P226

Virologia

HCMV-SPECIFIC T-CELL IMMUNE RESPONSE AMONG KIDNEY TRANSPLANT RECIPIENTS (KTRS) MEASURED AT PRE-TRANSPLANT

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INTRODUZIONE

Human Cytomegalovirus (HCMV) is still one of the most relevant opportunistic infection in solid organ transplant recipients. The aim of this study was to investigate the pre-transplant HCMV-specific T-cell response in kidney transplant recipients (KTRs) and its correlation with the risk of HCMV infection in the first year after transplant

METODI

One-hundred KTRs were recruited in two Italian centers. HCMV serostatus was assessed at pre-transplant and HCMV DNAemia was monitored accoridng to diagnostic protocols. PBMC were collected at pre-transplant before induction therapy and stimulated with peptide pools (15 aminoacids in length with 11 overlapping) representative of HCMV proteins pp65, IE1 and IE2. IFN-γ- producing T cells were quantified by ELISpot assay as net spots/million PBMC and responses were normalized on positive control.

RISULTATI

Ninenty patients (90%) were HCMV seropositive at transplant. Analysis of HCMV protein-specific T-cell responses in HCMV seropositive patients at pre-transplant showed that pp65 was the most immunogenic antigen, followed by IE1; IE2-specific T-cell response was almost undetectable. Patients treated with pre-emptive therapy were classified according to HCMV DNAemia in two groups: patients showed at least one episode of HCMV DNAemia $\geq$100.000 copies/mL and patients showed HCMV DNAemia <100.000 copies/mL).
We observed a significantly lower pp65 and IE1-specific T-cell responses in the first group than in the second one (respectively p=0.0422 and p=0.0214), while no difference was observed in terms of IE-2 specific T-cell response.

CONCLUSIONI

Evaluation of HCMV-specific T-cell response at pre-transplant could be useful to predict the development of HCMV infections at risk for disease. The role of pp65 and IE1-specific T-cell response as a prognostic predictor requires confirm in a larger group of patients.