Case 397

5. Secondary arterial dilatation secondary to median arcuate ligament syndrome

【Progress】

She received endoscopically surgical resection for residual cecum cancer based on designated schedules.

【Discussion】

Median arcuate ligament is a part of diaphragm and connects diaphragmatic crus. It surrounds the celiac axis with celiac nerve plexus. When median arcuate ligament descends inferiorly, it compresses celiac artery and celiac nerve plexus (1, 2). It is said that most people with descending median arcuate ligament are non-symptomatic, but some people experience abdominal pain after food ingestion, weight loss and abdomen murmur which are known as triads of median arcuate ligament syndrome (3).

Celiac artery stenosis associated with dilatations of collaterals such as anterior or posterior pancreatic arcade, is demonstrated on angiography, contrast-enhanced CT. Especially, concave compression from top of celiac artery on sagittal image is a characteristic figure for median arcuate ligament syndrome. It induces development of collaterals, leading formation of aneurysms of dilated pancreatic arcade artery. Increased blood flow gives stressful blood pressure to the collaterals, especially angled pancreas head arcade, leading formation of aneurysm and rupture (4-6). In our case, celiac artery stenosis concave stenosis from top associated with the dilatation of dorsal pancreatic artery was depicted on arterial phase of contrast-enhanced CT.

Peri pancreas hematoma is known to be caused by pseudoaneurysm after pancreatitis, trauma, surgical partial pancreas resection in 50-90% rather than true aneurysm. True peri pancreas aneurysms are formed secondary to celiac axis stenosis. Peri pancreatic aneurysms are treated by interventional catheter treatment with coil packing associated with or without stent placement (4-7). The application for catheter treatment is pseudoaneurysms irrespective of aneurysm sizes and true aneurysm 2cm or greater in size (7).

Median arcuate ligament syndrome is treated with endoscopically surgical separation or division of median arcuate ligament associated with resection of celiac nerve plexus. The syndrome can be treated with stent placement or balloon inflation for celiac artery stenosis.

【Summary】

We presented a seventy-four-year-old female for additional radical endoscopically surgical resection for residual cecum cancer following intraluminal endoscopic resection. Preoperative contrast-enhanced CT depicted an enhanced cecum mural thickening associated with unusual dilatation of dorsal pancreatic artery. It is borne in mind that a typical symptom of median arcuate ligament syndrome is abdominal pain after ingestion of food which is caused by that mediate arcuate ligament descends and compresses celiac axis and celiac nerve plexus. It induces dilatations of pancreas arcade artery and/or dorsal pancreatic artery.

【References】

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