

Prevalence and predictive value of anti-cyclic citrullinated protein antibodies for future development of rheumatoid arthritis in early undifferentiated arthritis

Abstract

The aim of this study is to evaluate the prevalence and predictive value of anti-cyclic citrullinated protein (CCP) antibodies as a diagnostic marker for future development of rheumatoid arthritis (RA) in a cohort of patients presenting with undifferentiated arthritis (UA). The study comprised 69 patients (22 males and 47 females) presenting with UA, and 66 healthy subjects as control group. For all patients the following parameters were assessed: swollen joint count (SJC), tender joint count (TJC), and duration of morning stiffness in minutes. Baseline laboratory investigations included erythrocyte sedimentation rate (ESR) first hour, C-reactive protein (CRP), complete blood count, complete liver and kidney function tests, urine analysis, anti-nuclear antibodies, rheumatoid factor (RF), and anti-CCP antibodies. Positive correlations were observed between anti-CCP versus SJC, TJC ($p = 0.001$), duration of morning stiffness ($p = 0.04$), ESR first hour, and bone erosive changes ($p = 0.001$). Anti-CCP showed sensitivity of 57%, specificity of 37.9%, positive predictive value of 65.1%, and negative predictive value of 39.3%. Sensitivity and positive predictive values of anti-CCP are close to those observed for RF. In patients presenting with UA, anti-CCP antibodies may allow prediction of RA, thereby allowing early individualized therapeutic decisions.