



## Editorial

# New Paradigms in the Diagnosis and Classification of the Spondylarthritis<sup>☆</sup>

## Nuevos paradigmas en el diagnóstico y la clasificación de las espondiloartritis

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Important advances in the understanding of spondyloarthritis (SAs) have been made in the area of classification criteria<sup>1</sup> and have significantly improved the approach to these diseases and the better identification of patients in early stages of the disease.<sup>2</sup> Conceptually the term spondyloarthritis (SA) continues to represent a heterogeneous group of interrelated diseases<sup>3</sup> called ‘spondyloarthritis’ (SA), although often used in the plural form, “spondyloarthritis (SA)”, accentuating the sense of group, rather than a disease with different clinical presentations.<sup>4</sup>

In the medical sciences in general and in rheumatology in particular, systems of diagnostic criteria or classification are used interchangeably for research and for clinical practice. However, the differences between them are substantial and must be known before application. The *diagnostic* criteria should be applied to individual patients and should be especially sensitive (high sensitivity) to allow identification of patients with the disease even during the early stages. This depends on the prevalence of the disease. In contrast, the purpose of the *classification* criteria is to differentiate patients with a specific disease from patients with other illness or individuals from the general population, and are used in epidemiological research to create homogeneous groups of patients. These criteria should have high specificity and be applied to patients’ already diagnosed. Their qualities are not dependent on the prevalence and should not be applied “automatically” for diagnosis, especially in populations where the prevalence is low,<sup>5</sup> as in general practices, where the prevalence of these is low and high for low back pain of mechanical origin.

In the field of SA, two systems of criteria were developed almost simultaneously, the Amor<sup>6</sup> and the European Group for the Study of spondylarthropathies criteria (EGSS),<sup>7</sup> which have been very useful thanks to their good quality in terms of sensitivity (90.8% Amor and 83.5% EGSS) and specificity (96.2% Amor and 95.2% EGSS). However, the introduction of diagnostic imaging, especially MRI, which can detect early sacroiliitis, the efficacy of biological drugs in early stages of the disease<sup>8</sup> and the need to recognize patients at increasingly early stages evidenced the shortcomings of these criteria for

the early recognition (preradiologic) of inflammatory involvement of the sacroiliac joints and there was a need to develop a new system of classification criteria that overcame these limitations, namely ASAS.<sup>9</sup>

Previously, it was necessary to redefine some concepts. First, it issued a new definition of inflammatory back pain.<sup>10</sup> Secondly, ASAS has proposed dividing patients with SA into 2 subgroups according to the clinical presentation: *predominantly axial SA*<sup>11</sup> (which would include the SA and initial forms, now called non-radiographic axial SA) and *predominantly peripheral SA* (including reactive arthritis, psoriatic arthritis, arthritis associated with chronic inflammatory bowel disease and SAInd).<sup>12</sup> And thirdly, it coined the term “*preradiographic axial spondyloarthropathy*” or “*non radiographic axial spondyloarthritis (SAax/pRx)*” for patients with clinically predominantly axial disease where no structural damage is detected radiographically on the sacroiliac joints and hence could not be diagnosed with SA; although clinically indistinguishable, both (SAaxnRx and SA) represent a unique disease in varying stages.<sup>13</sup>

With these premises, ASAS has developed and validated new criteria to classify patients according to their clinical expression (axial or peripheral<sup>14–16</sup>). In the axial subtype, a patient may qualify if presenting back pain for more than 3 months duration, beginning before 45 years of age and sacroiliitis on X-rays or MRI, defined when at least one of 11 SA specified characteristics are present, or (if without SI criteria) if HLA-B27 is positive and at least two of these characteristics are present. For the peripheral subtype it is required that the presence of arthritis, dactylitis or entesitis be present, or as an entry criterion, one or two of the characteristics defined. The sensitivity and specificity of the new criteria are: for axial SA criteria, 82.9% and 84.4%, respectively, and for peripheral SA criteria, 78.0% and 82.2%.

Regarding the above, the ASAS criteria report predominant symptoms<sup>17</sup> and have slightly better qualities, even when modifying these by adding MRI. Nevertheless, some considerations are worthy of note. These classification systems (axial and peripheral) should not be mutually exclusive, as it is common for phenotypic pattern to change along the evolution of the disease process. Moreover, these criteria are apparently restricted to patients younger than 45 years and limit the ability to include some patients with peripheral forms, particularly reactive arthritis or psoriatic arthritis, which often start above this limit. Some authors<sup>18</sup> have

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highlighted the differences in access to MRI in different countries, which may influence the applicability of the criteria in clinical practice.

ASAS criteria were developed as classification criteria, but, if applied in a scenario in which the prevalence of disease is high (rheumatology clinic seeing patients with suspected SA) they may also be used as diagnostic criteria. In other scenarios, such as in general medicine they are not sufficient enough to be used for diagnosis.

In short, the new ASAS criteria represent a step forward in the goal of better classification of patients with axial and peripheral SA than those previously developed, especially in the early stages of the disease. Another potential target of these criteria is to facilitate the conduct of clinical trials and observational studies in patients with axial preradiographic SA, but probably the most important contribution of these criteria is that they expand the range of therapeutic indications, via the authorization of competent agencies such as the European Drug Agency and the Food and Drug Administration with TNF blocking agents in patients with very early forms of the disease<sup>8</sup> and lead us to finally confirm (or not) that the forceful therapeutic approach to SAaxnRx changes the course of the disease or even induces permanent remission.

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