

# Understanding and Managing Psoriatic Arthritis



**Proton Rahman MD, MSc, FRCPC**

Although Baron Jean-Luis Aubert offered the first case description of psoriatic arthritis in 1818, it was not officially recognized by the American College of Rheumatology as a distinct clinical entity until 1964 due to some overlapping features with rheumatoid arthritis.<sup>1</sup> Since then, epidemiological studies have clearly demonstrated that psoriatic arthritis is a separate disease entity, with its own demographic, radiologic, and clinical features.<sup>2</sup> Psoriatic arthritis is an inflammatory arthritis associated with psoriasis.<sup>3</sup> The incidence of psoriatic arthritis varies between 0.3% to 1.0% and, to some extent, depends on the prevalence of psoriasis.<sup>4,5</sup> Psoriatic arthritis usually occurs in patients with psoriasis or patients with a family history of psoriasis or psoriatic arthritis.<sup>6</sup> The peak age of onset for psoriatic arthritis occurs in the late 30s and there is no predisposition to either sex.

## Etiology of Psoriatic Arthritis

The etiology of psoriatic arthritis remains unknown, but likely results from an interplay

between genetic, immunological and environmental factors.<sup>7</sup> Multiple lines of evidence support a genetic basis for psoriatic arthritis. This evidence is derived from family-based investigations, association studies with human leukocyte antigens, and mounting evidence for the genetic basis of psoriasis, a related condition.<sup>8</sup>

The inflammatory nature of skin and joint manifestations of psoriatic arthritis has suggested an immune mechanism. Humoral and cellular immune abnormalities have been detected in psoriasis and psoriatic arthritis. Environmental factors, including infection and trauma, have also been proposed as important factors in both the initiation and perpetuation of inflammation in the psoriatic arthritis condition in the setting of a susceptible individual.<sup>8</sup>

## Clinical Features

On the basis of clinical observations, Moll and Wright described five clinical patterns: symmetric polyarthritis, similar to rheumatoid arthritis; asymmetric oligoarthritis, four or less joints; spondyloarthropathy, similar to ankylosing spondylitis; distal pattern affecting the distal interphalangeal joints;

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and arthritis mutilans, a destructive form of arthritis leading to flail or ankylosed joints.<sup>6</sup> While these patterns may be clearly recognized at disease onset, they change over time and it has been difficult to ascertain whether they have prognostic implications.

Dr. Rahman is assistant professor, faculty of medicine, Memorial University of Newfoundland, staff, St. Clare's Hospital, St. John's, NF.

Table 1

## Five clinical patterns of psoriatic arthritis in decreasing frequency

- Symmetric polyarthritis
- Asymmetric oligoarthritis
- Spondyloarthropathy
- Distal interphalangeal pattern
- Arthritis mutilans

Table 2

## Comparison of clinical features of psoriatic arthritis and rheumatoid arthritis

Clinical feature	Psoriatic arthritis	Rheumatoid arthritis
Peripheral joint involvement	frequent	frequent
Asymmetric involvement	frequent	infrequent
Distal interphalangeal involvement	frequent	infrequent
Spondylitis	frequent	infrequent
Sacroiliitis	frequent	infrequent
Syndesmophytes	frequent	infrequent
Iritis	frequent	infrequent
Psoriasis	frequent	infrequent
Nail lesions	frequent	infrequent
Rheumatoid nodules	infrequent	frequent
Rheumatoid factor	infrequent	frequent
Bony erosions	frequent	frequent
New bone formation	frequent	infrequent

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Periarticular involvement is also common in psoriatic arthritis, as patients may develop dactylitis, tendonitis and enthesitis. Dactylitis, or sausage digit, is an inflammatory process involving the whole digit. In dactylitis, arthritis is thought to affect all of the joints in the digit. Inflammation of the tendon sheath (either flexors or extensors) is called tenosynovitis. Common sites of involvement for tendonitis include the Achilles tendon and the plantar fascia. Enthesitis, or inflammation at sites of tendon insertions, is a frequent finding in patients with psoriatic arthritis. It is especially common around the heel and is often associated with spur formation.

Extra-articular manifestations of psoriatic arthritis, apart from psoriasis, include ocular involvement, particularly anterior uveitis, aortic insufficiency, mucus membrane lesions, and colitis.

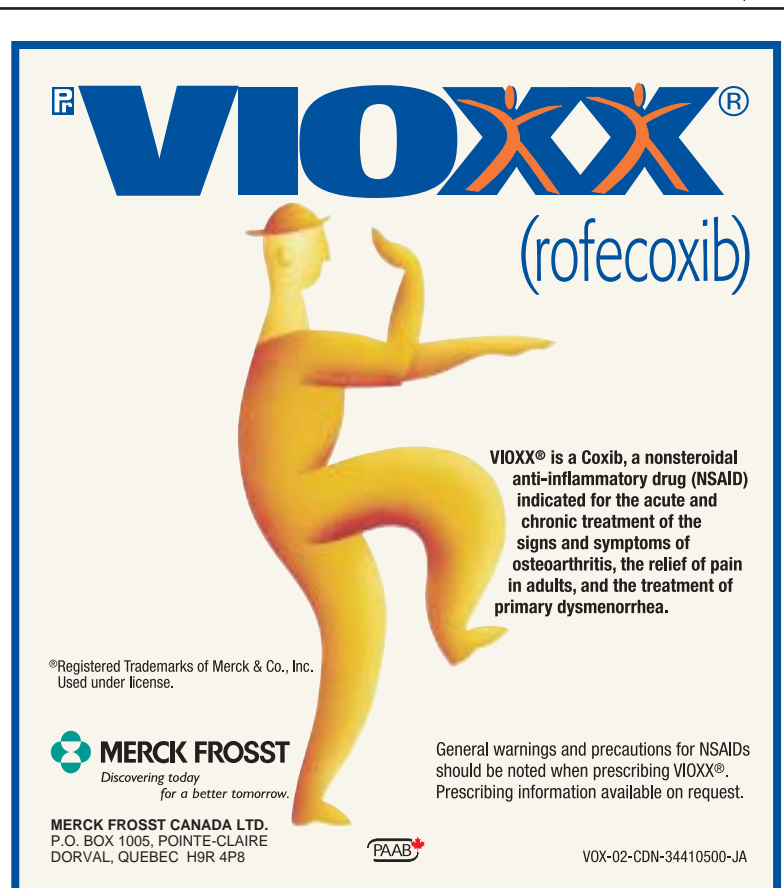
## Relationship between skin and joints

The majority of patients with psoriatic arthritis have the classic form of psoriasis vulgaris, although pustular psoriasis and erythroderma have also been reported.<sup>9</sup> The relationship between skin and joint manifestations in psoriatic arthritis remains unclear. In approximately 70% of cases psoriasis precedes the onset of arthritis, but the interval in between is extremely variable. In approximately 15% of cases, psoriasis precedes the onset of arthritis. The interval between the onset of psoriasis and arthritis can be extremely variable. In another 15% of cases, the psoriasis and inflammatory arthritis are diagnosed together.<sup>2</sup> For the most part, there is

no clear relationship between the extent of psoriasis and severity of inflammatory arthritis.

Inflammatory arthritis in the presence of psoriasis usually prompts the physician into considering the diagnosis of psoriatic arthritis. It should be noted, however, that the diagnosis of psoriasis is often overlooked as it may affect areas of the body not in plain view, such as scalp, buttocks, *etc.*

A greater challenge ensues when one has to consider the diagnosis of psoriatic arthritis in the absence of psoriasis, as the arthritis can precede the psoriasis in 15% of cases. In such cases the physician has to be vigilant in searching for non-cutaneous features that will distinguish psoriatic arthritis from rheumatoid arthritis.



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## Practice Pointer

- Inflammatory axial symptoms and/or sacroiliitis rarely occur in rheumatoid arthritis and strongly favor the diagnosis of a seronegative spondyloarthropathy, such as psoriatic arthritis.
- A strong family history of psoriasis or psoriatic arthritis, especially among first-degree relatives, should trigger consideration of a diagnosis of psoriatic arthritis.
- The key radiographic features of psoriatic arthritis include soft-tissue swelling, minimal osteopenia, bone erosions, resorption of the distal phalanx, prominent new bone formation, asymmetric distribution, and paravertebral ossification.

## How do psoriatic arthritis and rheumatoid arthritis differ?

Rheumatoid arthritis and psoriatic arthritis can both present with a symmetrical inflammatory polyarthritis. However, the presence of an inflammatory axial disease, the distribution of articular disease, the occurrence of periarticular and extra-articular features or characteristic radiographic changes may be more suggestive of psoriatic arthritis.<sup>8</sup>

Inflammatory axial symptoms and/or sacroiliitis rarely occur in rheumatoid arthritis and strongly favor the diagnosis of a seronegative spondyloarthropathy, such as psoriatic arthritis. Inflammatory axial symptoms and/or sacroiliitis also favors the presence of distal interphalangeal involvement, as this tends to occur in psoriatic arthritis and involvement of this joint is usually spared in rheumatoid arthritis.

Psoriatic arthritis is more likely to be inherited than rheumatoid arthritis. A strong family history of psoriasis or psoriatic arthritis, especially

among first-degree relatives, should trigger consideration of a diagnosis of psoriatic arthritis. It is also important to search for rheumatoid nodules, vasculitis and pulmonary and renal manifestations, as these extra-articulars are strongly suggestive of rheumatoid, rather than psoriatic, arthritis. Differences in radiographic features between these two inflammatory arthritides are described later.

### LABORATORY STUDIES

There are no specific laboratory investigations that aid in the diagnosis of psoriatic arthritis. The abnormalities noted are similar to those of any chronic inflammatory process. Acute phase reactants, such as the erythrocyte sedimentation rate (ESR), are elevated in 40% to 60% of patients. Five to 16% of patients have a low titer of rheumatoid factor and 2% to 16% of patients test positive for anti-nuclear antibody.

### RADIOGRAPHIC FINDINGS

The key radiographic features of psoriatic arthritis include soft-tissue swelling, minimal osteopenia, bone erosions, resorption of the distal phalanx, prominent new bone formation, asymmetric distribution, and paravertebral ossification. Specific radiographic features that facilitate the diagnosis of psoriatic arthritis are the simultaneous appearance of joint erosions, such as “pencil-in-cup” changes, along with new bone formation in other joints. That is, psoriatic arthritis patients may demonstrate “pencil-in-cup” change in one joint and total ankylosis in an adjacent joint. Similar peripheral joints may be involved in rheumatoid arthritis and psoriatic arthritis, but X-rays of patients with psoriatic arthritis usually do not demonstrate the same degree of periarticular osteopenia. Psoriatic arthritis is associated with periosteal reaction and new bone formation.<sup>10</sup>

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## Management

The aims of therapy in psoriatic arthritis are to induce remission of the skin lesions, alleviate articular symptoms and prevent joint destruction. At presentation it may be difficult to gauge how aggressively a patient should be treated. The clinical dilemma is that the majority of patients with psoriatic arthritis do well and can be treated with just a nonsteroidal anti-inflammatory drug (NSAID). In up to 20% of patients, however, joint destruction may develop. Unlike rheumatoid arthritis, where the institution of a disease modifying anti-rheumatic drug (DMARD) is encouraged as soon as the diagnosis is confirmed, careful assessment and monitoring of clinical response with NSAID therapy is required prior to institution of DMARD therapy.

NSAIDs are the initial drug of choice for psoriatic arthritis. All NSAIDs, including the newer COX-2 selective agents, have similar efficacy for peripheral arthritis when administered in equivalent therapeutic doses. Indomethacin, diclofenac, tolmetin and sulindac may be more effective for treating axial symptoms than other NSAIDs.

## Practice Pointer

The aims of therapy in psoriatic arthritis are to induce remission of the skin lesions, alleviate articular symptoms and prevent joint destruction. In principle, medications capable of controlling both components of the disease should be favored.

- NSAIDs are the initial drug of choice for psoriatic arthritis. All NSAIDs, including the newer COX-2 selective agents, have similar efficacy for peripheral arthritis when administered in equivalent therapeutic doses.
- If NSAIDs do not control the inflammatory synovitis, a DMARD should be considered. The decision process in selecting a DMARD should include an assessment of the burden of skin disease, because certain DMARDs can improve both skin and joint manifestations.

There is consensus that corticosteroids should be avoided in psoriatic arthritis as their discontinuation may exacerbate the skin disease.

If NSAIDs do not control the inflammatory synovitis, a DMARD should be considered. The

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decision process in selecting a DMARD should include an assessment of the burden of skin disease, because certain DMARDs can improve both skin and joint manifestations. In principle, medications capable of controlling both components of the disease should be favored.

Many of the “classic” DMARDs used in the treatment of rheumatoid arthritis are also used in the treatment of psoriatic arthritis.<sup>8</sup> This includes methotrexate, sulfasalazine, intramuscular gold, azathioprine, and cyclosporine. The newer biologic agents (infliximab and etanercept) have also demonstrated great promise.<sup>11</sup>

The most widely used agent is methotrexate. It is quite effective in reducing the inflammatory synovitis as well as the skin manifestations. The doses of methotrexate used in psoriatic arthritis are comparable to those in rheumatoid arthritis. Sulfasalazine has been used in the treatment of psoriatic arthritis with variable results. Reductions in the duration of morning stiffness, active joints and ESR following treatment with sulfasalazine have been noted. Intramuscular gold injections have been shown to be effective in treating active peripheral joints. Intramuscular gold injections’ role in treating symptoms of axial disease is limited. However, use of intramuscular gold injections may cause psoriasis to flare. Small, randomized, controlled trials with both biologic agents directed at inhibiting tumor necrosis factor (infliximab and etanercept) have recently demonstrated a substantial reduction in active joints in patients with refractory psoriatic arthritis. If this trend is confirmed in larger studies, these biologic agents will become a mainstay in the treatment of refractory psoriatic arthritis.

## Conclusion

Even though psoriatic arthritis may resemble

rheumatoid arthritis, psoriatic arthritis is a distinct clinical entity. In up to one-fifth of patients with psoriatic arthritis, the disease progressed from a benign condition to a disabling disease. Patients with mild disease can be managed solely with NSAIDs, whereas those with severe disease will require institution of DMARDs. [CME](#)

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