The General Practice Guide to Autoimmune Diseases

Edited by Y. Shoenfeld and P. L. Meroni

EASi™
European Autoimmunity
Standardisation Initiative


ThermoFisher
SCIENTIFIC

The General Practice Guide to Autoimmune Diseases

Edited by Y. Shoenfeld and P. L. Meroni

Pabst Science Publishers
Lengerich, Berlin, Bremen, Miami,
Riga, Viernheim, Wien, Zagreb

Bibliographic information published by Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available in the Internet at <http://dnb.ddb.de>.

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in other ways, and storage in data banks. The use of registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulation and therefore free for general use.

The authors and the publisher of this volume have taken care that the information and recommendations contained herein are accurate and compatible with the standards generally accepted at the time of publication. Nevertheless, it is difficult to ensure that all the information given is entirely accurate for all circumstances. The publisher disclaims any liability, loss, or damage incurred as a consequence, directly or indirectly, of the use and application of any of the contents of this volume.

© 2012 Pabst Science Publishers, 49525 Lengerich

http://www.pabst-publishers.de

Printing: MercedesDruck, Berlin
Typesetting: Hilmar Schlegel, Berlin
Cover: Agentur für zeitgemäße Kommunikation Kaner Thompson
www.kanerthompson.de

ISBN 978-3-89967-770-6

Psoriasisarthritis

Manfred Herold

1 Introduction

Psoriatic arthritis (PsA) is a chronic, inflammatory arthropathy associated with psoriasis. Joint pain, stiffness and swelling are the main symptoms of PsA which affects peripheral joints, spine, and entheses and is characterized by diverse phenotypic subtypes and a variable clinical course. 5 to 7 % of patients with psoriasis are affected. Untreated, this disorder may result in joint damage with significant functional impairment, disability, reduced quality of life and increased mortality.

2 Diagnostic criteria

For many years the Moll and Wright criteria [1], based on five distinct clinical subsets (oligoarticular asymmetric arthritis, polyarticular arthritis, distal interphalangeal joint predominant, spondylitis predominant, and arthritis mutilans), have been used for the classification of PsA. According to these criteria, PsA can be classified in a patient who has psoriasis, an inflammatory form of arthritis, is negative for rheumatoid factor, and shows one of five distinct clinical subsets (Table 1).

Table 1. Clinical subtypes for psoriatic arthritis described by Moll and Wright [1]. To diagnose psoriatic arthritis a patient with psoriasis, inflammatory arthritis and rheumafactor negative must present one of the five clinical subtypes. With these criteria specificity is 98 % and sensitivity 91 %. The frequency is estimated according to different publications.

Type	Clinical Subtypes	Frequency
I	distal interphalangeal joint predominant as for osteoarthritis	5 %
II	arthritis mutilans	5 %
III	symmetrical polyarthritis as in RA	15 %
IV	oligoarticular asymmetric arthritis, often HLA-B27 positive	70 %
V	spondylitis predominant, HLA-B27 positive	5 %

Over the last few years, several classification criteria for PsA have been proposed [2] and used in literature but none of them have been accepted as the best to define patients with PsA. In 2006 the CASPAR (ClASsification criteria for Psoriatic ARthritis) study group developed a new classification scheme based on extensive analysis of over 500 patients with PsA and more than 500 patients with other types of inflammatory arthritis serving as controls [3]. According to the CASPAR criteria, a disease may be classified as PsA in the presence of an established, inflammatory, articular disease with at least 3 points from the following features:

- current psoriasis (assigned a score of 2; all other features are assigned a score of 1),
- a history of psoriasis (unless current psoriasis is present),
- a family history of psoriasis (unless current psoriasis is present or there is a history of psoriasis),
- dactylitis, juxta-articular new bone formation,
- rheumatoid factor negativity, and
- nail dystrophy (Table 2).

Skin involvement has the highest scoring with 2 points indicating that most patients have develop psoriasis before PsA.

Table 2. CASPAR criteria for psoriatic arthritis [3].

Presence of inflammatory articular disease (joint, spine, or entheseal) plus the following features which are validated by points.	
• Psoriasis current	2
history of Psoriasis	1
family history of Psoriasis	1 *
• Nail dystrophy	1
• negative rheumatoid factor	1
• dactylitis current	1
• history of dactylitis	1
• Radiographs (hand or foot)	
with juxta-articular new bone formation	1 **
To meet the CASPAR 2006 classification criteria for psoriatic arthritis, a patient must have inflammatory articular disease and $\geq$3 points from the remaining categories. Criteria specificity is 98.7 % and sensitivity is 91.4 %.	

* patient-reported history in a first- or second-degree relative.
**as recorded by a rheumatologist.

3 Requirements for family practitioners

An estimated 5–7 % of people with psoriasis also have psoriatic arthritis and the annual incidence rate is close to 2 PsA cases per 100 psoriasis patients. The incidence seems to be unrelated to the duration of psoriasis but several studies suggest that the severity of psoriasis is associated with a higher risk of developing PsA (reviewed in [4]). Psoriatic arthritis usually begins between the ages of 30 and 55 years and has an equal sex distribution.

Diagnosis is mainly based on clinical symptoms. No specific laboratory tests are known for PsA. Non-specific markers of inflammation such as ESR and CRP may be elevated and correlate with the numbers of involved joints.

In clinical examination the arthritis presents with typical signs of inflammation such as tenderness, warmness, swelling and limitation of motion. In the earliest stage of PsA a monoarthritis of a knee is often reported.

In severe cases the erosive arthritis may cause a complete resorption of entire phalanges resulting in a so called arthritis mutilans with clinical features including "falling joints" or digital telescoping described as "opera glass finger" (Fig. 1). Alternatively, spondylitis with stiffness and pain in lower back and neck resulting from inflammation of the joints and discs in the spine may be the dominant clinical symptom.

Joint pain can also occur without joint inflammation and the clinical sign of swelling. Painful distal interphalangeal (DIP) joints are one of the possible distinct

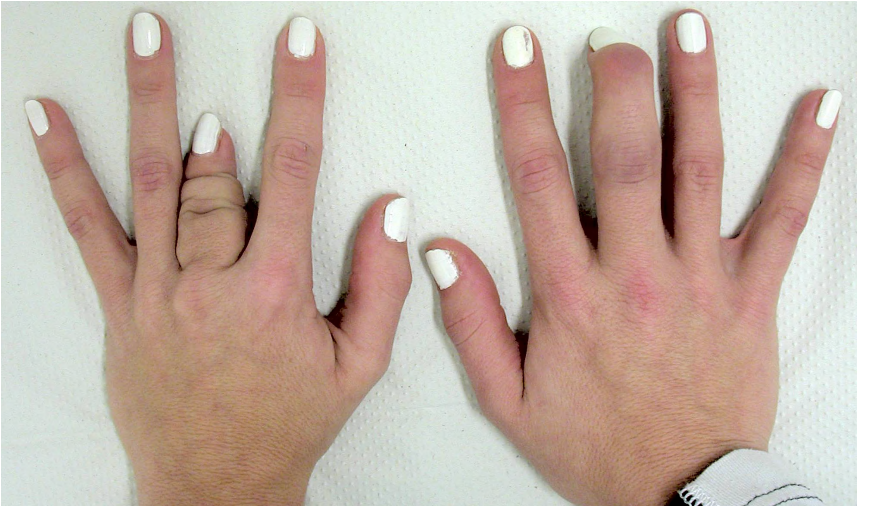

Figure 1. Arthritis mutilans of finger 3 on the left hand and dactylitis of finger 3 on the right hand (picture M. Herold 2005).

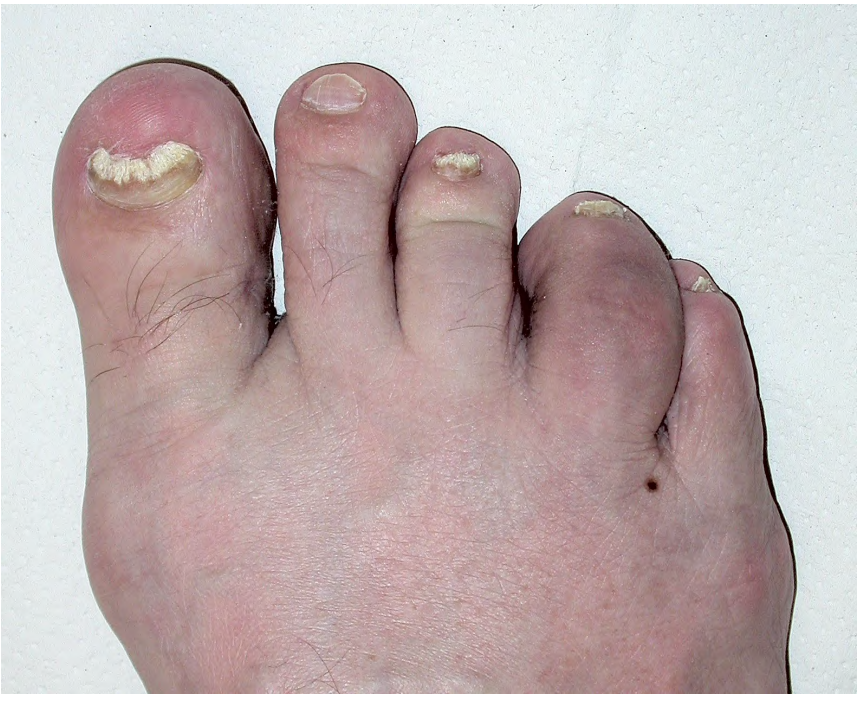

Figure 2. Dactylitis of toe 4 and psoriasis associated nail dystrophy (picture M. Herold 2005).

features of PsA and might be misinterpreted as osteoarthritis of the DIP joints. DIP arthritis or DIP arthropathy is usually associated with nail psoriasis.

Tenderness, pain and swelling over tendons may be caused by an inflammatory involvement of the entheses. Achilles tendon and entheses of the lower limbs are most often involved but other locations of tendon insertions (pelvis, thorax, epicondyles) are also possible.

A further characteristic feature of PsA is dactylitis or "sausage-shaped digit" (Fig. 2). Dactylitis is defined as diffuse and usually painful swelling of the entire digit due to a combination of synovitis of interphalangeal joints in line and flexor tenosynovitis.

4 Diagnostic measurement for experts

PsA is influenced by genetic factors and associated with human leukocyte antigen (HLA) alleles including HLA-Cw6, HLA-B13, B-17, B-27 and others. Oligoarticu-

lar (4 or fewer involved joints) or polyarticular (5 or more involved joints) asymmetric arthritis are the most frequent patterns observed in patients with PsA.

Typical radiographic features have been described in PsA with signs of destructive and proliferative changes. In peripheral PsA, radiographs show marginal erosions with adjacent bone proliferation, lack of periarticular demineralisation, (sub)luxations, ankylosis and pencil-in-cup phenomena. Paravertebral soft tissue calcifications, asymmetrical paravertebral ossification and signs of asymmetrical sacroiliitis may be seen along the spine.

5 Management

Treatment of PsA depends on the symptoms and severity of the disease and should be appropriately customised. A curative treatment does not exist, but, without treatment, PsA may be disabling. In mild forms of the disease, nonsteroidal anti-inflammatory drugs (NSAIDs), analgesics and low-dose glucocorticoids may be used. Alternatively, infiltrative therapy with intra-articular glucocorticoids in single joint involvement or enthesial inflammation may be appropriate. Nonresponders and patients with severe peripheral arthritis should be treated with disease modifying antirheumatic drugs (DMARDs) as used in rheumatoid arthritis. In PsA, methotrexate (MTX) is the most commonly used DMARD with efficacy on symptoms of arthritis and skin. Leflunomide has also shown effectiveness in PsA and treating skin symptoms. Sulfasalazine may improve the symptoms of arthritis but is ineffective on the skin. Cyclosporine can achieve rapid improvement of skin lesions caused by psoriasis but is less effective in musculoskeletal symptoms. Antimalarials such as chloroquine and hydroxychloroquine are ineffective. In patients with ankylosing spondylitis, DMARDs such as MTX, leflunomide or sulfasalazine have been ineffective in treating axial manifestations. From this experience it can be concluded that these DMARDs would also be ineffective in treating spinal symptoms of PsA.

TNF-α seems to play a central role in the pathogenesis of both PsA and psoriasis. The TNF-inhibitors etanercept, infliximab, adalimumab and golimumab have been approved for the treatment of PsA and psoriasis [5]. All TNF-α inhibitors have demonstrated their efficacy in different clinical disease expressions including peripheral arthropathy, axial involvement, enthesopathy and skin manifestations. Several controlled studies also demonstrated that TNF-α inhibitors are able to slow down the radiological progression of PsA.

References

[1] Moll JM, Wright V. Psoriatic arthritis. Semin Arthritis Rheum 1973; 3: 55–78.
[2] Cantini F, Niccoli L, Nannini C, et al. Psoriatic arthritis: a systematic review. Int J Rheum Dis 2010; 13: 300–17.

[3] Taylor W, Gladman D, Helliwell P, et al. Classification criteria for psoriatic arthritis: development of new criteria from a large international study. Arthritis Rheum 2006; 54; 2665–73.
[4] Eder L, Chandran V, Shen H, et al. Incidence of arthritis in a prospective cohort of psoriasis patients. Arthritis Care Res 2011; 63: 619–22.
[5] Mease PJ. Psoriatic arthritis: update on pathophysiology, assessment and management. Ann Rheum Dis 2011; 70, Suppl 1: i77–84.