

Background and aims

- Endoscopic retrograde cholangiopancreatography (ERCP) is technically challenging in some patients with altered anatomy including patients with prior pancreaticoduodenectomy (Whipple).
- The Flexible Rigidizing Overtube (FRO) stiffens through vacuum application allowing to achieve a stable endoscopic position and facilitates endoscope exchange.
- Aim:** To evaluate the utility and safety of the FRO in patients with prior Whipple surgery.

Methods

- Patients with prior Whipple surgery undergoing an ERCP between January 2019 and October 2021 were retrospectively evaluated.
- Procedures where the FRO was utilized were compared with the remaining procedures (conventional arm).
- Type of therapeutic interventions performed, endoscopes and accessories used, and procedure-related complications were evaluated.

Results

- 40 ERCPs were performed on 26 patients and included.

	Flexible rigidizing overtube used (n=8)	Conventional (n=32)
Age, median (IQR)	67 (59-75)	65 (62-74)
Gender, male, n (%)	4 (50)	24 (75)
Indication		
Jaundice, n (%)	1 (14.3)	3 (9.4)
Abdominal pain, n (%)	1 (14.3)	0
Cholangitis, n (%)	1 (14.3)	7 (21.9)
Abnormal liver enzymes, n (%)	4 (50)	11 (34.4)
Pancreatitis, n (%)	0	1 (3.1)
Routine stent exchange or removal, n (%)	1 (14.3)	10 (31.3)

Results (continued)

	Flexible rigidizing overtube used (n=8)	Conventional (n=32)
Afferent limb reached, n (%)	8 (100)	32 (100)
Bilio-enteric anastomosis reached, n (%)	7 (100)	28 (90.3)
Cannulation success of bilioenteric anastomosis, n (%)	6 (85.7)	27 (87.1)
Exchange from colonoscope to therapeutic upper endoscope, n (%)	2 (25)	4 (12.5)
10 Fr biliary stent placed, n (%)	3 (42.8)	4 (12.9)
Balloon dilation of bilio-enteric anastomosis, n (%)	4 (57.1)	8 (25.8)
Balloon dilation of intra or extrahepatic bile ducts, n (%)	2 (28.5)	4 (12.9)

- Colonoscope exchanged for a therapeutic upper endoscope for additional therapeutic interventions more common when the FRO was used compared (25% vs 12.5%).
- A 10 French biliary stent was more commonly placed in the FRO group (42.8% vs 12.9%).
- No procedural complications were reported, and procedural time was comparable between the two groups.

Conclusion

- Performance of ERCP can be safely enhanced with the use of a rigidizing overtube, allowing for a higher likelihood of reaching the anastomotic site, the exchange of multiple endoscopes, and possibly more therapeutic options.
- Additional larger studies are needed to evaluate efficacy, safety, and cost-effectiveness of this device for ERCP in post-surgical anatomy.