Highly sensitized patients have very limited access to kidney transplantation, resulting in a long waiting time on dialysis. Delisting of prohibited HLA antigens should allow the performance of DSA-positive, crossmatch-negative transplants. We describe the experience of four Spanish transplant centers after delisting prohibited HLA antigens to reduce cPRA below 99%. Delisting was gradually performed, allowing HLA antigens with MFI < 5000, avoiding repeated antigens from previous transplants. If the cPRA did not decrease, a more aggressive HLA delisting was performed up to a maximum MFI of 10,000 except for DP. In some cases, the capacity to activate complement (C3d or C1q) and the 1/16 dilution were performed to individually decide the delisting. Forty-eight patients underwent delisting from May 2022 to August 2023, with total time on the waiting list of 5.6 [3.3–9.1] years and time on dialysis of 9.8 [5.7–13.5] years. Baseline cPRA was 100.0 [99.9–100.0]%. After delisting, it dropped to 98.3 [96.0–99.0]%. Thirty patients obtained an offer within the Spanish Highly Sensitized Program (PATHI) after a period of 98 [52–154] days of which 18 had a negative CDC and flow cytometry crossmatch and underwent kidney transplant. The number of DSAs at the time of transplant was 2 [1–4], with MFI of the dominant DSA of 8036 [3857–20,955]. 55.6% of recipients received post-transplant desensitization. Rejection developed in 7 patients (38.9%), in all cases humoral and in 2 cases (11.1%) mixed, after 43 [13–91] days post-transplant. In only two cases rejection could not be controlled with treatment and, in one case, it progressed to chronic antibody-mediated rejection. All grafts, except one, are functional at 186 [67–384] days post-transplant and, in 7 patients, at 1 year of follow-up. A delisting strategy can be considered for hypersensitized patients who have no other options to find a compatible donor on the waiting list.

P120 | Immunogenetic profiling in living donor kidney transplantation: Insights from DSAs and pronase-treated flow cytometry crossmatch

Luís Ramalhete[1], Ana Teixeira[2], Cristiana Teixeira[2], Maria Isabel Silva[2], Paula Almeida[2], Alice Lima[2] and Ruben Araujo[3]
[1]*Centro Sangue e Transplantação de Lisboa, Nova Medical School, Portugal;* [2]*Centro Sangue e Transplantação de Lisboa, Transplantação, Portugal;* [3]*Nova Medical School, Portugal*

Correspondence: rubenalexandredinisaraujo@gmail.com, luis.m.ramalhete@gmail.com

Ensuring a precise evaluation of immunological risks is essential for the success of kidney transplantation (KT). The presence and characteristics of Donor-Specific Antibodies (DSAs) are key in forecasting the likelihood of graft rejection. Enhanced detection methods for DSAs significantly contribute to predicting the outcomes of grafts. The application of pronase in Flow Cytometry Crossmatch (FCXM) procedures augments the identification of antibodies that are clinically significant, offering a comprehensive insight into potential immunological risk. The study covered 77 living donor kidney pairs, analyzing Donor-Specific Antibodies (DSAs) and FCXM (T and B cells). DSAs were classified into HLA class I and II, with their baseline Mean Fluorescence Intensity (MFI) measured. FCXM results were categorized as positive or negative. Among these, the DSAs demonstrated an average count of 0.57 per patient, (present in 18 patients). For class I, DSAs averaged around 7335 (range 1712–14,067), while class II DSAs showed an average MFI of approximately 9947 (range 1197–22,847). FCXM results were also pivotal in our assessment. Among the 77 patients, around 13% exhibited positive FCXM results, 3 positive for T cells, 3 positive for B cells, and 7 positive for both T and B cells. Among the patients, 9 had class I DSAs, and 14 had class II DSAs, reflecting the varied immunological challenges in the cohort. In 2 patients T cell positivity was observed in 2 patients, 1 ABO incompatible and the other with DSAs near the cut-off. The study highlights the role of critical DSAs and FCXM in KT candidates, addressing potential discrimination and emphasizing nuanced post-transplant monitoring. This balances thorough immunogenetic evaluation with fair patient care, aiming to improve graft survival and outcomes in living donor KT.

P121 | Optimizing kidney re-transplantation outcomes: Validation of a highly sensitive assay for monitoring of donor-derived cell-free DNA

Sofia Westerling[1], Natasa Sikanic[1], Venkat Talla[1] and Linnéa Pettersson[1]
[1]*Devyser, Sweden*

Correspondence: sofia.westerling@devyser.com

Every year 100,000 patients in the US with End Stage Renal Disease (ESRD) are awaiting a kidney transplant, either from a Living Donor (LD) or a Deceased Donor (DD). Only 30% of these individuals are transplanted annually, leaving 70% of the patients with alternative treatments such as dialysis. The median kidney graft survival ranges between 15 and 17 years, and therefore it is not uncommon for kidney transplant patients to require re-transplantation for proper kidney function. Lost grafts