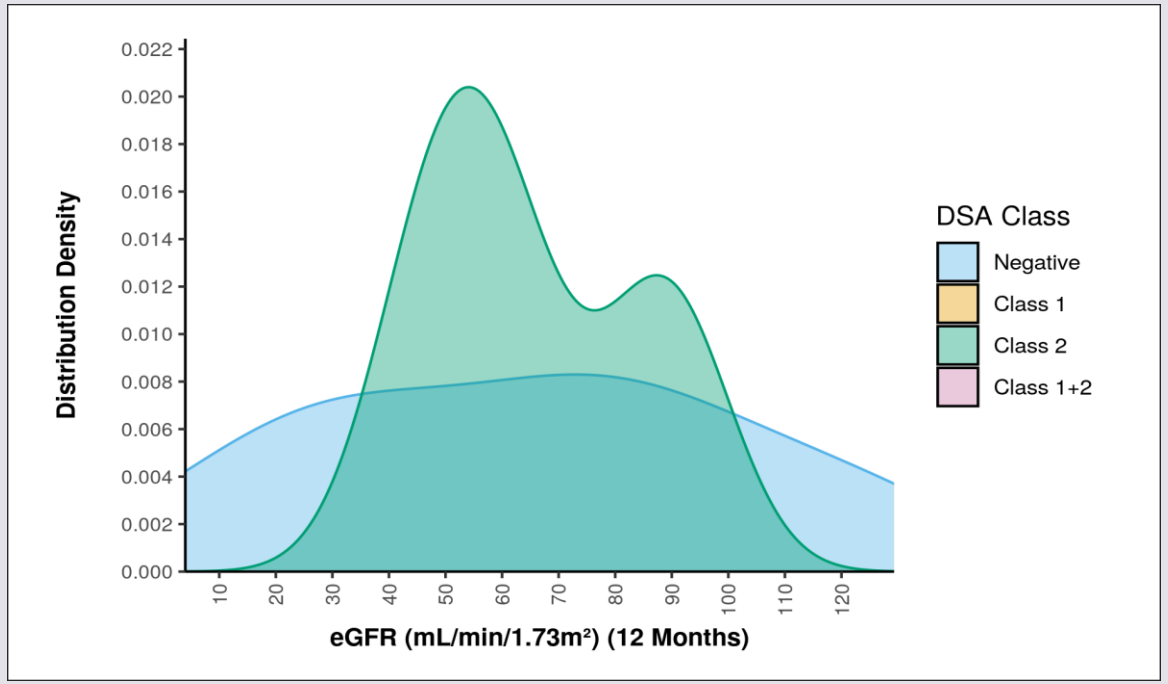
Of 18 patients, 5 were females and 13 were males with a mean age of 38 years. 13 (72.22%) patients had no DSA while 5 (27.77%) had DSA. Most commonly encountered DSA were against class 2 HLA primarily DQB1. Serum creatinine and eGFR were not significantly different between the 2 groups. One year after transplantation, mean serum creatinine was 1.60+/-0.91 in DSA-positive and 2.23 +/-2.47 in DSA-negative patients (p=0.84). The respective numbers for eGFR were 67.68+/-37.7 and 65.22+/-38.59 ml/min (p=1.0), and proteinuria (>500 mg/day) was seen in 20% and 15.4% (p=1.0)patients respectively. DSA-positive patients had graft and survival rates that were not significantly different from those of DSA-negative patients.

The incidence of rejection episodes was more frequent in DSA-positive than in DSA-negative patients (80%v/s 30.8%) without reaching statistical significance(p=0.118).

None of them had hyperacute rejection.

Association of DSA Class with proteinuria and eGFR at 12 months





CONCLUSION

Our one-year follow-up of patients with pre transplant DSA treated with desensitisation found no association with a deterioration in graft function. Furthermore, we did not observe a significant increase in biopsy-proven rejection in patients with pre-transplant DSA positivity.