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Case Report

Cutaneous manifestation of reactive arthritis: Case report

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ABSTRACT

Introduction: Reactive arthritis (ReA) is one of the forms of seronegative spondyloarthropathies. The difficulties in the diagnosis of reactive arthritis, despite a complex clinical picture, result from the lack of unequivocal diagnostic criteria, especially in the initial period. Diverse clinical manifestation of ReA may require the cooperation of many specialists.
Aim: The case of a 59-year-old man with reactive arthritis caused by an acute *Yersinia enterocolitica* infection 3 weeks before was described.
Case study: A 59-year-old patient, so far healthy, was admitted due to fever for a few days, pain and swelling of crurotalar joints, pain in the left part of the lumbosacral region, escalating at night, and additional complaints impeding urinating. Joint involvement was accompanied by numerous cutaneous and mucosal lesions.
Results and discussion: In this case the presence of characteristic cutaneous symptoms as keratoderma blenorrhagicum and balanitis circinata allowed to identify the disease quickly, despite a short course of the disease. The presence of antibodies of *Y. enterocolitica* IgA was noticed, without the presence of IgG and IgM. The presence of HLA B27 antigen was positive. In this case, the occurrence of many characteristic cutaneous lesions enabled a quick identification of the disease, despite the difficulties with determining the etiological factor.
Conclusions: The diagnosis of ReA is clinical, based on the history and physical examination findings. A high index of suspicion is required because no laboratory tests, markers or imaging finding allow diagnosing of ReA. The most important is proper cooperation between a rheumatologist and a dermatologist.

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1. Introduction

Reactive arthritis (ReA) is a disease of a complex clinical picture belonging to a group of seronegative spondyloarthropathies. The first mentions which could reflect ReA were formulated in the times of Hippocrates (approx. 460 BC).[3] Reiter[13] and independent researchers, Fiessinger and Leroy,[5] described the ocular-articular-urethal syndrome in 1916. In 1942 the term Reiter's syndrome was introduced into the medical terminology. It specified the coexistence of syndromes characteristic for reactive arthritis.[2] Nowadays, this term is less used due to Hans Reiter's attitude during the World War II. Diverse clinical manifestation of ReA includes the syndromes of preceding infection of the gastro-intestinal tract, urinary system and, less frequently, respiratory, peripheral arthritis – most frequently crurotalar and knee joints, vertebral joints, cutaneous and mucosal lesions, and ocular involvement.[8] The occurrence of so many syndromes may cause great diagnostic difficulties, especially in the initial period and it may require the cooperation of doctors of many specializations. Data on the incidence and prevalence of ReA are scarce, partly because of a lack of a disease definition and classification criteria. The frequency is estimated to be 3.5–5.0 cases per 100 000.[1] The most common etiological factors are enteric rods of *Shigella flexneri* and *S. dysenteriae*, *Salmonella enteritidis* and *S. typhimurium*, *Camphylobacter jejuni*, *Clostridium difficile*, *Yersinia enterocolitica* 03 and 09, *Chlamydiae trachomatis* and *Ch. pneumoniae* and less frequent *Clostridium difficile* or *Ureaplasma urealyticum*[11]. In 65%–80% of patients the presence of the HLA-B27 antigen may be determined.[12,14] Below, the case of a patient with ReA with diverse dermatological picture was presented.

2. Aim

We present and describe the case of a 59-year-old man with reactive arthritis caused by an acute *Y. enterocolitica* infection 3 weeks before.

3. Case study

A 59-year-old patient, so far healthy, was admitted to the Department of Internal Medicine due to fever for a few days, pain and swelling of crurotalar joints, pain in the left part of the lumbosacral region, escalating at night, and additional complaints impeding urinating.

About a month before admission to hospital the lesions on glans and foreskin appeared. Three weeks before hospitalization diarrhea with accompanying pains in the right iliac fossa occurred, which stopped spontaneously after three days. The patient noticed deterioration of his state of mind and increasing weakness. A few days before he was admitted to hospital a burning sensation in the area of crurotalar joints appeared, which initially did not require analgesia. The pain of crurotalar joints increased, pain in the sacral region occurred and the swelling of the crurotalar joints appeared. The complaints were accompanied by cutaneous lesions on both the soles, initially of erythema and later of pustular character. On the third day of hospitalization, cutaneous lesions in the left subscapular area appeared. Herpes zoster was diagnosed.

In the examination of the locomotor organs not only a slight limitation of the motion of the lumbar area of the spine was stated, but also a weak positive left-handed Patrick symptom and the limitation and swelling of crurotalar joints. On dermatological examination of soles numerous pustular (up to 1 cm) and hyperkeratotic lesions, yellowish brown in color, were found. Within the mucosa of the glans, many annular erythematous plaques and erosions with whitish, slightly raised edges were noticed and on the tongue two singular shallow erosions were spotted. Moreover, the patient had lesions of the nail plate of the fifth finger of the right hand and the first toe of the right foot in form of oil spots. In the interdigital spaces of feet maceration and skin rupture with a slight sero-purulent exudation were present.

In the laboratory tests when the patient was admitted the titer of CRP was 170.5 mg/L and ESR 134 mm/h; a general examination of urine revealed a thick layer of leukocytes blocking the visual area and singular fresh erythrocytes. The full blood count revealed Hgb 10.3 g/dL, RBC 3.4×10^{12}/L, WBC 11.3×10^{9}/L, PLT 393×10^{9}/L and Hct 32%.

The urine culture did not grow any bacteria. In the bacteriological examination performed on a swab from urethra *Micrococcus* sp. were grown and on a swab from the interdigital spaces singular colonies of *Clostridium perfringens* were grown. The cultures from the swabs taken from soles were sterile. Pathogenic enteric rods were not grown on feces either. The presence of HLA B27 antigen was positive. The rheumatoid factor, Waaler-Rose test, anti-citrulline peptide (anti-CCP) and antinuclear antibodies were negative. The presence of antibodies of *Y. enterocolitica* IgA were noticed, without the presence IgG and IgM. The antibodies of *Ch. trachomatis* were not present. The Mantoux tuberculin skin test (RT-23) was evaluated as 10 mm and the Quantiferon control test gave a negative result.

The X-ray of iliosacral joints showed broadening of the left joint space. The radiograms of lungs and crurotalar joints were normal.

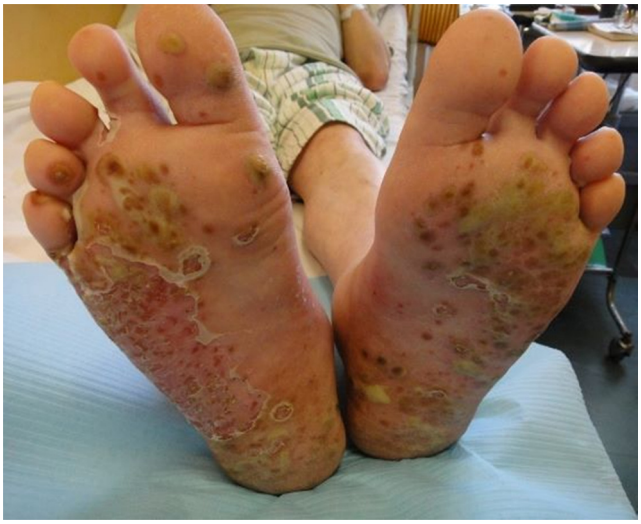

Fig. 1 – Keratoderma blenorrhagicum on the soles.