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Introduction

Autonomic dysreflexia (AD) is a potentially life-threatening complication of spinal cord injury, most commonly occurring in patients with lesions at or above the T6 level. It results from an exaggerated sympathetic response to stimuli below the level of injury and is characterized by acute severe hypertension accompanied by headache, diaphoresis, facial flushing, nausea, bradycardia, and visual disturbances. If unrecognized, sustained hypertension may cause complications such as intracranial hemorrhage or cardiac arrhythmia. Gastric perforation is a surgical emergency typically presenting with acute abdominal pain, peritoneal signs, fever, and leukocytosis. In patients with high cervical lesions, however, impaired sensory pathways may mask symptoms and delay diagnosis. We report a rare case of AD presenting as isolated persistent hypertension in a patient with high cervical myelopathy, in whom gastric perforation was identified as the precipitating cause despite the absence of typical abdominal or dysautonomic features.

Case Report

A 68-year-old woman with a history of subtotal gastrectomy for gastric cancer in 2014 was admitted in September 2022 with progressive limb paralysis. Magnetic resonance imaging demonstrated transverse myelopathy at a high cervical level (Fig. 1). She was classified as American Spinal Injury Association Impairment Scale (AIS) grade A with a neurological level of injury at C2 and required continuous mechanical ventilation via tracheostomy. She had been taking 10 mg of oral prednisolone daily. In February 2023, she developed recurrent vomiting and was diagnosed with small bowel obstruction, for which laparoscopic exploration was performed. In early March 2023, her systolic blood pressure persistently exceeded 160 mmHg, while other vital signs remained stable. She had no typical features of AD, including headache, flushing, diaphoresis, or bradycardia. Bladder drainage and bowel care were maintained, and no clear noxious stimulus was identified. She remained afebrile, and laboratory findings were unremarkable also. Antihypertensive therapy provided only transient control, and hypertension persisted for several days. Abdominal computed tomography revealed perforation of the posterior gastric wall with free intraperitoneal air (Fig. 2). Emergency surgery was performed, after which her blood pressure normalized without further antihypertensive therapy.



Fig. 1. T2-weighted sagittal MRI of the cervical spine demonstrating transverse myelopathy below the cervicomedullary junction.

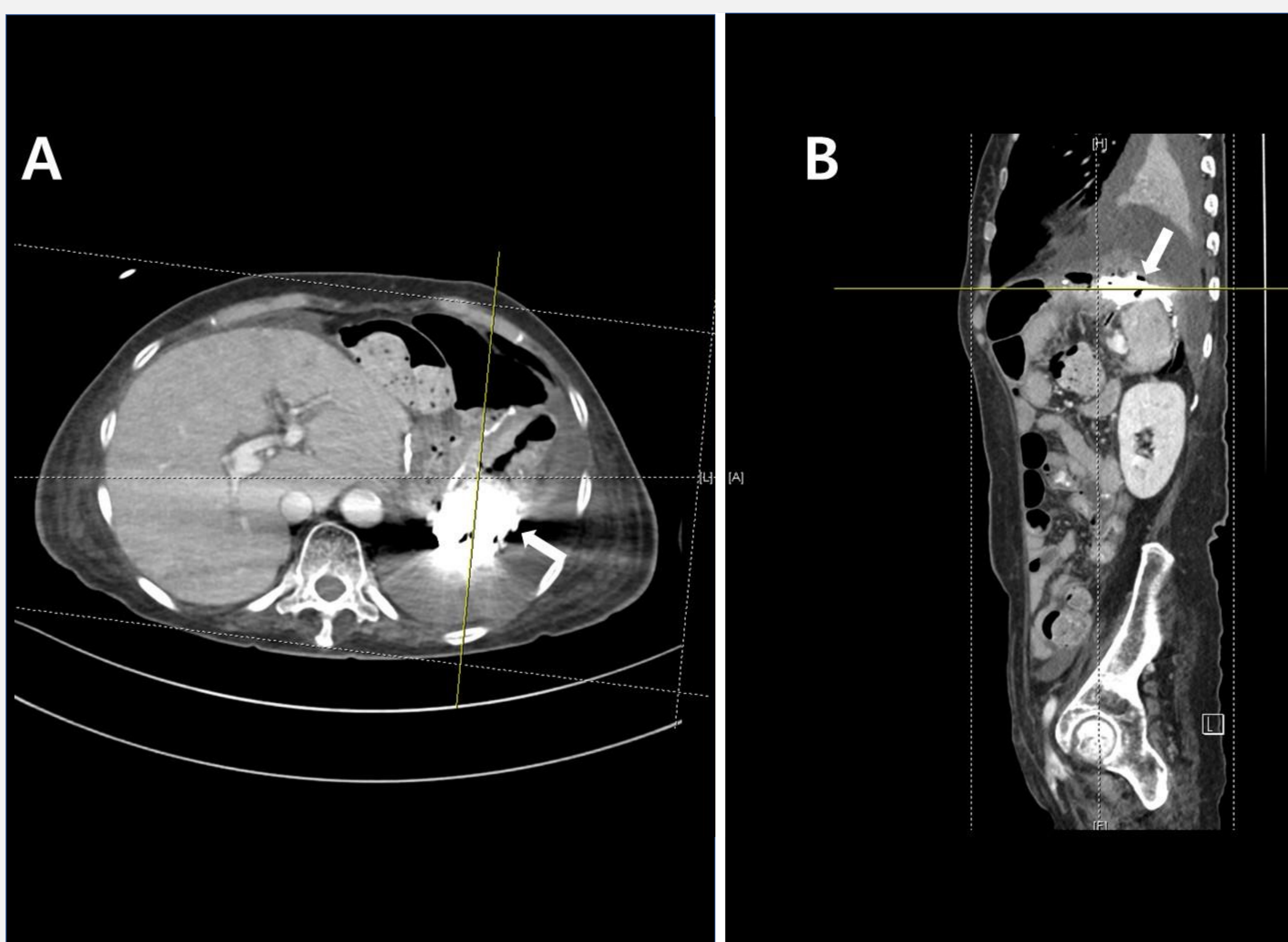


Fig. 2. An abdominal CT image showing findings of gastric perforation. The contrast agent used for swallowing function evaluation is observed to have leaked into the peritoneal space through the perforation (white arrow). (A) axial and (B) sagittal images.

Conclusion

This case underscores the need to consider autonomic dysreflexia in patients with high cervical myelopathy who develop unexplained hypertension, even without classical symptoms. Severe intra-abdominal pathology may remain clinically silent because of impaired sensory transmission. Isolated hypertension may be the sole manifestation of AD and may delay recognition of life-threatening conditions such as gastric perforation. Prompt evaluation for occult noxious stimuli is essential.