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VERTEBRAL OSTEOMYELİTİS AND SPINAL EPİDURAL INFLAMATION DUE TO BRUCELLOSIS

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Vertebral Osteomyelitis and spinal epidural inflammation due to brucellosis is a rare pathological process. A case with this process was presented. Although lumbar spine films were normal destructive lesions in vertebral bodies and inflammatory tissue mass anterior the dura was demonstrated by computed tomography The diagnosis was made with positive bacterial culture for brucella The patient made a complete recovery after laminectomy and antibiotic therapy for 2 months.

Key words: Osteomyelitis, epidural, inflamation, brucellosis

Despite so many efforts at controlling the disease, brucellosis still remains a serious infection and public health problem in the world, especially in developing countries. Human brucellosis is primarily due to one of three species; Br. Mellitensis which was discovered by Bruce in 1887, Br. Abortus which was reported by Bang in 1897 and Br. Suis which was cultured by Tuam in 1914 (4). Brucellosis is transmitted from animals to humans by direct contact of infected tissues, ingestion of contaminated meat or dairy products and inhalation of infectious aerosols (6).

Brucellae are small, non motile, non spore forming gramnegative rods. Following invasion of the body the organism tend to localize in tissues of the reticuloendothelial system (8). The less frequent localization of brucella organisms are the bones; especially the spine, the endocordium, the testes and the nervous system.

Case report

A 46 year-old man was admitted to the neurosurgical clinic because of severe backache and pain in the leg in December 1991. 5 months before admission he developed pain in his left leg and after a week the pain distributed to his right leg. For a month he complained of increased backache, occasional fever, malaise and weight loss. While walking fora short distance he left weakness in his both legs, more on the lenft side. He had moderate motor weakness in flexion and extension of his left leg. Although

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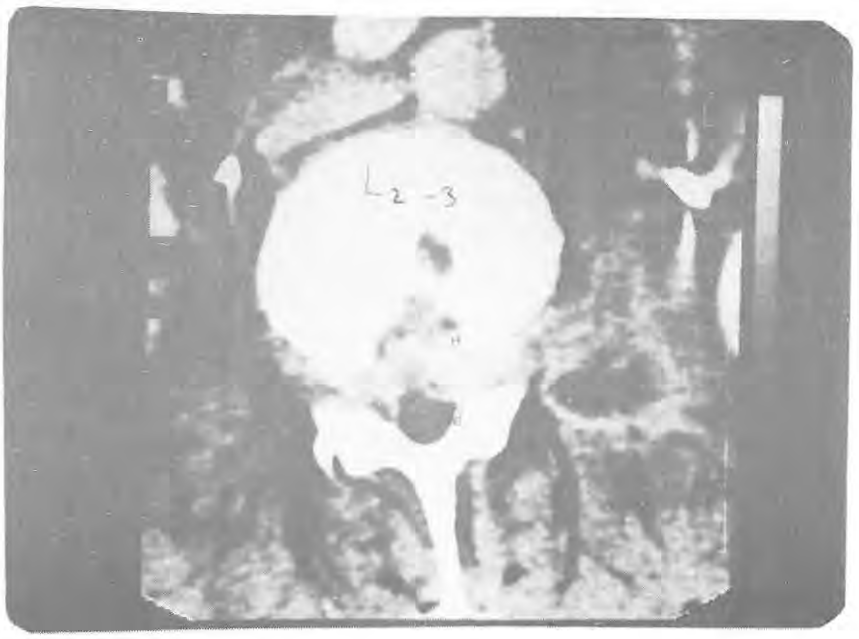
lumbar spine films showed no abnormality, evaluation with computed tomography of the lumbar area with contrast between L_1 and S_1 vertebrae, demonstrated destructive lesions in the corpus of L_2 and L_3 vertebrae, epidural inflamatory tissue mass and many abscesses inside the mass and in both psoas muscles (Figür 1, 2). His total blood count was normal, ESR was 45 mm/h. and brucella antibody titre was 1/160. Due to compression by tissue mass the patient underwent a complete laminectomy at L_2 and L_3 vertebral levels. At both levels anterior the dura and adherent it a granulomatous tissue was observerd. Histologic examination of biopsy material taken both from the gramulomatous tissue and from the corpus was reported as a non caseating granuloma and osteomyelitis. The tissue culture was positive for brucella. After 2 months antibiotic therapy with Rifampicin, Co-trimoxazole and doxycycline his syestemic symytoms disappeared and antibody titre droped to 1/40.

DICUSSION

Brucellosis is a systemic infection that characterises it self by fever, generalized malaise, night sweats, anorexia, weightloss, severe headache and polyarthralgia (3). Primarily attacking the reticuloendothelial system, brucellosis is occasionally complicated by meningitis, meningoencephalitis, polyradiculonevritis, endocarditis, septic arthritis and osteomyelitis (1,7). Such complications are however uncommon.

Figür 1. Computed tomography with contrast at L2/3 level. Destructive lesion in vertebral body. Granulomatous tissue compressing the dural sac and entering both neural foramina. Middle sized abscess in the left psoas muscle.



Figür 2. Computed tomograhpy with contrast at L3 level. Destructive lesion in vertebral body. Granulomatous tissue obliterating the anterior part of dural sac. Multipl abscesses in the granulomatous tissue and in both psoas muscles

The spinal involvement was reported as ranging 2 % % 30 % (3,5). The earliest radiographic changes are non spesific and may be noticed months after the onset of symytoms. In the early period, with computed tomography it is possible to show the changes in the epidural space and in vertebral bodies not observed on spine films. At late period changes in the end plates, intervertebral disc and vertebral bodies lead to wedging of the vertebra, angulation, tilting to a side or lead to bony ankylosis (3).

Brucella in bone may produce suppuration which, as in tuberculosis,may form cold abscess at paravertebral area and retroperitoneal space (1,3,4). A Positive culture from bone, granulomatous tissue, blood or synovial fluid is diagnositic. It was possible to diagnose the disease and to assess the adequacy of treatment by antibody titre of brucella (5,6).

Treatment is usually conservative and consist of immobilization, analgesia and antibiotic therapy with tetracycline, co-trimoxazole, rifampicin and streptomycin frequently in combinations (1,7). However there is no agreement on the combiation of which antibiotics to be used and on the duration of therapy (6). Because of the high frequency of clinical and serological reactivation rate due to short duration therapy, it was reported that it had to be more than at least six weeks (5).

Surgical invervention is reserved for meduller

compression, biopsy, large paravertebral abcess or for spinal fusion (4,5).

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