

Clinically aggressive rheumatoid arthritis with minimal symptomatic inflammation: the importance of imaging in early disease

Barbara Bochenek^{1,2}, Małgorzata Dąbrowska^{1,2}, Aleksandra Juskiewicz^{1,2}

¹Department of Internal Medicine and Rheumatology, Military Institute of Medicine – National Research Institute, Warsaw, Poland

²Student Scientific Group at the Department of Internal Medicine and Rheumatology, Military Institute of Medicine – National Research Institute, Warsaw, Poland

Key words: ACPA (anti-citrullinated protein antibodies), rheumatoid arthritis, erosions

Introduction: Early-phase arthritis can manifest with significant clinical aggression despite minimal symptomatic inflammation. Intervention at an early stage is critical to prevent irreversible structural damage and preserve long-term joint function.

Case description: We present the case of a 41-year-old male referred to the Rheumatologic Outpatient Clinic with a one-month history of bilateral hand and feet arthralgia. Patient reported significant morning stiffness (lasting 30–60 minutes), although nocturnal pain was absent. Physical examination revealed tenderness in several metacarpophalangeal (MCP) and metatarsophalangeal (MTP) joints; joint swelling was not present at the time of the examination. A family history revealed an aggressive form of rheumatoid arthritis (RA) in the patient's mother. The laboratory tests indicated slightly elevated values of inflammatory markers and highly elevated anti-cyclic citrullinated peptide (anti-CCP) antibodies and rheumatoid factor. The ultrasonographic examination showed no synovial hypertrophy but identified swelling of the extensor tendon of the right second MCP joint (Fig. 1), bilateral tenosynovitis of the second finger flexors and the right hallux flexor. Based on the American College of Rheumatology/European Alliance of Associations for Rheumatology criteria, the patient was diagnosed with RA. The initial treatment was methotrexate (MTX) and prednisone. Due to the patients' intolerance, MTX was changed to hydroxychloroquine. The patient remained non-compliant due to reported malaise; therefore, remained on low-dose prednisone monotherapy. Arthralgia in the hands and feet persisted. With disease progression, clinically evident inflammatory changes developed in the hands, characterised by erythema and soft tissue swelling in the metacarpophalangeal joint region (Fig. 2). After three months of ineffective therapy, an ultrasound identified erosive changes in the right second MCP joint (Fig. 3) and left second proximal interphalangeal joint. Given the aggressive clinical course and objective evidence of joint destruction, initiation of biological therapy was indicated.

Conclusions: Patients presenting with high anti-CCP titers (ACPA-positive) require prompt and intensive treatment, along with frequent rheumatologic monitoring. This case indicates the importance of musculoskeletal ultrasonography in detecting early structural changes and monitoring subclinical activity that may be overlooked by conventional laboratory tests or physical assessments.

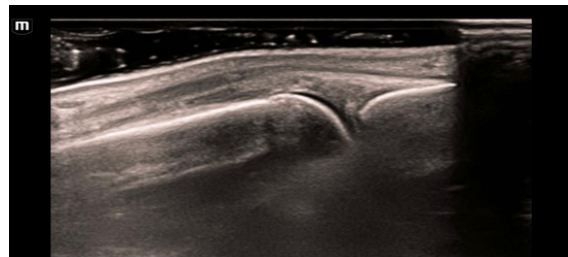


Fig. 1. Longitudinal scan of the right second metacarpophalangeal (MCP) joint from the dorsal aspect. Swelling of the extensor tendon overlying the joint is visible. No synovial hypertrophy.



Fig. 2. Dorsal view of both hands in a patient with rheumatoid arthritis during a follow-up examination.

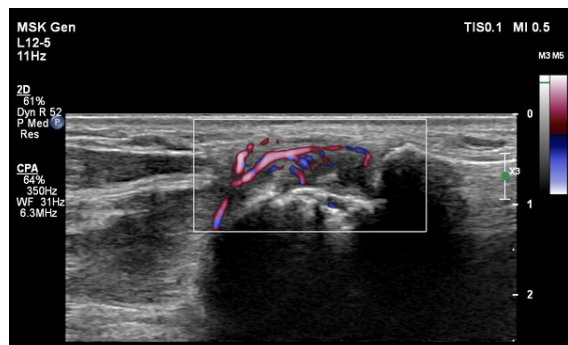


Fig. 3. Follow-up ultrasonographic examination after 3 months. Longitudinal dorsal scan of the right second MCP joint demonstrating synovitis with visible active inflammatory erosion.