IMAGES IN THIS ISSUE
Medical Imaging

JKMS

http://dx.doi.org/10.3346/jkms.2016.31.9.1349 • J Korean Med Sci 2016; 31: 1349-1350

A Case of Spontaneous Isolated Dissection of Left Gastric Artery

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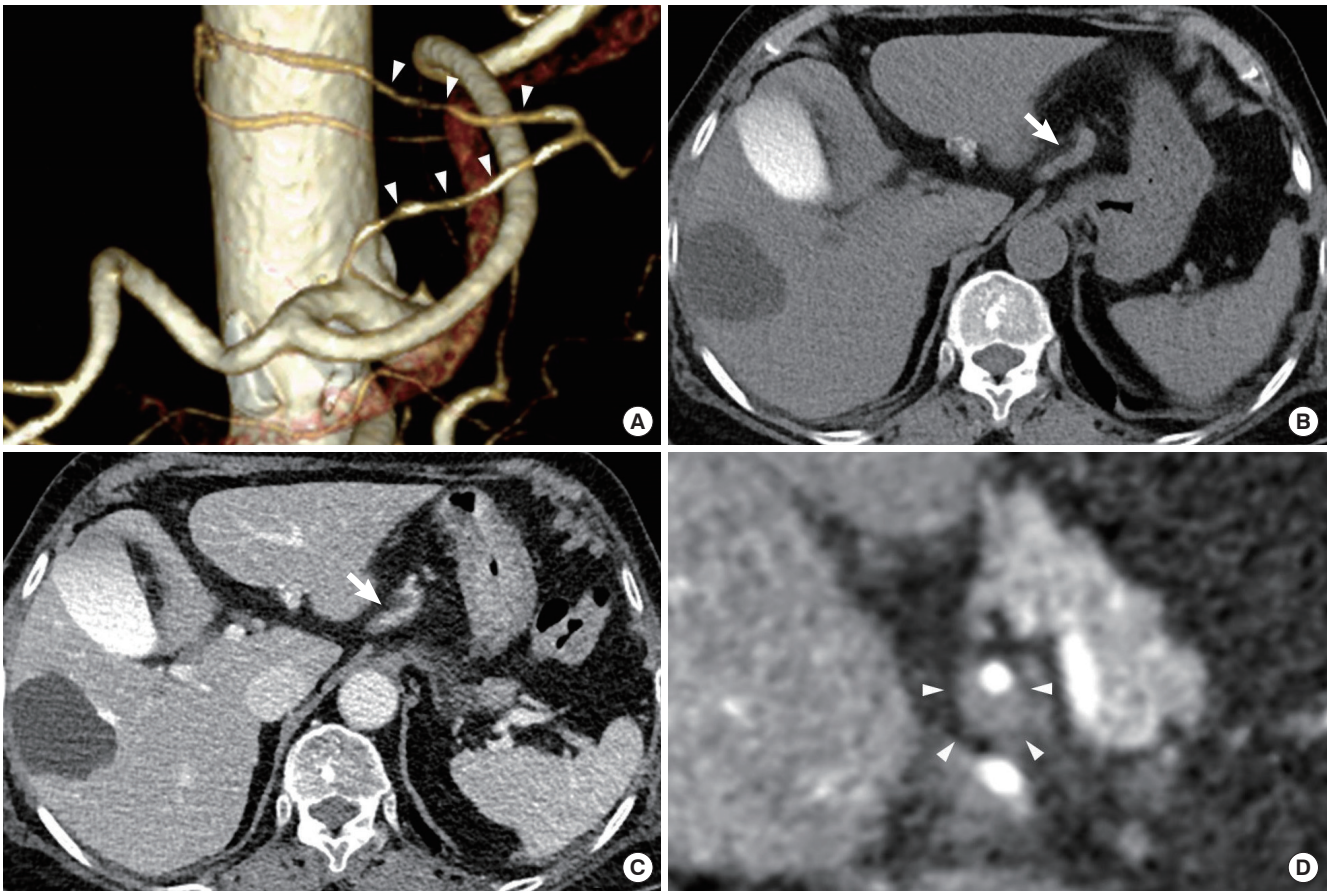

Fig. 1. Multidetector computed tomography (MDCT) angiography of a 77-year-old woman with sudden severe epigastic pain. (**A**) The three-dimensional volume rendering image shows anatomical variant of the replaced left hepatic artery arising from the left gastric artery (LGA) with diffuse irregular luminal narrowing (arrowheads). (**B**) The non-enhanced CT scan shows high density of thickened LGA (arrow), measuring 40 Hounsfield units. (**C**) The enhanced CT scan shows diffuse luminal irregularity of LGA (arrow) with associated fat stranding. (**D**) The curved multiplanar reformatted image shows eccentric wall thickening of LGA (arrowheads), representing dissection with acute intramural hematoma.

A 77-year-old woman was admitted to the emergency room due to sudden severe epigastric pain. Because she complained of very severe pain with 9-points on the numeric pain rating scale, the emergency physician suspected pain of vascular origin and computed tomography (CT) angiography was performed. The three-dimensional volume rendering (3-D VR) image revealed the anatomical variant of replaced left hepatic artery (LHA) arising from left gastric artery (LGA) (Fig. 1A). The diffuse irregular wall thickening of LGA with high attenuation, measuring 40 Hounsfield unit was noted on the non-enhanced phase (Fig. 1B). The irregular luminal narrowing through long segment of LGA and replaced LHA was noted on the arterial phase (Fig. 1C) and 3-D VR image (Fig. 1A). There was associated surrounding fat stranding. The curved multi-planar reformatted (MPR) image demonstrated the eccentric wall thickening (Fig. 1D), suggesting thrombosis in the false lumen. These CT findings were compatible with dissection of LGA. Therefore, the patient was diagnosed with spontaneous isolated dissection of LGA and

pISSN 1011-8934
eISSN 1598-6357

replaced LHA. She received conservative management and the symptoms subsided after 1 week of treatment.

A spontaneous dissection of a splanchnic artery is a rare disease entity. The superior mesenteric artery is the most frequently reported artery. However, the incidence is very low, approximately 0.06% (1). According to our web-based search results, only two cases presenting LGA dissection have been reported (2,3). In one case, the dissection involved multiple splanchnic arteries; LGA, common hepatic artery and multiple intra-hepatic arteries (2). In both cases, gastric artery aneurysms were developed, which were found in a ruptured state. The rupture of gastric artery aneurysm showed high mortality, up to 70% (4). On the other hand, to the best of our knowledge, the isolated LGA dissection without aneurysm formation has not been reported yet.

CT angiography has become the modality of choice for the patients with suspicious vascular-origin pain. As well as it is fast and noninvasive, it shows clear visualization of mesenteric vasculature with possible anatomical variants. Recent techniques of three-dimensional reconstruction allow us to accept the vascular anatomy intuitively. The intimal flap is pathognomonic finding of the dissection (5). However, the intimal flap is not always clearly visualized. The presence of thrombosis in the false lumen or eccentric mural thrombi is essential to diagnose the dissection in those cases (5). There are several image findings associated with dissection such as surrounding fat infiltration and development of aneurysm of involved arteries (5). With the advanced technology of CT angiography and knowledge of the image findings of splanchnic arterial dissection, the improved detection rate and diagnostic accuracy may be obtained in clinical medicine.

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http://dx.doi.org/10.3346/jkms.2016.31.9.1349