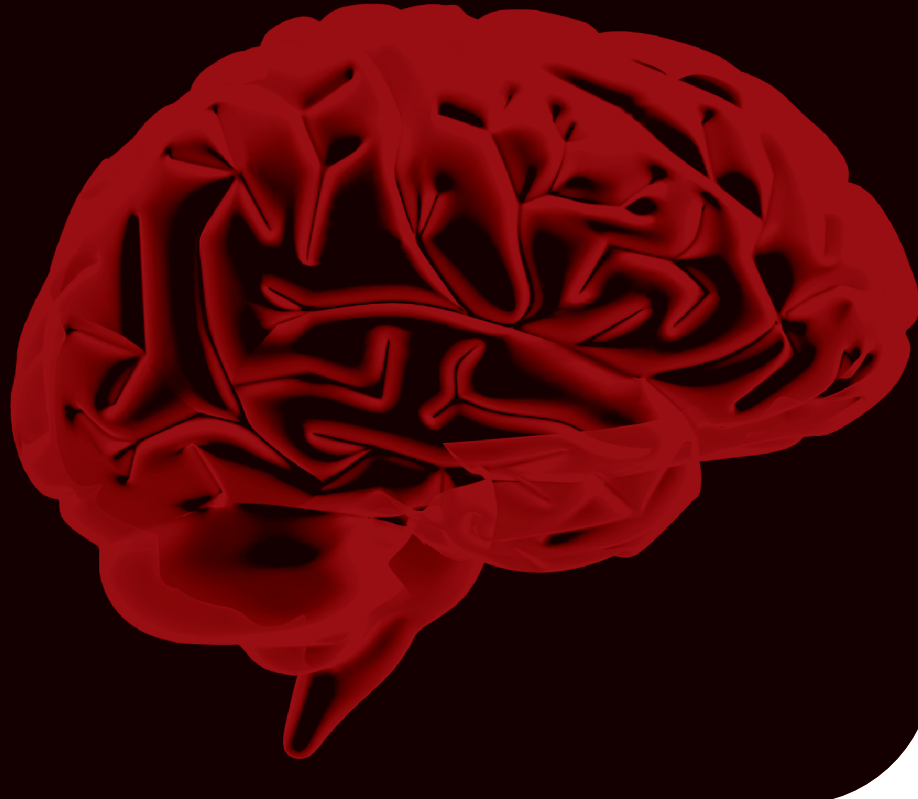


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Brucella melitensis shunt infection

Sir,
Shunt infection is a serious complication of shunt operations

and the reported rate varies between 1% and 20% of the shunt operations.^[1] Brucellosis is an endemic zoonotic disease in the Mediterranean basin and middle east.^[2,3] This reports a rare case of *Brucella melitensis* shunt infection.

A 42-year-old, female patient admitted to the emergency department with headache, altered mental status and convulsions. On examination, fever was 39.5°C, Glasgow Coma Scale score was 11 and signs of meningeal irritation were present. There was no hepatosplenomegaly. She had neurosurgical operations for cranial epidermoid tumor in 1989, 1998 and 2009. In 2011, she had ventriculoperitoneal shunt insertion for hydrocephalus and had shunt revision for shunt dysfunction 5 months before this admission. She had a history of animal livestock until 2010. Cranial computerized tomography revealed mild hydrocephalus. Cerebrospinal fluid (CSF) analysis revealed protein: >2 g/dl, glucose: 12 mg/dl (concomitant serum glucose level: 98 mg/dl) and 100 leukocytes/mm³. She was initiated on meropenem 2 gr q8h and vancomycin 500 mg q6h empirically. On the 3rd day of treatment, CSF culture yielded *B. melitensis*. Vancomycin and meropenem were stopped and ceftriaxone 2 gr q12 h, rifampicin 600 q24 h and doxycycline 100 mg q12 h were started. Serum *Brucella* agglutination tests were: Rose Bengal (+), Standard Wright 1/640 (+), 2-mercapto-ethanol test 1/640 (+), Rose Bengal test was (+) in the CSF. On day-18 of treatment, repeated CSF showed 50 leukocytes/mm³. CSF analysis revealed Rose Bengal test (+) and Standard Wright: 1/320. Fever resolved on day-5 of treatment. Neurosurgeons felt against change of the shunt. Three drug therapies were given for 6 weeks and the patient was discharged on rifampicin 600 q24 h and doxycycline 100 mg q 12 h for 6 month. There was no relapse during the follow-up at 12 months.


Major etiologic agents for shunt infections are coagulase-negative staphylococci, *Staphylococcus aureus* and Gram-negative bacilli.^[1] However, infections which are common in the community such as *Brucella spp.* may also cause shunt infections.^[3,4] In the presented case, meropenem and vancomycin combination were the initial empirical regimen.^[1] When it was learnt that the CSF culture yielded *B. melitensis*, treatment was switched over to combination of three drugs: doxycycline + rifampin + ceftriaxone. In a recent multi-national multi-center study,^[2] for neurobrucellosis, therapy including ceftriaxone was found to be more effective than non-ceftriaxone including therapy. This patient suggests that in the communities endemic to certain infections such as brucellosis, one should keep in mind the possibility of shunt infections with such organisms.

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