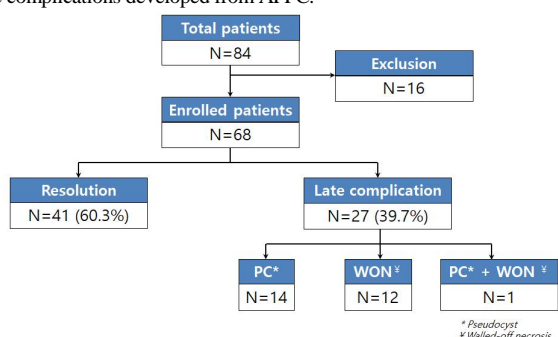


Natural Course of Acute Peripancreatic Fluid Collection in Acute Pancreatitis

¹대구가톨릭대학교병원 내과, ²경북대학교병원 내과, ³계명대학교 동산의료원 내과, ⁴영남대학교병원 내과, ⁵대구가톨릭대학교병원 내과

*남기웅¹, 이동욱¹, 한지민¹, 김호각¹, 조창민², 정민규², 조광범³, 김태년⁴, 김국현⁴, 김현수⁵

Background/Aims: Acute peripancreatic fluid collection (APFC) is an acute local complication of acute pancreatitis (AP) according to Revised Atlanta classification. Complete resolution of APFC is observed frequently however sometimes APFC changed to pseudocyst or walled-off necrosis (WON), so called late complications. The aim of this study is to predict the natural course of APFC and identify risk factors of late complications. **Methods:** From October 2014 to September 2015, consecutive patients with AP with APFC within 48 hours of onset on imaging studies were enrolled at 6 medical centers. The status of fluid collection was followed after 4-8 weeks from onset. Initial laboratory findings and clinical scoring systems such as Ranson score were analyzed. **Results:** Total 68 patients were enrolled and APFC was completely resolved in 41 (60.3%) (resolution group) and 27 (39.7%) were remained with 14 pseudocysts, 12 WONs and 1 pseudocyst with WON (late complication group). Alcohol etiology was more common and initial bicarbonate level was low significantly in late complication group. On the other hand Ranson score was high in late complication group. In multivariate analysis, alcohol etiology, prolonged total parenteral nutrition and nasojejunal feeding after 48 hours were risk factors to develop late complications. **Conclusions:** 39.7% of APFC were changed to pseudocyst or WON and alcohol etiology, delayed oral feeding after 48 hours and high Ranson score were independent risk factors of late complications developed from APFC.



Variables	Odds ratio	95% CI*	P value
Etiology			
Non-Alcohol	1	-	-
Alcohol	7.041	1.426 - 34.768	0.017
Nutrition after 48 hours			
Oral feeding	1	-	-
Total parenteral nutrition	4.532	1.105 - 18.598	0.036
Nasojejunal tube feeding	23.425	1.639 - 334.736	0.020
Ranson score			
1.56	1.014 - 2.398	0.043	
HCO ₃	1.01	0.834 - 1.229	0.904

*Confidence interval

EUS-guided drainage of pancreatic fluid collections using fully covered metal versus plastic stents

¹울산대학교 의과대학 서울아산병원 내과, ²울산대학교 의과대학 서울아산병원 소화기내과

*김규원¹, 이화룡¹, 조석정², 오동욱², 송태준², 박도현², 이성구², 김명환², 이상수²

Background/Aims: Endoscopic ultrasound (EUS)-guided drainage of pancreatic fluid collections (PFCs) by using double-pigtail plastic stents (DPPSs) requires sequential placement of multiple stents for favorable outcomes. EUS-guided drainage with fully covered metal stents (FCSEMSs) is being increasingly used due to one step procedure and a larger diameter stent. The present study aimed to compare the efficacy and safety of EUS-guided PFC drainage between DPPSs and FCSEMSs. **Methods:** Patients who had undergone EUS-guided drainage of PFCs with DPPSs and FCSEMSs from January 2005 to December 2017 were retrospectively analyzed. The most commonly used stents were two, 7 F DPPSs and one, 8-mm diameter FCSEMSs (BONA-Soo stent). **Results:** 119 patients (81 in FCSEMSs group and 38 in DPPSs group) were enrolled in this study. There was no difference in technical success rate between FCSEMSs and DPPSs groups (98.8% vs. 94.7%, P=0.19). The procedure time was significantly shorter in FCSEMS group than in DPPSs group (FCSEMS vs. DPPSs; 14.0 ± 6.6 vs. 25.9 ± 12.3, P<0.05). FCSEMSs group showed significantly higher clinical success rate (96.3% vs. 80.6%, P=0.005). Procedure-related early (≤ 2 weeks) adverse events such as bleeding occurred significantly less in the FCSEMSs group (3.7% vs. 21.1%, P=0.002) and late adverse such as stent migration also occurred significantly less in the FCSEMSs group (1.3% in FCSEMSs group vs. 13.2% in DPPSs group, P=0.004). **Conclusions:** EUS-guided drainage of PFCs with FCSEMSs may be more likely to achieve higher clinical success and reduce both procedure-related early and late adverse events.

Table 1. Baseline characteristic of patients and clinical outcomes

	FCSEMSs (n=81)	DPPSs (n=38)	P-value
Mean age (SD), years	54.2 (13.2)	48.6 (13.8)	0.36
Male : Female	62:19	30:8	0.77
Cause of pancreatic fluid collection			0.29
Post-inflammatory	42 (51.9%)	30 (78.9%)	
Post-surgical	39 (48.1%)	8 (21.1%)	
Mean cyst size in mm (SD)	70.4 (28.9)	73.3 (29.1)	0.61
Additional plastic stent insertion	7 (8.8%)	7 (18.4%)	
Additional nasocystic drainage, n (%)	5 (6.3%)	20 (52.6%)	0.000
Technical success	80/81 (98.8%)	36/38 (94.7%)	0.19
Clinical success	77/80 (96.3%)	29/36 (80.6%)	0.005
Procedure time (SD), minutes	14.0 (6.6)	25.9 (12.3)	0.000
Procedure-related early adverse event	3 (3.7%)	8 (21.1%)	0.002
Inward migration	1	1	
Distal migration	2	1	
Bleeding	0	2	
Pneumoperitoneum	0	4	
Late adverse event (> 2 weeks)	1 (1.3%)	6 (15.8%)	0.004
Inward migration	0	1	
Distal migration	1	5	
Buried stent syndrome	0	0	
Bleeding	0	0	

SD, standard deviation; FCSEMSs, fully covered metal stents; DPPSs, double-pigtail plastic stents;