

Psychiatric morbidity associated with some cytokines (IL-1beta, IL-12, IL-18 and TNF-alpha) among rheumatoid arthritis patients

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Psychiatric morbidity is common in rheumatoid arthritis (RA) patients and may affect disease activity and immunological markers. We studied the relationship of the psychiatric morbidity and immunological factors; the serum levels of Interleukin-1beta (IL-1beta), Tumor Necrosis Factor Alpha (TNF-alpha), Interleukin-18 (IL-18) and its inducer interleukin-12 (IL-12), and their impact on RA disease activity. Forty-two RA patients and 20 apparently healthy individuals as a control group were included in this study. Psychiatric morbidity was identified according to the International Classification of Disease, tenth version criteria (ICD-10). The Hospital Anxiety and Depression Scale (HADS) and the mental health Short Form 36 (SF-36) were applied for further analysis. Serum IL-1beta, IL-12, IL-18 and the TNF-a were measured using Enzyme-Amplified Sensitivity Immunoassays (EASIA) and were correlated with psychiatric morbidity and disease activity as measured by Health Assessment Questionnaire and Overall Status. Psychiatric morbidity was found in 40.48% of the studied patients, the most common psychiatric disorders among RA patients were depressive disorders and anxiety disorders. The SF-36 score was closely correlated to the anxiety and depression score ($P < 0.001$). RA patients showed high levels of IL-1beta, IL-12, IL-18 and TNF-alpha than the control group. There was a significant correlation between psychiatric morbidity, serum levels of IL-1beta, IL-12, IL-18, TNF-alpha and disease activity measurements. We have to view rheumatoid arthritis as a psycho-immunological disorder rather than an autoimmune disease. Furthermore, the studied cytokines may be a novel target for therapeutic intervention of rheumatoid arthritis and its psychiatric morbidity.