Brucellosis Masquerading as Spondylodiscitis with Multiple Intervertebral Disc Prolapse

Sir,

A 60-year-old male farmer, from Pulwama district of Kashmir valley, India, presented with low backache of 6 months duration. It was dull boring in character and moderate in intensity. Bending and exertion worsened it. Patient also complained of chronic ill health with vague pains. The patient had consulted many doctors for treatment without any relief. The patient was a hookah smoker. Family history was insignificant. The patient had strong H/O exposure to domestic animals, besides H/O frequent intake of improperly cooked cheese. O/E patient was conscious, well oriented but appeared listless. Pulse and BP were normal. There was no pallor, cyanosis, icterus or oedema. JVP was normal. There was no lymphadenopathy or clubbing. Spine examination revealed a normal curvature, but tenderness in the lumbar region. Chest and cardiovascular examination were normal. Abdominal examination showed mild splenomegaly. CBC was normal with mild lymphocytosis. Mantoux test and sputum for AFB were negative as was ELISA for MTB. Chest X-ray and ECG was normal. X-ray lumbar spine showed wide disc spaces between L1-L2, L2-L3, L3-L4 and anterior osteophytes. MRI of lumbar area depicted discitis with prolapse at L2-L3, L3-L4, L4-L5 levels [Figure 1]. USG showed splenomegaly. A needle biopsy of the spine was done for histopathology and culture. Histopathology was consistent with brucella. Culture of the spine was positive for brucella. Brucella titers were positive initially (1 : 320) then increased after 6 weeks and persisted as 1 : 640. Blood culture was positive for brucella melitensis. Therefore a diagnosis of spondylodiscitis with multiple disc prolapses due to brucellosis was made. The patient was put on streptomycin I/M 0.75 g/d for 3 weeks, followed by doxycycline plus rifampicin for 6 weeks. Patient had marked improvement in health with good appetite besides weight gain of 6 kg. X ray and MRI lumbosacral spine repeated 18 months after treatment showed improvement. Brucella titres repeated after two and a half years were normal.

Brucellosis, a zoonotic disease continues to remain hyperendemic in Middle East, Hungarian Peninsula, Mexico, India and Southern America. It is caused by brucella, which are small, gram-negative bacilli or coccobacilli, transmitted to humans either by the consumption of animal by products or by direct contact with infected animals. The disease involves many organs in the body, which mimics many other diseases and can present with unusual features. Musculoskeletal involvement occurs in 40 –73% of patients. Spondylitis occurs usually above 50 years and mostly involves lumbar spine in the form of spondylodiscitis followed by dorsal and cervical spine. Usually monofocal lesions appear but multiple levels contiguous or non-contiguous lesions mimicking tuberculosis can occur but this is exceptionally rare. Only a few cases with multiple level involvements of spine and disc have been described till date. The case under discussion is one such addition to the literature where we are discussing a case of spine and disc disease with disc protrusion at multiple levels. The diseases which come in differential diagnosis are tuberculosis, pyogenic infection or a degenerative disease. In brucellosis, spondylotic changes appear in the form of osteophytes on anterior end plate (Parrot beak spine), intact vertebral body with disc gas or discal vacuum on MRI with par spinal soft tissue involvement. In tuberculosis vertebral collapse with gibbus deformity of dorsolumbar spine with psoas abscess formation occur. Moreover multiple level involvement of spine occurs frequently in tuberculosis but can occur rarely in brucellosis as well. In degenerative spine disease the erosions and sclerosis of the spine are the main features.

Turgot et al. had suggested 2 out of 6 criterion for clinching diagnosis of brucella: a) culture, b) histopathology, c) serology, d) compatible clinical features, e) exposure to animals or to animal by products, g) radiology compatible with infective spondylodiscitis. Our case fulfilled almost all criterion. The delay in treatment can lead to complications; hence, patients should be put on antibrucella treatment as early as possible otherwise surgery would be the last resort of treatment.
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