Case 378

4. Walled-off necrosis

【Progress】

He received drainage via the gastric route under endoscopic guidance.

【Discussion】

Transverse mesocolon is a connective part between pancreas and transverse colon which carries middle colic branch arteries and portal veins (1). Pancreatitis often infiltrates to transverse colon, and then, presence and absence of infiltration to transverse mesocolon is used for grading of pancreatitis. Contrast-enhanced CT is superior to non-enhanced CT for pancreatitis grading (2-4).

Acute pancreatitis is diagnosed with medical symptoms of abdominal pain, three times and more of amylase or lipase values, and typical CT findings (1).

Acute pancreatitis is prudently assessed: early phase of within 1 week and late phase of after 1 week. The momentum of pancreatitis is various: transient or consistent. Severity of pancreatitis is graded into mild (no organ failure), moderate (organ failure less than 48 hours) and severe (organ failure longer than 48 hours) (2, 3).

Abdomen CT findings in the early term tend to underestimate momentum of pancreatitis (4, 5). Although fluid retention surrounding pancreas is mild, it occurs that progressive organ failure due to systemic inflammatory response causes early death.

Pancreatitis is limited to interstitial pancreatitis with fluid collection in some cases, and it expands not only to interstitial pancreatitis but also to associate with pancreas necrosis. Fluids including fluids and edema are called peripancreatic fluids collection, and those including fluids associated pancreatic necrotic parts are called acute necrotic collection or acute necrotic pancreatitis (2, 3).

The image of interstitial fluids collection without pancreas necrosis consistent of more than 4 weeks is termed as pseudocyst, while that with pancreas necrosis of more than 4 weeks is termed walled-off necrosis (WON) (4, 5).

WON is usually applicable to drainage treatment, although pseudocysts can be served at times (6). Enhanced CT is sometimes difficult to differentiate WON from pseudocyst because of the similar image. Meanwhile, MRI can differentiate between them because necrotic tissues have different signal intensity from pseudocysts; necrotic tissues of WON, low signal intensity on both of T2WI and T1WI; fluids of pseudocyst, low signal intensity on T1WI and high signal intensity on T2WI (4, 5).

Drainage contents for WON include necrotic tissues and fluids, inducing to prevent from abscess formation (6). Necrotic tissues of WON can be sources of infection focus or abscess. Infected pancreatitis causes systemic inflammation response, sepsis, organ failure, leading poor prognosis (2, 3). The early managements for acute pancreatitis are crucial for impeding infectious consistent inflammation.

【Summary】

We presented a fifty-nine-year-old male presented for abdominal pain and was diagnosed with acute pancreatitis. CT twenty-five days and forty-one days later depicted encapsulated fluids, indicative of pseudocysts or walled-off necrosis. Drainage via gastric route revealed fluids and necrotic tissues, compatible with WOF. It is borne in mind that the terms change before and after 4 months; from acute interstitial pancreatitis to pseudocyst: acute necrosis pancreatitis to walled-off necrosis.

【References】

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2025.3.14