A case of psoriatic arthritis preceding the appearance of skin manifestations

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CASE REPORT

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Abstract

We present a case of psoriatic arthritis preceding the appearance of skin manifestation. A 48-year-old man presented to our hospital with pain in the finger, toe, and ankle joints. The erythematous and swollen joints were 3 joints, and the distribution of them is asymmetrical. The antibodies referring rheumatoid arthritis (RA) were negative. Two years had gone from the onset of joints pain until the appearance of the skin lesions, helping of diagnosis of the psoriatic arthritis. Although the diagnosis of psoriatic arthritis is easily made when the skin lesions of psoriasis are present, it is difficult to diagnose when the arthritis precedes the appearance of the skin lesions. It is important to follow up asymmetrical oligoarthritis with negative RF even in the absence of typical skin lesions as the possible diagnosis of psoriatic arthritis.

Key words: psoriasis  psoriatic arthritis  rheumatoid arthritis(RA)  hyperuricemia  gout

Introduction

Psoriatic arthritis can present as a complication of psoriasis. The diagnosis of psoriatic arthritis is easily made when the skin lesions of psoriasis are present, but it is difficult to diagnose when the arthritis precedes the appearance of the skin lesions. Some studies have shown that arthritis preceding the appearance of the skin lesions occurs in 15% to 30% of cases. This case was additionally difficult as the arthritis preceded the skin lesions by two years.

Case report

A 48-year-old man presented to our hospital with pain in the finger, toe, and ankle joints. He had a history of hypertension. Two years prior, he had had painful swelling and erythema of the second finger of left hand, which resolved spontaneously. One and one half years later, he had recurrent swelling and erythema of the IP joint of the right first finger, the MTP joint of the left third toe, and the left medial malleolus. He had been seen by an Internist, a Dermatologist and an Orthopedist. Gouty arthritis or infectious arthritis was considered with negative rheumatoid factor (RF) and he was
treated with allopurinol and levofloxacin. He did not improve, so he was treated with loxoprofen sodium 120mg/day on his initial visit to our hospital.

On physical examination, the right first IP joint, the left third MTP joint, and the medial malleolus of left ankle were swollen and erythematous (Fig 1 A,B,C), but other joints were unremarkable. The laboratory findings showed mild liver dysfunction, hyperuricemia, and hyperlipidemia. C-reactive protein and erythrocyte sedimentation rate were slightly elevated. RF, anti nuclear antibody and anticyclic citrullinated peptide were negative. On X-ray, boney erosion and narrowing of the joint spaces were not present. According to ACR/EULAR 2010 criteria, the score of 5 points did not meet criteria for RA (more than 6 points).

Although a firm diagnosis was not made at the first examination, we began to treat as gout with allopurinol 200mg/day and loxoprofen sodium 180mg/day. One month later, the painful swelling and erythema of the right first IP joint and the left third MTP joint had improved, but new swelling and erythema of the second left MTP joint had appeared. In addition, a one to two cm patch of erythema had appeared on the left upper arm. A Dermatologist was consulted for a possible diagnosis of psoriasis. As it was not the typical skin lesion of psoriasis, a biopsy was not done. Moreover, although a whole body and nail examination was performed at that time, no typical rash or nail changes of psoriasis were found. One month later, swelling of the MTP joints of the second and third toe, and the dorsum of left foot was present. Laboratory findings showed resolution of the hyperuricemia. We discontinued allopurinol due to poor response. The patient reported that a scaly rash appeared for one day during this period. We therefore consulted the dermatologist again. He did not think that this was psoriasis, but he did find another lesion with erythema and scale on the scrotum (Fig 2 A), and a biopsy was done. At the same time, we also consulted with a Rheumatologist. He diagnosed the arthritis as early RA with synovial inflammation by joint ultrasonography. Methotrexate was initiated. Ten days later, the skin biopsy was reported as consistent with psoria-

![Fig. 1. A: The IP joint of the first finger of the right hand was swollen and erythematous. B: The MTP joint of the third toe of the left foot was swollen and erythematous. C: Expansion of B](image-url)
sis (Fig 2 B). We ultimately diagnosed his symptoms as psoriatic arthritis with skin psoriasis (2 points), negative rheumatoid factor (1 point), and dactylitis (1 point) according to the new CASPAR criteria (more than 3 points being psoriatic arthritis)\(^9\).

**Discussion**

Psoriatic arthritis is a severe erosive arthritis associated with psoriasis. It has the characteristics of asymmetrical oligoarthritis, especially arthritis of distal joints, negative RF, skin psoriatic lesions and nail lesions (pitting, onycholysis, and oil staining).

This patient had asymmetrical oligoarthritis and negative RF, but he did not have skin lesions, arthritis of distal joints or nail changes. Diagnosis was delayed as the patient had no skin lesions at the first presentation, and did not develop typical skin lesions until two years after arthritis onset. Typical skin lesions are the key finding in the diagnosis of psoriatic arthritis, but arthritis preceding the appearance of skin lesions occurs in 15 to 30% of psoriatic arthritis cases according to the literature, making this diagnosis difficult in these cases. In addition, psoriatic arthritis can simulate rheumatoid arthritis or gout. Thus, we should exclude both diseases before making the diagnosis of psoriatic arthritis.

**Conclusions**

We presented a case of psoriatic arthritis preceding the typical skin lesions. It is necessary to follow up asymmetrical oligoarthritis with negative RF even in the absence of typical skin lesions, as the diagnosis may be psoriatic arthritis.

**References**