Case report

Bone erosion of the sternocostal joint in a patient with Behcet’s disease

Yuki Nanke, Tsuyoshi Kobashigawa, Toru Yago, Naomi Ichikawa, Hisashi Yamanaka and Shigeru Kotake

Institute of Rheumatology, Tokyo Women’s Medical University

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Summary

Behcet’s disease (BD) is a polysymptomatic and recurrent systemic vasculitis with a chronic course and unknown cause. Erosive arthropathy is extremely rare. We report a 52-year-old female patient with BD demonstrating bone erosion of the sternocostal joint.

Key words — Behcet’s disease; arthritis; joint

Introduction

BD is a polysymptomatic and recurrent systemic vasculitis with a chronic course and unknown cause. Arthropathy of BD is monoarthritis or oligoarthritis and usually runs an acute or recurrent course. In addition, arthritis associated with BD is usually non-deforming; bone erosive change of the joint is extremely rare. Here we report the second case of BD patient with atypical findings of erosive sternocostal arthritis.

Case report

In 1998, a 52-year-old woman was diagnosed at another hospital as having Behcet’s disease (BD) based on the presence of oral and genital ulcers, acne, erythema nodosum. She was treated with prednisolone and colchicines only when the erythema worsened. In 2004, the patient consulted our outpatient clinic because of polyarthralgia. At the first consultation, the patient presented with oral and genital ulcers, acne, erythema nodosum and polyarthritis involving both knees, the right shoulder and the left ankle. The patient also reported tenderness of the left sternocostal joint. The pathergy test was negative. On ophthalmologic evaluation, there were no signs of uveitis. Chest radiograph and ECG were both within normal limits. Laboratory data were as follows: WBC 8200 (3000~9000) /microL, Hb 13.5 (11.5~15.0) g/dl, and C-reactive protein (CRP) 0.9 (<0.3) mg/dl. Urinalysis did not demonstrate any protein on dipstick. Renal and liver functions were normal. Immunological tests demonstrated that immunoglobulin (Ig) D was 2.5 (<11.5) mg/dl. Antinuclear antibody, RAPA, p-ANCA, and c-ANCA were negative. Anti-CCP antibody was negative. Serologic HLA analysis demonstrated A24, A31, B52, B56, CW4, DR15, DR8 and DQ1. The sacroiliac joint was intact. Chronic inflammatory bowel disease was excluded by colonoscopy. There was no synovitis on foot and hands. There were no indications of rheumatoid arthritis or other spondyloarthropathies such as psoriasis, palmoplantar pustulosis and the SAPHO syndrome (synovitis, acne, pustulosis, hyperostosis and osteitis). She was diagnosed as having BD based on Behcet’s Disease Research Committee Criteria and international BD study group criteria. The patient was administered prednisolone, cholchicine and non-steroidal anti-inflammatory drugs and followed. Chest computed tomography demonstrated erosive change of the sternum (Fig. 1a). Scintigraphy demonstrated a hot spot at the second left sternocostal joint (Fig. 1b). Nonsteroidal anti-inflammatory drug effectively relieved her pain.

Discussion

This patient fulfilled Behcet’s Disease Research Committee Criteria and the international Study Group Criteria for the diagnosis of BD. She demonstrated bone erosion of the sternocostal joint. The HLA phenotype was negative for HLA–B27 and HLA–B51. The sacroiliac joints were intact and spondyloarthritis associated with chronic inflammatory bowel disease and rheumatoid arthritis were excluded. There was no synovitis in other joints. Thus, this erosive arthropathy in the sternoclavicular joint was due to BD.

Joint manifestations are present in 40–75% of BD patients. According to the retrospective review of 340 cases, joint involvement is the first manifestation of...
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BD in 18.2%\(^4\). The knees, ankles, wrists and elbows are frequently affected, while involvement of the small joints in the hands and feet is less common. Most cases demonstrate monoarthritis or oligoarthritis and usually run an acute or recurrent course\(^2\). Polyarthritis and the chronic form are rare. In addition, arthritis associated with BD is usually benign, self-limited and nondeforming. Bone erosive change of the joint is extremely rare\(^3\). Joint deformities and destruction have been reported only in a few cases\(^5\). We previously reported synovial histology and destructive joint manifestations in three BD patients who underwent orthopedic surgery\(^6\). The joints affected in these cases were the ankle, the wrist, the elbow and the knee.

Erosive changes due to joint involvement by BD are also quite infrequent. Vernon-Roberts et al\(^5\) reported that 2 of 6 patients with Behcet’s disease showed radiologically erosive change. Armas et al\(^7\) reported radiologically well defined “punched-out” erosive arthropathy in the head of the first metacarpophalangeal (MCP) joints. Duzgun et al reviewed\(^8\) erosive arthropathy in BD patients. They reviewed 11 papers. Erosive changes were reported in axial joints (sacroiliac), enthesis (calcaneal) and peripheral joints such as the MCP and joints of the feet, intercarpal and MCP joints of the hand, knee, wrist, and hip joints\(^2, 5, 7–10\). More recently, Aydin et al\(^11\) reported an unusual case of BD with extensive erosive arthropathy radiologically mimicking psoriatic arthritis. In that case, erosive changes at the process of the left ulnar styloid were notable.

In summary, here we present a female patient with BD who demonstrated arthritis in the manubrio-sternal joint showing erosive changes, which rarely occur in BD. This case is the second case showing the involvement of manubrio-sternal joint with erosive change in a BD patient. Thus, our case suggests the joint manifestations of BD show a wide range; sometimes mimicking rheumatoid arthritis, psoriatic arthritis and seronegative spondyloarthritides radiologically.

References


