The relationship between hand prehensile strength, clinical activity and functional capacity in patients with rheumatoid arthritis

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Background: The hand is an anatomical structure with a large number of joints; its prehensile grasp capability constitutes a highly specialised biomechanical function. In rheumatoid arthritis (RA), the structures of the joint are damaged by the characteristic inflammatory process. The Disease Activity Score (DAS28) considers twenty hand joints in the evaluation of rheumatoid arthritis (RA). While the Health Assessment Questionnaire (HAQ) disability index (DI) (HAQ-DI) is the most frequently used instrument for measuring self-reported physical function in rheumatoid arthritis and considers the ability to dress and groom, get up, eat, hygiene, reach, grasp, situations in which the functional capability of the hand is crucial.

Objectives: To assess the relationship between hand prehensile strength, the DAS28 index and HAQ-DI score in patients with diagnosis of RA.

Methods: The prehensile strength was obtained by the dynamometry method from 105 AR patients, the maximum strength levels in the dominant and non-dominant hand were considered. The Disease Activity Score in 28 joints using the erythrocyte sedimentation rate (DAS28-ESR) and HAQ-DI were recorded.

Results: The maximum prehensile strength, on average, was 14 kg, and the weak force category was more prevalent. The prehensile strength of both hands was negatively correlated with the HAQ-DI score and DAS28 index. In an adjusted logistic regression model, the ‘weak’ strength category of the non-dominant hand was associated with ‘moderate clinical activity’ in the DAS28 score (OR=8.59, p=0.02), while the category of ‘weak’ strength of the dominant hand was associated with the presence of ‘some difficulty’ in HAQ-DI score (OR=4.75, p=0.10).

Conclusions: The decrease in prehensile strength represents a marker associated with the DAS28 index and HAQ-DI score in the patient with RA, regardless of age, muscle mass, total fat or body mass. The measurement of the prehensile strength can be a useful and inexpensive tool to be considered in the clinical evaluation of the RA.

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REFERENCES:


Support of medical clerks in rheumatoid disease clinic aims T2T practice for rheumatologists and improves disease activities of patients with rheumatoid arthritis

I. Matsushita, H. Motomura, T. Hiraia, S. Arii, C. Ota, T. Kimura, Orthopaedic Surgery, University of Toyama; Orthopaedic Surgery, Sainou Hospital, Toyama, Japan

Background: With treat-to-target (T2T), the physician always has to evaluate disease activity and joint damage of rheumatoid arthritis (RA) patients exactly to maintain the activities of daily living of the patient for the long term. However, the amount of work required by physicians to complete T2T can be onerous, so the cooperation of medical staff is necessary to practice T2T.

Objectives: The purpose of this study is to clarify the role and effectiveness of medical clerks (MCs) in a rheumatoid disease clinic.

Methods: In our rheumatoid disease clinic, MCs have supported rheumatologists since April 2011. We individually evaluated 50 RA patients in May 2010 before the start of MC support. Prevalence of T2T practice improved gradually. SDAI remission was 30.8% in the preceding period, 28.5% in the early period, 30% in the middle period, 58% in the late period and 56% in the last period, respectively. HAQ-DI remission improved towards the last phase, similar to that seen with the SDAI. The mean dose of methotrexate (MTX) increased gradually towards the last phase, but the prevalence of MTX use did not show a remarkable change. Prevalence of use of biological disease-modifying anti-rheumatic drugs did not increase during the study period.

Conclusions: The study is the formative work to help design a patient-centred intervention for a CVD risk reduction program for patients with RA.

Disclosure of Interest: None declared

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