

PROFILE OF ANTI-HLA ANTIBODIES IN KIDNEY RECIPIENTS – A SINGLE CENTER STUDY

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Objectives. HLA immunization is an important drawback in transplantation, resulting in graft rejection. Both HLA antibody screening and the cross-match tests performed before transplantation detect the anti-HLA antibodies. We aimed to identify the anti-HLA antibodies in the serum of potential kidney recipients, prior to transplantation.

Materials and methods. We performed a retrospective study on 1348 pre-transplantation samples that were tested for the presence of anti-HLA antibodies, within the last 10 years. Furthermore, the positive screening tests were followed by the specificity identification of these antibodies, either by Luminex technology (Immucor) or by blot (BAG – Histospot).

Results. The screening tests were positive in 40% of the cases. Out of these, immunization occurred only against HLA-I molecules in 25.7% of the cases, against HLA-II molecules only in 34.3% of the cases, while 40% of the immunized persons had both HLA-I and HLA-II antibodies. Within the immunized group, 57.6% had anti-HLA-DR antibodies, 57.3% had anti-HLA-DQ antibodies, 56.7% had anti-HLA-B antibodies, and 49.1% had anti-HLA-A antibodies. Anti-HLA-DP antibodies were detected in 49% of the tests performed with BAG kits, while neither LifeScreen nor LM2Q Immucor reagents could identify anti-HLA-DP specificities. Anti-DQ7, -DQ2, and -DQ8 antibodies were the most frequently identified specificities in 30.9%, 29%, and 28.8%, respectively, of the immunized people, followed by anti-DR1 (25%) and anti-DR103 (24.7%).

Conclusions. As anti-HLA-DQ and -DP antibodies were often reported in the blood of kidney recipients who rejected the graft, 6 loci HLA typing should be considered as a standard for kidney donor-recipient matching.