

Psoriatic arthritis

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Abstract

Psoriatic arthritis (PsA) has been defined as an inflammatory arthritis usually without any rheumatoid factor in serum (seronegative arthritis) associated with psoriasis. Diagnostic criteria for PsA are still not entirely satisfactory. Moll and Wright's classification criteria are the most frequently used. They described 5 PsA subgroups. PsA is characterized by various clinical manifestations including symmetric polyarthritis, asymmetric oligoarthritis or polyarthritis, spinal inflammation similar to ankylosing spondylitis, peripheral enthesitis, anterior chest wall involvement or distal interphalangeal arthritis of the hands and feet, dactylitis (sausage digits), arthritis mutilans and onycho-pachydermo-periostitis that are less frequent but characteristic. The annual incidence was estimated to be between 6.1 and 6.7 per 100.000 adult populations. The pathogenesis of PsA remains to be elucidated but genetic, environmental and immunologic factors seem to play a prominent role. Enthesitis is probably the primary lesion in PsA but synovitis is also common. The treatment of PsA consists of NSAIDs (Non Steroidal Anti-Inflammatory Drugs), local steroid injections, rehabilitation of joint and spine. DMARDs (disease-modifying antirheumatic drugs) should be prescribed as early as possible in active form of PsA. Methotrexate, leflunomide and sulfasalazine are the most frequently used DMARDs. Anti-TNF therapy is indicated in peripheral or spinal forms of PsA which are active and refractory to first-line therapies.

Keywords

Inflammatory seronegative arthritis, psoriasis, enthesitis, synovitis, TNF-blockers, leflunomide, methotrexate

Disease name and synonymes

psoriatic arthritis

Diagnosis criteria/definition

Psoriatic arthritis (PsA) has been defined as an inflammatory arthritis usually without any rheumatoid factor in serum (seronegative) associated with psoriasis. Diagnostic criteria for PsA are still not entirely satisfactory. Moll and Wright's classification criteria are the most frequently used and described 5 PsA subgroups :

- Arthritis of the distal interphalangeal joints of the hands and feet
- Arthritis mutilans with sacroiliitis
- Symmetric arthritis indistinguishable from rheumatoid arthritis but with negative rheumatoid factor
- Asymmetric, pauciarticular arthritis with small joint involvement
- Ankylosing spondylitis with or without peripheral arthritis

However, PsA is a heterogeneous disease with typical features of spondylarthropathies in most cases, features of rheumatoid arthritis or features of uncommon arthropathies such as arthritis mutilans in other cases.

Furthermore, arthritis with the clinical and radiographic features of PsA may occur in patients without psoriasis or prior the development of psoriasis. In addition, not all patients with psoriasis and inflammatory arthritis have PsA and reciprocally the absence of current psoriasis does not exclude a diagnosis of PsA.

Differential diagnosis

- Rheumatoid arthritis
- [Lupus](#) and connective tissue disease
- Others spondylarthropathies including reactive arthritis and [ankylosing spondylitis](#)
- Undifferentiated arthritis
- Hand osteoarthritis

Prevalence

There are few data available regarding the incidence and prevalence of PsA in the population. However, recent work in the United Kingdom, has reported an adjusted prevalence of 1.7 and 0.3 % for psoriasis and PsA respectively.

The annual incidence in a Finnish population was evaluated to be 6.1 per 100.000 adult populations. The male to female ratio was 1,3 and the age-specific incidence rates showed a peak (11.8 per 100.000) between 45 and 54 years of age. The average age and sex adjusted incidence per 100.000 population was 6.7 in a population-based study in Rochester, USA, similar to that reported in Finland.

Clinical description

Clinical manifestations of PsA are various including symmetric polyarthritis, asymmetric oligoarthritis or polyarthritis, spinal inflammation similar to ankylosing spondylitis, peripheral enthesitis, anterior chest wall involvement or distal interphalangeal arthritis (DIP) of the hands and feet, dactylitis (sausage digits), arthritis mutilans and onycho-pachydermo-periostitis that are less frequent but characteristic. Fingernail dystrophy is frequently associated with DIP involvement. The absence of current psoriasis does not exclude a diagnosis of PsA. Psoriasis in some cases may occur several months or years after the occurrence of arthropathies.

PsA is not associated with any specific immunologic abnormalities. Seronegativity for rheumatoid factor is usual. Antinuclear antibodies are uncommon.

Characteristic radiological features have been described including proliferative new bone formation at entheses, "whiskering" seen around the joints, acro-osteolysis and periostitis. There is an important clinical overlap within the various clinical subgroup of PsA. Finally, the [SAPHO syndrome](#), which can be associated with cutaneous psoriasis, is a rare entity close to PsA.

Outcome and prognosis

The prognosis of PsA is generally considered to be better than that of rheumatoid arthritis. However, PsA can result in severe deformity and functional impairment. At least 40 % of patients with PsA develop radiographically detectable joint destruction. Therefore, early diagnosis and treatment can have a significant impact on disease course and outcome. Some prognostic factors (number of joint involvement, high ESR (erythrocyte sedimentation rate)...) of disease severity have been proposed and could participate to therapeutic strategy.

Pathogenesis

The pathogenesis of PsA remains to be elucidated but genetic, environmental and immunologic factors seem to be prominent. Enthesitis is probably the primary lesion in PsA but synovitis is also common.

T lymphocyte mediated process is thought to play a central role both in skin and synovium in PsA patients. Pro-inflammatory cytokines, such as TNF α and IL-1 but also IL-8 and adhesion molecules also seem to be involved in joint inflammation and joint damage in PsA.

Several studies have suggested a genetic basis for psoriasis. The strongest allelic association has been reported with HLA-Cw0602 on a haplotype including HLA-B1302 but non-HLA genes are probably also associated. PsA as well as psoriasis is known to be linked with both class

I (B13, B17, B39, B27, Cw06002) and class II (DRB1*07) HLA genes but the linkage doesn't appear to be strong enough to have pathogenic or diagnostic value. Recently, non-HLA genes including the MICA-A9, TNF α alleles or SLC22A4/5 (OCTN1, Organic Cation Transporter) genes have also been suggested as candidate genes for PsA.

Management

First-line treatment of PsA consists of nonsteroidal anti-inflammatory drugs (NSAIDs) and local steroid injections. Disease modifying anti-rheumatic drugs (DMARDs) are reserved for active, NSAID-resistant or progressively destructive forms. NSAIDs are usually well tolerated in PsA patients but should be proposed after evaluation of the gastro-intestinal, renal and cardiovascular status of each patient. Coxibs should be recommended due to the lower associated digestive risk; however, coxibs are not currently registered in PsA but other NSAIDs no more. Systemic corticosteroid, even at low dosage may frequently destabilize psoriasis and should be avoided in most of the cases.

The most frequently prescribed DMARDs for treating PsA are sulfasalazine (SSZ), methotrexate (MTX), leflunomide (LEF) and to a lesser extent cyclosporine. They have demonstrated efficacy both on peripheral arthritis and psoriasis but not on spinal symptoms, in double-blind placebo controlled studies. Only MTX and LEF have been registered in PsA. DMARDs should be prescribed as early as possible to prevent irreversible joint damage. SSZ (2-3 mg/day) is usually proposed in the mild diseases and MTX (7.5-25 mg per week) or LEF (20 mg/day) in the active forms of PsA.

Rehabilitation of joint and spine is usually associated with drugs to improve disability and quality of life and patients with joint damage and/or deformity may benefit from surgery.

Recently, TNF-blockers (etanercept (ETN), infliximab (INF), adalimumab (ADA)) have demonstrated excellent efficacy on peripheral arthritis, spine and skin symptoms. ETN has also shown an effect on disease progression. IFN (5 mg/kg/infusion) and ETN (25 mg twice weekly) have been registered for use in PsA. ADA (40 mg twice monthly) registration is in the process.

Due to the cost of these drugs and the risk of severe side-effects, they are recommended in active forms of PsA that are refractory to first-line treatments such as at least three different NSAID in ankylosing spondylitis and at least one DMARD including MTX or LEF in peripheral arthritis.

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