

Endovascular Stent Grafting via the Left Radial Artery for a Spontaneous Isolated Dissecting Rupture of the Superior Mesenteric Artery

Ji Hyun Lee, MD, Sung Gyun Ahn, MD, and Junghan Yoon, MD

Division of Cardiology, Wonju College of Medicine, Yonsei University, Wonju, Korea

A 56-year-old man presented with abrupt onset epigastric and back pain for 4 hours. Computed tomography angiography (CTA) revealed a dissection at the proximal part of the superior mesenteric artery (SMA) without a limitation in distal flow or bowel ischemia (Fig. 1A). However, an 1-week follow-up CTA showed progression of the SMA dissection down to the distal jejunal branch (Fig. 1B). Thus, we decided to perform endovascular interventional treatment.

A 6-Fr introducer sheath was inserted into the left radial artery. A 6-Fr multi-purpose angiographic 1 guiding catheter (Cordis, Miami, FL, USA) was then used to pass a 0.014-inch floppy guidewire into the true lumen of the SMA. A subsequent angiography (Fig. 1C, arrow indicates dissecting inlet) and intravascular ultrasound (IVUS) examination (Fig. 1D, arrow indicates dissecting inlet) showed a huge communicating dissecting rupture at the proximal portion of the SMA. We confirmed blood flow to the false lumen through the dissecting inlet by IVUS Chroma-flow imaging (Fig. 1E, arrow indicates dissecting inlet). Two stent-grafts (Jostent®, Abbott Laboratories, Inc., Abbott Park, IL, USA) (3.5×19 mm followed by 3.5×16 mm) with overlap were deployed consecutively in the proximal SMA to cover the dissection. The follow-up CTA at 9 months (Fig. 1F)

showed good patency of the stent-grafts and restoration of the SMA true lumen. The patient remained asymptomatic for 12 months on 100 mg of aspirin daily.

There are some reports of isolated SMA dissection, particularly in the Asian population. The causes of an isolated SMA dissection are unknown, and treatment options vary and include surgery, endovascular treatment, or conservative management depending on the extent of dissection and associated complications.¹⁾²⁾ Chroma-flow imaging and IVUS were valuable to detect the SMA dissection inlet. The left radial artery is alternative vascular access for treating an SMA lesion, because it offers good alignment and proper back-up support by a guiding catheter.

References

1. Gobble RM, Brill ER, Rockman CB, et al. Endovascular treatment of spontaneous dissections of the superior mesenteric artery. *J Vasc Surg* 2009;50:1326-32.
2. Min SI, Yoon KC, Min SK, et al. Current strategy for the treatment of symptomatic spontaneous isolated dissection of superior mesenteric artery. *J Vasc Surg* 2011;54:461-6.

Received: August 5, 2011 / Accepted: August 25, 2011

Correspondence: Sung Gyun Ahn, MD, Division of Cardiology, Wonju College of Medicine, Yonsei University, 20 Ilsan-ro, Wonju 220-701, Korea
Tel: 82-33-741-0907, Fax: 82-33-741-1219, E-mail: sgahn@yonsei.ac.kr

• The authors have no financial conflicts of interest.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

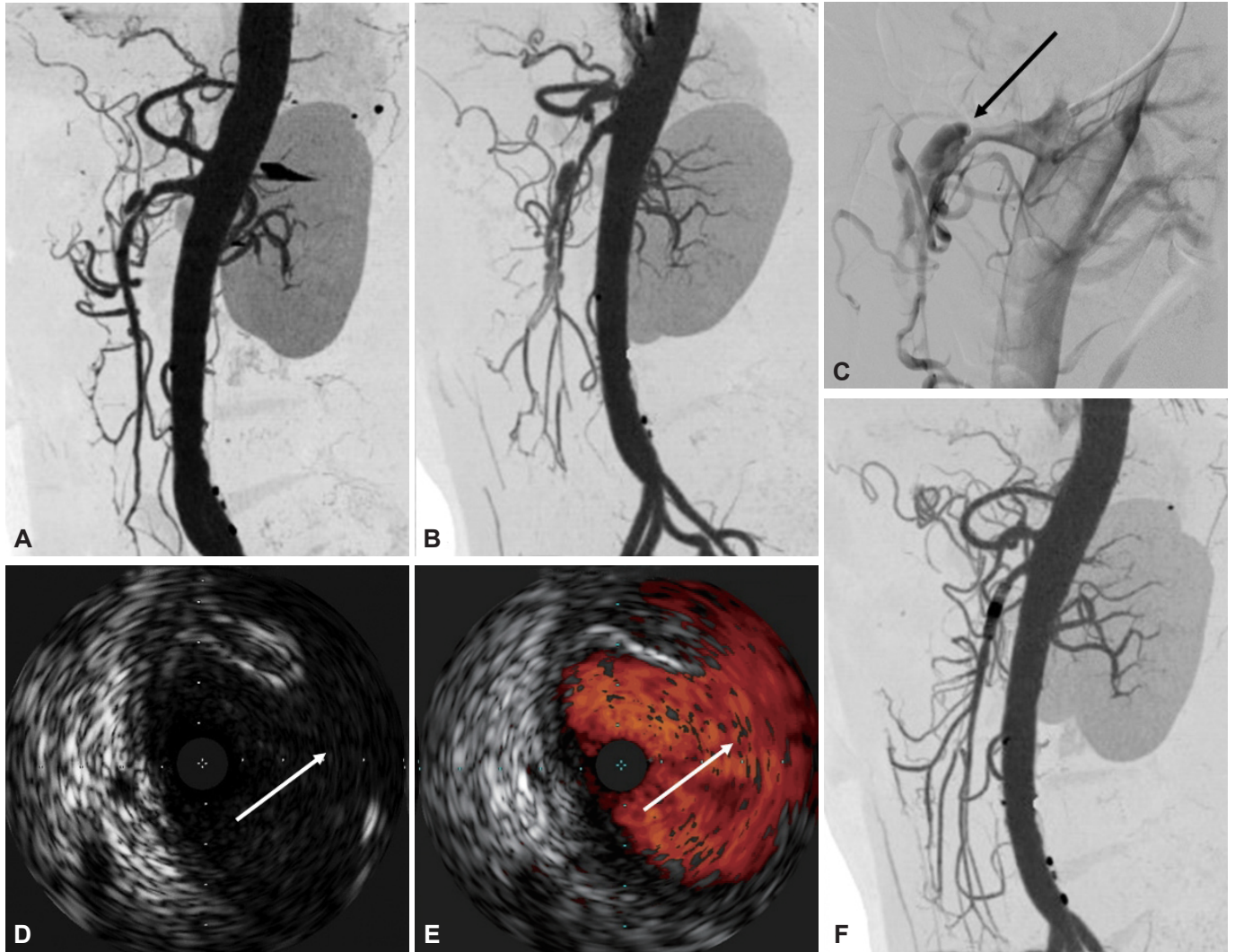


Fig. 1.