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Brucella spondylitis: a case report

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Introduction

A patient with back pain is described in whom spondylitis in the lomber vertebrae was caused by brucellae infection. Systematic investigation revealed no evidence of degeneratif osteophitic changes in other sites.

Brucellosis has a worldwide distribution, but pathogenic species depends on the geographic location. The clinical menifestations and the severity of the disease vary according to the responsible species and the host. Brucella has a spondylitic form with involvement of the disc and adjacent vertebrae (1). Spondylitis is most common (6.8%) in the lumbosacral region, generally affecting older patients with more chronic infection. It's pathogenesis is beleived to represent a septic discitis with contagious involvement of the adjecent vertebral body and eventual vertebral osteomyelitis (2). Brucellosis may cause generalized backache, peripheral joint pains, fever and constitutional symptoms that are far more profound than those of typical cause of ankylosing spondylitis (3).

Case report

A 65 year old man was admitted to the hospital with a three months history of increasing pain in the lower back. In his history there was exposure to infected animals and animal products. For three days prior to admission the back pain had become more intense and he had been unable to sleep at night. Fever, malasia was present, hepatic and splenic enlargement was absent. On examination he had paravertebral muscle spasm with limitation of anterior lumbar flexion. Straight leg raising to 70 degree induced pain in both legs. Neurological examination didn't reveal any pathology. Power and sensation were normal. General exemination was normal. Full blood count (Erytrocyte: 5630000 mmcub, leucocytes: 5100 mmcub). ESR 8 mm in half an hour and 25 mm in one hour. Liver function tests, immunglobulins and protein electrophoresis were normal. Brucella agglutination tests were positive in 1/350 titres and showed high titrations in three consequent trials. Chest X-ray showed chronic fibrotic changes (Figure 1). In the lateral view lumbar X-ray showed osteolytic lesions and osteophyts in forth and fifth lumbar vertebrae (Figure 2). In CT vacuum phenomena in L 5- S1 intervertebral space and degenerative changes were seen (Figure 3).

Figure 1. Chronic fibrotic changes in chest x-ray

Figure 2. Osteophyts in lumbar vertebrae

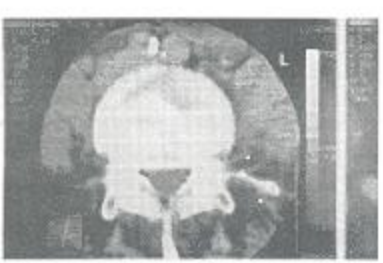

Figure 3. Vacuum phenomena in L5-S1 intervertebral space

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He was treated with streptomycin, tetracyclin, and trimethoprim. Symptoms improved in two months. Therapy is being continued since the admission to the hospital and he went into remission. We followed him for six months.

Discussion

A patient presented with low back pain and subsequent investigation revealed to be due to brucella spondylitis. He had improving symptoms after therapy. The typical x-ray findings of brucella is osteolytic lesions together with osteophitic spur formation. In this case in the lateral view lumbar x-ray showed osteolytic lesions and osteophyts in forth and fifth lumbar vertebrae (Figure 2). In CT vacuum phenomena in L 5- S1 intervertebral space and degenerative changes were seen (Figure 3). Characteristic findings of brucella spondylitis included predilection for the lower spine (% 68 of lesions), bone destruction limited to the end the plates and disk collapse. Tuberculous spondylitis was characterized by predilection to midthoracic spine (%73), vertebral destruction with gibbus deformity (% 60), disk collapse and paraspinal abcesses (4). Spondylitis occurs in 3 to 15 per cent of cases and usually involves the lumbar spine, although there may be involvement of the thoracic and cervical regions (5). The clinical picture of brucellosis is characterized by localized abcess and bacteriemie, the extend of symptoms varying with the infecting species. Both B. abortus and B. melitensis are the causes of reactive and septic arthritis and osteomyelitis (6). In this case we identified it as B. melitensis. Brucella is uncommon cause of spondylitis and reactive arthritis. The arthritis associated with brucellosis may be caused by direct seeding of the synovium by the organism. Some causes however clearly reactive in nature where as brucella septic arthritis is usually monarticular and persistent to therapy (7).

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