Case Reports

Ankylosing spondylitis presenting with discitis

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ABSTRACT

Ankylosing spondylitis is not an uncommon disease worldwide, yet is relatively rare in Bahrain. There is a typical pattern of joint involvement in cases of ankylosing spondylitis, but the presentation of discitis is rare. We present a case of a patient presenting with backache and was diagnosed to have discitis. The diagnosis of ankylosing spondylitis was made only after he was found to be Human Leukocyte Antigen-B27 positive. This is the first case report of ankylosing spondylitis presenting as discitis in Bahrain.

Keywords: Ankylosing spondylitis, discitis, Magnetic Resonance Imaging, Human Leukocyte Antigen, B27.

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Spondyloarthropathy constitutes of a group of inflammatory rheumatic diseases in which the major target of the inflammatory process is the enthesis, rather than the synovium as in rheumatoid arthritis. The enthesis represents the interface between tendous, capsules or ligaments and bone.[1] Ankylosing spondylitis (AS) is a disease of the young with age onset of mainly the second to the fourth decade.[2] It has a classical presentation with low backache, but could present with a myriad of other clinical manifestations.[3]

Case report. A 33 year old Bahraini male who presented to our hospital with a history of back pain, mainly in the midback (lower dorsal and upper lumbar). It was increasing in severity with time, persistent throughout the day, radiating to both flanks and was aggravated on spinal movements and lifting heavy loads. In addition, the patient had a mild fever and lethargy. On examination, his vitals signs were normal.

His spinal range of motion was also normal with pain. He had tenderness at the level of thoracic spine 11 and 12. Examination of other joints and systems were unremarkable. Blood investigation showed normal hemoglobin, normal white blood cell counts and an elevated ESR (96 mm/hr). Rheumatoid factor, anti-nuclear antibody, anti-dsDNA antibody were all normal. CRP was 20 (normal <10). Plain X-rays of the spine were unremarkable, but the patient continued to have backache. Magnetic resonance imaging (MRI) study revealed endplate irregularity in the region of T11-T12 with hyperintensity in the adjacent vertebral body and loss of disc height on T1-weighted images (Figure 1). These end-plates turned hypointense on T2-weighted images. An impression of query spinal infection was made, and the patient was started on IV antibiotics. Brucellosis and tuberculosis were excluded by serology, blood culture, chest X-ray and PPD skin test which were all negative for both diseases. During his hospital stay, the patient's condition did not improve. He started to develop new complaints of neck and shoulder pain, as well as right knee effusion. Aspiration of the knee was carried out twice which was always negative for Gram stain and culture, AFB and crystals. Synovial fluid glucose concentration was normal, protein was normal, as

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between 1-10% whereas no data is available regarding asymptomatic cases.[4] Our case is unusual as he presented with a history of localized low back pain only. In the clinical findings and laboratory results, and the absence of any history of a chronic illness, an initial diagnosis of spinal infection was thought most likely, and he was managed accordingly. Normal or near normal, plain radiographs in the early stages of discitis is well documented in the literature.[5,6] Other imaging modalities, such as bone scans and computerized tomography scans, offer better diagnostic yield with regards to sensitivity, but are not very specific and do not always grade the extent of the disease process. Magnetic resonance imaging, however, has been described as the imaging modality of choice for diagnosing spondylodiscitis with regards to sensitivity and specificity.[7] Findings early in the disease process, the extent of disease, as well as possible etiopathologies can all be better eluded to via MRI of the spine.[3] Magnetic resonance imaging study of our patient showed features typical of discitis with end-plate irregularity with a hyperintensity in the adjacent vertebral body and loss of disc height on T1- weighted images, and the end-plates turned hypointense on T2-weighted images. Features of spinal infection such as tuberculosis present with hypointensity on T1-weighted images and turn hyperintense on T2-weighted images. There may be associated pre or paraspinal soft tissue.[8] However, early features of this condition make it difficult to distinguish it from aseptic discitis. Tuberculous infection should be kept in mind when considering patients from the Middle East Region, as it is not an uncommon illness.

The etiology of discitis in cases of AS in not clear, and several studies have been carried out in an attempt to find out the possible cause or causes. One possibility is that the discitis is as a result of the enthesopathy of AS itself, while another theory is that it is a result of the presence of pseudoarthroses of the spine. There is data for and against both possibilities, and it could also be that both mechanism are involved in the disease process.[1] In our case, the MRI findings, high ESR, localized T11-12 tenderness and non-response to intravenous antibiotics make the discitis most likely to be due to AS inflammatory process.

In conclusion, young patients between the ages of 20 and 30 presenting with backache with features of discitis on plain X-rays or MRI who do not respond to conventional treatment, the possibility of aseptic discitis due to a seronegative spondyloarthropathy should be considered. Our case is the first reported case of AS with discitis in Bahrain.

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