



Posterior inferior pancreaticoduodenal artery aneurysm rupture due to median arcuate ligament syndrome

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FIGURE 1.

CASE PRESENTATION

A 73-year-old woman experienced acute abdominal pain, nausea and vomiting during hospitalization for thalamic hemorrhage treatment. An emergent abdominal computed tomography scan revealed bloody ascites and hematoma in the pararenal extraperitoneal space. Vital signs were stable at the moment, however, three days later, the patient presented with hemorrhagic shock. She was transferred to our hospital for further evaluation and treatment. An emergent CT scan showed hematoma in the pararenal extraperitoneal space. A 3D-CT revealed stenosis of the root the celiac artery with a distal dilation (Fig. 1A; surrounded by a circle). Also, a digital subtraction angiography showed a spindle-shaped aneurysm was formed at the posterior inferior pancreaticoduodenal

artery (PIPDA) (Fig. 1B; Arrowhead). Median arcuate ligament syndrome complicated with PIPDA aneurysm rupture was confirmed in conjunction was diagnosed. The patient subsequently underwent a coil embolization of the aneurysm.

The cause of median arcuate ligament syndrome is the compression of celiac artery by medial arcuate ligament, which is connected to ventral side of vertebral body.^{1,3} This anatomical relationship sometimes leads to ischemia of organs supplied by the artery. Blood flow from the superior mesenteric artery rises to compensate for organ ischemia, and its bypass artery, PIPDA, is overloaded. This blood flow overload results in the formation of PIPDA aneurysms due to median arcuate ligament syndrome.¹⁻³ Rupture of aneurysm can be lethal, while

there is no evidence of relationship between the size of the aneurysm and frequency of rupture.² Endovascular treatment is the first choice for management of this condition.² Physicians should consider this condition in patients with vascular risk who complain with unexplained abdominal pain and retroperitoneal hemorrhage.

REFERENCES

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