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Ⅴ．研究成果の刊行物・別冊
（主なもの）

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ORIGINAL ARTICLE

A Prediction Rule for Disease Outcome in Patients With Undifferentiated Arthritis Using Magnetic Resonance Imaging of the Wrists and Finger Joints and Serologic Autoantibodies

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Objective. To evaluate whether magnetic resonance imaging (MRI) of the wrists and finger joints and an analysis of serologic autoantibodies are clinically meaningful for the subsequent development of rheumatoid arthritis (RA) in patients with undifferentiated arthritis (UA).

Methods. A total of 129 patients with UA, a disease status formally confirmed by a rheumatologist over a period of at least 1 year, were included. Gadolinium-diethylenetriamine–enhanced MRI of both wrists and finger joints and serologic variables were examined upon admission to our Early Arthritis Clinic at Nagasaki University. After a prospective followup of 1 year, a predictive value for the development of RA was determined for each patient.

Results. The subjects were evaluated for their positive or negative status with respect to 3 objective measures at study entry: anti–cyclic citrullinated peptide (anti-CCP) antibodies and/or IgM-rheumatoid factor, MRI-proven symmetric synovitis, and MRI-proven bone edema and/or bone erosion. The patients who were positive for at least 2 of these measures progressed to RA at 1 year with a 79.7% positive predictive value (PPV), 63.0% negative predictive value, 75.9% specificity, 68.0% sensitivity, and 71.3% accuracy. Furthermore, in 22 UA patients positive for both anti-CCP antibodies and MRI-proven bone edema who were considered to have progressed to RA at 1 year, the PPV was increased to 100%. A close correlation was found between the present rule and that established in the Leiden Early Arthritis Cohort.

Conclusion. MRI-proven early joint damage in conjunction with serologic autoantibodies is efficient in predicting progression from UA to RA. This method can be used to identify patients who would benefit from early treatment with disease-modifying antirheumatic drugs.

INTRODUCTION

Early undifferentiated arthritis (UA) is defined as early arthritis that does not fulfill the classification criteria for a more definitive diagnosis, according to the 1987 American College of Rheumatology (ACR; formerly the American Rheumatism Association) criteria for rheumatoid arthritis (RA) (1–3). The natural disease course of UA is variable; therefore, to minimize under- and overtreatment of patients with UA, a model was recently constructed by the Leiden Early Arthritis Cohort to estimate the likelihood of progression to RA in individual patients (2,3). Their prediction rule consists of 9 clinical variables: sex, age, localization of symptoms, morning stiffness, tender joint count,

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