# Migrating flank pain: mitigating disaster: a case of superior mesenteric artery dissection

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**Introduction:**
Spontaneous isolated superior mesenteric artery dissection is a rare vascular event with an incidence rate of 0.06%.The increasing use of diagnostic imaging studies - computed tomography angiography or magnetic resonance angiography - has resulted in its early recognition and treatment. Though it is a rare cause of acute abdomen, it could be potentially fatal and should be recognized early in the ED after excluding other common causes, as delay in treatment can lead to life-threatening complications.
**Case Presentation:**
We present a 63-year-old man with a past medical history of hypertension who presented to the ED with a sudden onset of bilateral flank pain, initially associated with giddiness, sweating, and an episode of vomiting. Later, the pain started radiating to the periumbilical region. He also reported burning micturition and increased frequency of urination from the past 2 days.
Upon arrival to the ED, the patient was in severe pain with a pain score of 9/10, with a blood pressure of 170/100. His physical examination did not reveal any pulse deficits or focal neurological deficits. Blood gas revealed elevated lactates.
In view of initial differentials of renal calculi or pyelonephritis, initially a CT KUB was done which revealed a crescentic hyperdense wall thickening of the abdominal aorta, but there was no evidence of urolithiasis/obstructive uropathy. Hence, in view of the above findings, a CT abdomen angiogram was done which revealed a dissection of the superior mesenteric artery from its origin with intimal flap extending for a length of ~7.5 mm, without features of mesenteric ischemia.
Initial management included bowel rest, intravenous fluid therapy, analgesia using IV opioids, and IV labetalol for blood pressure control. The patient was successfully treated conservatively with anticoagulation - low molecular weight heparin and dual antiplatelet therapy.
**Discussion:**
Atherosclerosis, cystic medial necrosis, fibromuscular dysplasia, trauma, vasculitis, and hypertension have been postulated risk factors for SMA dissection.
Anticoagulant therapy is the main stay of conservative therapy.
This case demonstrates the variable presentation of the condition and the need to recognize it early to prevent complications such as bowel ischemia, necrosis, and peritonitis. Based on the clinical presentation, the management options include conservative, endovascular stenting, or open surgical repair.
**Conclusion:**
Spontaneous isolated SMA dissection is an uncommon condition that should be considered in the differentials of acute abdominal pain.
Advanced imaging studies can help in early detection, avoid misdiagnosis, provide early treatment, prevent further complications, and enhance patient survival.