

Neurobrucellosis complicated with lumbar epidural abscess; A shepherd's agony

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Introduction

Brucellosis is a bacterial zoonosis that has a myriad of clinical presentations, of which neurologic involvement (neurobrucellosis) is a rare occurrence. We report a case of brucellosis complicated with lumbar epidural abscess.

Case report

A 45-year-old diabetic presented with fever for one week with confusion and worsening lower back pain for 3 months. He had been a shepherd in Kuwait for 3 years and had consumed raw camel milk. Physical examination including neurological examination was normal except for confusion.

His white cell count was $14.87 \times 10^3/\text{mL}$ and CRP and ESR were 100 mg/dl and 56 mm, respectively. CSF full report revealed increased protein (147 mg/dl) and reduced sugar (25 mg/dl). There were no cells in the CSF and culture, acid fast staining and TB PCR were negative. His serology, became positive for *Brucella abortus* and *Brucella melitensis* agglutination test with titres of 1:2560 and 1:1280, respectively. Meanwhile his blood culture yielded *B. melitensis*.

MRI-spine revealed infective spondylitis of the L5/S1 region with an epidural abscess causing moderate compression of the thecal sac. IV ceftriaxone, commenced on admission, was continued for 18 days, while oral doxycycline, rifampicin and co-trimoxazole were continued for a total of 6 months.

At discharge from the hospital his CRP, ESR were 6.8mg/dl and 45mm respectively with normal white cells.



Figure. MRI image showing an epidural abscess (arrow) at L5/S1 region.

Discussion

Neurobrucellosis is a diagnostic challenge as there is no consensus with regards to diagnostic criteria. The criteria necessary for definite diagnosis include (i) neurological dysfunction not explained by other neurologic diseases, (ii) abnormal CSF indicating lymphocytic pleocytosis and increased protein, (iii) positive CSF culture or agglutination titre in the blood/CSF, (iv) response to specific chemotherapy with a significant drop in the CSF lymphocytes and protein [3]. Our patient had high CSF protein, positive blood culture, positive serology and adequate response to antibiotics, fulfilling the criteria required to confirm the diagnosis.

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There is no consensus on the choice of antibiotic, dose, and duration. Dual or triple therapy with doxycycline, rifampicin, trimethoprim-sulfamethoxazole, streptomycin, or ceftriaxone for 3-6 months has been recommended (2).

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Conflicts of interest

Authors declare that there are no conflicts of interest.

References

1. Alton GG, Forsyth JRL, Brucella. In: Baron S, eds. *Medical Microbiology*, 4th ed. Galveston (TX): University of Texas Medical Branch at Galveston; 1996.
2. Görgülü A, Albayrak BS, Görgülü E, *et al.* Spinal epidural abscess due to Brucella. *Surg Neurol* 2006; **66**(2): 141-6.
3. Guven T, Ugurlu K, Ergonul O, *et al.* Neurobrucellosis: Clinical and Diagnostic Features. *Clin Inf Dis* 2013; **56**(10): 407-12.