Predictive value of CT scans and clinical findings for the need of endoscopic necrosectomy in walled-off necrosis (WON) from pancreatitis

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Background & goals: Choosing the best treatment option at the optimal point of time for patients with walled-off necrosis (WON) is crucial. Standard diagnosis is made by contrast-enhanced computed tomography (ceCT). Sensitivity of ceCT for infected WON is low and misdiagnosis is frequent. We aimed to identify imaging parameters and clinical findings predicting the need of necrosectomy in patients with WON compared to pancreatic pseudocyst.

Study: All patients at a tertiary center with endoscopically diagnosed WON and pseudocyst were retrospectively identified. Post-hoc analysis of pre-interventional ceCT was performed for factors predicting the need of necrosectomy. Demographic data, treatment, outcome and risk factors were compared among the indicated groups.

Results: 65 patients were included in this study. 40 patients (61.5%) were diagnosed with pseudocyst, 25 patients (38.5%) with WON. Diabetes and arterial hypertension were significantly more frequent in patients with WON (p=0.023 and p=0.01, respectively). Patients with WON mostly had acute pancreatitis with biliary cause compared to more chronic pancreatitis and toxic cause in pseudocyst group (p=0.002 and p=0.004, respectively). Logistic regression revealed diabetes as a risk factor for WON. CT scans revealed 4.62% (n=3) patients as false positive and 24.6% (n=16) as false negative findings for WON. In a logistic regression model reduced perfusion and detection of solid findings were independent risk factors for WON.

Conclusion: CT scans are of low diagnostic yield when needed to predict treatment of patients with pancreatic cysts. Reduced pancreatic perfusion and solid findings seem to be a risk factor for WON while patients with diabetes seem to be at higher risk of developing WON.