

Supplementary

Table 1 baseline characteristics between acute & obtuse angle in both groups

	Beginner endoscopist			Expert endoscopist			
	Acute angle (n=37, %)	Obtuse angle (n=32, %)	P value	Acute angle (n=36, %)	Obtuse angle (n=33, %)	P value	
Female	18 (26.1)	8 (25.0)	0.848	4 (11.1)	6 (18.2)	0.405	
Age	71.5 ± 12.7	72.1 ± 8.8	0.813	72.9 ± 11.3	71.5 ± 10.1	0.591	
Angle	17.9±7.8	43.1 ±11.4	0.000	18.0 ±7.0	43.8 ±12.7	0.000	
Bile duct dilatation	8.8 ± 3.3	10.0 ± 3.2	0.119	9.5 ±4.2	10.5 ±3.8	0.270	
Benign Dz	34 (91.9)	29 (90.6)	0.852	33 (91.7)	31 (93.9)	0.716	
PAD	12 (32.4)	12 (37.5)	0.659	19 (52.8)	13 (39.4)	0.265	
erythema	2 (5.4)	6 (18.8)	0.084	5 (13.9)	6 (18.2)	0.627	
bulging	1 (2.7)	1 (3.1)	0.917	1 (2.8)	6 (18.2)	0.034 ^a	

^aP<0.05.

Table 2 Result of ERCP between acute or obtuse angle in beginner group

Beginner endoscopist				
	Total (n=97, %)	Acute angle (n=52, %)	Obtuse angle (n=45, %)	P value
Success rate	93 (95.9)	50 (96.2)	43 (95.6)	0.883
Cannulation time	5.6 ± 6.3	6.3 ± 6.5	4.7 ± 6.0	0.211
Total procedure	19.5 ± 21.1 ± 11.3	17.6 ± 10.0		0.110
	10.8			
p-duct insertion or injection	24 (24.7)	16 (30.8)	8 (17.8)	0.139
p-duct stent	21 (21.6)	14 (26.9)	7 (15.6)	0.175
PEP	12 (12.5)	10 (19.2)	2 (4.5)	0.030 ^a
Hyperamylasemia	15 (15.6)	9 (17.3)	6 (13.6)	0.622
bleeding	2 (2.1)	1 (1.9)	1 (2.3)	0.905
Perforation	1 (1.0)	0 (0)	1 (2.3)	0.274

^aP<0.05.