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CLINICAL RELEVANCE OF PREFORMED "ACCEPTABLE" DONOR SPECIFIC ANTIBODIES IN KIDNEY TRANSPLANTATION.

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Aim: Preformed HLA cytotoxic antibodies, specific for mismatched HLA molecules of the potential donor, represent an absolute contraindication in kidney transplantation. New techniques, like the Luminex-Single Antigen Beads assay, are very sensitive allowing detection of HLA donor specific antibodies (DSAs) at low mean fluorescence intensity (MFI) values. However, few evidence on the clinical relevance of such low "strength" DSAs have been reported.

Methods: Graft outcome (follow-up 34.2 ± 19.8 months) of 99 pre-sensitized patients (%FlowPRA class I = 41 ± 33; %FlowPRA class II = 30 ± 36), transplanted between May 2007 and June 2014 on the basis of both CDC-XM and FC-XM negative results, was analyzed. Five patients were excluded from the study because of primary non-function of the graft (3 patients) or death for non-immunologic causes with non-functional graft (2 patients). Forty-seven (47%) patients did not have pre-formed HLA DSAs; the remaining 52 (53%) patients had "acceptable" DSAs (MFI $\leqslant$ 5000) specific for HLA-A/B/C/DR/DQB molecules or anti-DPB/DQA DSAs with high MFI values (>5000). HLA class I DSAs were present in 28 patients; five of these showed DSAs against more than one donor HLA molecules. HLA class II DSAs were present in 19 patients; three of these showed anti-DPB/DQA DSAs with MFI > 5000. The remaining five patients had both HLA class I and class II DSAs; one of these had high level of anti-DP DSA.

Results: Analyzing graft outcome of the remaining 94 transplanted patients with functioning graft, we did not evidenced any significant difference between DSA positive patients and DSA negative patients (rejection: 10.4% vs. 6.5%, P = ns; graft loss: 12.5% vs. 10.9%, P = ns). In particular, among the 48 DSA positive patients, three (6.2%) had humoral rejection without graft loss; two (4.2%) had cellular rejection, one of these lost the graft. Six DSA positive patients suffered graft failure that was never due to antibody-mediated rejection related to pre-formed DSAs.

Conclusion: The results of this study show that pre-formed DSAs with low mean fluorescence intensity values do not represent a contraindication in kidney transplantation. An accurate evaluation of the "strength" of Luminex-detected DSA allows transplanting patients with clinically "irrelevant" HLA antibodies.