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LETTER TO THE EDITOR

Numerous factors hamper objective assessment of disease activity in axial spondyloarthritis

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We read the article published by Inan et al.[1] with interest. Contrary to the latest evidence-based recommendations by European Alliance of Associations for Rheumatology (EULAR), no robust correlation was found between Spondyloarthritis Research Consortium of Canada (SPARCC) scores and disease activity parameters. Based on a systematic literature search, EULAR recommends the use of magnetic resonance imaging (MRI) of the sacroiliac (SI) joints or the spine to assess and monitor disease activity in axial spondyloarthritis (axSpA), as an additional tool accompanying clinical and laboratory assessments.[2] We would like to discuss some important points which may explain influencing factors for lack of correlation between disease activity parameters and SPARCC scores in Inan et al.'s study.[1] First, ASAS (Assessment of Spondyloarthritis International Society) classification criteria for axSpA has imaging and clinical arms.[3] In the study, the number of patients who met only the clinical or imaging criteria, or both, was not specified. Furthermore, the number of patients with radiographic and nonradiographic axSpA was not mentioned. Half of the patients were negative for HLA-B27; therefore, we may assume that these patients likely had sacroiliitis on imaging (either X-ray or MRI), which increases the possibility of bone edema in the SI joint on MRI, potentially leading to higher SPARCC scores. However, HLA-B27-positive patients did not require imaging findings to be included in the study if they had two or more spondyloarthritis features. Therefore, we may assume that HLA-B27-negative patients were more likely to have a wider range of SPARCC scores compared to HLA-B27-positive patients, resulting in a higher and significant correlation coefficient in this subgroup of patients. Second, some factors may affect SPARCC scores and inevitably influence correlation coefficients. For example, tumor necrosis factor (TNF) blockers have the capability to reduce bone edema in the SI joint and, accordingly, SPARCC scores.[4] The number and percentage of patients on anti-TNF agents given in Table 2 is not consistent. If only four (12.5%) patients were on biologics, this may have had less influence on the scores; however, this influence would be more prominent if more than half (53.1%) were on anti-TNF treatment. The third point may be the gender issues. Results should be carefully interpreted if the analyses were done based on gender splitting. Gender difference is an important issue regarding effect modifying contextual factors, outcome influencing contextual factors, and measurement affecting contextual factors stated in the survey of OMERACT working groups.[5] Women tend to have higher values in some of the patient-reported outcome measurements.[5,6]

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Therefore, female patients may be evaluated separately, as suggested and conducted in Inan et al.'s study[1]. A previous report showed longitudinal association of inflammatory lesions in the SI joint and disease activity in males but not in females.[7] In Inan et al.'s study, the small number of patients, particularly the lower number of female patients (n=11), may be the most important limitation since outliers become strikingly important in correlation analysis with a low number of patients.

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