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GOOD DISCRIMINATIVE ABILITY OF THE SIMPLE EROSION NARROWING SCORE COMPARED TO THE SHARP/VAN DER HEIJDE SCORE

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Background: The Simple Erosion Narrowing Score (SENS), a simplification of the Sharp/van der Heijde score (SHS), has been recommended for use in clinical practice because it combines a simpler, less time-consuming scoring method with measurement properties comparable to the SHS [1]. The SENS assesses both joint space narrowing (JSN) and erosions in the same joints as the SHS, but the SENS sums the number of joints with erosions and the number of joints with JSN without grading per joint. However, some studies have suggested that the SENS is less sensitive to radiographic progression than the SHS. Further erosion of already eroded joints added to the discriminative ability of the SHS in the COBRA trial, suggesting some discrimination might be lost when using the SENS, especially in more advanced RA populations [2]. This is an important issue, as time savings using SENS are substantial (7 instead of 25 minutes [1,3]), but contrast between interventions is in general lower than in the early years of RA research as the standard of care improves and trials are more and more characterized by active control and disease activity guided treatment strategies that tend to converge.

Objectives: To assess whether the SENS can discriminate between treatment groups when the treatment contrast is low, using data from the DRESS (Dose REduction Strategy of Subcutaneous TNF inhibitors) trial.

Methods: The DRESS study (Dutch trial register, NTR 3216, CMO region Arnhem-Nijmegen, NL37704.091.11) is an open label non-inferiority randomised controlled trial in which RA patients with low disease activity on a stable adalimumab or etanercept dose were randomised 2:1 to disease minimising controlled intervention based on the methodological recommendations, which suggested a minimisation procedure of joint scores. In total, 200 patients were randomised: 100 to the SHS intervention and 100 to the SENS intervention. For the SENS intervention, a computer generated randomisation list was used, for the SHS intervention, a block randomisation list with a block size of 4 was used. Patients in both centres were directed to answer open-ended questions on disease activity and patient-reported outcome measures considered). item reduction performed in 100 additional RA patients, feasibility. Step 3 consisted of RPQ psychometric validation performed in 270 additional RA outpatients, content and face validity (by experts and test-retest). Sample size was based on the methodological recommendations, which suggested a minimum of 50 patients for assessing construct validity, 100 patients for assessing internal consistency, and 5 to 10 patients for each item. IRB approved the study.

Results: The 390 patients included in the 3 samples were representative of typical RA outpatients from a tertiary care level center; they were primarily women, in their fifth decade of life, with basic formal education, primarily women, in their fifth decade of life, with basic formal education, medium long socioeconomic status and had long-standing disease; in addition, patients with a major comorbid condition and with surgical joint replacement were also represented. RPQ included 27 items distributed in 5 factors (3 for likelihood, 1 for responsibility and prevention and 1 for disease control), which resulted in 68.8% of the variance explained. Cronbach’s α for the total score was 0.90. Intraclass-correlation-coefficient in test-retest was 0.93 (95% CI=0.90-0.95). All items had ≥80% agreement from experts. Patients agreed about item’s semantic clarity (89%) and RPQ format adequacy (97%).

Conclusion: RPQ showed to be a valid and reliable instrument to evaluate RP in Spanish speaking RA patients. RPQ can be incorporated to clinical care and guide interventions to improve patient’s health behaviors.