curves were compared with log-rank test. The results has shown better graft survival curves of patients (N=913) transplanted in the first 2 years after jan/02 than patients (N=715) transplanted 2 years before jan/02 (78.1% vs. 64.9% P < 0.001). After Jan/02 until Dec/06, a total of 2597 consecutive transplants were performed. From those, transplants with zero (N=121) HLA-A, -B, -DR MM had a significantly better survival rate than those with 1-2 (N=862) or 3-4 (N=1271) or 5-6 (N=343) HLA-A, -B, -DR MM (72.42% vs. 63.44% vs. 58.25% vs. 56.71% P<0.050). Transplants (N=1467) with no HLA-DR MM had a significantly better survival rate than those (N=1130) with one and two HLA-DR MM (62.4% vs. 59.13.0%, P<0,005). Finally, HLA homozygous patients (N=17) wait longer for suitable crossmatch negative organ compared to HLA heterozygous patients (N=2008, – 51mth vs. 35mth) and they have a significantly reduced survival rate compared to the same group (31% vs. 60% P<0.050). In conclusion, HLA compatibility is still a feasible criterion to allocate deceased donor kidneys. However, regarding to HLA homozygous patients, some adjustment must be done to guarantee equal distribution.

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2286 IMPACT OF THE NON-CLASSICAL HLA-E EXPRESSION ON KIDNEY ALLOGRAFT OUTCOME.

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Human leukocyte antigen (HLA)-E belongs, with HLA-G and HLA-F, to the non-classic major histocompatibility complex (MHC) class I (Ib) molecules, broadly defined by a limited polymorphism and a restricted pattern of cellular expression, and may display tolerogeneic functions. In solid organ transplantation, the expression and function of HLA-E in physiological and pathologic processes remain poorly established. Since the expression of the of HLA-E in renal biopsies has not been performed, in this study we performed a cross-sectional study, systematically comparing the expression of HLA-E in post-transplanted renal grafts, stratifying patients according to the presence or not of rejection.

Patients and Methods: Ninety-four renal specimens (12 with acute rejection (AR) and 19 chronic allograft nephropathy (CAN), and 63 with no signs of rejection were immunohistochemically evaluated for HLA-E expression.

Results: In the group as a whole, HLA-E molecules were detected in 23 cases (24.5%). On the hand, among specimes that presented HLA-E expression, 12 out of 23 (52.2%) exhibited AR and CAN, and the remaining 11 (47.8%) exhibited no signs of rejection. The comparison between patients with rejection with those without rejection, the expression of HLA-E was significantly increased in specimens exhibiting signs of rejection (p<0.0396).

Conclusions: Our results suggest that HLA-E expression in the kidney allograft is associated with susceptibility to CAN.

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2287 LONG-RANGE LINKAGE ON CHROMOSOME 6P OF VEGF, FKBP5, HLA AND TNF ALLELES ASSOCIATED WITH TRANSPLANT REJECTION

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Introduction: Polymorphisms in several genes on the short arm of chromosome 6 (6p), among them VEGF (6p12), FKBP5 (6p21.2), HLA-DR (6p21.3) and TNF-α (6p21.3), have been associated with inflammation and transplant outcome. Each of these genes is associated with acute rejection. Independent segregation of these genes is unproven, so we investigated linkage between distant genes on 6p and the putative existence of evolutionarily-conserved long-range 6p haplotypes.

Methods: SNPs studied were VEGF-2578*C/A (rs699947), TNF-α -308*G/A (rs1800629) and FKBP5*C/T (rs1360780) in 206 random and 80 selected HLA-DR52 positive individuals. HLA-DR was typed by serology or SSP. To simplify the analysis, the HLA-DR genotypes were collapsed to the 5 human ancestral HLA-DR supertypes, namely: ***DR51*** [DR15(2), DR16(2)], ***DR52*** [DR11(5), DR12(5), DR13(6), DR14(6), DR17(3), DR18(3)], ***DR53*** [DR4, DR7, DR9], ***DR1*** [DR1, DR10] and ***DR8***. Gametic phase and linkage between paired genotypes were determined using ARLEQUIN 3.01 software, and significance was determined by Chi-square and Markov chain/Fisher's exact test analysis.

Results: Significant allelic associations were evident across the 6p region examined.

	VEGF	FKBP5	HLADR	TNFα
VEGF	*		P<0.05	P<0.05
FKBP5	P<0.05	*	P<0.05	P<0.05
HLADR	P<0.05	P<0.05	*	P<0.05
TNFα	P<0.05	P<0.05	P<0.05	*

Two putative extended haplotypes were identified, associated with DR52 and DR1.

	DR52	VEGF*C	FKBP*T	TNF*A	DR1	VEGF*A	FKBP*C
Chi sq		6.79	4.19	32.54		17.14	8.76
P value		<0.05	<0.05	<0.001		<0.001	<0.05

Within the HLA-DR52 supertype, TNF*A was associated with DR3, while FKBP5*T was associated with DR6.

Discussion: The interval between VEGF and TNF-α is 12.31Mb. Therefore, allelic associations are surprising considering expected recombination and the evolutionary time (c10MY) since divergence of DR supertypes. This suggests that DR1 and DR52 haplotypes have a survival advantage. Within the DR52 supertype, VEGF*C-DR3-TNF*A is a 'high inflammatory' haplotype associated with acute and chronic rejection, while the FKBP5*T-DR6 haplotype is associated with resistance to endogenous and exogenous glucocorticoids. Conversely, the DR1 haplotype is a 'low inflammatory' haplotype.

Conclusion: Distant genes on chromosome 6p co-segregate. This has implications for transplantation and the definition of HLA-disease associations.

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2288 DIFFERENT IMPACTS OF PRE-TRANSPLANT AND POST-TRANSPLANT FLOW-PRA AND DSA ON LIVING DONOR RENAL GRAFTS

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Background: The presence of preformed alloantibodies may pose tremendous risk for humoral rejection to kidney allografts. The objective of this study was to measure the serum creatinine levels of living donor kidney transplant recipients, and find out what were the impacts of pre-transplant and post-transplant panel reactive antibodies (PRA) and donor-specific antibodies (DSA) on the renal grafts.

Methods: We reviewed the data of 135 recipients of living donor kidney transplants from our hospital from 2001 to August 15, 2007, including 19 positive pre-transplant HLA flow PRA (6 anti-HLA-IFlow PRA ;2 anti-HLA-IIFlow PRA and 11 anti-HLA-¦ &¦ Flow PRA). All 135 patients (with 2.3±1.2 HLA-I mismatches and 1.0±0.6 HLA-I mismatches¦ post-transplant 2.7±1.3ys) had negative pre-transplant flow cytometry crossmatch (FCXM). There was no graft lost during observation. All serum samples from the recipients were screened for preformed or post-transplant Flow-PRA and DSA, DSA were detected by the flow T- and B-cell crossmatch FCXM (FTXM and FBXM), while the creatinine levels were monitored. And, relation of humoral rejection with preformed or post-transplant PRA and DSA was evaluated.

Results: Approximately 30%(41/135) of tested sera were found to contain anti-HLA-antibody (12 anti-HLA-IFlow PRA ;5 anti-HLA-IFlow PRA and 20 anti-HLA-¦ &¦ Flow PRA), and 45 tested sera¦ 45/135 33.3%¦ had positive FCXM results (26 FTXM-positive and 18 FBXM-positive). We found that all recipients with positive pre-transplant HLA-IPRA got higher creatinine levels (1.80 ± 0.51mg/dl; n=17¦ than the patients with negative pre-transplant HLA-IPRA¦ 1.12±0.37 mg/dl; n=118¦ (p<0.05); 6 of 8(75%) recipients with positive pre-transplant HLA-IPRA got pathology proved humoral rejection, but none in later group. There were no statistically differences between creatinine levels after transplantation of recipients with positive and negative pre-transplant HLA-¦ PRA. Creatinine levels of recipients with positive post-transplant anti-HLA-Ior¦ Flow PRA (1.17