

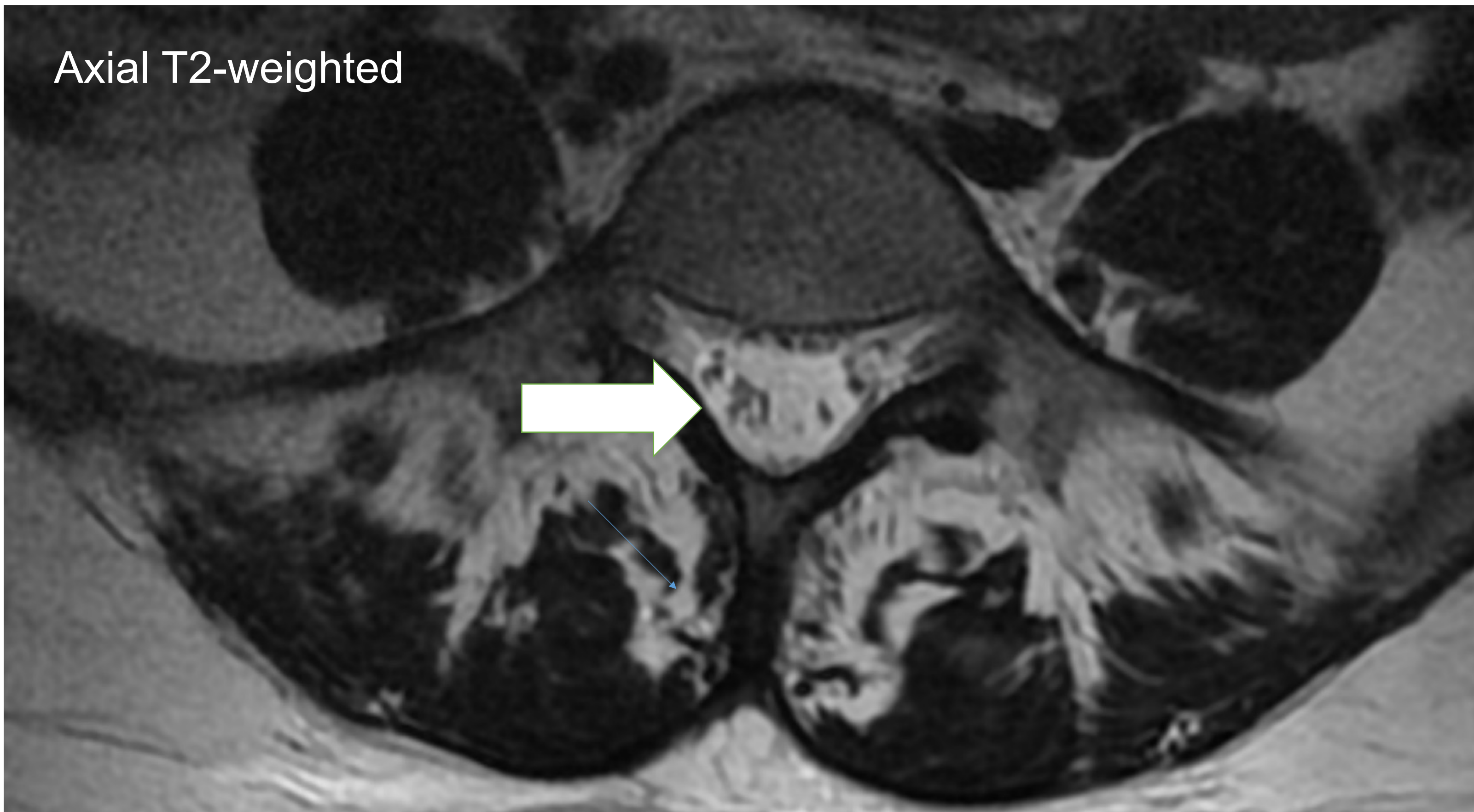
Arachnoiditis After Inadvertent Dural Puncture Requiring Epidural Blood Patch

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Introduction

Arachnoiditis can result from chemical contamination, local anesthetics, or blood breakdown¹. It is a known but rare complication of epidural blood patches. Its diagnosis is complicated by varying symptoms, but it has been defined as back and leg pain that increases with activity, an abnormal neurological examination, and MRI changes consistent with the disease. Only eight other cases of post-epidural blood patch arachnoiditis have been reported². There are few treatment options for arachnoiditis, and the most severe cases are likely to develop lasting disabilities.



Discussion

This patient's intrathecal space had evidence of blood and clumping of the cauda equina. The blood could have been from the initial dural puncture, but more likely the epidural blood patch. Persistent, worsening back pain after an epidural blood patch, accompanied by neurologic symptoms, should warrant imaging. While intravenous methylprednisolone followed by oral prednisone was only effective in one of the eight cases reported previously², in this patient, she did have a resolution of neurologic symptoms but continued with persistent pain six months post blood patch.

References

- ¹ Rice, I et al. Obstetric epidurals and chronic adhesive arachnoiditis. British Journal of Anaesthesia. 2004 Jan; 92 (1): 109–120.
- ²Villani LA, Digre KB, Cortez MM, Bokar C, Rassner UA, Ozudogru SN. Arachnoiditis, a complication of epidural blood patch for the treatment of low-pressure headache: A case report and systematic review. Headache. 2021 Feb;61(2):244-252.

Case

38 yo G2P0010 was induced at 39.3 weeks with a velamentous cord insertion. A CSE was attempted at L4/L5 using loss of resistance to air, but an inadvertent dural puncture occurred. The CSE was reattempted at L3/L4 using loss of resistance to air. She complained of a severe frontal headache immediately.

She was delivered by cesarean section for arrest of dilation. On POD #1, her headache worsened, and she agreed to a blood patch. The blood patch was performed at L4/L5 using loss of resistance to air. 22mL of autologous blood was injected. She was ambulating without any headache that evening and was discharged home.

On POD # 9, she returned to the ED with severe pain, weakness, and difficulty urinating. An MRI of the lumbar spine demonstrated the cauda equina nerve roots clumping with mild enhancement. A small T2 hypointense material layered within the thecal sac, reflecting sequellae of prior blood patch and trace post-procedure blood. Neurology observed coccygeal numbness and a significant post-void residual bladder volume, diagnosing her with inflammatory arachnoiditis with radiculopathy. She was given a dose of IV solumedrol, followed by prednisone for six days. Her neurologic symptoms resolved entirely, but on POD # 24, Neurology started gabapentin for worsening radicular pain. At six months post-partum, she continued to have daily back pain requiring gabapentin.