

## Co-existing features of rheumatoid and psoriatic arthritis – diagnostic difficulties

*Problemy diagnostyczne u pacjenta ze współistniejącymi objawami reumatoidalnego i łuszczycowego zapalenia stawów*

Ewa Matyska-Piekarska, Jakub Trefler, Jan K. Łącki, Jacek Pazdur

Department of Connective Tissue Diseases, Institute of Rheumatology in Warsaw  
Klinika i Poliklinika Układowych Chorób Tkanki Łącznej Instytutu Reumatologii w Warszawie  
kierownik Kliniki prof. dr hab. med. Jan K. Łącki, dyrektor Instytutu prof. dr hab. med. Sławomir Maśliński

**Key words:** rheumatoid arthritis, psoriatic arthritis, overlap syndrome, rheumatoid factor.

**Słowa kluczowe:** reumatoidalne zapalenie stawów, łuszczycowe zapalenie stawów, zespół nakładania, czynnik reumatoidalny.

### Summary

This is the case of a patient who for many years presented with typical features of RA. When new findings such as skin psoriasis with asymmetrical, destructive and proliferative changes of the DIP joints of the feet presented, the previous diagnosis had to be reviewed. The clinical distinction between RA and PsA diagnosis in this patient is very difficult to establish. Currently the clinical and radiological picture of the patient's hands is typical for RA, whereas the feet are typical for PsA. Other available tests have not been conclusive for the final diagnosis as well.

There is no case of a patient with RA and PsA overlap syndrome reported so far in the literature. It appears that in this patient such a diagnosis should be seriously considered. However, it needs to be underlined that according to the present criteria such cases are diagnosed as PsA.

### Streszczenie

W pracy zaprezentowano przypadek chorego, u którego przez wiele lat występowały typowe objawy reumatoidalnego zapalenia stawów (RZS). Jednak, gdy dołączyły się typowe łuszczycowe zmiany skórne z obecnością asymetrycznych, destrukcyjnych i proliferacyjnych zmian w dystalnych stawach międzypaliczkowych stóp, dotychczasowe rozpoznanie musiało ulec modyfikacji. Jednoznaczne rozróżnienie pomiędzy RZS a łuszczycowym zapaleniem stawów (ŁZS) jest u tego chorego bardzo trudne, ponieważ w chwili obecnej obraz kliniczny i radiologiczny rąk jest typowy dla RZS, a stóp typowy dla ŁZS. Inne dostępne badania dodatkowe również nie ułatwiają zadania postawienia ostatecznej diagnozy. Jak dotąd nie opisano przypadku zespołu nakładania RZS i ŁZS. Zdaniem autorów u zaprezentowanego chorego nie można jednoznacznie wykluczyć takiej diagnozy, mimo że na podstawie proponowanych obecnie kryteriów powinno się rozpoznać ŁZS.

### Introduction

Sometimes the clinical distinction between RA and PsA is very difficult to establish. The following case report highlights the extreme diagnostic difficulties that every clinician can face dealing with patients who present with symptoms of both rheumatoid and psoriatic arthritis.

### Case presentation

A 51-year old tobacco smoker and long-term blood donor has been a patient of the Institute of Rheumatology (IR) in Warsaw since November 2004. He was diagnosed with rheumatoid arthritis (RA) 17 years ago. Symmetrical joint involvement with pain and swelling had been present from the onset of the illness.

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#### Correspondence address:

Dr Jakub Trefler Department of Connective Tissue Diseases Institute of Rheumatology in Warsaw, ul. Spartańska 1, 02-637 Warsaw, Poland, tel. +48 22 844 42 41 ext. 546, e-mail: jtrefler@gmail.com

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Affected areas included wrists, MCP, PIP, knees, ankles and MTP joints with morning stiffness greater than an hour and a positive RF. X-rays taken in 1998 showed destructive changes characteristic for RA in the hands and feet. In 2002 typical psoriatic skin changes were noticed for the first time.

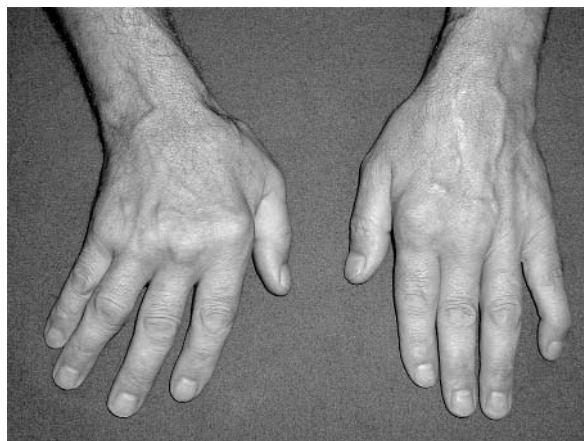
In November 2004 the patient was admitted to IR in Warsaw following severe aggravation of the disease over the preceding 9 months. At the time pain, swelling and restriction of movement in the wrists, MCP joints, knees, ankles, MTP and several asymmetrical DIP joints of feet were present with accompanying morning stiffness (>2 hours). Laboratory tests showed an elevated ESR of 16 mm/h, CRP of 45 U/L, RF of 340 IU/ml (N: <34), negative ANA and HLA B27 samples and normal uric acid levels. X-rays of the hands revealed advanced destructive changes in the wrists, MCP and PIP joints, and X-rays of the feet showed destructive changes in the MTP, PIP and DIP joints. Hip densitometry confirmed osteoporosis.

Pharmacotherapy between 1990 and 1996 included sulfasalazine and NSAIDs and therapy between 1996 and 2004 included NSAIDs with glucocorticoids. From March 2004 the patient received combination therapy with sulfasalazine, glucocorticoids, biphosphonates, methotrexate (15 mg per week) and cyclosporin (200 mg/d), which was stopped after 3 months due to side effects. Cyclosporin was replaced in November 2004 by leflunomide, 20 mg on alternate days. Leflunomide was stopped after three months due to lack of effect.

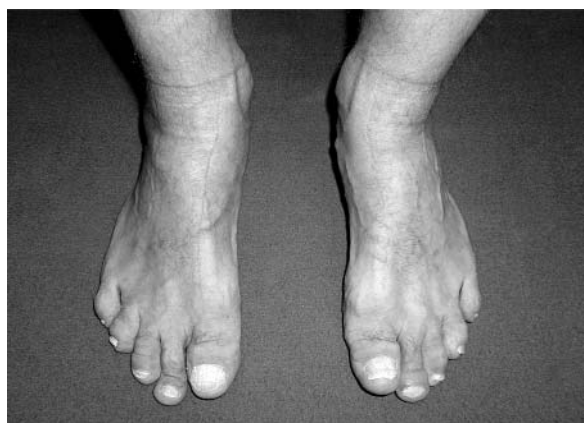
In June 2006 infliximab 3 mg/kg in combination with methotrexate was commenced with good clinical effect and improved laboratory parameters.

At present only a few DIP joints of the feet are swollen. Mild pain and restricted movement (without swelling) can be seen in the wrists, MCP, elbows, knees and ankle joints. The MCP joints are subluxated and ulnar deviation is visible. X-rays of the spine and sacroiliac joints are normal. Small typical psoriatic skin changes are still present.

The clinical picture of the hands is typical for RA (fig. 1), whereas the feet are typical for PsA (fig. 2). X-rays seem to confirm clinical findings (fig. 3). X-ray of the hands shows typical changes for stage IV RA according to Larsen, i.e. periarticular osteoporosis, symmetrical destructive changes in joints (bony erosions), flexion contractures, subluxations and ulnar deviation in MCP joints. X-rays of the feet show typical changes for stage IV PsA according to Larsen: i.e. advanced destructive changes with evident bony proliferative reaction in PIP and DIP joints of toes 1, 3, 4



**Fig. 1.** Hands.  
**Ryc. 1.** Ręce.



**Fig. 2.** Feet.  
**Ryc. 2.** Stopy.



**Fig. 3.** X-rays of hands and feet.  
**Ryc. 3.** Rentgenogram rąk i stóp.

and 5 of the right and toes 1, 2, 4 and 5 of the left foot. Bone erosions are present in the fifth metatarsal bones and ankylosis of the ankle joints can be seen. In laboratory tests anti-CCP antibodies are positive and RF is 496 IU/ml.

## Discussion

This patient presented for many years with typical symptoms of RA and still fulfils the 1987 revised ACR diagnostic criteria (symmetrical polyarthritis with hand involvement, morning stiffness, typical radiological changes in hands – Larsen stage IV and positive RF result) [1].

However, when new signs such as skin changes with asymmetrical DIP joints of the feet occurred (destruction accompanied by proliferative bony reaction), the previous diagnosis of RA had to be reviewed.

On the basis of the available criteria (1987 revised ACR, 1973 Moll and Wright, 1984 Vasey and Espinoza, etc.) [1–3] only 2 differential diagnoses could be considered for this patient: 1) typical RA with accompanying skin psoriasis 2) psoriatic arthritis (polyarthritis of rheumatoid type with asymmetrical DIP joints involvement).

It seems to us that neither of the above diagnoses fit this patient completely. In fact, typical clinical and radiological features supporting both RA and/or PsA diagnosis can be easily found.

Similarly, laboratory tests are inconclusive. The patient is positive for anti-CCP antibodies and strongly positive for RF. Anti-CCP antibodies are highly specific for the diagnosis of RA [4, 5], but they may also be found in patients with PsA. In one study 9.72% (n=72) of patients with PsA were positive for anti-CCP antibodies. Moreover, one patient from this group was positive for RF but in relatively low concentration. What is interesting is that most of these patients presented with polyarticular joint involvement. In other studies results were similar [5–7]. Anti-CCP antibody positive patients showed higher numbers for joints involved, frequency of erosive arthritis and frequency of positive RF results. A negative HLA B27 result is inconclusive for the differential diagnosis; however, the lack of symptoms of sacroiliitis in a patient with such a longstanding history of the disease should be considered a little bit surprising.

Pharmacotherapy with disease modifying anti-rheumatic drugs proved to be unsuccessful in this patient. Only after introduction of anti-TNF therapy (infliximab) combined with methotrexate was satisfactory control of articular symptoms finally achieved. Available studies demonstrate that anti-TNF therapy is highly effective in both RA and PsA, appearing more successful in PsA than in RA [8].

## Conclusion

The diagnosis of RA and PsA is based on clinical, laboratory and radiological tests. In the event of

a patient with coexisting features of both RA and PsA, the diagnosis of PsA (polyarthritis of rheumatoid type) is usually established. In our patient none of the available tests or criteria can be used as a definitive indicator of the final diagnosis. There is no case of a patient with RA and PsA overlap syndrome reported so far in the literature. It seems that in the above patient such a diagnosis should be seriously considered. However, it needs to be underlined that according to the present criteria such cases are diagnosed as PsA.

## Abbreviations List

ACR – American College of Rheumatology  
ANA – anti-nuclear antibodies  
Anti-CCP (antibodies) – anti-cyclic citrullinated peptide (antibodies)  
Anti-TNF (therapy) – anti-tumour necrosis factor alpha (therapy)  
CRP – C-reactive protein  
DIP (joint) – distal interphalangeal (joint)  
ESR – erythrocyte sedimentation rate  
HLA B27 – human leukocyte antigen  
IR – Institute of Rheumatology  
MCP (joint) – metacarpophalangeal (joint)  
MTP (joint) – metatarsophalangeal (joint)  
NSAIDs – non-steroid anti-inflammatory drugs  
PIP (joint) – proximal interphalangeal (joint)  
PsA – psoriatic arthritis  
RA – rheumatoid arthritis  
RF – rheumatoid factor

## Consent

“Written informed consent was obtained from the patient for publication of this case report and all accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.”

## Competing interests

Competing interests: no competing financial or non-financial interests have been present while working on this manuscript.

## Authors' contributions

All listed authors made an equal contribution to this manuscript.

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