

Psoriatic arthritis: an evolving matter

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Psoriatic arthritis is a multifaceted disease, raising the discussion of its position between a single isolated disease or a part or subset of spondyloarthritis. New developments in the several fields of knowledge are paving the way for a new look at this disease.

A STORY OF CLASSIFICATION CRITERIA

Several sets of criteria were proposed over the years for classifying psoriatic arthritis. Recent are the CASPAR criteria.¹ The patient must have inflammatory articular disease (joint, spine or entheses) with three points from the following five categories: (1) evidence of current psoriasis or a personal or familial history of psoriasis; (2) typical psoriatic nail dystrophy; (3) absence of rheumatoid factor; (4) current dactylitis or a history of dactylitis; (5) radiographic evidence of juxta articular new bone formation. A score of 2 is assigned to current psoriasis; all other features are assigned a score of 1. These classification criteria allow the inclusion of many patients and various clinical phenotypes (including axial forms) in a definition of psoriatic arthritis. The question is if psoriatic arthritis fits into the spondyloarthritis frame too. Over the past few years, the ASAS group (Assessment in SpondyloArthritis international Society) developed and proposed new classification criteria for axial and peripheral forms of spondyloarthritis.² These classifications allow the recognition of several clinical or phenotypical presentations of the disease³: axial spondyloarthritis, radiographic (corresponding to ankylosing spondylitis), non-radiographic; peripheral articular erosive or not erosive, and enthesitis spondyloarthritis. These presentations are *somewhat* different from the several phenotypic forms of psoriatic arthritis described earlier by Moll and Wright in 1972,⁴ but this illustrates that, in current practice, it is more the phenotypic presentation than the nosological classification that matters.

NEW EPIDEMIOLOGICAL FINDINGS

Under these circumstances, some epidemiological data are highlighted. The prevalence

of psoriatic arthritis is estimated as 0.14% in a nationwide study in France,⁵ and psoriatic arthritis in 6–24% of patients with skin psoriasis⁶ with some particularities of the skin disease associated with arthritis: scalp, intergluteal/perianal lesions and nail involvement. A trend for an association between high Psoriasis Area and Severity Index (PASI) and psoriatic arthritis is suggested.⁶ The relation between nail involvement and enthesitis is underlined,⁷ evaluated by several imaging techniques.^{8–10}

Like in other inflammatory arthritides, comorbidities are now recognised as factors to be screened and taken into account. Many studies have shown a significant increased risk of cardiovascular events,¹¹ but increased mortality is not clearly demonstrated.^{11 12} Obesity may be associated with an increased risk of incident psoriatic arthritis.¹³ Metabolic syndrome and insulin resistance were found to be highly prevalent in psoriatic arthritis and independently associated with the severity of the rheumatic disease.¹⁴ Finally, smoking appears as a major environmental factor for psoriatic arthritis. Smoking is associated with the risk of psoriatic arthritis in the general population,¹⁵ with a relative risk of 1.54 for past smokers and 3.13 for current smokers, compared with never smokers. Moreover, smoking is associated with a more severe disease,^{15–17} and a poorer response to tumour necrosis factor (TNF) blockers.¹⁸

NEW TOOLS FOR EVALUATION

Evaluation of the disease is more standardised, taking into account the various aspects of the disease. Besides tools extrapolated from rheumatoid arthritis (for peripheral joints) or spondyloarthritis (for axial involvement), or dermatology (PASI skin score, Nail Psoriasis Severity Index (NAPSI) score), new instruments have been developed specifically for psoriatic arthritis.¹⁹ These are response criteria, and besides PSARC (psoriatic arthritis response criteria), new disease activity scores (PASDAS, Psoriatic Arthritis Disease Activity Score; MDA, Minimal Disease Activity;

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CPDAI, Composite Psoriatic Disease Activity Index; DAPSA, Disease Activity Index for Psoriatic Arthritis), as well as patient-reported outcome measures (PsAID: Psoriatic Arthritis Impact of Disease) were proposed.²⁰ These not only allow the quantification and standardisation of the disease evaluation and treatment response, but also provide composite scores encompassing the whole spectrum of the phenotypic heterogeneity of psoriatic arthritis. New imaging techniques (ultrasound,^{8 9} MRI²¹ and PET scanner¹⁰) may be used as tools for diagnosis and evaluation assessment.

NEW THERAPEUTIC STRATEGIES AND RECOMMENDATIONS

Recommendations for the management of psoriatic arthritis have been developed and tailored to the presentation of the disease.²² New concepts, validated in other diseases, may be used in psoriatic arthritis management. This is the case for the treat-to-target strategy, proposed in spondyloarthritis and psoriatic arthritis,²³ with the first evaluation of this strategy with tight control in a trial in psoriatic arthritis (TICOPA).²⁴ The latest national recommendations have taken these considerations into account, as well as the polymorphism of the disease.^{25 26} However, the eventuality of a window of opportunity remains to be demonstrated, especially in axial forms.²⁷

NEW PATHOPHYSIOLOGICAL DEVELOPMENTS AND NEW TREATMENT OPTIONS

Methotrexate is a first-line disease-modifying antirheumatic drug (DMARD), as recommended,^{22 25} and an anchor drug for biologics, even if its efficacy has not been evidence-based demonstrated.²⁸ Anti-TNF agents represent a major breakthrough in the treatment of the different presentations of psoriatic arthritis.²⁶ Knowledge in the immune pathogenesis of the disease led to new targeted therapeutic approaches.

Psoriasis and psoriatic arthritis are cytokine-driven diseases. In the cytokine network involved in psoriatic arthritis, the IL-23/Th17 pathway is currently under the spotlight.^{29 30} This allows the development of treatment strategies based on IL-23 or IL-17 targeting, using monoclonal antibodies against the cytokine or its receptor, or soluble receptors. Potential targets include each of the IL-23 subunits (p40 and p19), IL-17A and IL-17 receptor, and randomised controlled studies provided results in psoriatic arthritis with ustekinumab (monoclonal anti-p40 IL-12/23 antibody), secukinumab (monoclonal antibody directed against IL-17A) and brodalumab (monoclonal antibody directed against the IL-17 receptor), with significantly positive results compared to placebo, regarding clinical efficacy on rheumatological and skin expression.²⁹ Ustekinumab is licensed in Europe for patients with psoriatic arthritis. Other options are possible as, for example, new anti-IL-17A antibodies (ixekizumab), anti-p19IL-23 antibodies and

anti-IL-23 receptor antibodies, as well as soluble receptors for IL-23 and IL-17.

Small molecules may also have a future in the treatment strategy of psoriatic arthritis. Apremilast, a phosphodiesterase four inhibitor, demonstrated significant results in several situations of psoriatic arthritis^{26 31} (and received recent Food and Drug Administration (FDA) approval to treat adults with active psoriatic arthritis), and kinase inhibitors are under evaluation in this condition.

CONCLUSION

Psoriatic arthritis is not a concept, but a live disease with a phenotypical polymorphism. There is no doubt about new developments in the future in this part of rheumatic musculoskeletal diseases.

Competing interests None.

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