

ANTI HLA ANTIBODIES DEVELOPMENT IN A LARGE COHORT OF RENAL TRANSPLANTED PATIENTS. MONOCENTRIC EXPERIENCE.



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OBJECTIVES

The use of single antigen flow beads technique (Luminex), improved dramatically the comprehension of the role of anti HLA antibodies in renal transplantation.

The exact rate of developing DSA antibodies is not well defined and varies within studies.

We studied the occurrence of anti HLA antibodies in our cohort of kidney recipients and their influence on renal function

METHODS

In 2013 we performed a Luminex test in 343 kidney graft recipients performed from 1975 to 2013 currently on follow up in our clinic and compared baseline characteristics, data of renal function, rate of rejections between those with and without anti HLA antibodies.

RESULTS

We detected anti HLA antibodies in 69 cases (20%), of whom class I antibodies in 43%, class II in 37% and 20% both class I and II. Most of the cases had HLA antibodies against more than one antigens of class I or II.

Donor's specific HLA antibodies (DSA) were detected in 8 patients (11%). The donor's HLA typing was unknown for 19 patients with HLA antibodies (27%). Finally 11 patients (15%) had anti DQ HLA antibodies but we can't indicate if they are DSA since the donor DQ HLA typing is unknown except in one case with anti DQ DSA. 19 patients with anti HLA antibodies (DSA and non-DSA) underwent a renal biopsy and C4d staining was positive in the peritubular capillaries in 7 patients (3 DSA positive, 3 no DSA and 1 who seroconverted from positive to negative).

We didn't see any influence of HLA antibodies on renal function or proteinuria between patients with or without anti HLA antibodies but we didn't performed a statistical analysis between recipients with DSA antibodies and those with non-DSA antibodies because the group with DSA was too small.

Graphs and tables

tab 1. results between recipients with and without anti HLA antibodies

parameter	anti HLA antibodies negative (n:274)	anti HLA antibodies positive (n:69)	p value
age at transplantation (years)	45 (16-76)	43 (13-69)	0.369
age at evaluation years	56 (20-80)	54 (19-77)	0.304
follow up (years)	7.1 (0-30)	7.5 (0-26)	0.898
Serum creatinine (mg/dl)	1.39(0.4-3.4)	1.3(0.65-3.39)	0.651
Proteinuria mg/24 h	202 (0-5363)	198 (0-2600)	0.444
eGFR ml/min median and range	52 (14-94)	51(14-90)	0.652
Recipient sex M/F	65%/35%	42%/58%	0.000
Cadaveric/living donors	93%/7%	98%/2%	0.235
Donor sex M/F	49%/51%	40%/60%	0.011
Acute rejections	17%	27%	0.11
Pre transplant blood cells transfusions	25%	25%	1.0
previous transplant	1.8%	17%	0.000

CONCLUSIONS

We have found anti HLA antibodies in 20% of our patients currently on follow up. Due to the design of this study, the percentage of patients developing DSA antibodies was underestimated because we didn't account for patients who are not on follow up because they lost their graft for the developing of a humoral process. In our cohort of transplanted patients, non-DSA antibodies don't seem to influence renal function

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