

Celiac Plexus Block and Spinal Cord Ischemia: A Case Report of Suspected Adamkiewicz Artery Vasospasm

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INTRODUCTION

Celiac plexus block (CPB) is a well-established technique for managing upper abdominal pain. While generally safe, rare serious complications such as spinal cord ischemia and paraplegia have been reported. The artery of Adamkiewicz (AKA), which supplies the thoracolumbar spinal cord, lies near the CPB target zone and may be affected by injury, vasospasm, or embolism. We present a case of transient bilateral lower extremity weakness and sensory loss following CPB, likely due to AKA vasospasm.

METHODS

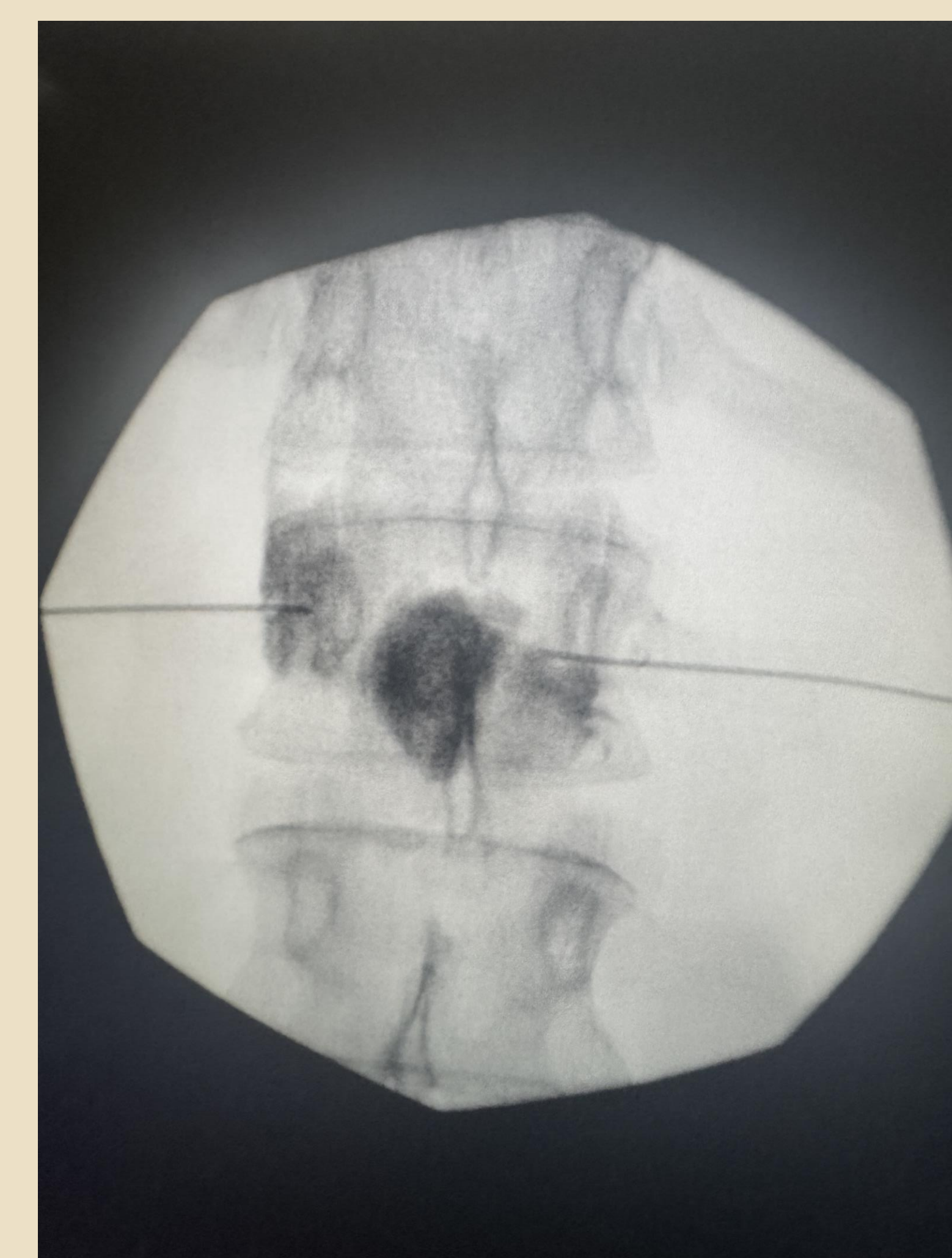
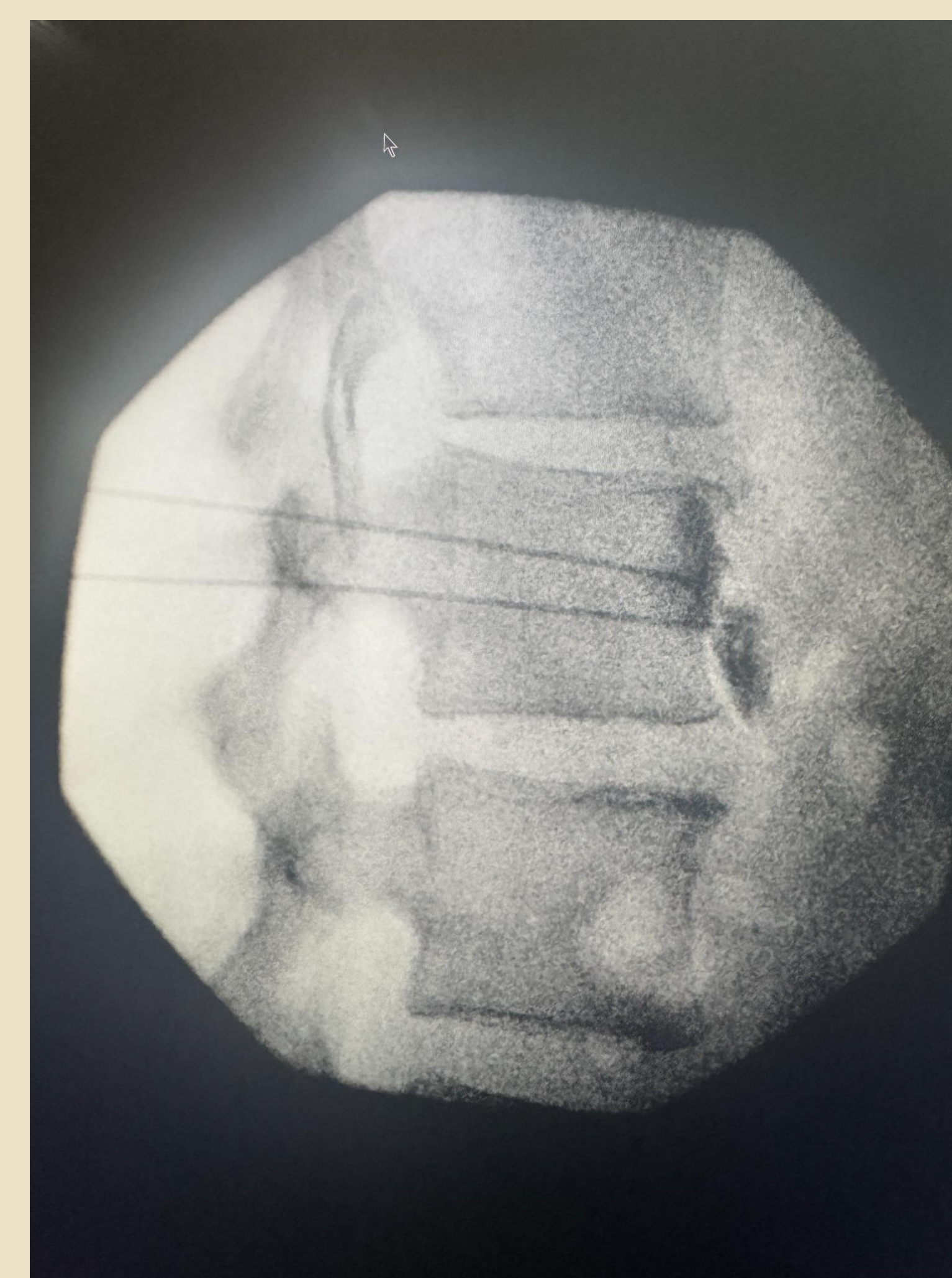
A 47-year-old female with a history of bladder cancer, chronic abdominal pain, and multiple comorbidities underwent repeat fluoroscopy-guided bilateral CPB for cancer-related abdominal pain under moderate sedation. Following written informed consent and procedural timeout, moderate sedation was administered. CPB was performed at the L1 level using a bilateral posterior paravertebral approach. Initial needle placement on the right was positive for heme; the needle was advanced slightly, and subsequent aspiration was negative bilaterally for blood and cerebrospinal fluid. Isovue dye injection showed contrast flow in the region consistent with the celiac plexus bilaterally without vascular uptake. Then, 10 cc of 0.5% ropivacaine was injected per side, with negative aspiration every 2 cc. The patient tolerated the procedure well, and vital signs remained stable.

CASE AND RESULTS

As the patient was transferring off the procedure table, she reported bilateral lower extremity weakness. Further evaluation revealed sensory loss to touch, pinprick, and temperature, with preserved proprioception. Symptoms resolved spontaneously within approximately 60 minutes, and no residual neurologic deficits were noted. Given the acute onset, bilateral presentation, and full resolution of symptoms,

the most likely etiology was transient spinal cord ischemia due to vasospasm of the artery of Adamkiewicz. No vascular uptake was observed during contrast injection, and the procedure was otherwise uneventful. Notably, the patient had experienced a similar episode four years earlier following a right-sided only approach to the celiac plexus. Despite this history, she elected to continue undergoing the procedure due to the significant and consistent pain relief and functional improvement it provided. A prior left-sided only approach had failed to offer

adequate relief. Risks, including the potential for neurologic complications, were discussed thoroughly before each procedure, and informed consent was obtained. The patient's symptoms were monitored closely post-procedure, and no further interventions were required. This case highlights the importance of recognizing rare but serious complications of CPB and the value of shared decision-making in managing complex cancer-related pain



DISCUSSION

Spinal cord ischemia after CPB is a rare but serious complication. The artery of Adamkiewicz, typically arising from T8 to L2, may be affected by trauma, intra-arterial injection, or vasospasm. Risk factors include anatomic variation, lack of contrast use, high injection pressure, and neurolytic agents. In our case, contrast and fluoroscopy were used, but heme-positive aspiration suggested vascular proximity. Fortunately, the patient experienced transient symptoms with full neurologic recovery.

CONCLUSION

CPB can rarely cause transient spinal cord ischemia via Adamkiewicz artery vasospasm — prompt recognition and monitoring can prevent permanent injury.

CONSENT

Patient provided informed consent for case report submission.

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