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REVIEW

# Psoriatic Arthritis: What the Dermatologist Needs to Know, Part 1

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**KEYWORDS**
Psoriasis;
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**Abstract**
Psoriatic arthritis is defined as inflammatory arthritis occurring in patients with psoriasis and is classified as a seronegative spondyloarthropathy associated with human leukocyte antigen B27. Between 25% and 35% of patients with psoriasis go on to develop psoriatic arthritis during the course of their disease. Given that the skin is affected before the joints in most cases, the dermatologist must be able to recognize the signs and symptoms in order to make a diagnosis and start the most appropriate treatment. This review aims to cover key aspects of the initial diagnostic workup and clinical evaluation. It examines the epidemiology, pathogenesis, and manifestations of psoriatic arthritis, as well as the complementary tests and diagnostic tools the dermatologist should be aware of in order to make the correct diagnosis.


**PALABRAS CLAVE**
Psoriasis;
Artritis psoriásica;
Epidemiología;
Patogenia

**Artritis psoriásica: lo que el dermatólogo debe saber (Parte 1)**

**Resumen**
La artritis psoriásica (APso) se define como la artritis inflamatoria asociada a la psoriasis y se clasifica dentro de las espondiloartropatías seronegativas asociadas a HLA-B27. Se estima que entre el 25 y el 35% de los pacientes con psoriasis pueden desarrollar una artritis psoriásica a lo largo de la enfermedad. Dado que en la mayoría de los casos la afectación cutánea precede a la articular, es de gran importancia que el dermatólogo sepa reconocer los signos y síntomas de esta para iniciar el proceso diagnóstico y establecer el tratamiento más adecuado para el paciente. En esta revisión se pretende abarcar los aspectos necesarios para abordar el diagnóstico y evaluación inicial de la artritis

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psoriásica e incluye aspectos relacionados con la epidemiología, patogenia y clínica de la APso, así como las pruebas complementarias y encuestas diagnósticas que el dermatólogo debe conocer para establecer un diagnóstico correcto.


## Introduction

Psoriatic arthritis is defined as inflammatory arthritis associated with psoriasis and is classified as a seronegative spondyloarthropathy associated with human leukocyte antigen (HLA) B27.

Around 30% of patients with psoriasis are expected to develop joint disease, leading to functional disability and diminished quality of life.[1,2] As the skin is affected before the joints in 80% of cases, patients are usually seen by a dermatologist, who must be able to recognize and take on the initial management of joint symptoms in order to provide optimal therapy and the opportunity for early referral to a rheumatologist for specialized assessment and treatment.[3] Furthermore, joint involvement is a criterion for providing systemic treatment, irrespective of the extension or severity of the cutaneous manifestations at a given time; therefore, clinical knowledge of psoriatic arthritis enables the dermatologist to offer the most appropriate treatment available for each patient.

The present review aims to cover those aspects that must be addressed in the initial assessment and diagnosis of psoriatic arthritis in routine practice, by providing information on diagnostic tools and evaluation criteria at diagnosis and during treatment, additional tests the dermatologist should be aware of, and when to refer to a rheumatologist.

The review is divided into 2 parts. This first part examines the epidemiology, pathogenesis, symptoms, and diagnosis of psoriatic arthritis; the second will focus on methods of assessment, follow-up, and treatment.

## Epidemiology

Although the prevalence of psoriatic arthritis is unknown, it is calculated to affect between 0.04% (Faroe Islands) and 1.2% (Sweden) of the general population.[1] A study from the Mayo Clinic revealed the prevalence to be 0.1%; however, the sample studied only included patients with psoriasis.[1] In addition, a study performed in Holland showed how difficult it was for rheumatologists to make a diagnosis of psoriatic arthritis; a number of patients went undiagnosed because some of the participating rheumatologists did not question them about the presence of psoriasis, cutaneous signs of psoriasis were not looked for, and x-rays to identify erosive lesions were not performed.

The prevalence of psoriasis ranges from 6% according to the study by the Mayo Clinic to 42% in a South African clinic.[1] A population-based study calculated prevalence to be 11%. In fact, the results of studies carried out in Italy and Sweden in which patients were followed by dermatologists and rheumatologists suggest that the real prevalence must lie between 25% and 34%. These figures show that psoriatic arthritis is much more prevalent in the general population than suggested by previous studies. Therefore, if psoriasis is present in 1% to 3% of the population and 30% of these patients have psoriatic arthritis, then the prevalence of the latter in the general population is 0.3% to 1%, which is similar to the prevalence of rheumatoid arthritis.[1]

## Genetics and Pathogenesis

Both psoriasis and psoriatic arthritis are more common in patients with first-degree relatives who have the disease, thus indicating that common genetic factors play a pathogenic role. Psoriatic arthritis is associated with polymorphisms in the genes coded in the HLA region of chromosome 6, which codes for class 1 antigens (HLA-B13, B57, B39, Cw6, and Cw7); HLA Cw6 shows the closest association both with psoriasis and with psoriatic arthritis. In contrast, the alleles HLA-B27, B38, and B-39 correlate with specific joint patterns of psoriatic arthritis. Polymorphisms (238G>A and 857C>T) have also been detected in the tumor necrosis factor (TNF) $\alpha$ gene on chromosome 6. These are associated with the presence of psoriatic arthritis but not with psoriasis and are independent of the PSORS1 allele. The genes *IL12B* (JL-12p40) and *IL23R* (IL-23 receptor) have also been identified as indicators of susceptibility to psoriatic arthritis.[4]

In addition to the genes found in the major histocompatibility complex (MHC), there has been speculation about the involvement of other genes in the pathogenesis of psoriatic arthritis. Some of these genes are found on chromosome 16q (locus PSORS8), chromosome 2q (*IL-1* gene cluster), and chromosome 19q13.4 (killer cell immunoglobulinlike receptor genes).[5] Identification of the genetic factors involved in susceptibility to psoriasis and psoriatic arthritis has been the subject of genome-wide association studies such as that by Liu et al,[6] who found that the strongest associations were with polymorphisms in the class 1 region of the MHC and with polymorphisms in