

## IMAGES IN EMERGENCY MEDICINE

## General Medicine

# Man with persistent low back pain radiating down leg

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## 1 | CASE PRESENTATION

A 67-year-old man with a history of hypertension, atrial fibrillation, coronary artery disease, and peripheral vascular disease presented to the emergency department with 2 weeks of progressively worsening non-traumatic lumbar back pain radiating to left groin, buttock, and left leg with associated left lower extremity paresthesia. The patient's vital signs were a pulse rate of 67 beats/min, blood pressure 108/70 mmHg, and temperature 36.7°C. Examination was notable for a middle-aged man in moderate distress with lumbar spine tenderness and worsening pain elicited with left-sided straight leg raise to 30°. The patient had intact distal sensation and strength in both lower extremities; however, the full range of motion was limited by pain. Laboratory results were remarkable for leukocytosis (14.12 K/ $\mu$ L), elevated lactic acid (2.1 mmol/L), and stable chronic kidney disease. A computed tomography (CT) scan of the abdomen and pelvis was performed (Figures 1A and 1B), and the diagnosis was further clarified on subsequent magnetic resonance imaging (MRI; Figures 2A,B). The patient was started on broad-spectrum antibiotics and admitted for further imaging and intervention.

## 2 | DIAGNOSIS

### 2.1 Lumbar discitis, osteomyelitis, and epidural abscess secondary to psoas abscess

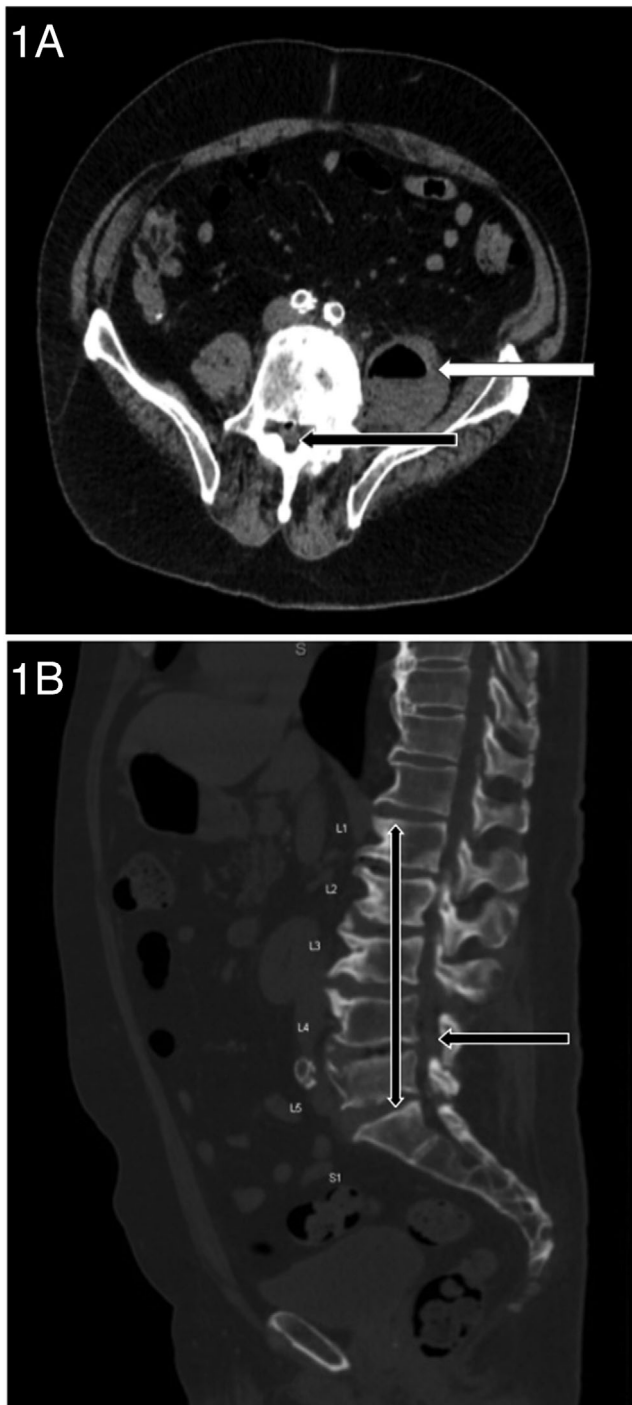
The patient underwent fluoroscopic drainage of the psoas abscess with pigtail catheter placement that yielded cultures positive for

polymicrobial growth. Given the lack of spinal cord compromise on imaging or associated subsequent neurological deficits, surgical intervention for the epidural abscess, osteomyelitis, and discitis was not recommended. Blood cultures yielded mixed species, most notable for *Anaerococcus prevotii*, suggesting an enteric source. Repeat imaging on hospital day 8 showed resolved epidural gas and fluid collection and near-resolution of the left psoas abscess prompting pigtail drain removal. The patient was discharged home on hospital day 10 without further complications on a 6-week course of ertapenem.

Iliopsoas abscesses can be a diagnostic challenge as they are relatively uncommon and can present with vague, indolent symptoms. Although historically they were most commonly seen in the setting of spinal tuberculosis, etiologies can be secondary to hematogenous spread or as a secondary infection from the many adjacent structures including the appendix, sigmoid colon, ureters, kidneys, pancreas, lumbar spine, abdominal aorta, and iliac lymph nodes.<sup>1</sup> Common predisposing factors include diabetes mellitus, trauma (with or without hematoma), and inflammatory bowel disease.<sup>1,2</sup> Cases most often are diagnosed on CT, and treatment generally consists of appropriate antibiotics based on the source and drainage, either surgically or through interventional means, depending on the case.<sup>1</sup> Several case series have reported that spinal infections (including osteomyelitis, discitis, and epidural abscesses) are not uncommon as a primary source or sequelae of an iliopsoas abscess.<sup>2,3</sup> Emergency physicians should consider advanced imaging, such as MRI, if there is a clinical concern for spinal extension in patients presenting with iliopsoas abscesses.

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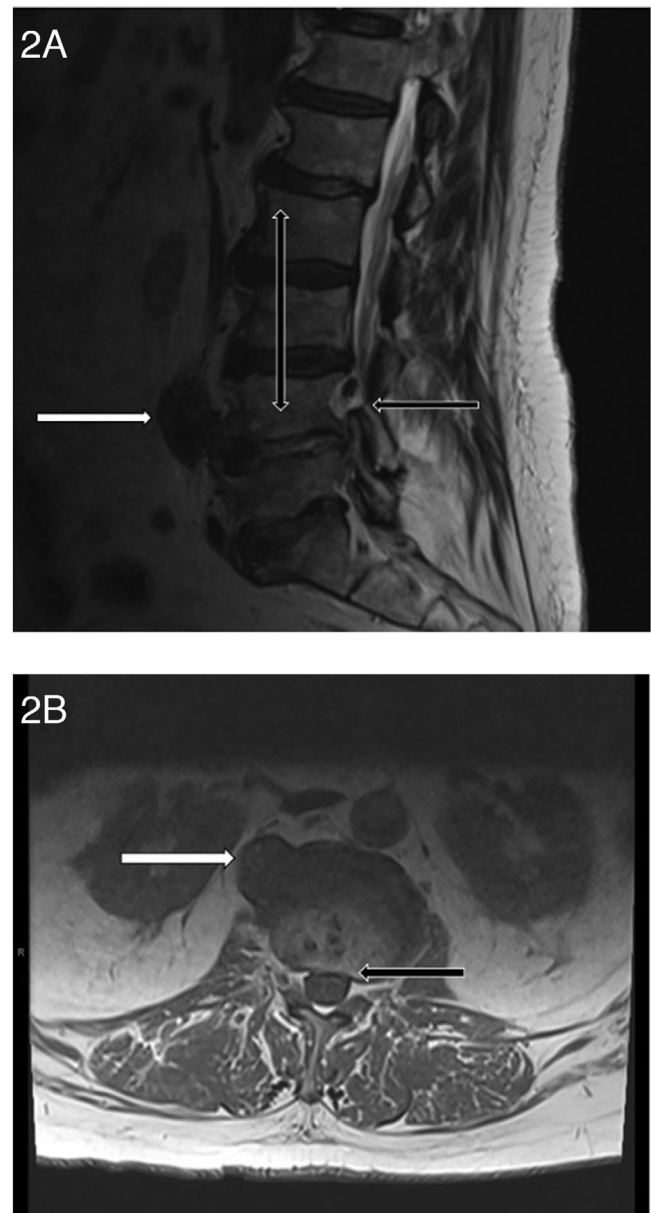
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**FIGURE 1** (A and B) Computed tomography imaging showing large left psoas abscess containing gas (white arrow), associated epidural abscess extending from the superior aspect of L4 to the mid L5 (black arrow), and focal osteomyelitis (double-headed arrow)

#### REFERENCES

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**FIGURE 2** (A and B) Magnetic resonance imaging showing psoas abscess (white arrow) and L4-5 and L5-S1 infectious osteomyelitis/discitis (double-headed arrow) with ventral epidural abscess extending from L3 through L5 (black arrow)

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