

Granulomatous Spondylodiscitis as a Rare Manifestation of Brucellosis in a Patient on Maintenance Hemodialysis from India

Dear Editor,

Brucellosis is a zoonotic disease affecting many organ systems.^[1] Transmission of the bacteria to humans occurs via many pathways with monocyte–macrophage system playing a major role. Since the immune system is compromised in patients with end-stage kidney disease (ESKD), varied manifestations of brucellosis are seen; but there is gross underdiagnosis of the disease among dialysis patients. Here, we report the first case of *Brucella* spondylodiscitis in a patient with chronic kidney disease on maintenance hemodialysis from India.

A 50-year-old male farmer with ESKD secondary to chronic interstitial nephritis on thrice-weekly hemodialysis presented with 4 weeks history of dull aching, nonradiating low backache. He had continuous fever with reduced appetite for 3 weeks. There was no history of trauma or history suggestive of neurological deficits. He was started on empirical antitubercular treatment (ATT) elsewhere, following which he developed drug-induced liver injury, warranting the stoppage of ATT. On examination, he was moderately built and hemodynamically stable. Systemic examination revealed tenderness in the lumbosacral region without gibbus/knuckles or neurological deficits. Labs showed normocytic normochromic anemia with elevated erythrocyte sedimentation rate (ESR) and other abnormalities concomitant with ESRD. Ultrasound abdomen revealed hepatomegaly. X-ray of lumbosacral spine revealed reduced intervertebral disc space between L2 and L3. Magnetic resonance imaging (MRI) spine showed adjacent endplate marrow edema with subtle erosions at L2/3 levels, and intervening disk edema, suggestive of spondylodiscitis. The Mantoux test and Interferon Gamma Release Assay (IGRA) were negative. Serum and urine immunofixation electrophoresis and serum free light chain assays were negative for *Brucella* serology was positive with a titer of 1:320 (standard tube agglutination test). Blood cultures were negative. Computed tomography (CT)-guided biopsy of the involved tissue in the lumbosacral region revealed histiocytic granuloma consistent with brucellosis. He was treated with gentamicin and doxycycline for 6 weeks, with significant improvement in his symptoms.

There are four species of *Brucella* known to cause zoonotic infection in humans. It is transmitted directly/indirectly

to humans from infected animals. Acute and aggressive presentation with high predilection toward spondylitis is seen with *Brucella melitensis*.^[2] The most frequent musculoskeletal complication is spondylodiscitis, seen in 19%–69% of cases.^[3]

Sedentary lifestyle, sarcopenia, mineral bone disease, *Staphylococcus aureus* spinal infections and tuberculosis cause low backache in hemodialysis patients.^[4] It is difficult to establish the diagnosis of brucellosis, particularly in the early phase of the disease when manifestations are subtle.

Diagnosis requires high index of suspicion, supported by serological tests, radiological investigations, particularly MRI/CT, and tissue biopsy. This case report highlights the importance of establishing an etiological diagnosis of spondylodiscitis rather than a blindfolded therapeutic trial, which otherwise may be counterproductive.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms.

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Conflicts of interest

There are no conflicts of interest.

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