Relationship of Psoriatic Arthritis to Other Spondyloarthritides

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ABSTRACT. In the early 1970s, Moll and co-workers formulated the unified concept of spondyloarthritides, a group of conditions sharing similar clinical features. Subsequently, criteria for their classification have been proposed by Amor and coworkers, the European Spondylarthropathy Study Group, and the Assessment in SpondyloArthritis international Society. Opinion, however, is divided between those who believe that the different entities of the complex represent the variable expression of the same disease ("lumpers") and those who think that these should be considered separately but under the same umbrella ("splitters"). Several sets of criteria have been proposed for psoriatic arthritis (PsA), the most recent being the ClASsification for Psoriatic Arthritis (CASPAR) criteria. According to some authors, there are persuasive arguments to support the view of PsA as a distinct entity. (J Rheumatol Suppl. 2015 Nov;93:33–5; doi:10.3899/jrheum.150632)

Key Indexing Terms:
PSORIATIC ARTHRITIS SPONDYLOARTHRITIS ANKYLOSING ARTHRITIS

In the 1970s, Moll, *et al* suggested that some diseases previously considered "atypical special forms of rheumatoid arthritis" could be classified together in a group called "seronegative spondarthritides"[1]. The prefix "*spond*" was chosen to emphasize the strong association of each member of the group with ankylosing spondylitis (AS). In the authors' opinion, the following criteria should be met for inclusion in the group: absence of rheumatoid factors (RF), absence of subcutaneous ("rheumatoid") nodules, inflammatory peripheral arthritis (often asymmetrical), radiological sacroiliitis with or without AS, evidence of clinical "overlap" between members of the group, and tendency to familial aggregation. The clinical entities they included in the group were uncomplicated AS, psoriatic arthritis (PsA), Reiter disease (reactive arthritis; ReA), the arthritides associated with ulcerative colitis and Crohn disease, Whipple disease, and Behçet syndrome.

Discovery of a strong association of the spondyloarthritides with HLA-B27 confirmed and reinforced the concept of a group of interrelated diseases. In the subsequent edition of the *Copeman's Textbook of the Rheumatic Diseases* the authors added the significant association with the HLA-B27 antigen to the inclusion criteria and extended the list of diseases, adding ReA, acute anterior uveitis, and some forms of juvenile chronic arthritis[2]. ReA has subsequently replaced and incorporated the abandoned term Reiter syndrome. Behçet disease and Whipple disease are no longer considered part of the group because they possess other clinical features and they lack an association with HLA-B27[3,4].

In addition to AS, PsA, ReA, and inflammatory bowel disease (IBD)–related arthritis, the spondyloarthritis (SpA) complex also includes forms that do not meet criteria for these categories, which are designated as undifferentiated SpA (uSpA)[5,6]. USpA is not a subcategory or a new entity but rather a provisional diagnosis for differentiating patients with SpA from those with other rheumatic inflammatory diseases and includes the early phases of definite forms of SpA, and abortive and self-limiting forms that do not develop into any established entity, overlap syndromes combining features of more than 1 disease, and etiologically unknown entities of SpA[5]. Because uSpA lacked classification criteria, it was excluded by most epidemiological studies performed in the last century.

In the 1990s, 2 sets of classification criteria were proposed with the aim of encompassing the entire clinical spectrum of SpA, including uSpA: the European Spondylarthropathy Study Group (ESSG) criteria[7] and the Amor criteria[8]. The ESSG criteria require the presence of inflammatory spinal

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pain and/or asymmetrical synovitis, predominantly of the lower limbs ("entry criterion"), plus 1 of: positive family history, psoriasis, IBD, alternate buttock pain, enthesitis, and sacroiliitis. In contrast, the Amor criteria are a point-scale list of 12 items, none of which is indispensable for classifying a patient as having SpA. Although both were proposed for classification purposes, these criteria, especially the Amor criteria, may also be useful for supporting diagnosis in certain patients with uSpA in clinical practice.

More recently, another set of criteria, the ASAS (Assessment in SpondyloArthritis international Society) have been developed and validated for axial[9] and peripheral SpA[10]; these criteria are expected to replace the ESSG[7] and the Amor criteria[8]. Axial criteria include the nonradiographic (nr) phase, in which inflammation can be detected by magnetic resonance imaging (MRI) as bone-marrow edema and osteitis and in which the patients can be labeled as having nr-axial SpA, and the radiographic phase, during which the term *AS* can be used.

According to these criteria, a patient with back pain of at least 3 months' duration and with age at onset of symptoms less than 45 years can be classified as having axial SpA if there is imaging evidence of sacroiliitis on pelvic radiographs or on MRI, plus 1 of the following SpA features: inflammatory back pain, arthritis, enthesitis (heel), uveitis, dactylitis, psoriasis, IBD, good response to nonsteroidal antiinflammatory drugs, family history of SpA, HLA-B27 positivity, and elevated C-reactive protein. A patient with no imaging evidence of sacroiliac joint involvement but who is HLA-B27–positive would need to have 2 of the above SpA features. According to the ASAS criteria for peripheral SpA, to be classified as having SpA a patient should have enthesitis, dactylitis, or arthritis, plus 1 or 2 SpA features. Peripheral SpA includes uSpA, ReA, SpA related to IBD, and PsA.

A continuing controversy persists as to whether the different diseases that constitute the SpA complex should be considered together or as separate entities[11]. The "lumpers" believe that all the SpA forms, including PsA, are a single disease with several different manifestations. In contrast, in the "splitters'" opinion, the features of PsA are sufficiently different to justify an individual diagnosis and classification under the umbrella of SpA.

In 1973 Moll and Wright suggested their diagnostic criteria for PsA: a type of inflammatory arthritis in the presence of psoriasis that is usually seronegative for RF[12]. Other sets of criteria have since been proposed, the most recent being the ClASsification for Psoriatic Arthritis (CASPAR) criteria, which are more sensitive and specific and more universally accepted[13]. According to CASPAR, the patient should have inflammatory musculoskeletal disease, including articular, spinal, and entheseal disease plus 3 or more points from the following: evidence of psoriasis, psoriatic nail lesions, negative test for RF, dactylitis, and radiological evidence of juxtaarticular new bone formation. One limitation of the criteria is the imperfect description of the "entry criterion," i.e., inflammatory musculoskeletal disease (joint, spine, or entheseal). The Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) is trying to improve this definition. The CASPAR criteria were developed using data from a population of patients with longstanding disease (mean duration 12.5 yrs). Some studies have established that these criteria can also identify patients with early disease[14,15]. Van den Berg, *et al* tested the performance of the ASAS criteria and the CASPAR criteria in patients with SpA and PsA included in the Leiden Early Arthritis Clinic[16]. In the PsA group, the CASPAR criteria were more sensitive than the ASAS peripheral criteria (88.7% vs 52%).

According to Eder and Gladman, there are persuasive arguments to support the view of PsA as a distinct entity[17]: (1) peripheral arthritis is more common in PsA, can involve the distal interphalangeal (DIP) joints, and can be polyarticular; (2) psoriatic spondylitis differs from AS in severity and in radiographic features; (3) there are skin and nail lesions in psoriatic disease; and (4) the genetics are quite different: HLA-B27 is present in the majority of patients with AS and in a minority of patients with psoriatic axial disease, and other HLA alleles are associated with PsA including HLA-B*38, B*39, B*8 and C*06; and (5) there are differences in the response to some drugs. Methotrexate and leflunomide are effective in PsA but not in AS.

Moll and Wright described 5 clinical patterns of PsA: predominant DIP joint involvement, arthritis mutilans, symmetrical "RA-like" polyarthritis, asymmetrical oligoarthritis, and predominant axial involvement with features of AS[12]. Asymmetrical oligoarthritis was the most frequent subtype, observed in around 70% of patients, followed by polyarthritis present in 15% of cases. In the majority of subsequent studies on clinical features of PsA, polyarthritis was the most frequent pattern. It is now recognized that the clinical phenotype is not permanent and can change over time, especially for peripheral joint involvement[17]. Oligoarthritis often evolves into polyarthritis, and transition in the opposite direction can occur as a result of therapy.

Regarding psoriatic spondylitis, there is no established definition of axial involvement in psoriatic disease[18]. McEwen, *et al* observed distinguishing features of psoriatic spondylitis, including unilateral and asymmetric involvement of the sacroiliac joints, paramarginal, bulky and asymmetrical syndesmophyte formation, and predominant involvement of the cervical spine[19]. Subsequent studies have highlighted that the differences between AS and psoriatic spondylitis are more quantitative than qualitative[20].

Experts normally agree that PsA represents a distinct entity in the SpA complex, but its delineation remains to be further investigated.

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REFERENCES

1. Moll JMH, Haslock I, Wright V. Seronegative spondarthritides. In: Scott JT, editor. Copeman's textbook of the rheumatic diseases, 5th ed. Edinburgh, London, and New York: Churchill Livingstone; 1978:578-91.
2. Moll JMH, Haslock I, Wright V. Seronegative spondarthritides. In: Scott JT, editor. Copeman's textbook of the rheumatic diseases, 6th ed. Edinburgh, London, Melbourne, and New York: Churchill Livingstone; 1986:723-44.
3. Olivieri I, Salvarani C, Cantini F. Is Behçet's disease part of the spondyloarthritis complex? J Rheumatol 1997;24:1870-2.
4. Olivieri I, Brandi G, Padula A, Di Stefano M, Mantovani W, Calabrese C, et al. Lack of association with spondyloarthritis and HLA-B27 in Italian patients with Whipple's disease. J Rheumatol 2001;28:1294-7.
5. Zeidler H, Mau W, Khan MA. Undifferentiated spondyloarthropathies. Rheum Dis Clin North Am 1992;18:187-202.
6. Olivieri I, van Tubergen A, Salvarani C, van der Linden S. Seronegative spondyloarthritides. Best Pract Res Clin Rheumatol 2002;16:723-39.
7. Dougados M, van der Linden S, Juhlin R, Huitfeldt B, Amor B, Calin A, et al. The European Spondylarthropathy Study Group preliminary criteria for the classification of spondylarthropathy. Arthritis Rheum 1991;34:1218-27.
8. Amor B, Dougados M, Mijiyawa M. [Critères de classification des spondylarthropathies]. [Article in French] Rev Rhum Mal Osteoartic 1990;57:85-9.
9. Rudwaleit M, van der Heijde D, Landewé R, Listing J, Akkoc N, Brandt J, et al. The development of Assessment of Spondyloarthritis international Society classification criteria for axial spondyloarthritis (part II): validation and final selection. Ann Rheum Dis 2009;68:777-83.
10. Rudwaleit M, van der Heijde D, Landewé R, Akkoc N, Brandt J, Chou CT, et al. The Assessment of SpondyloArthritis International Society classification criteria for peripheral spondyloarthritis and for spondyloarthritis in general. Ann Rheum Dis 2011;70:25-31.
11. Nash P, Mease PJ, Braun J, van der Heijde D. Seronegative spondyloarthropathies: to lump or split? Ann Rheum Dis 2005;64 Suppl 2:ii9-13.
12. Moll JM, Wright V. Psoriatic arthritis. Semin Arthritis Rheum 1973;3:55-78.
13. Taylor W, Gladman D, Helliwell P, Marchesoni A, Mease P, Mielants H; CASPAR Study Group. Classification criteria for psoriatic arthritis: development of new criteria from a large international study. Arthritis Rheum 2006;54:2665-73.
14. D'Angelo S, Mennillo GA, Cutro MS, Leccese P, Nigro A, Padula A, et al. Sensitivity of the classification of psoriatic arthritis criteria in early psoriatic arthritis. J Rheumatol 2009;36:368-70.
15. Coates LC, Conaghan PG, Emery P, Green MJ, Ibrahim G, MacIver H, et al. Sensitivity and specificity of the classification of psoriatic arthritis criteria in early psoriatic arthritis. Arthritis Rheum 2012;64:3150-5.
16. van den Berg R, van Gaalen F, van der Helm-van Mil A, Huizinga T, van der Heijde D. Performance of classification criteria for peripheral spondyloarthritis and psoriatic arthritis in the Leiden early arthritis cohort. Ann Rheum Dis 2012;71:1366-9.
17. Eder L, Gladman DD. Psoriatic arthritis: phenotypic variance and nosology. Curr Rheumatol Rep 2013;15:316.
18. Lubrano E, Spadaro A. Axial psoriatic arthritis: an intriguing clinical entity or a subset of an intriguing disease? Clin Rheumatol 2012;31:1027-32.
19. McEwen C, DiTata D, Lingg C, Porini A, Good A, Rankin T. Ankylosing spondylitis and spondylitis accompanying ulcerative colitis, regional enteritis, psoriasis and Reiter's disease. A comparative study. Arthritis Rheum 1971;14:291-318.
20. Helliwell PS, Hickling P, Wright V. Do the radiological changes of classic ankylosing spondylitis differ from the changes found in the spondylitis associated with inflammatory bowel disease, psoriasis, and reactive arthritis? Ann Rheum Dis 1998;57:135-40.

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