

Table 3. Risk factor for clinical failure via endoscopic treatment of MBO in patients with surgically altered anatomy

	Clinical failure n=14	Clinical success n=31	Univariate analysis			Multivariate analysis		
			OR	95% CI	p-value	OR	95% CI	p-value
Age, (>67 years), n (%)	7 (50.0%)	16 (51.6%)	0.9	0.3-3.3	0.92			
Sex, male, n (%)	8 (57.1%)	21 (67.7%)	0.6	0.2-2.3	0.49			
Etiology of MBO, n (%)								
Malignant biliary disease	4(28.6%)	12(38.7%)	0.6	0.1-2.4	0.51			
Malignant pancreatic disease	3(21.4%)	10(32.3%)	0.6	0.1-2.3	0.45			
Gastric cancer	6(42.9%)	6(19.4%)	3.1	0.8-12.9	0.11			
Colon cancer	0(0%)	3(9.7%)	0		0.13			
Hepatocellular carcinoma	1(7.1%)	0(0%)	-		0.13			
Type of MBO, n (%)			0.9	0.2-7.0	0.90			
Primary disease	2(14.3%)	4(12.9%)						
Recurrent disease	12(85.7%)	27(87.1%)						
Liver metastasis	2(14.3%)	10(32.3%)						
Lymph node metastasis	3(21.4%)	4(12.9%)						
Local recurrence	7(50.0%)	13(41.9%)						

Location of MBO, n (%)			2.2	0.6-8.3	0.26			
Hilar or HJ anastomosis	8(57.1%)	23(74.2%)						
Distal	6(42.9%)	8(25.8%)						
Presence of peritoneal dissemination, n (%)	8 (57.1%)	5 (16.1%)	6.9	1.7-31.3	0.006	6.8	1.6-32.8	0.008
Digestive reconstruction, n (%)								
Modified Child's method	3(21.4%)	15(48.4%)	0.3	0.1-1.1	0.08	0.3	0.1-1.3	0.12
RY gastorejejunostomy	5(35.7%)	8(25.8%)	1.6	0.4-6.2	0.50			
RY hepaticojejunostomy	4(28.6%)	5(16.1%)	2.1	0.4-9.5	0.34			
Billroth II with gastrectomy	2(14.3%)	3(9.7%)	1.6	0.2-10.6	0.66			
Presence of native papilla, n (%)	7 (50.0%)	11 (35.5%)	1.8	0.5-6.7	0.36			
Time from surgery to ERCP (>505 days), n (%)	5 (35.7%)	18 (58.1%)	0.4	0.1-1.4	0.16			
T-Bil (>2.5 mg/dL), n (%)	9 (64.3%)	13 (41.9%)	2.5	0.7-9.8	0.16			
AST (>80 IU/L), n (%)	8 (57.1%)	14 (45.2%)	1.6	0.5-6.0	0.46			
ALT (>72 IU/L), n (%)	8 (57.1%)	14 (45.2%)	1.6	0.5-6.0	0.46			
γGTP (>364 IU/L), n (%)	8 (57.1%)	13 (41.9%)	1.8	0.5-6.9	0.34			
ALP (>1205 IU/L), n (%)	6 (42.9%)	15 (48.4%)	0.8	0.2-2.8	0.73			
Type of scope, n (%)			1.5	0.4-7.8	0.59			
EI-580BT	3(21.4%)	9(29.0%)						

Other scope

11(78.6%)

22(71.0%)

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MBO, malignant biliary obstruction; HJ, hepaticojejunostomy; RY, Roux-en-Y; ERCP, endoscopic retrograde cholangiopancreatography; TB, total bilirubin; AST, aspartate aminotransaminase; ALT, alanine aminotransferase;  $\gamma$ GTP, g-glutamyl transpeptidase; ALP, alkaline phosphatase; OR, odds ratio; CI, confidence interval