Gas in the superior mesenteric artery: severe malperfusion and bowel necrosis caused by acute aortic dissection

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A 51-year old lady was admitted for acute abdominal pain. Computed tomography showed acute type A aortic dissection with multiple malperfections of the vessels and gas in the superior mesenteric artery (Figs. 1 and 2, Supplementary Video 1). The patient underwent emergency aortic arch replacement; however, she died of massive bowel necrosis soon after surgery.

Supplementary material (Video 1) is available at EJCTS online.

Video 1: Multi-detector CT images. There was severe narrowing of the true lumen at the origin of the celiac trunk and the superior mesenteric artery.

Figure 1: Three-dimensional reconstruction of the computed tomography (CT) image showing type A dissection with severe stenosis of the celiac trunk, the superior mesenteric artery and both renal arteries. The right common iliac artery was occluded.
Figure 2: Enhanced CT views. There was gas inside the mesenteric artery (white arrow), which suggested severe transmural bowel necrosis. With this particular finding of the CT, the indication for aortic surgery should be considered carefully. Laparotomy or laparoscopy should be organized for checking the severity of the bowel condition.