

Spinal Epidural Hematoma Following Epidural Catheterization in Young, Healthy Male and Subsequent Timing of New Epidural Catheter

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Introduction

- Spinal epidural hematoma following epidural catheter placement is a rare event.
- Ehrenfeld et. al found an incidence rate of 1 in 7200 in a recent study.
- The most common presenting symptoms in the study were lower extremity weakness, numbness, paralysis, and back pain.
- Risk factors for developing a hematoma include coagulopathy, elderly, females, and a technically difficult placement of an epidural catheter.
- We present a case of an epidural hematoma in an otherwise healthy, young male experiencing multiple pneumothoraces and the subsequent perioperative pain management.

Materials and Methods

Patient informed consent was obtained. This is a medically challenging case and IRB approval is not mandatory.

Case Description

A 27-year-old healthy male presented with a recurrent left-sided pneumothorax and was scheduled for a video-assisted thoracoscopy (VATS) procedure. His platelet count and coagulation studies were within normal limits. Initial epidural placement resulted in heme being aspirated from the catheter and was replaced at a level below. A few hours later, the patient endorsed excruciating back pain at the site of the epidural. Neurologic exam was unremarkable. An MRI demonstrated an epidural hematoma extending from T2-3 to T7-8 with no evidence of spinal cord compression. Re-imaging the following day demonstrated a stable hematoma. An erector spinae plane catheter was placed preoperatively for pain control in lieu of a thoracic epidural and the procedure was uneventful.

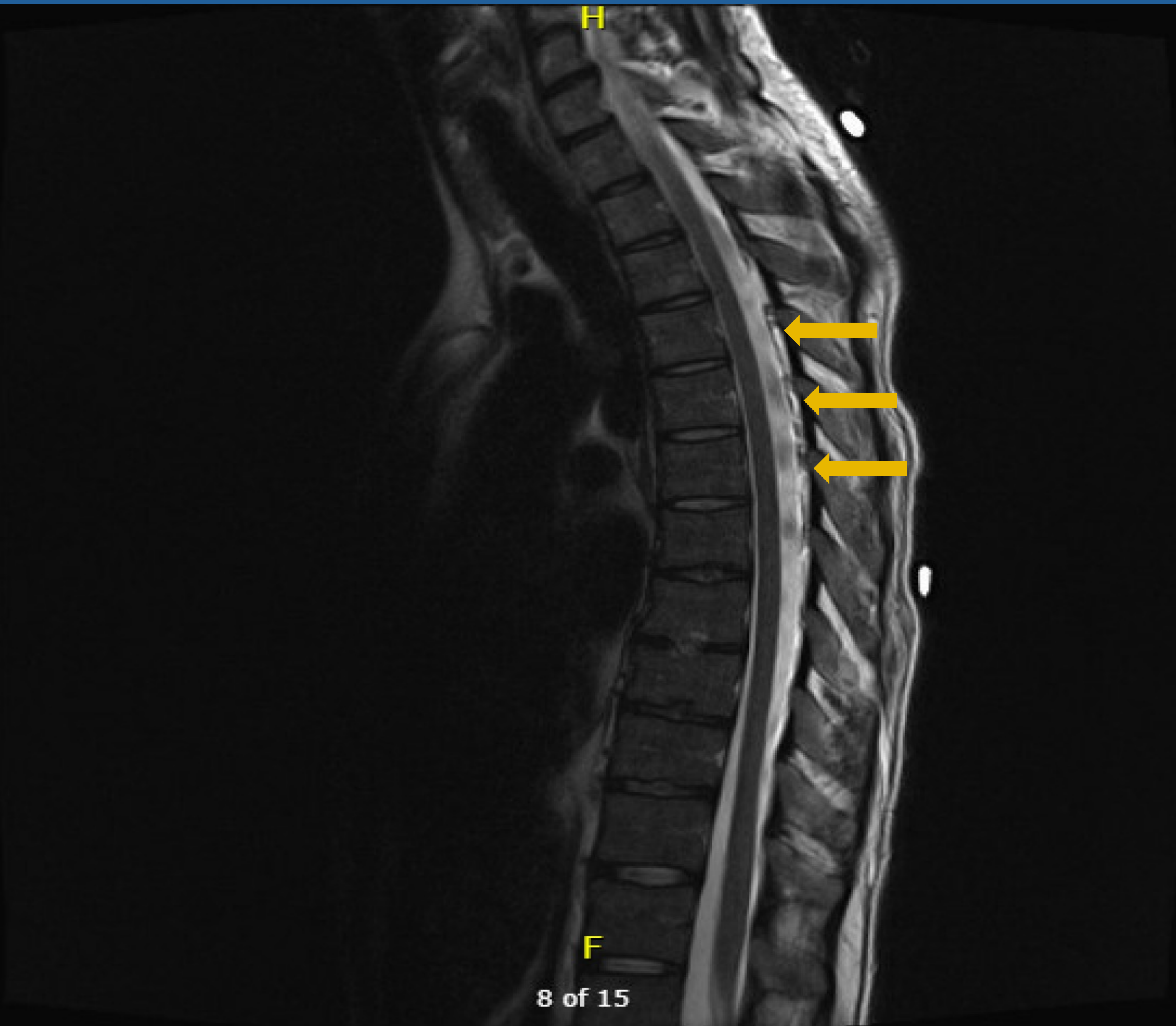


Figure 1. Sagittal magnetic resonance image of the thoracic spine. A thin dorsal epidural hematoma extending from T2-3 to T7-8 without mass effect or thecal sac narrowing is present on the T2-weighted image.

Case Description Continued

Two weeks later, he presented with a right-sided spontaneous pneumothorax and was again scheduled for a VATS procedure. Neurosurgery weighed in on the timing of placing an epidural catheter. A repeat MRI demonstrated resolution of the hematoma and a thoracic epidural was placed preoperatively. Surgery proceeded uneventfully and pain was well controlled.

Discussion

- Asymptomatic epidural hematomas are likely more common than historically thought.
- The patient had no medical history besides the pneumothoraces and none of the risk factors commonly associated with a spinal epidural hematoma.
- Patient was receiving 1 milligram of hydromorphone regularly on the floor and had not received another dose while waiting several hours with the epidural catheter in place to go to the operating room.
- This leads us to the notion that epidural hematomas may be more common than we expect but may be largely asymptomatic without causing neurologic damage. To our knowledge, there are no case reports of asymptomatic spinal epidural hematomas following epidural catheterization.
- Because the patient had no neurologic sequelae from the hematoma and imaging demonstrated resolution of the hematoma, our neurosurgery colleagues’ deemed that it was safe to proceed with epidural catheter placement for the second operation.

References

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