

P116

THE NUMBER OF MISMATCHES AND ITS IMPACT ON THE SENSITIZATION OF KIDNEY RE-TRANSPLANT CANDIDATES AFTER FIRST GRAFT FAILURE

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Sensitization directed to Human Leukocyte Antigens (anti-HLA) is one of the major barriers to kidney transplantation. One of the main reasons is the emergence of anti-HLA antibodies (anti-HLAab) directed to previous transplants. The purpose of this study was to investigate how the number incompatibilities with previous transplants can affect sensitization of patients re-entering on the waiting list for a 2nd transplant. The study included a total of 243 patients who, after losing the first graft re-entered our waiting list. Their sensitization was evaluated using the results obtained by solid phase assays (SPA) (Single Antigen Class 1 and 2), and using software that allows to calculate the PRA against 2668 RANDOM HLA typing in following loci: HLA-A, HLA-B, HLA-Cw, HLA-DR and HLA-DQ. Whenever a patient had more than one SPA study the PRA attribute to the highest result obtained. Patients were stratified into 7 groups according to the number of mismatches (MM) in HLA-A, HLA-B and HLA-DR (0MM;1MM;2MM;3MM;4MM;5MM and 6MM). The evaluation of mismatches was performed at the broad level. The average PRA value of each group was calculated. The number of patients included in each group were respectively: 1,13,63,97,48,18 and 3 and the results obtained were: 0MM-PRA = 0%; 1MM-PRA = 78.3% [0-100]; 2MM-PRA = 85.3% [0-100]; 3MM-PRA = 91.1% [0-100]; 4MM-PRA = 91.7% [7-100]; 5MM-PRA = 99.6% [96.5-100] and 6MM-PRA = 99.9% [99.9-100] (P = 0.0004). We also looked in to the average days of survival of primary graft for each group and the results obtained were as follows: 0MM = 4099 days; 1MM = 3367 days; 2MM = 2957 days; 3MM = 2843 days; 4MM = 2894 days; 5MM = 2754 days and 6MM = 2479 days. Despite the low number of cases in some groups we can see that the increasing number of mismatches is associated with a higher value of PRA and with a lower graft survival. The higher PRA value most certainly will contribute to a longer waiting time when these patients reenter on our waiting list.

P117

MEASURING ACCESS TO KIDNEY TRANSPLANTATION

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Kidney allocation from cadaveric donors must balance two main principles: medical utility and justice. The principle of medical

benefit is gauged by maximizing efficiency in the use of organs, and the principle of justice by its effectiveness ensuring that all patients have a reasonable opportunity to be transplanted. The survival benefit of transplant patients when compared with dialyzed values is well described even after adjusting for age, comorbidities, albumin and Body Mass Index (BMI). This benefit is also observed in patients over the age of 60 years. Several factors are related to transplant efficiency: maximization of HLA matching for patients that are more relevant (children and youth), preference for children; minimization of ischemia time, and the relation of life expectancy of the graft with life expectancy of the receptor. The factors related to justice are: reduction of waiting times, and greater equity of access for patients regardless of their race, blood group, HLA homozygosity and geographic location. There are socio-demographic and immunological factors associated with longer waiting time for kidney transplantation, such as: age, blood group or sensitization against HLA antibodies. Knowing the prevalence and incidence (per year, per million inhabitants) of kidney transplant candidates' demographic factors such as: sex, age groups, socioeconomic status, clinical and immunological characteristics: blood group, PRA values, BMI, type of dialysis, cause of renal failure, and comorbidities; allows for an objective comparison of allocation programs. The waiting time for transplantation should be measured as the median time between the start of dialysis and transplantation of wait listed patients each year. By using the Cox regression analysis, with time on dialysis to transplantation as a dependent variable and clinical and socio-demographic factors as independent variables, will shed light on which characteristics most affect the access to transplantation. Only by defining and applying standardized metrics to kidney transplant candidates over time, is it possible to make informed decisions when debating organ allocation rules. "What gets measured gets improved".

P118

ALL THAT GLITTER IS NOT GOLD: PERSISTENT AND STRONG DE NOVO ANTI-DSA ANTIBODIES AT HIGH TITER COULD NOT BE ASSOCIATED WITH HUMORAL ACUTE REJECTION WHEN SOLID PHASE SAB C1Q-BINDING ASSAY IS NEGATIVE IN POST-TRANSPLANTATION

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The complement-fixing ability of HLA antibody, irrespective of IgG MFI strength could be a key component of clinical outcome. Recently, it has been developed a C1q-SAB assay that identifies complement-fixing HLA antibodies with high sensitivity and specificity. C1q is the first step in the classical complement cascade activated by antibody and precedes C4d deposition. IgG1/IgG3 activate complement and this response is triggered when C1q binds to the C γ 2 region of IgG1/G3 and at the C μ 3