

Traumatic Lumbar Subdural Hematoma: Clinical Image

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Abstract

We present the case of a 21-year-old male with sudden onset back pain while exercising and one week of progressive claudication type symptoms culminating in weakness. Imaging revealed a fluid collection consistent with an early subacute subdural hematoma spanning from L3 to midsacrum with the most severe compression at L4-L5. Laminoplasty for subdural hematoma evacuation was required due to neural compression with neurologic deficit. Intraoperative imaging demonstrated good neural decompression without residual hematoma. The patient recovered to his neurologic baseline immediately postoperatively with no symptoms of recurrence over one year. Intraoperative images demonstrated unique findings not previously illustrated in the literature.

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Received: October 19, 2024; **Accepted:** October 22, 2024; **Published:** October 31, 2024

Keywords: Lumbar Spine, Spinal Subdural Hematoma, Neurosurgery, Clinical Image

Write Up

A 21-year-old male was referred to our hospital with sudden onset of back pain while exercising and progressive sciatica the week leading to presentation. The morning of his presentation, he demonstrated severe back pain and radiculopathy associated with focal weakness. On examination he demonstrated bilateral weakness in an L5 and S1 pattern without noted sensory deficit.

MRI demonstrated a T1 hyperintense and T2 hypointense extramedullary intrathecal collection at the dorsal aspect of the thecal sac spanning from L3 to midsacrum leading to severe cauda equina compression (Figure 1A&B). Contrast MRI did not demonstrate any abnormal vasculature.

His presentation was concerning for progressive subacute subdural hematoma secondary to trauma the week prior. Given progressive symptoms associated with neurologic deficit and severe compression, evacuation was warranted. An L4-5 laminoplasty was performed with the discoloration of the thecal sac secondary to subdural hematoma readily apparent (Figure 1C). The separation of arachnoid and dura with intervening hematoma is clear on intraoperative ultrasound (Figure 1D). The dura was opened with care to maintain arachnoid plane to protect neural elements and mitigate risk for CSF leak (Figure 1E).

He recovered to his neurologic baseline immediately following hematoma evacuation. At one year follow-up he has returned to his previous activities without limitation and no recurrence of symptoms. This case illustrates a rare pathology that required operative intervention. Intraoperative ultrasound demonstrates unique images that allowed further characterization of the hematoma to facilitate safe evacuation.

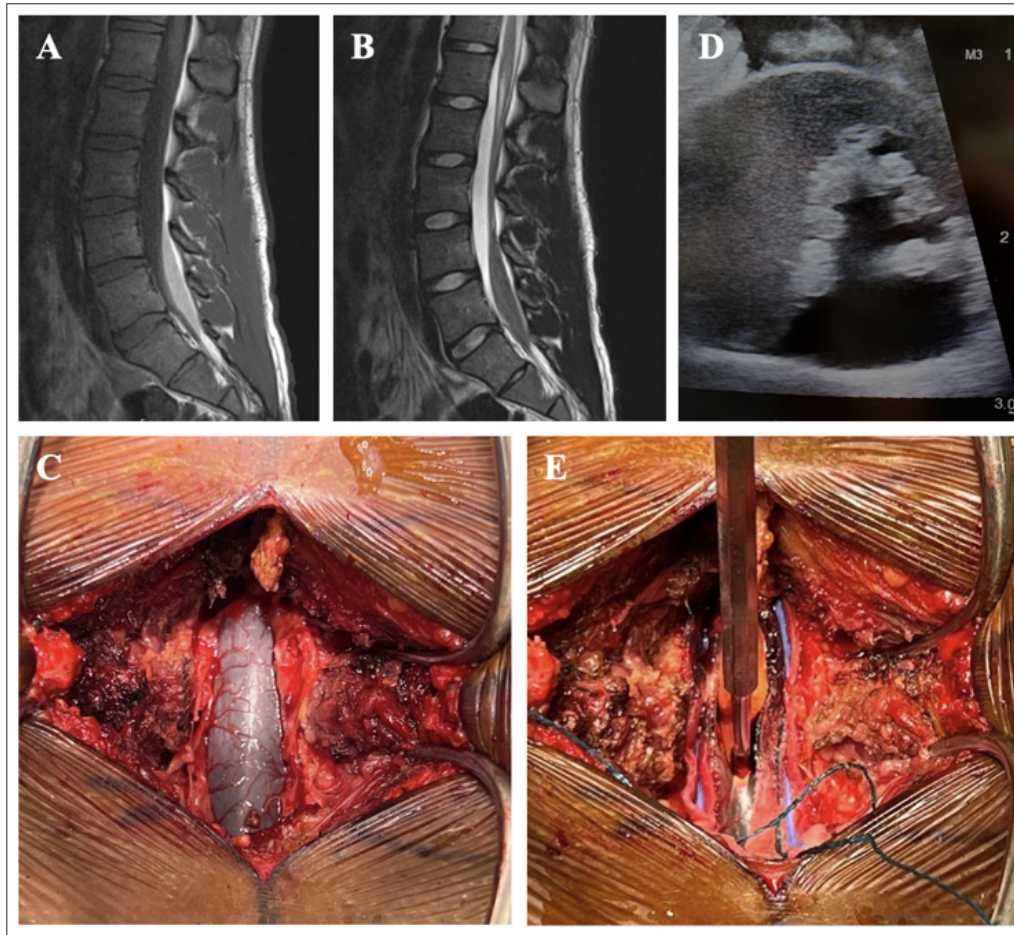


Figure 1: (A and B) MRI Demonstrated a T1 Hyperintense and T2 Hypointense Extramedullary Intrathecal Collection at the Dorsal aspect of the Thecal Sac Spanning from L3 to Midsacrum Leading to Severe Cauda Equina Compression. (C) Upon L4-5 Laminectomy the Discoloration Secondary to Underlying Subdural Hematoma is Evident. (D) The Separation of Arachnoid and Dura with Intervening Hematoma is Clear on Intraoperative Ultrasound. (E) The Dura was Opened with care to Maintain Arachnoid Plane to Protect Neural Elements and Mitigate Risk for CSF Leak.

Acknowledgments

The authors would like to acknowledge the patient who allowed their data to facilitate greater understanding of traumatic lumbar subdural hematomas and its management.

Funding

This study did not receive any funding or financial support.

Disclosures

The authors have no personal, financial, or institutional interests in any of the drugs, materials, or devices described in this manuscript.

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