

Osteochondritis of Sternoclavicular Joint Due to Brucellosis: A Case Report

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Abstract

Introduction: Osteochondritis is a joint condition in which bone underneath the cartilage of a joint destroys due to lack of blood flow. Then bone and cartilage can break, causing pain and sometimes affecting joint motion and skin around the involved joint might be swollen and tender. Osteochondritis occurs most commonly in the knee, but also occurs in elbows, ankles and other joints. Decreased blood flow to the end of the affected bone due to trauma is the main cause, but there might be a genetic component, making some persons more susceptible to get this disorder. Some infections such as brucellosis can lead to osteochondritis. Bone and joint complications are common in brucellosis, but osteochondritis of sternoclavicular joint is a rare presentation.

Case Presentation: Here, we presented a 34-year-old woman referred to our hospital for fever, chills and arthralgia in the sternoclavicular joint, which has been started two months before admission. Finally, with more evaluations, we found that she had sternoclavicular osteochondritis due to brucellosis.

Conclusions: Although, brucellosis can cause arthritis more in knee, elbow and hip and causes spondylodiscitis, osteochondritis of sternoclavicular joint is very rare in brucella infection.

Keywords: Joint Inflammation, Osteochondritis, Sternoclavicular

1. Introduction

We presented a 34-year-old woman referred to our hospital (Boo-Ali hospital, southeast of Iran) with fever, chills and arthralgia in the sternoclavicular joint, which has been started two months before admission. Finally, brucellosis was diagnosed with early presentation of osteochondritis of sternoclavicular joint.

2. Case Presentation

In September 2014, a 34-year-old woman from Zahedan in the southeastern Iran referred to our hospital with fever, chills and arthralgia in the sternoclavicular joint. Her symptoms, especially pain, had been started two months before admission and did not response to any analgesics. She was house-wife and had no history of recent traveling, medication and contact with animals. Fever, chills, headache, and arthralgia worsened at night. Physical examination had normal findings. Only she had tenderness on sternoclavicular joint. White blood cell was 7500 μ L (40% lymphocyte) and glucose 96 mg/dL. Liver function test, urinalysis, biochemical test, thyroid and kidney functional tests were within the normal ranges. Tuberculin test

had negative result. All blood and urine cultures had negative findings. Sedimentation rate (ESR) was 66. Diagnostic tests for rheumatologic diseases had negative results. Chest X-Ray showed a diffuse infiltration on the right and left lower lobes. All diagnostic tests for tuberculosis (TB) had negative results. X-Ray of sternoclavicular joint was normal. Sonography showed increased volume in sternoclavicular joint space and hypertrophic signs suggestive of osteochondritis. At first Wright test had negative result but when repeated it was 1/640 and 2 mercaptoethanol (2 ME) was 1/80. We started Doxycyclin, Streptomycin (STM), rifampin and analgesic. After five days, she could not tolerate STM and changed with Cotrimoxazole. Three months later, she was in good condition and joint inflammation (on X-Ray) was decreased and she had no pain. We continued drugs for one month more and at follow-up she was fine.

3. Discussion

Osteochondritis is a painful disorder, in which cartilage or bone in a joint is inflamed. Osteochondritis occurs more in children and adolescents. It can cause symptoms

after an injury to a joint sometimes several months after trauma (1). Disease occurs most commonly in the knee, but can occur in elbows, ankles and seldom in other joints. For young children whose bones are still developing, the injury might heal by itself. Surgery should be considered if patient has persistent pain or if fragment comes loose and gets caught between the moving parts of the joint (1, 2). Depending on the affected joint, symptoms and signs of osteochondritis may be different. Pain is the most common symptom of osteochondritis, which might be triggered by physical activity, walking, climbing or playing sports (1-4). The skin around patients' joint might be swollen and tender. Patient may feel weakness and might be unable to straighten the affected limb completely (1, 2, 5, 6). In brucellosis, in the first stage of disease, septicaemia occurs and leads to the classic triad of undulant fever, sweating and migratory arthralgia and myalgia (joint and muscle pain) (2, 5-7). Focalization of brucellosis occurs usually in the bones and joints and spondylodiscitis of the lumbar spine accompanied by sacroiliitis, which is very characteristic of the disease. Brucellosis can cause arthritis in other joints such as knee and bigger joints, but osteochondritis of the sternoclavicular joint is very rare. There are many reports about bone and joint complication of brucellosis (1-8), but we did not find any report about osteochondritis of sternoclavicular joint in brucellosis.

Although brucellosis can cause arthritis in knee, hip, and ankle more commonly causing spondylodiscitis, osteochondritis of the sternoclavicular joint is very rare. Physicians in endemic areas should mind brucellosis when facing osteochondritis.

Footnote

Authors' Contribution: All authors had equal role in design, work, and manuscript writing.

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