Thread a needle with two hands: inner countertraction using clip with rubber band facilitates difficult pancreatic cannulation during ERCP

Difficult biliary or pancreatic cannulation during endoscopic retrograde cholangiopancreatography (ERCP) is among the leading causes of failed operations [1]. Inspired by the application of traction in endoscopic treatment of early gastrointestinal tumors [2], we have developed clip-and-rubber-band traction to accomplish difficult pancreatic cannulation during ERCP (▶Video 1).

An elderly woman was diagnosed with an uncinate process tumor of the pancreas by endoscopic ultrasound-guided fine-needle biopsy. To relieve the high pressure of the extremely dilated pancreatic duct, ERCP was considered to perform pancreatic duct drainage. Unfortunately, a long, rugose, and pendulous papilla with a stiff and constrictive orifice was revealed under duodenoscopy (▶Fig. 1a), resulting in the failure of conventional cannulation because the papillary orifice could not be reached or entered (▶Fig. 1b). Consequently, the clip-and-rubber-band traction technique was used to rescue the difficult ERCP. After an endoclip holding a rubber band was anchored to the inferior border of the papillary orifice, a second endoclip was introduced to pick up the rubber band and fix it to the opposite wall of the duodenum (▶Fig. 1c). As the papilla was completely lifted upright with the countertraction device and the papillary orifice was well exposed, the sphincterotome with a guidewire was successfully inserted into the pancreatic duct within seconds (▶Fig. 1d). After the stenosis of the pancreatic duct head was thoroughly dilated with dilating bougies, a 7-Fr × 7-cm plastic stent was smoothly placed into the pancreatic duct body with fluent drainage of pancreatic juice (▶Fig. 1e).

Compared with the external means of traction including clip with line [2], snare [3] and forceps [4] in ERCP, internal countertraction has several remarkable advantages. It does not interfere ERCP instruments, and it is inexpensive, easily accessible, and simple and convenient to manipulate. This technique is very promising for improving the success rate of difficult biliary or pancreatic cannulation during ERCP in the future.

Endoscopy_UCTN_Code_TTT_1AR_2AK

Funding

Department of Science and Technology of Sichuan Province
http://dx.doi.org/10.13039/501100004829
2021YFS0375

Competing interests

The authors declare that they have no conflict of interest.
The authors

Ren-yi Zhang1*, Qiang Guo2*, Xiao Hu1, Wei-hui Liu1

1 Department of Gastroenterology and Hepatology, Sichuan Academy of Medical Sciences & Sichuan Provincial People’s Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan Province, China

2 Department of Endocrinology, the People’s Hospital of Jianyang City, Jianyang, Sichuan Province, China

Corresponding author

Wei-hui Liu, MD
Department of Gastroenterology and Hepatology, Sichuan Academy of Medical Sciences & Sichuan Provincial People’s Hospital, 32# W. Sec 2, 1st Ring Rd., 610072 Chengdu, Sichuan Province, China
audiliu12@163.com

* Contributed equally to this work.

References


Bibliography

Endoscopy
ISSN 0013-726X
published online 2022
© 2022, The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos

Video 1 The clip-and-rubber-band traction rescued the difficult pancreatic duct drainage during ERCP in a patient with an uncinate process tumor.

Zhang Ren-yi et al. Thread a needle ... Endoscopy | © 2022, The Author(s).