

(TNF $\alpha$ ) and interleukin 1 (IL1) have a critical role in the pathogenesis of RA. Biological treatment blocks pathological pathways in the actions of these proinflammatory cytokines. The aim of this study was to analyse concentrations of TNF $\alpha$  in blood serum and synovial fluid in patients with RA to identify patient groups most suitable for anti-TNF $\alpha$  treatment.

**Methods** Blood serum and synovial fluid from patients with RA and osteoarthritis (OA) at Pauls Stradins Clinical University Hospital Center of Rheumatology were selected for detection of TNF $\alpha$  from January 2005 to December 2007 by ELISA. Histiocyte/macrophage counts were detected in synovial fluid in the hospital laboratory. Statistical analyses were performed by the Student *t* test.

**Results** 29 patients with RA and 11 with OA participated in the study; 17 of the patients with RA had high disease activity (DAS >5.1) and 12 had medium disease activity (DAS  $\leq$ 1). A statistically significant difference was detected in TNF $\alpha$  levels in the synovial fluid of the RA group and the OA group ( $p=0.19$ ), and in serum from the RA group versus the OA group ( $p=0.00154$ ); medium activity RA group vs OA group TNF $\alpha$  in blood serum and synovial fluid ( $p=0.07$  and  $p=0.02$ ) and high activity RA group vs OA group TNF $\alpha$  in blood serum and synovial fluid ( $p<0.001$  and  $p=0.01$ ). The difference between high and medium RA activity groups in TNF $\alpha$  levels in serum and synovial fluid was  $p=0.162$  and  $p=0.037$ . Histiocyte/macrophage count in synovial fluid differed in OA group vs RA medium disease activity group ( $p=0.02$ ) and in OA vs RA high disease activity group ( $p=0.04$ ), but in medium disease activity RA vs high disease activity RA group ( $p=0.58$ ).

**Conclusion** Further studies are needed to detect cytokines in blood serum and synovial fluid for the use of one as a possible marker when choosing treatment for individual patients with RA.

#### A100 TUMOUR NECROSIS FACTOR $\alpha$ IN RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS PATIENTS IN BLOOD SERUM AND SYNOVIAL FLUID

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**Objective** Rheumatoid arthritis (RA) is a chronic autoimmune disease of unknown cause which affects the ability of elderly people to work. There is strong evidence to suggest that inflammatory mediators such as tumour necrosis factor  $\alpha$