Anti-TNF therapy in patients with rheumatoid arthritis decreases Th1 and Th17 cell populations and expands IFN-?-producing NK cell and regulatory T cell subsets

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The aim of this work was to study the effect of anti-TNF treatment on CD4+ Th1, Th17 and regulatory T cells (Tregs), together with CD8+ T cells and NK cells from rheumatoid arthritis (RA) patients. For this purpose, 18 RA patients received adalimumab during 16. weeks and their peripheral blood lymphocytes were assessed by flow cytometry at the beginning and at the end of the study. We found that the proportion of Th17 cells was directly correlated with Th1 cells, but inversely correlated with IFN-?-producing NK cells. A decrease was observed in Th1, Th17 cells and IFN-?-producing CD8+ T cells by anti-TNF therapy. Conversely, the proportion of Tregs increased, as did the percentage of IFN-?-producing NK cells. We postulate that a rise in IFN-? production due to recovery of NK cells' function, together with expanded Tregs, contribute to decrease the Th17 response in anti-TNF-treated RA patients.