Relative clinical influence of clinical, laboratory, and radiological investigations in early arthritis on the diagnosis of rheumatoid arthritis. Data from the French Early Arthritis Cohort ESPOIR.

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Abstract

OBJECTIVE: To evaluate the relative level of influence of usual investigations in early arthritis on the diagnosis of rheumatoid arthritis (RA).

METHODS: Patients: those included in the ESPOIR early arthritis cohort, a national cohort of patients with grade ≥ 2 synovitis for > 6 weeks and < 6 months. The diagnostic properties of variables assessed at baseline were measured against the diagnosis of RA defined by American College of Rheumatology criteria (at any timepoint between inclusion and 12-month followup) and expert opinion. Various models, including (1) clinical data; (2) clinical + radiographic data (plain radiographs); (3) addition of rheumatoid factor (RF) and/or anti-cyclic citrullinated peptide (anti-CCP); and (4) addition of HLA-DR typing, were assessed by comparing areas under the curves for ROC curves.

RESULTS: Of 731 patients studied, 372 (50.9%) satisfied criteria for RA at 1 year. In univariate analysis, sensitivity was highest for distal articular presentation (94.6%), presence of IgM RF (69.4%), pain on metatarso-phalangeal squeeze test (66.1%), and presence of anti-CCP (65.6%); whereas specificity was highest for nodules (100%), HLA typing: shared-epitope double dose (95.9%), radiographic erosions (86.5%), and anti-CCP antibodies (86.4%). The most efficient model included swollen joint count, morning stiffness, erosions, RF, and anti-CCP. Adding rheumatoid nodules, C-reactive protein, or HLA-DR information was not contributive.

CONCLUSION: In addition to the clinical variables and radiographs, RF and/or anti-CCP are the single variables of interest that are contributive for the diagnosis of RA.