Remitting seronegative symmetrical synovitis with pitting oedema (RS3PE) of Hands and Feet in an 83-year-old Man

Uffe Nygaard, Christian Vestergaard and Uffe Koppelhus*
Department of Dermatology, Aarhus University Hospital, P.P. Ørumsgade 11, DK-8000 Aarhus, Denmark. *E-mail: uffkop@rm.dk
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Remitting seronegative symmetrical synovitis with pitting oedema (RS3PE) was first described by McCarty et al. in 1985 (1). It is a rare clinical syndrome that occurs predominantly in elderly men and is characterized by rapid-onset symmetrical distal teno- and/or joint synovitis, marked pitting oedema over the joints involved, especially the dorsum of the hands and feet. The erythrocyte sedimentation rate (ESR) is usually high, while rheumatoid factor (RF) and antinuclear antibodies (ANA) are negative. Other characteristics include the absence of articular erosions on radiographs and a rapid response to glucocorticosteroids leading to long-term remission (1, 2). The aetiology of RS3PE is unknown. It can occur as an idiopathic phenomenon, but also in association with various types of rheumatic diseases, most frequently late-onset rheumatoid arthritis and polymyalgia rheumatica (3–5). In addition several reports have described RS3PE as a paraneoplastic syndrome seen in association with both haematological and solid malignancies (6, 7). However, this association is confounded by the advanced age of the typical patient with RS3PE (8). Furthermore, some drugs and infectious agents have been suggested as possible triggers of the syndrome, in isolated cases (9, 10). A connection between RS3PE and certain HLA serotypes has been claimed, but not verified (11, 12). Finally, elevated serum levels of vascular endothelial growth factor and matrix metalloproteinase 3 have been reported as potentially involved in the pathogenesis, or at least as possible diagnostic markers, of the syndrome (13, 14).

CASE REPORT

An 83-year-old man presented a 5-day history of gradual bilateral swelling of the hands, wrists, feet and ankles. The swelling was accompanied by morning stiffness, impaired grip function and paraesthesia of most of finger pulpas. In addition, a severe aching of the hands occurred, especially during the night. The patient had no other constitutional symptoms and no previous medical history, apart from bilateral knee arthroplasty due to arthrosis. He took no medication and was a non-smoker. He had a temperature of 38.1°C, while other vital signs were normal. The skin showed typical urticarial dermographism. Palpation revealed swelling and moderate tenderness of the metacarpophalangeal and proximal interphalangeal joints. The hands (especially the dorsum) showed a remarkable (non-tender) pitting oedema that extended to the middle of the lower arms (Fig. 1A). In addition, the feet and ankles had marked oedema. The finger joints had a reduced range of motion (especially the distal interphalangeal (DIP) and proximal interphalangeal (PIP) joints) with reduced grip and opponens strength. Fingers 1–3 on both hands showed reduced sensibility.

Comprehensive laboratory testing was performed, and elevated values for ESR (96 [normal <30] mm/h), C-reactive protein (254 mg/l [normal <8]), alanine aminotransferase (125 IU/l [normal <70]), alkaline phosphatase (342 IU/l [normal <105]) and prostate-specific antigen (PSA) (28 ng/ml [normal <4]) were found. Furthermore, the analysis revealed a mild inflammation-associated anaemia with haemoglobin of 6.5 mmol/l [normal 8.3–10.5], low transferrin and high ferritin. Otherwise, all parameters were normal, including platelet count, blood coagulation, creatinine, glucose levels, bilirubin, albumin, RF, anti-cyclic citrullinated peptide antibody, ANA, anti-neutrophil cytoplasmic antibodies, immunoglobulins, blood culture, thyroid-stimulating hormone, uric acid and urinalysis. Ultrasound of the abdomen, followed by computed tomography of the thorax and abdomen, displayed nothing but a moderately enlarged prostate. Transrectal ultrasound-guided prostate biopsy revealed benign prostate hyperplasia. Radiographs of the hands, wrists, ankles and feet showed signs of mild arthrosis and no erosions. Further investigations showed normal findings with respect to cerebrospinal fluid analysis.
that increased awareness of RS3PE syndrome amongst dermatologists may be warranted (15).

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REFERENCES