

Supplementary Online Content

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eTable 1. Crude Baseline Characteristics

eTable 2. Status Based on APACHE II Category

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Crude Baseline Characteristics*			
Characteristics	Catheter Drainage (n=227)	Relaparotomy (n=82)	P Value
Age – yr (median (IQR))	65 (59-72)	66 (57-71)	0.65
Male sex – no. (%)	147 (65)	62 (76)	0.07
Coexisting condition – no. (%)			
Cardiovascular disease	60 (26)	32 (39)	0.03
Pulmonary disease	14 (6)	9 (11)	0.16
Chronic renal insufficiency	4 (2)	2 (2)	0.66*
History of upper abdominal surgery	51 (23)	19 (23)	0.90
ASA class on admission (%)			0.006
I: healthy status	50 (22)	14 (17)	
II: mild systemic disease	150 (66)	46 (56)	
III: severe systemic disease	27 (12)	22 (27)	
Body-mass index (mean ±SD) †	26.4±3.6	26.7±4.5	0.47
Weight loss - no. (%)	113/222 (51)	42/77 (56)	0.58
Quantity – kg (median (IQR)) ‡	2 (0-6)	4 (0-8)	0.42
Preoperative ERCP §			0.16
Without intervention	43 (19)	8 (10)	
With stenting/papillotomy	122 (54)	45 (55)	
Preoperative cholestasis – no. (%)	165 (73)	56 (68)	0.45
Operating characteristics			
Pylorus preserving pancreatoduodenectomy	183 (81)	64 (78)	0.62
Reconstruction portal vein	7/220 (3)	3/81 (4)	0.73*
Additional organ resection	10/220 (5)	10/81 (12)	0.01
Abdominal drain	225 (99)	79 (96)	0.12*
Pathology malignant – no. (%)	210 (93)	71 (87)	0.11
Disease severity 24h before first intervention			
APACHE II (median (IQR)) #	8 (6-10)	10 (7-14)	<0.001
SIRS – no. (%)**	99 (44)	47 (58)	0.03
Organ failure – no. (%)	27 (12)	39 (48)	<0.001
Single-organ failure – no. (%)	8 (18)	26 (32)	<0.001
Multiple-organ failure – no. (%)	9/226 (4)	13 (16)	<0.001
Previous re-intervention – no. (%)	10 (4)	12 (15)	0.002

* Normal distributed values are presented as mean ± SD, ASA denotes American Society of Anaesthesiologists; P-values denoted with * are obtained using the Fishers exact Test

† Body-mass index, weight in kilograms divided by the square of the height in meters; out of 212 patients in drainage group and 80 patients in relaparotomy group

‡ Crude data calculated over 220 patients in drainage group and 74 patients in relaparotomy group

§ Crude data calculated over 226 patients in drainage group and 82 patients in relaparotomy group

|| Defined as jaundice, elevated bilirubin and/or need for preoperative biliary drainage

¶ Crude data calculated over 220 patients in drainage group and 78 patients in relaparotomy group

Acute Physiology and Chronic Health Evaluation (APACHE II) scale from 0-71, higher scores indicating more severe disease

** Systemic inflammatory response syndrome as defined by the American College of Chest Physicians and the Society of Critical Care Medicine

eTable 2. Status Based on APACHE II Category	APACHE II <9				APACHE II 9-12				APACHE II >12			
	Catheter Drainage (n=136)	Relaparotomy (n=33)	RR (95%CI)	P Value	Catheter drainage (n=74)	Relaparotomy (n=19)	RR (95%CI)	P Value	Catheter Drainage (n=17)	Relaparotomy (n=28)	RR (95%CI)	P Value
Death – no. (%)	14 (10)	8 (24)	0.43 (0.19-0.93)	0.044*	7 (10)	6 (32)	0.30 (0.11-0.79)	0.023*	4 (24)	16 (57)	0.41 (0.16-1.03)	0.035*
Secondary endpoints												
Major complications after first intervention for pancreatic fistula – no. (%)												
New-onset single-organ failure	27 (20)	16 (49)	0.41 (0.25-0.67)	0.001	17 (23)	6 (31)	0.73 (0.33-1.59)	0.552*	2 (12)	10 (36)	0.33 (0.08-1.33)	0.096*
New-onset multiple-organ failure	11 (8)	11 (33)	0.24 (0.12-0.51)	0.001*	12 (16)	9 (47)	0.34 (0.17-0.70)	0.011*	2 (12)	12 (43)	0.28 (0.07-1.08)	0.046*
Post pancreatectomy haemorrhage †	18 (13)	6 (18)	0.73 (0.31-1.69)	0.578*	19 (26)	2 (11)	2.44 (0.62-9.57)	0.224*	3 (18)	9 (32)	0.55 (0.17-1.75)	0.488*
Gastroenterostomy leakage †	2 (2)	2 (6)	0.24 (0.04-1.66)	0.172*	2 (3)	0 (0)	1.35 (0.06-27.03)	>0.99*	1 (6)	0 (0)	4.83 (0.20-112.35)	0.378*
Bile leakage †	10 (7)	3 (9)	0.81 (0.24-2.78)	0.720*	6 (8)	1 (5)	1.54 (0.20-12.04)	>0.99*	1 (6)	5 (18)	0.33 (0.04-2.59)	0.385*
Long term complications – no. (%)												
New-onset diabetes ‡	18/122 (15)	13/31 (42)	0.35 (0.19-0.64)	0.001	7/69 (10)	7/19 (37)	0.28 (0.11-0.69)	0.010*	3/16 (19)	7/19 (37)	0.51 (0.16-1.65)	0.285*
New-onset exocrine pancreatic insufficiency ‡	48/118 (41)	16/28 (57)	0.71 (0.48-1.05)	0.114	31/65 (47)	7/18 (39)	1.23 (0.65-2.31)	0.507	6/15 (40)	11/16 (69)	0.58 (0.29-1.17)	0.108
Interventions												
Completion pancreatectomy – no. (%)	4 (3)	10 (30)	0.10 (0.03-0.29)	<0.001*	2 (3)	5 (26)	0.10 (0.02-0.49)	0.004*	1 (6)	6 (21)	0.28 (0.04-2.09)	0.227*
No. of additional relaparotomies				<0.001				0.923				0.849
No. of patients (%)	22 (16)	16 (48)			12 (16)	3 (16)			6 (35)	11 (39)		
Median (range) per patient	0 (0-2)	0 (0-8)			0 (0-4)	0 (0-3)			0 (0-5)	0 (0-5)		
No. of additional catheter drainages				0.391				0.061				0.108
No. of patients (%)	55 (40)	16 (48)			40 (55)	7 (37)			11 (65)	11 (39)		
Median (range) per patient	0 (0-11)	0 (0-5)			1 (0-9)	0 (0-2)			1 (0-7)	0 (0-5)		
No. of interventions for pancreatic fistula				0.048				0.533				0.137
Median (range) per patient	1 (0-8)	2 (1-5)			2 (0-9)	1 (1-4)			3 (0-7)	1 (1-7)		
No. of interventions during admission				0.001				0.345				0.803
Median (range) per patient	1 (0-12)	3 (1-13)			2 (0-13)	2 (1-5)			3 (0-9)	3 (1-7)		
Hospitalization course												
New ICU admission after first intervention – no. (%)	32 (24)	26 (79)	0.29 (0.21-0.42)	<0.001	24 (33)	19 (100)	0.32 (0.23-0.45)	<0.001	11 (65)	27 (96)	0.67 (0.47-0.96)	0.008*
Length of ICU stay (median (IQR)) §,	0 (0-0)	5 (0-10)		<0.001	0 (0-2)	8 (4-12)		<0.001	2 (0-17)	9 (4-29)		0.110
Length of hospital stay (median (IQR))	26 (19-38)	54 (40-61)		<0.001	36 (25-63)	47 (31-68)		0.171	47 (30-73)	61 (51-86)		0.137
Duration of pancreatic fistula (median (IQR)) ,¶	28 (16-48)	25 (15-48)		0.750	33 (21-66)	39 (12-87)		0.989	35 (22-65)	43 (29-73)		0.381