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Spondyloarthropathies

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Spondyloarthropathies (SpA) are a group of common inflammatory rheumatic disorders characterised by axial and or peripheral arthritis, associated with enthesitis, dactylitis and potential extra-articular manifestations such as uveitis and skin rash. The diseases, which comprise the group, share a common genetic predisposition, the HLA-B27 gene; however, this association varies markedly among the various SpAs and among different ethnic groups. Environmental factors seem to be triggering the diseases in the genetically predisposed individuals. The radiographic hallmark of the group is sacroiliitis, which when present is of help in the diagnosis. Various sets of diagnostic and classification criteria were developed over the years including the European Spondyloarthropathy Study Group (ESSG) criteria which were until recently the most widely used. The new Assessment in SpondyloArthritis international Society (ASAS) international working group has recently proposed a new set of diagnostic criteria that would enable identification of SpA before structural changes develop in the spine. Magnetic resonance imaging (MRI) changes have now been included in the new classification criteria of early axial SpA and are now considered as a major tool in the diagnosis. Until recently, there were no real disease-modifying anti-rheumatic drugs which were able to halt the disease progression. Over the past decade, tumour necrosis factor (TNF)-alfa-blocking agents have been extensively investigated and became the mainstream of therapy providing the patients an effective treatment option.

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The spondyloarthropathies (SpA) now better termed spondyloarthritides (SpAs) are a group of diverse interrelated inflammatory arthritides which share multiple clinical features as well as common genetic predisposing factors [1–3]. The group includes the prototypical disease ankylosing spondylitis (AS), reactive arthritis (ReA) or spondyloarthritis, psoriatic arthritis (PsA) or spondyloarthritis, SpA associated with inflammatory bowel disease (IBD) (Crohn's disease or ulcerative colitis), undifferentiated SpA (uSpA) [3] and juvenile-onset spondyloarthritis.

Spondyloarthritides are characterised by sacroiliitis with inflammatory back pain, peripheral arthropathy, absence of rheumatoid factor and subcutaneous nodules, enthesitis, extra-articular or extra-spinal involvement, including of the eye, heart, lung and skin. There is a tendency towards familial aggregation as well as varying association with HLA-B27, depending on the population studied; however, at least six other genes associated with AS have been discovered. The similarities in clinical manifestations and the genetic predisposition suggest that these disorders share some pathogenic mechanisms. The prevalence of AS is about 0.3–0.8% and the overall prevalence of SpA is similar to that of rheumatoid arthritis [4,5]. New classification criteria for the whole group of the SpA have recently been set and are now generally accepted and applied in clinical studies.

Signs and symptoms

AS is the most common and most typical form of SpA, with a prevalence of 0.2–1.2% in the Caucasian population [6], depending on regional genetic and environmental factors. This prevalence tends to be higher in populations with a higher prevalence of HLA-B27 positivity. Historically, AS was considered to affect men up to 10 times more commonly than women [7]; however, recent epidemiological studies demonstrated a lower male to female ratio, approximated at 2–3:1 [8]. The initial symptoms, typically in the early adulthood, are usually of dull pain over the buttock and lower lumbar area, accompanied by morning stiffness, relived with exercise and worsened with inactivity. This inflammatory back pain, which usually responds well to nonsteroidal anti-inflammatory drugs (NSAIDs), may be unilateral or bilateral and may alternate from side to side. Since low back pain is very common in the general population, the diagnosis of AS is usually delayed by years. The mean delay from onset of symptoms to the diagnosis of AS can be as long as 8 years, with longer delays in females [9,10]. Hopefully, the newly Assessment in SpondyloArthritis international Society (ASAS) diagnostic criteria, described below, will enable shortening this diagnostic delay. Other initial features include localised pain as a sign of enthesitis, inflammation at bone insertion sites of ligaments and tendons. The pain expressed due to the enthesopathy depends on the affected location (heels, ischilal tuberosities, costosternal junctions, greater trochanters and other locations). Frank arthritis may occur in 25–35% of the patients, usually involving large joints in an asymmetrical fashion (shoulder, knee, ankle and hip). Involvement of the cervical spine with neck pain leading to a reduced range of motion is generally a later manifestation in the course of the disease. Dactylitis, inflammation of an entire digit, commonly termed 'sausage digit', is another typical feature of the SpA, mainly in PsA and ReA. It is thought to arise from joint and tenosynovial inflammation. Other clinical features include recurrent acute anterior uveitis which occurs in about 30% of the patients and can antedate the spondylitis, cardiovascular manifestations (aortic insufficiency, congestive heart failure, aortitis, angina, pericarditis and cardiac conduction abnormalities). Dyspnoea, cough or haemoptysis can result from upper lobe pulmonary fibrosis.

PsA develops in 5–40% of psoriasis patients [1,11]. Its prevalence ranges from 0.02% to 0.2% and the incidence in the normal population is 7.2 per 100,000 per year. In patients who are already suffering from psoriasis, the prevalence of PsA is much higher and rises to 7–40%. The arthritis is often asymmetric, involving small and large joints. A number of patterns of joint involvement have been described: arthritis mutilans, peripheral oligoarthritis or polyarthritis, spondylitis and distal interphalangeal joint arthritis (fingers and toes) which are commonly affected (>50%). Cervical spine disease is common (>50%) and usually progresses in severity in parallel with the peripheral joint disease. Psoriasis of the nails (in 83%) or skin may precede or follow joint involvement. The typical psoriatic lesions may be hidden in the scalp, behind the ears, gluteal folds or umbilicus, occasionally even un-noticed by the patient. Extra-articular features include constitutional symptoms, fatigue and iritis or uveitis. Similarly to other SpAs, various biomarkers have been suggested for assessing PsA. Of these biomarkers, which are still being studied, C-reactive protein (CRP), matrix metalloproteinase-3