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MULTIFOCAL OSTEOARTICULAR BRUCELLOSIS: A RARE CASE OF SPONDYLODISCITIS, VERTEBRAL ABSCESS, AND KNEE ARTHRITIS

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Abstract

Brucellosis is a zoonotic disease transmitted from animals to humans, most commonly through direct contact with infected livestock or consumption of contaminated animal products such as unpasteurized dairy. It presents with a wide clinical spectrum, ranging from mild flu-like symptoms such as fever, fatigue, and muscle pain to more severe complications involving multiple organ systems if left untreated. Osteoarticular involvement is the most frequent complication, but the simultaneous occurrence of spinal brucellosis, vertebral abscess, and peripheral arthritis is rare and poses significant diagnostic challenges. Brucellosis is an endemic disease in Armenia. According to annual statistics from the National Institutes of Health, the number of brucellosis cases has increased during the last decade. The aim of the case report is to highlight the challenges in the management of a patient with multifocal osteoarticular brucellosis. A 51-year-old male agricultural worker was admitted to the hospital with fever, fatigue, lumbar pain, restricted mobility, and night sweats. Magnetic resonance imaging (MRI) revealed L4–L5 spondylodiscitis with an epidural abscess and epiduritis. Tuberculosis was excluded, while serological testing (Wright test 1:400, Huddleson test 3+) and enzyme-linked immunosorbent assay (ELISA) confirmed brucellosis (IgM and IgG strongly positive). During hospitalization, the patient developed swelling of the left knee; synovial fluid polymerase chain reaction (PCR) was positive for Brucella, confirming knee arthritis (gonitis). Laboratory evaluation demonstrated elevated erythrocyte sedimentation rate (ESR) (53 mm/h), C-reactive protein (CRP) (72.74 mg/L), and fibrinogen (724 mg/dL), indicating active infection. The final diagnosis was acute brucellosis, osteoarticular form with spondylitis, vertebral abscess, and left gonitis. He received combination antibiotic therapy with supportive care, resulting in clinical improvement and decreased inflammatory markers by discharge. This case highlights an unusual triad of brucellar spondylitis, epidural abscess, and **knee arthritis (gonitis)**. *Early recognition, supported by imaging and serology, and prompt initiation of appropriate therapy are essential to prevent long-term sequelae.*

Keywords: *Brucellosis, Spondylitis, Vertebral abscess, Gonitis, Treatment*

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