AB0287

DECREASE IN 14–3–3 η PROTEIN LEVELS IS CORRELATED WITH IMPROVEMENT OF CLINICAL DISEASE ACTIVITY IN TOFACITINIB TREATED EARLY RHEUMATOID ARTHRITIS PATIENTS

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Background: 14–3–3 η protein is a proinflammatory mediator that may represent a novel diagnostic and prognostic biomarker for rheumatoid arthritis (RA).

Objectives: To assess the disease activity parameters and 14–3–3 η protein concentrations in serum of early RA patients treated with Tofacitinib.

Methods: Paired serum samples from 35 previously non-treated early RA patients (disease onset less than 1 year) receiving Tofacitinib were obtained at baseline and 5 months after the initiation of treatment. Levels of 14–3–3 η were measured by JOINT stat 14–3–3 η ELISA test kits (Augurex Life Sciences Corp.). The cut-off was defined as 0.19 ng/ml. We investigated the correlation between changes in serum 14–3–3 η concentrations and changes in clinical disease activity index (CDAI), simplified disease activity index (SDAI), Disease Activity Score (DAS) 4CRP and DAS4ESR.

Results: Increased concentrations of 14–3–3 η were found in 57% of the patients at baseline and in 37% of the patients after 5 months of treatment. Mean $\pm$ SD baseline 14–3–3 η concentrations [4.92 $\pm$ 8.86 ng/ml] were significantly higher ($p=0.005$) than those found following treatment [1.97 $\pm$ 4.59 ng/ml]. Statistically significant improvement ($p<0.001$) of CDAI, SDAI, DAS4ESR and DAS4CRP was achieved after the 5 month of treatment. No correlation was found between absolute 14–3–3 η concentrations and parameters of clinical disease activity at both time points. Decrease in 14–3–3 η protein levels were highly correlated with improvement in DAS4ESR ($r=0.50$, $p<0.01$) and moderately correlated with improvement in CDAI ($r=0.32$), SDAI ($r=0.33$), and DAS4CRP ($r=0.46$, $p<0.01$).

Conclusions: The study demonstrates that decrease in 14–3–3 η protein concentrations in RA patients treated with Tofacitinib is correlated with improvement of clinical disease activity parameters. 14–3–3 η protein is a useful biomarker for monitoring Tofacitinib therapy.

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AB0288

LEVELS OF METALLOPROTEINASE-3 (MMP-3) CORRELATE BETTER WITH CLINICAL DISEASE ACTIVITY INDEX (CDAI) AND SIMPLIFIED DISEASE ACTIVITY INDEX (SDAI) THAN STANDARD DISEASE ASSESSMENT SCORE (DAS-28)

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Background: The MMP-3 is a matrixin calcium-dependent zinc-containing; the major expressed in rheumatoid synovial tissue; with essential role in the degradation of both aggrecan and collagen fibrils.

Objectives: The aim was to evaluate the correlation of MMP3 levels with assessment scores of RA activity.

Methods: 109 patients with RA as per the 2010 ACR/EULAR criteria were included in the prospective Study ALTRA. Patients were divided into groups of early arthritis active, established arthritis active, and remission with conventional remissive or biological remissive. The levels of MMP3 and activity scores: DAS28-ERS, DAS28-CPR, SDAI and SDAI were on the basis of predefined cut-offs. The correlation was determined with the Pearson Test for parametric variables and the Spearman Test for non-parametric variables.

Results: The levels of MMP3 in patients with early RA Vs established were 63.2 and 39.9 U/ml, $p<0.021$ respectively. MMP3 levels of patients with activity measured by DAS28-ESR were 62.9 in the active and 35.2 U/ml in remission, $p<0.000$.

The correlation between serum levels of MMP3 and DAS28-ERS was 0.21 ($p<0.25$), with DAS28-CRP 0.27 ($p<0.004$); CDAI 0.26 ($p<0.06$) and with SDAI 0.35 ($p<0.002$).

Conclusions: Elevated MMP3 levels indicate state of disease activity; besides the addition in the expression of the collagen damage. This finding may help in making decisions in clinical practice.

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AB0289

PARAOXONASA 1 ACTIVITY IS MODULATED BY ANTI-RHEUMATIC TREATMENT AND L55M POLYMORPHISM IN PATIENTS WITH RHEUMATOID ARTHRITISFROM SOUTHERN MEXICO

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Background: Paraoxonase-1 (PON-1) is a high-density lipoprotein (HDL)-associated antioxidant enzyme with anti-atherogenic properties. Although genetic polymorphisms are known to modulate PON-1 activity,¹ other factors as the consumption of disease-modifying anti-rheumatic drugs (DMARDs) and nonsteroidal anti-inflammatory drugs (NSAIDs) can also modulate its function.²

Objectives: To analyse the association between PON-1 activity according to L55M polymorphism and anti-rheumatic treatment in patients with rheumatoid arthritis (RA) from southern Mexico.

Methods: Serum PON1 activity, using 4-chloromethyl phenylacetate (4-CMPA) as substrate³ was quantified in 246 RA patients (181 treated with DMARDs, NSAIDs and/or corticosteroids, and 65 without treatment). The PON1 rs854560 genotype (L55M) was determined by the PCR-RFLP method.

Results: PON-1 activity was decreased in RA patients under treatment anti-rheumatic. In addition, an effect of LM/MM genotype of L55M polymorphism was noted in treated patients who exhibiting the lowest PON-1 activity (10.45 vs 13.91 U/mL, $p=0.05$). The distribution of L55M genotypes were; 86.8% (LL), 12.8% (LM) and 0.4% (MM). The Leflunamide and diclofenac drugs were associated with the mainly decrease of the PON-1 activity ($p<0.05$), compared with others DMARDs, NSAIDs and corticosteroids drugs used to RA in pharmacological regimens.

Conclusions: PON-1 activity is impaired in association with the anti-rheumatic treatment and L55M polymorphism, so in patients with RA the susceptible background genetic could contribute to increasing the cardiovascular risk linked to PON-1 activity.

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