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CASE REPORT / *OLGU SUNUMU*

ANTERIOR LUMBOSACRAL BRUCELLAR EPIDURAL ABSCESS TREATED VIA ANTERIOR APPROACH

ANTERİOR YAKLAŞIMLA TEDAVİ EDİLEN ANTERİOR LUMBOSAKRAL EPİDURAL BRUSELLA ABSESİ

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SUMMARY:

Spinal epidural abscess is a rare but serious complication of systemic brucellosis. In this article a case of an anterior lumbosacral brucellar epidural abscess that was operated via anterior approach is presented. In cases where an abscess is located anteriorly, it should be drained via anterior approach. The abscess can completely recover by administering antibiotics for an appropriate period after the drainage.

Key words: *Brucella, surgical treatment, epidural abces, anterior drenage*

Level of evidence: *Case report, Level IV*

ÖZET :

Spinal epidural abse sistemik brusellosisin nadir fakat ciddi bir komplikasyonudur. Bu yazıda anterior yaklaşımla ameliyat edilen anterior lumbosakral brusellar epidural abse olgusu sunulmaktadır. Absenin anterior yerleşimli olduğu olgularda anterior yaklaşım ile drenajı gerekir. Drenaj sonrası uygun süre antibiyoterapi ile abse tamamen düzelebilmektedir.

Anahtar Kelimeler: *Brusella, cerrahi tedavi, epidural apse, anterior drenaj*

Kanıt Düzeyi: *Olgu sunumu, Düzey IV*

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INTRODUCTION:

Although brucellosis often affects the spine, it can rarely be complicated by epidural abscess or paraspinal purulent mass. Brucellar spinal epidural abscess (BSEA) is generally located in middle thoracal and lumbar areas [4, 8]. Brucellar epidural abscess located anterior to the spinal cord is very rare. This article presents the case of a brucellar epidural abscess located anterior to the lumbosacral vertebrae, which had compartments and compressed the dural sac, and discusses the treatment principles in spinal brucellar abscesses.

CASE REPORT:

A 30-year-old woman admitted to our clinic with a complaint of lumbar pain that had persisted for 1 year. Six months previously, the patient was diagnosed with brucella at another clinic, for which she recieved metoprim and rifampicin for 1 month and quit the treatment at the end of this period. The patient's neurological examination was normal.

In laboratory tests, WBC was 5600/mm3, WBC 5600/mm3, erythrocyte sedimentation rate (ESR) was 50mm/hour, C-reactive protein (CRP) was 2.1mg/dL, brucella tube agglutination titre was 1/320 (positive), brucella IgM was 6.44 - , brucella IgG was 5.47 (positive according to Wright test). Blood culture was negative. Spinal magnetic resonance imaging (MRI) showed thick septate multiple abscess formations that were heterogeneous hypointense in T1 weighted images and heterogeneous hyperintense in T2 weighted images in L4 ve L5 vertebrae and were extending through the sacral level. Intense contrast enhancement accompanied with spondylodiscitis within the epidural space were seen (Figure-1).

The patient underwent surgery. The abscess was drained via transabdominal-transperitoneal approach. For 6 weeks postoperatively, rifampicin (600mg/day) and streptomycin (1gr/day) and during the following 3 months, doxycycline (200mg/day) and rifampicin (600mg/day) were administered. In the follow-up after 6 months, there was a complete radiological recovery in the spinal MRI (Figure-2).

Laboratory tests were within normal parameters.

Figure-1. Magnetic resonance images showing multiple septate abscesses located in the spinal lumbosacral region. Accompaying spondylodiscitis and anterior dural sac compression is also seen. **a.** Sagittal T2-weighted image, **b.** Sagittal contrast-enhanced T1-weighted image **c.** Axial T2-weighted image.

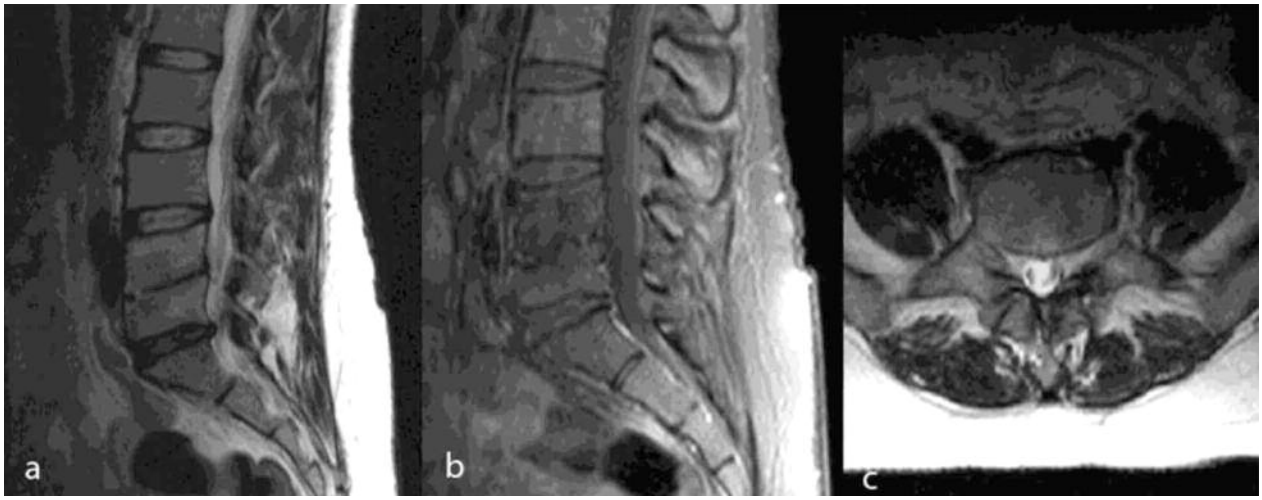

Figure-2. Magnetic resonance images showing complet radiologic recovery. **a.** Sagittal T2-weighted image, **b.** Sagittal contrast-enhanced T1-weighted image, **c.**

DISCUSSION:

Although a single case of brucellar epidural abscess case located in the anterior of the spinal cord is reported in the literature, the abscess in this case was located in the cervical region [1]. Our case is unique in that the abscess was located in the lumbosacral anterior epidural space. The literature suggests the following approaches in the treatment of BSEA: antibiotherapy alone if there is no neurological deficit; if there is neurological deficit, surgical drainage followed by antibiotherapy [2-3, 5, 10-11]. There are also some reports that rare cases with neurological deficits can be treated by administering only antibiotherapy for an appropriate period without any surgical procedure [3, 8]. The selection of antibiotic and its period and the role of surgery in the BSEA management are still controversial. In most of cases, the abscess is drained via posterior approach followed by antibiotic treatment during the post-operative 3 months [1-4, 7, 9-11]. There are also reports of rare cases that were treated via posterior paramedian transpedicular approach and cervical anterior approach

Spinal cord compression is rarely encountered in brucellar abscess [4-5, 8]. Delay in surgical treatment in cases with neurological deficits resulting from spinal cord compression may result in permanent sequelae [1, 9]. Although there were no neurological deficits in our case, the abscess was drained via transabdominal transperitoneal approach and antibiotherapy was administered for an appropriate period, as there was anterior dural sac compression in MRG and the abscess had compartments and was multiseptate. There is no similar case that is reported in the literature to date. Since the abscess was located anteriorly in our case and has septate, we preferred an anterior approach.

There is no consensus on the most appropriate antibiotic or the treatment period for brucellosis. The most frequently suggested antibiotic treatments are tetracycline, streptomycin, co-trimoxazole and rifampin. Combined treatment has been shown to reduce relapse. The use of rifampin and streptomycin or their dual use with doxycycline for 6 months ensures clinical and radiological recovery. The treatment period in the literature range between 6 weeks and 1 year [3, 6, 8].

Surgical treatment should be administered before the antibiotic treatment in selected cases to shorten the clinical and radiological recovery period and to ensure a rapid improvement in complaints. Although BSEA responds well to antibiotic treatment, it is clear that drainage of abscess which is particularly septate andcompresses the dural sac will fascilitate clinical and radiological recovery, as abscesses require long-term treatment.

In conclusion, spinal epidural abscess resulting from brucella may progress with neurological complications and a poor prognosis. Therefore, it is necessary to diagnose and select the appropriate treatment method as soon as possible. We think that appropriate surgical intervention before medical treatment in the selected cases will fascilitate clinical and radiological recovery.

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