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Humoral immunity in hand transplantation: anti-HLA and non-HLA response.

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Abstract

Antibodies against donor's HLA antigens and B cell activity are recognized modulators of immune response to allograft. The role of both anti-HLA and non-HLA antibodies is understood in solid organ transplantation, but has not been addressed in composite tissue allografts.

AIM: We decided to evaluate the presence and role of anti-HLA and non-HLA antibodies after hand transplantation.

METHODS: We assayed anti-HLA and non-HLA antibodies in 5 consecutive hand transplant patients. The presence of anti-HLA antibodies was tested by flow-PRA method (One Lambda). Non-HLA antibodies were defined as anti-endothelial cell (AECA), anti-angiotensin II type 1 receptor (anti-AT1R), anti-endothelin receptor antibodies (anti-ETAR).

RESULTS: Anti-HLA antibodies were present in 1 patient in class I and in another one in class II. Both patients developed one episode of acute rejection. AECA were present in only one recipient with borderline activity. Both anti-AT1R and Anti-ETAR were found strongly positive in one patient who repeatedly developed acute rejection episodes.

CONCLUSION: The presence of non-HLA antibodies (anti-AT1R and anti-ETAR) and the occurrence of multiple rejection episodes found in one patient here require further investigation into a possible association and role of humoral immunity in composite tissue rejection.