

Detection of antibodies in eluates of immunoadsorption causing humoral rejection in patients after solid organ transplantation.

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Source

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Abstract

The influence of antibodies (AB) against human leukocyte antigen (HLA) on antibody mediated rejection (AMR) is still discussed controversially. Here we demonstrate to what extent post transplant detected HLA-AB and non-HLA-AB against Angiotensin II type 1 receptor (AT1 R-AB), endothelin-1 type A receptor (ETA R-AB) and glycoprotein (GP) IIb/IIIa, Ia/IIa, Ib/IX affect the graft outcome. A total of 13 transplant recipients (9 kidneys and 4 hearts) suffering from AMR were analysed. Before immunoadsorption (IA) treatment HLA-AB (CDC) in sera were detected in 27% versus 39% in eluates and 46% versus 87% by using ELISA. We could not find any AB against GP in sera. In eluates, however, we could detect AB against GP: GP IIb/IIIa in 86% of all samples with titres from 1:1 to 1:32, GP Ib/IX (up to 1:32) in 76% and GP Ia/IIa with titres from 1:1 to 1:16 in 82%. Further we detected anti-endothelial cell antibodies (AECA) against receptors AT1 and ETA in sera before IA in 22%, after IA in 10% and in eluates in 42% of all samples. The antibody titres vary from 1:1 to 1:256. Our investigation pointed out, that AMR is still possible without detectable AB in serum and consolidates the hypothesis that clinical relevant non-HLA-AB and HLA-AB are partly fixed on the graft. IA is qualified to detach these fixed AB.