Kinetics of Regulatory CD4 T Cells in Heart Recipients Under Induction Therapy With One-single Dose versus Two-dose Basiliximab

ISHLT
883

S. Garcia[1], J. Carbone[1], I. Sousa[2], A. Karinina[2], E. Zatarain[2], P. Navas[2], A. Gallego[1], L. Calahorra[1], R. Lerma[1], E. Sarmiento[1]
SERVICIO DE INMUNOLOGIA. HOSPITAL GENERAL UNIVERSITARIO GREGORIO MARAÑON
Madrid Spain

INTRODUCTION

The indication of induction immunosuppressive therapies in heart transplantation (HT) is still controversial.

Minimization of doses of monoclonal antibodies for induction therapy is indicated in some clinical settings such as high infection risk.

Immunemonitoring of lymphocyte subsets after induction therapy is not a common practice but might provide useful information.

OBJETIVES

To assess the kinetics of regulatory CD4+ T-cells in heart recipients using distinct basiliximab dosing.

METHODS

In a retrospective single center study, a comparative analysis of the kinetics of lymphocyte subsets was performed in patients using the recommended two doses [2D] of anti-IL2R-alpha monoclonal antibodies (Basiliximab, 20 mg, n=18) versus a single dose (1D, n=32).
This was a non interventional study, 1D was indicated in specific clinical settings.
We analysed the kinetics of regulatory CD4 T cells during the first 6 months (6m) after transplantation.
Assessment points were pre-HT, day [d] 7, 15, 30, 60, 90 and 180.
Maintenance immunosuppression included steroids, tacrolimus and mycophenolate mofetil in a similar way in both groups.
Lymphocyte subsets were studied by flow-cytometry.

RESULTS

Pre-HT percentages were similar in both groups: 5.45±2.48 vs 5.36±3.31%, p=0.93.
In 2D group, a decrease of CD4+CD25+CD127low regulatory cells was observed as compared with pre-HT values between d7 and d60; while in 1D patients there were not significant differences.
Lower levels of regulatory CD4+ cells were observed up to d30 in 2D patients as compared with 1D patients:
d7 2.52±2.62 vs 4.76±3.90%, p=0.046; d14 2.75±2.55 vs 5.08±5.17%, p=0.074 and d30 2.96±2.69 vs 5.61±3.78%, p=0.014.
During the 6m follow-up there was no significant difference in the prevalence of acute cellular rejection (ACR, p=0.92).

CONCLUSIONS

1D Basiliximab maintained higher levels of regulatory cells and similar rates of ACR compared to a conventional 2D regimen.
Since CD4 regulatory cells are considered to have an important role against allograft rejection, this information is of interest.
The potential role of this immunemonitoring to assist in clinical decision making should be further explored in future studies.

Funds: Project FIS 1501472. Instituto de Salud Carlos III. With participation of FEDER Funds, a way o making Europe.