Successful Endovascular Revascularization for SMA Malperfusion Secondary to Aortic Dissection

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The patient was a 75-year-old male. He underwent ascending aortic replacement and thrombectomy of the superior mesenteric artery (SMA) for Stanford type A aortic dissection. Postoperatively, the patient developed abdominal distension and elevated lactate levels, raising suspicion of ongoing mesenteric ischemia. Contrast-enhanced CT demonstrated severe narrowing of the true lumen in proximal SMA due to compression by the false lumen. Endovascular revascularization was therefore indicated. An anatomical variant was noted in which common hepatic artery (CHA) originated from SMA, requiring meticulous stent placement to avoid jailing CHA. Via right femoral approach with 8Fr JR4, a guide catheter was engaged to SMA. At first, We adopt a strategy of performing fenestration by balloon dilatation with a 4.0 mm Wolverine, but this strategy was unsuccessful. Under IVUS guidance, we then used a CROSSLEAD penetration wire to puncture the false lumen and attempted decompression with the stroke technique. Because the false lumen had already begun to thrombose and effective decompression could not be achieved, we ultimately deployed a 6.0/18 mm Express stent at SMA ostium. Post-procedural imaging confirmed improved antegrade flow and expansion of the true lumen. Lactate levels showed a decrease over time after the procedure. The patient showed a favorable clinical course without further signs of bowel ischemia. Return of bowel peristalsis and defecation were observed, and no surgical resection was needed. This case highlights the utility of timely endovascular intervention in preventing bowel necrosis in complicated aortic dissection with SMA involvement, especially in the presence of anatomical variants.

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