Nonocclusive Mesenteric Ischemia Following Abdominal Aortic Aneurysm Repair

Shun-ichi Kawarai

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An 80-year-old man developed a high fever due to a urinary tract infection three weeks after undergoing emergent open repair for impending abdominal aortic aneurysm rupture. He subsequently complained of abdominal pain and remained hypotensive and unresponsive to fluids. Acidosis was noted, and the serum lactate level increased continuously. Selective superior mesenteric artery (SMA) angiography showed segmental narrowing of the SMA and its branches with poor visualization of the intestinal arcade and intramural vessels (Picture A), thus confirming the diagnosis of nonocclusive mesenteric ischemia (NOMI). Treatment with continuous transcatheter intra-arterial vasodilator infusion (prostaglandin analogues) relieved the patient’s symptoms within one hour, and angiography showed complete resolution the following day (Picture B).

NOMI is characterized by the presence of intestinal hypoperfusion caused by ongoing splanchnic vasoconstriction without demonstrable occlusion in the mesenteric vasculature. Given the high mortality rate (60-80%), it is important to accurately diagnose and promptly manage NOMI with transcatheter intra-arterial vasodilator infusion in order to achieve vasospasmolysis and prevent intestinal necrosis in the reversible stage (1).

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Reference