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11. DUODENAL COMPLICATIONS IN NECROTIZING PANCREATITIS: CHALLENGES OF AN OVERLOOKED CONDITION

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Background: Duodenal complications of necrotizing pancreatitis are challenging and understudied. We therefore sought to characterize the demographics and clinical course of NP patients with duodenal complications.

Methods: All NP patients treated between 2005 and 2018 at a single tertiary center were captured in a prospectively maintained database. Patients developing duodenal complications during the course of NP were identified; univariate analysis compared patients without and with duodenal complications.

Results: 687 NP patients were analyzed. Duodenal complications developed in 40 (6%) patients; 29 (4%) patients developed a duodenal stricture and 11 (2%) patients developed a duodenal perforation or fistula. One patient developed both a duodenal fistula and stricture. Duodenal fistula was diagnosed at 90 ± 31 days from NP; duodenal stricture was diagnosed 296 ± 374 days from NP. Sex, etiology of pancreatitis, age, and comorbidities were similar among patients without and with duodenal complications. NP patients with duodenal complications had increased computed tomography severity index (CTSI), degree of glandular necrosis, organ failure, infected necrosis, and disease duration (Table). Surgical management of duodenal complications was required in 19 (48%) patients. A combination of endoscopic and percutaneous procedures was applied to 19 (48%). Two (5%) patients died of NP prior to planned operative intervention. When compared, mortality from NP was similar in those without (n = 56, 9%) and with duodenal complications (n = 4, 10%).

Conclusion: Duodenal fistula and stricture complicate 6% of all necrotizing pancreatitis patients. Half of these duodenal problems required operative correction, and half were managed successfully with endoscopic and percutaneous therapy. Mortality from necrotizing pancreatitis was similar in those patients without and with duodenal complications.

	Control (n = 647)	Duodenal Complication (n = 40)	*P*
Demographics			
Male sex	420 (65%)	29 (73%)	0.3
Etiology			0.1
Biliary	316 (49%)	17 (43%)	
Alcohol	138 (21%)	5 (13%)	
Other	193 (30%)	18 (45%)	
Age*	52.2 ± 15.6 years	53.1 ± 15.7 years	0.7
Hypertension	388 (60%)	25 (63%)	0.8
Obesity	324 (50%)	22 (55%)	0.5
Tobacco Use	270 (42%)	12 (30%)	0.1
Diabetes Mellitus	163 (25%)	10 (25%)	1.0
Clinical Course			
CT Severity Index*	6.6 ± 2.0	7.3 ± 2.5	0.049
Degree of Gland Necrosis			0.003
None	91 (14%)	7 (18%)	
<30%	165 (26%)	8 (20%)	
30-50%	236 (36%)	6 (15%)	
>50%	155 (24%)	19 (48%)	
Pancreatic Head Necrosis	276 (43%)	21 (53%)	0.2
Organ Failure	223 (34%)	23 (58%)	0.003
Respiratory	199 (31%)	21 (53%)	0.004
Renal	138 (21%)	15 (38%)	0.02
Cardiovascular	89 (14%)	9 (23%)	0.1
Splanchnic Vein Thrombosis	276 (43%)	22 (55%)	0.2
Infected Necrosis	333 (51%)	34 (85%)	<0.0001
Disease Duration*	6.3 ± 5.5 months	10.6 ± 10.3 months	<0.0001
Mortality	56 (9%)	4 (10%)	0.8

Abbreviations: CT – computed tomography
*Continuous variables reported as mean value with standard deviation