

The effect of endoscopic ultrasound-guided drainage for postoperative fluid collection

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**Background/Aims:** Postoperative pancreatic or bile fluid collection (PPBFC) is presented as a complication of abdominal surgery. It manifests as abdominal pain, fever, increasing size on computed tomography (CT) image, or leukocytosis on laboratory test. Traditionally, it was resolved by surgical intervention or external drainage. However, recent studies show that endoscopic ultrasound (EUS)-guided drainage is effective way to treat PPBFC. We aim to evaluate the technical, clinical outcomes, and adverse events of EUS-guided drainage of PPBFC. **Methods:** The data of patients who had undergone EUS-guided drainage of PPBFC between July 2008 and January 2018 was retrospectively analyzed. Data of EUS-guided PPBFC drainage was obtained from prospective collected EUS database of our institute and reviewed of patients' clinical parameters based on electrical medical record. Treatment outcomes were based on the size of PPBFC on CT image. We measured the change of longest diameter of PPBFC and defined clinical success as decrease in longest diameter 50% or more compared with before the drainage. Clinical failure was defined as not. **Results:** 48 patients who had EUS-guided drainage of PPBFC occurred within 31 days after surgery were enrolled. Patients' mean age was 59 years, the male to female ratio was 30:18. There were 36 open surgeries and 12 laparoscopic surgeries and the pathologic results were 37 malignant cases and 11 benign cases. The indications of the procedure were abdominal pain ( $n=27$ ), fever ( $n=18$ ), leukocytosis ( $n=2$ ), increased size during external tube drainage ( $n=1$ ). Median procedure time was 13.5 minutes. Treatment results were clinical success in 46 cases (95.8%) and clinical failure in 2 cases (4.2%). Adverse event reported in one patient was bleeding occurred in fifth day after the procedure and was improved by left gastric artery embolization. **Conclusions:** EUS-guided drainage was effective to decrease size of PPBFC and had low risk of procedure related adverse events. Therefore, EUS-guided drainage might be a useful treatment tool for PPBFC.

Table 1. The clinical outcomes of 48 patients

	Number of patients	%
Technical success	48	100
Clinical success	46	95.8
Type of stents		
RCSEMS only	34	70.8
DP only	5	10.4
RCSEMS + DP (same time)	3	6.2
RCSEMS + ENCD (same time)	2	4.2
RCSEMS + ENBD (same time)	1	2.1
RCSEMS followed by DP	1	2.1
DP followed by ENBD	1	2.1
ENCD only	1	2.1
Location of fluid collection		
Pancreas head	15	31.2
Pancreas body/tail	27	56.3
Left margin of liver left lobe*	6	12.5
Puncture site of stomach		
Cardia	5	10.4
Body	38	79.2
Antrum	5	10.4

\*In case of splenic, location was described based on liver resection margin.

Wire-guided IDUS is not a risk factor for evolving post-ERCP pancreatitis

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**Background/Aims:** Intraductal ultrasonography (IDUS) without wire guidance has been considered as an independent risk factor for evolving post-endoscopic retrograde cholangiopancreatography (ERCP) pancreatitis. However, there was no study to determine wire-guided IDUS as a risk factor for evolving post-ERCP pancreatitis. **Methods:** A total of 286 patients who had undergone wire-guided IDUS ( $n=143$ ) and conventional ERCP without wire-guided IDUS ( $n=143$ ) between 2013 and 2014 were analyzed retrospectively. The primary outcome measure was the post-ERCP pancreatitis rate. **Results:** There was no significant difference in the post-ERCP pancreatitis rate between the wire-guided IDUS group (0.7%, 1/143) and conventional ERCP without wire-guided IDUS group (3.5%, 5/143,  $p=0.09$ ). There was no significant difference in the post-ERCP asymptomatic hyperamylasemia rate between the wire-guided IDUS group (9.1%, 13/143) and conventional ERCP without wire-guided IDUS group (7.5%, 11/143,  $p=0.67$ ). There were no significant differences in other complications between two groups. **Conclusions:** Wire-guided IDUS does not increase the risk for post-ERCP pancreatitis compared with conventional ERCP without wire-guided IDUS.

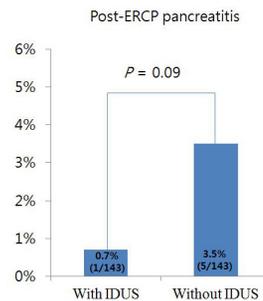


Figure 1. There was no significant difference in the post-ERCP pancreatitis rate between the wire-guided IDUS group and conventional ERCP without wire-guided IDUS group