

# Endovascular Approach to Acute Superior Mesenteric Artery Thrombosis Associated with Progesterone Use

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We would like to report the case of superior mesenteric arterial thrombosis in a woman with a history of progesterone intake. A 51-year-old woman with a history of progesterone consumption for delayed menstrual cycles and menorrhagia, presented with severe abdominal pain, nausea, and a 1-day history of constipation. A contrast-enhanced computed tomography (CT) scan revealed near-total occlusion of 4.4 cm of the superior mesenteric artery from its origin (►Fig. 1).

Subsequently, Digital Subtraction Angiography (DSA) confirmed the thrombosis of the superior mesenteric artery (►Fig. 2A) and at the same setting, thromboaspiration was performed (►Fig. 2B). Residual-narrowing was noted in the post aspiration angiogram (►Fig. 2C). After 2 days of inten-

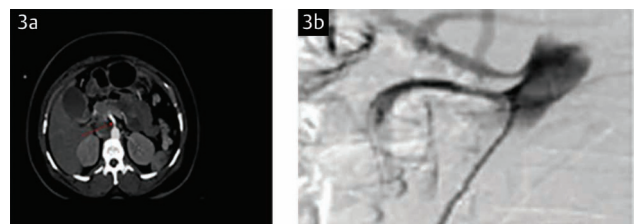
sive care unit (ICU) care, a repeat CT angiography showed recanalization of the superior mesenteric artery for a short segment with severe luminal narrowing by eccentric plaque, and non-enhancing bowel thinning was observed in the jejunum indicating ischemia, minimal ascites, and a bulky uterus (►Fig. 3A). The patient was put on antiplatelet drugs



**Fig. 1** CT scan axial arterial phase showing superior mesenteric artery thrombosis. Note the unenhanced lumen of the artery from its origin.



**Fig. 2** (A-C) DSA scans during and after interventional procedures in the patient. SMA thrombosis in a lateral view, scan before thromboaspiration (A). Post aspiration DSA scan showing partially restored blood flow (B). Residual stenosis is still noted post aspiration (C).



**Fig. 3** (A) CT axial and lateral views of abdominal angiogram showing improved flow through the superior mesenteric artery after thromboaspiration. However, residual narrowing is still noted at the SMA ostium (arrow) (A). DSA scan showing the arterial blood supply completely restored after successful stent placement (B).

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and a balloon expanding stent placement was performed without any complication (→**Fig. 3B**).

However, postprandial abdominal pain continued, this led to the termination of clopidogrel and scheduling of explorative laparotomy. A 10-cm distal ileal loop and 20-cm jejunal loop were found ischemic that were resected, and an end-to-end anastomosis was performed.

Several cases of mesenteric venous thrombosis occurring in patients using progesterone pills have been reported.<sup>1,2</sup> However, arterial thrombosis in patients using progesterone is uncommon. In our case, the woman was consuming progesterone and was scheduled for dilation and curettage when she developed SMA thrombosis.

Diagnosis of SMA thrombosis is difficult due to non-specific and vague symptoms.<sup>3</sup> Thrombotic occlusion of the artery is known to have an overall mortality rate of 77.4% compared with embolic occlusion that has a mortality rate of 54.1%.<sup>4</sup> Laparotomy may be done to have a second look at the condition of the intestine, identify viable loops, and resect the infarcted bowel. Arterial thrombosis in

patients on progesterone pills is rare, it is important to consider this in patients presenting with acute bowel ischemia.

#### Conflict of Interest

None declared.

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