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Epidural Gas: An Unusual Complication of Crohn Disease

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Epidural gas as a complication of Crohn disease has never been described to our knowledge. We report a patient with a 15-year history of Crohn disease, presenting with acute onset of back pain and fever, who had a large collection of epidural

gas. The diagnosis, established by computed tomography (CT), resulted in early treatment and prevention of epidural abscess formation and neurologic deficit.

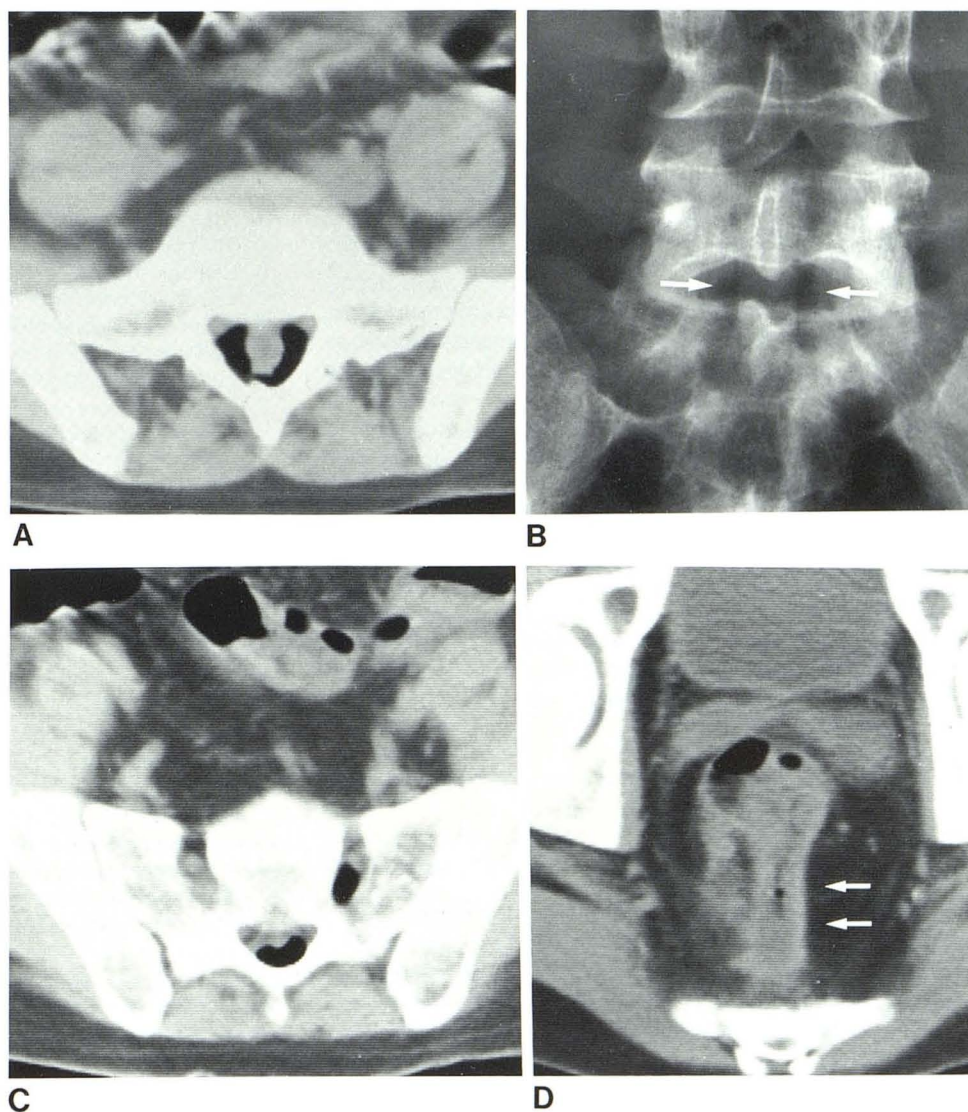


Fig. 1.—**A**, CT scan. Epidural gas outlines thecal sac. **B**, Anteroposterior radiograph of lumbar spine demonstrated, in retrospect, gas outlining thecal sac between L5 and S1 (arrows). **C**, CT scan. Gas in left sacral foramen and in epidural space. **D**, CT scan. Soft-tissue mass (arrows) of heterogeneous density, interposed between rectum and coccyx, was thought to be phlegmon rather than frank abscess.

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Case Report

A 31-year-old man with a 15-year history of Crohn disease was admitted because of 2 weeks of acute, progressively severe back pain and fever. There was no history of back problems. Crohn disease involving the terminal ileum and rectum had been stable on a regimen of prednisone, azathioprine, and sulfa. However, 2 weeks before admission, he began to experience low back pain that became progressively more severe and he developed a spiking fever. No abdominal pain or change in bowel habits was noted. On admission, the patient's temperature was 40°C. There was marked limitation of range of motion of the lumbar spine and tenderness of the sacrum to percussion. The neurologic examination was normal. Tenderness anteriorly was noted during rectal examination. White blood cell count was 3,200 with a marked left shift. Radiographs and a CT examination of the lumbosacral spine and pelvis demonstrated epidural gas and a pelvic phlegmon (fig. 1). The patient was treated with intravenous antibiotics and surgical drainage of the pelvic phlegmon. Unfortunately, no culture was obtained. However, the fever and symptoms resolved within 1 week. A CT lumbar spine examination 2 weeks after surgery demonstrated a normal appearance with complete resolution of the epidural gas.

Discussion

The complications of Crohn disease are myriad. Internal and external fistulae and abdominal abscesses, with or without intramural or extraluminal gas, are widely recognized [1, 2]. Septic arthritis of the hip, iliac osteomyelitis, and psoas abscess have been reported as rare complications due to internal fistulae [3-5]. However, epidural abscess or gas in the epidural space has never been described in a case of Crohn disease, to our knowledge.

Gas in the epidural space can be iatrogenic secondary to a gas myelogram or even lumbar puncture. Epidural gas has

been also demonstrated by CT in association with a vacuum phenomenon in degenerative disk disease, herniated nucleus pulposus, or after laminectomy and discectomy. However, these are invariably small collections that are incidental to the underlying abnormality [6, 7]. Our patient had a large collection of epidural gas and had severe back pain without associated disk disease. Gas could be demonstrated tracking caudad and anterior to a sacral foramen, which presumably was the site of termination of the internal fistula from the pelvic phlegmon (figs. 1C and 1D). Prompt diagnosis and appropriate combined medical and surgical treatment prevented development of an epidural abscess or neurologic deficit.

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