A144 BAFF AND TACI MRNA EXPRESSION ARE INCREASED IN VERY EARLY RHEUMATOID ARTHRITIS PATIENTS

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Background B cells play several important roles in rheumatoid arthritis (RA). Previous studies by our group have demonstrated that very early rheumatoid arthritis (VERA) patients have disturbances in peripheral blood memory B cells and increased circulating B cell related cytokines.

Objectives The main goal of this work was to analyse the expression of genes related with B cell survival and activation in VERA (<6 weeks of disease duration) and compare with

early RA (<1 year, ERA), established RA patients (RA) and other early arthritis conditions (VEA) to identify differences between disease stages.

Materials and methods BAFF, BAFF-R, TACI, BCMA, AID, CXCR5, Pax5, Blimp-1, $\beta 2m$ and Bcl-2 mRNA levels from peripheral blood mononuclear cell (PBMC) were determined by real-time PCR. Serum BAFF was quantified by ELISA.

Results VERA patients had increased BAFF and TACI mRNA levels in comparison with controls. Moreover, BAFF mRNA expression was higher in VERA in comparison with RA and VEA patients. BAFF-R expression was elevated in ERA and RA when compared to controls. Pax5 expression was increased in all RA patients and reduced in VEA in comparison with VERA. $\beta 2m$ levels were elevated in VERA, ERA and VEA patients when compared to controls. No differences were observed in BCMA, AID, CXCR5, Blimp-1 and Bcl-2 expression. Furthermore, VERA patients had the highest serum BAFF levels.

Conclusions Disturbances in the expression of B cell related activation genes, particularly BAFF and TACI, occur since the very early phase of RA. The increased BAFF serum and mRNA levels occurring in VERA patients might indicate BAFF as a potential therapeutic target since the first weeks of RA onset.