

THE EFFECT OF SENSITISATION HISTORY ON PANEL REACTIVE ANTIBODY/SINGLE ANTIGEN BEAD ANTI-HUMAN LEUKOCYTE ANTIGEN PROFILE

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Objective: Pre-transplant patients' being exposed to foreign Human Leukocyte Antigens (HLA) by means of blood transfusions, pregnancies, or organ transplants may lead to HLA allo-immunization in those patients. In our study, it was aimed to evaluate the effects of kidney transplant candidates' getting exposed to different types of sensitization on panel reactive antibody (PRA) and single antigen bead (SAB) anti-HLA profiles.

Methods: 256 patients (F/M,152/104) in whom anti-HLA antibody testing was conducted between 2017 and 2020 were assessed retrospectively. Class-I-II PRA identification and SAB tests were performed using the Luminex method (Immucor).

Results: PRA was positive in 62.2% of the patients, and SAB was positive in 67.2%. In both PRA (+) and SAB (+) patients, transfusion and transplantation history caused class-II positivity, while pregnancy history led to both class-I and class-II positivity. While PRA positivity was significant in patients with a history of pregnancy and transplantation (p: 0.028) and in patients with a history of transfusion and transplantation (p: 0.005), SAB positivity was significant for all sensitization types and combinations (pregnancy p<0.001; transfusion p:0.015; transplantation p: 0.0001; pregnancy+transfusion p: 0.036; pregnancy+transplantation p: 0.001; transfusion+transplantation p: 0.044; pregnancy+transfusion+transplantation p<0.001)

Conclusions: As a result of our study, it was determined that PRA/SAB positivity may be associated with sensitization at a rate of 85-90%. In addition, pregnancy, transfusion and transplantation history alone were not significantly associated with PRA positivity, but associated with SAB positivity, and the significance of PRA and SAB positivity increased when combined with more than one sensitization type.