Unseen Spine: A Case of Infective Discitis masked by diverticulitis in older patient

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Introduction

Spinal infections present a significant diagnostic challenge. Patients typically exhibit clinical symptoms, notably back pain accompanied by tenderness upon examination. The infrequent occurrence of such infections may lead to symptoms being overlooked and underdiagnosed. Awareness of these pathologies, along with their presentation and management, can facilitate early detection and treatment, thereby significantly reducing complications and potentially lowering mortality rates, particularly in geriatric patients.

Case Description:

We present a case of an 80-year-old female patient with a complex past medical history, including chronic back pain, osteoarthritis, bladder cancer, breast cancer (underwent mastectomy), and lymphedema. She presented to the emergency department (ED) with a 3-day-history of worsening lower back pain radiating to the abdomen. There was no history of trauma. Examination revealed no signs of intra-abdominal infection. There was a significant elevation of white blood cell count and C-reactive protein (CRP) on blood investigations. The initial CT imaging identified acute, uncomplicated sigmoid colonic diverticulitis with chronic inflammation (figure 1), which was treated under the surgical team conservatively with antibiotics, following which the patient was discharged.

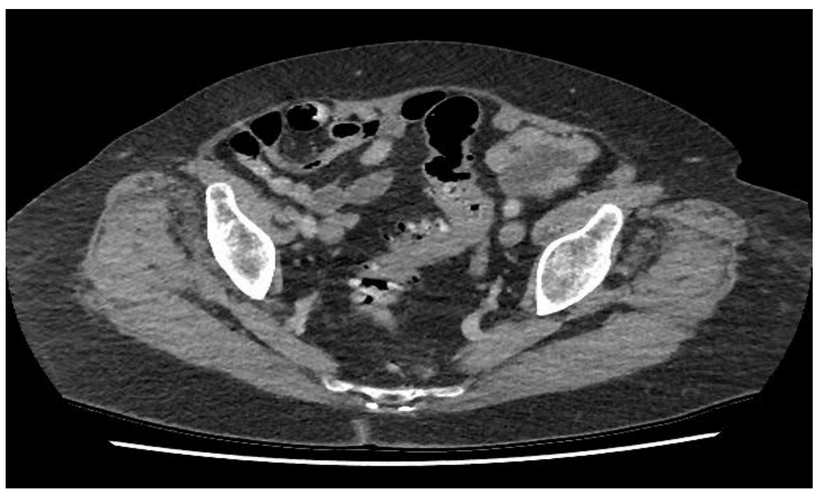

Figure 1- CT abdomen and pelvis- diverticular disease of the large bowel especially affecting the sigmoid colon with appearances suggestive of possible minor diverticulitis of the sigmoid colon

Thirteen days later, the patient represented again to the emergency with the same symptoms with additional pain radiation to the right leg affecting mobility. There was lumbar spinal process tenderness on examination with persistently high inflammatory markers in blood. Blood cultures resulted positive for Streptococcus agalactiae. An MRI spine was done and revealed infective discitis with a right paravertebral abscess and phlegmon, causing thecal sac compression (figure 2-3). A following CT scan of the lumbar spine also revealed same findings with bilateral psoas abscesses. The patient was started on an appropriate course of antibiotic course guided by the cultures and underwent CT-guided drainage of the abscess, following which she improved symptomatically and clinically.

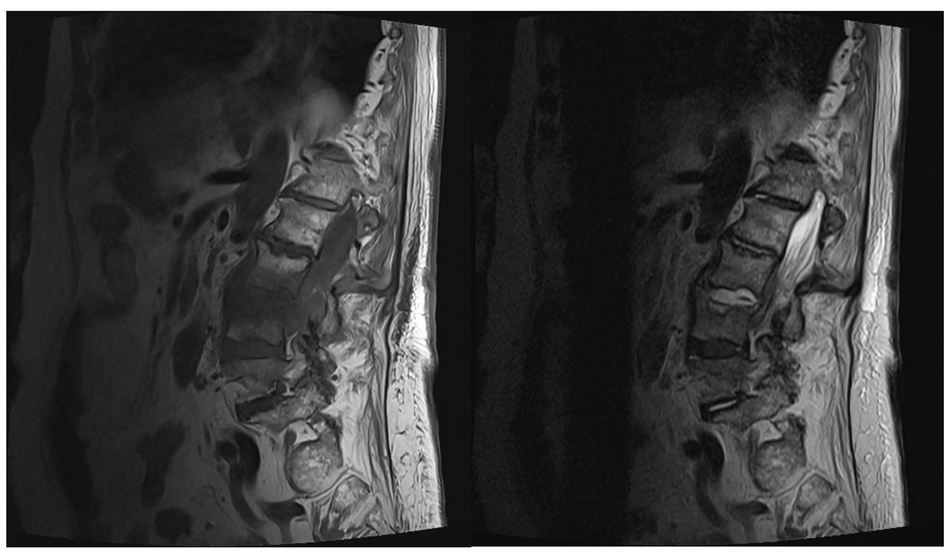

Figure 2- pre- and post- contrast slides showing erosion and marked oedema of the marrow of L2 and L3 vertebra which shows homogeneous enhancement.

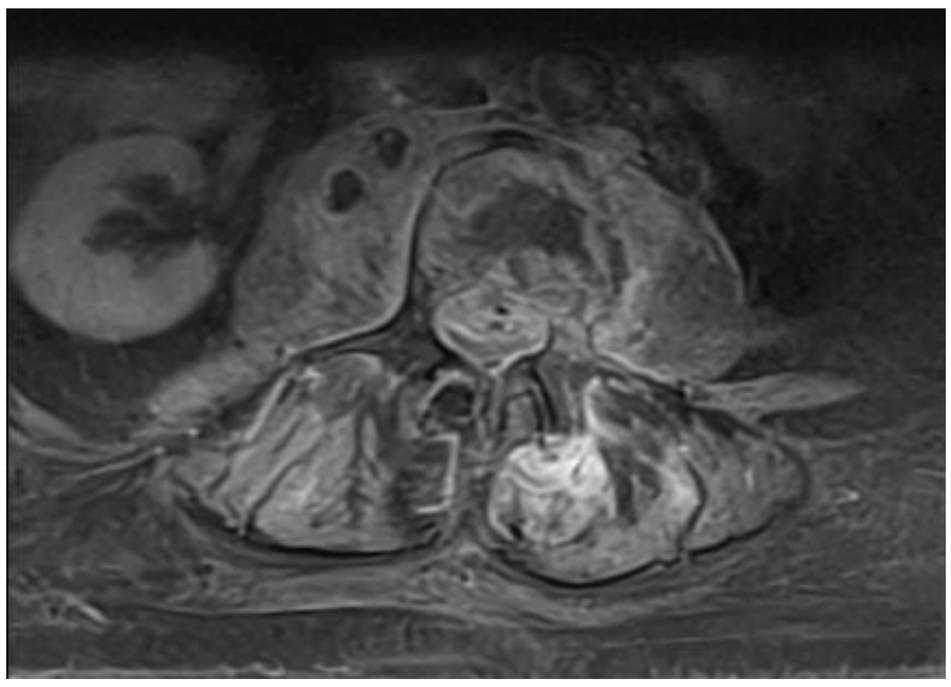

Figure 3- Oedema and swelling of the bilateral psoas muscles and erector spinae muscles. Within the right psoas muscle, there is non enhancing low signal intensity fluid collection with enhancing periphery suggestive of paraspinal abscess.

Discussion:

Spinal infections encompass vertebral osteomyelitis, septic discitis (termed 'spondylodiscitis' when both conditions coexist), facet joint septic arthritis, and spinal epidural abscesses.

Conventional teaching consolidates these diagnoses through the manifestation of back discomfort, fever, and heightened inflammatory markers. Neurological impairments are characteristic of spinal epidural abscess and may indicate advanced illness.

The incidence of general infections and sepsis escalates with age, particularly in the context of spinal infections. Spinal infections are infrequent, with a frequency of approximately 0.2–3.7 per 100,000 for spondylodiscitis and 2–20 per 100,000 hospital admissions for spinal epidural abscesses. The total incidence is proportionally greater in elderly individuals compared to younger ones. Delayed or inaccurate diagnosis leads to adverse outcomes, including considerable morbidity, death, and functional disability.

Older individuals may face an increased risk of delayed diagnosis due to a greater frequency of comorbidities, such as degenerative back pain, which can obscure diagnostic reasoning. Clinical assessment may be challenging due to pre-existing cognitive impairment or concurrent delirium, along with atypical or subtle indications, symptoms, and biochemical marker abnormalities.

Limited research on spinal infections explicitly addresses elderly people. There is a necessity for current, comparable data regarding the clinical patterns of spinal infections in older patients to facilitate diagnosis and enhance patient outcomes.

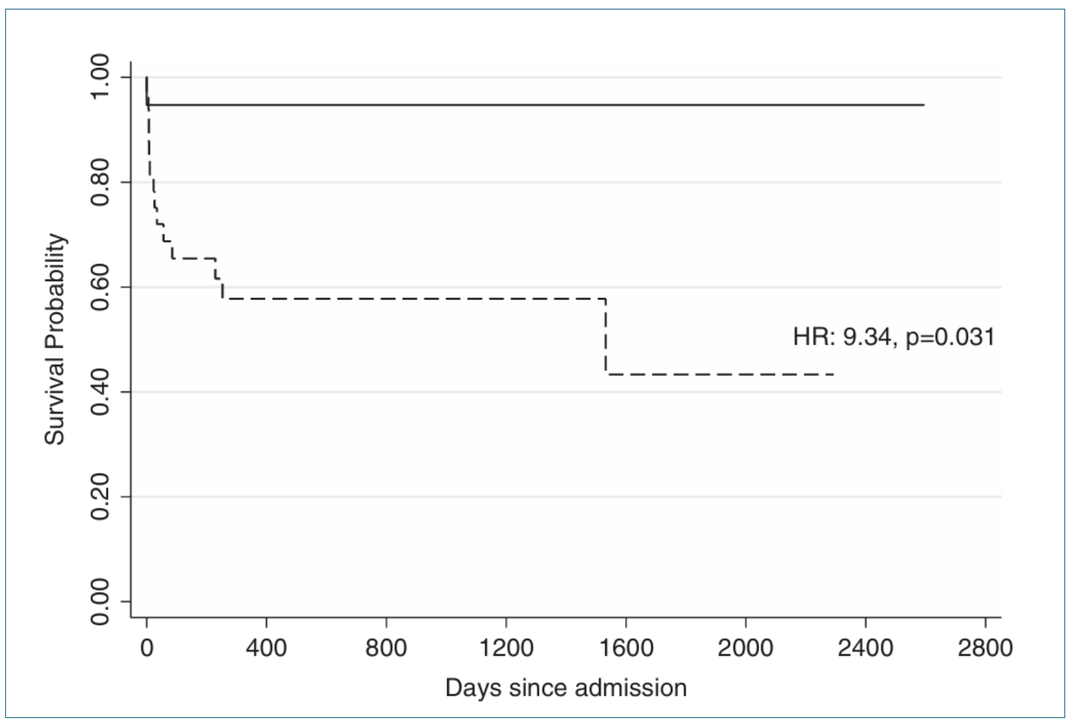

Figure 4- Kaplan–Meier hazard curves for the probability of death or failure of medical treatment across two age groups. (——), Age < 65 years; (-------), age ≥ 65 years.

Conclusion:

Spinal infections are uncommon, yet significant aetiology of back pain. They should be considered a differential diagnosis in anyone with new or increasing back pain. The investigation and treatment approach must be guided by history taking and clinical examination.

References:

1. Ghoneim MA, Abbass W. Management of Spontaneous Spinal Discitis and Spondylodiscitis in Older People. Open Journal of Modern Neurosurgery. 2020;10(01):182-91.
2. Amadoru S, Lim K, Tacey M, Aboltins C. Spinal infections in older people: an analysis of demographics, presenting features, microbiology and outcomes. Intern Med J. 2017;47(2):182-8.