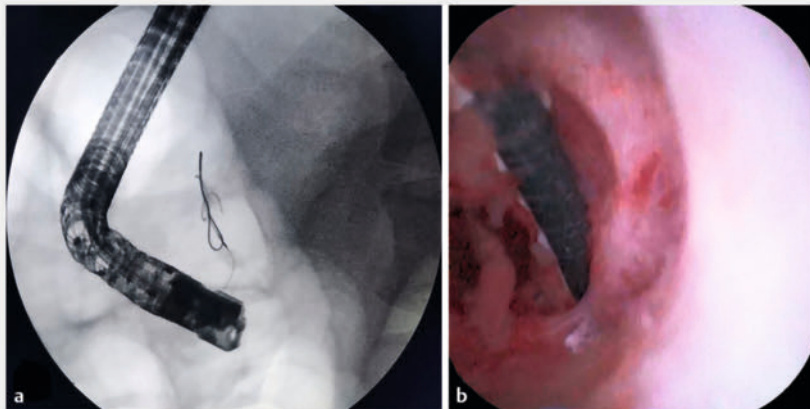
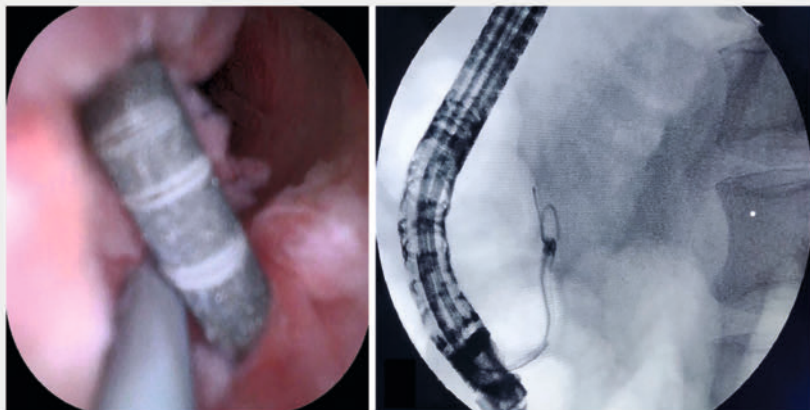


Peroral choledochoscope-assisted removal of residual guidewire embedded in the mucous membrane of the pancreatic duct

OPEN
ACCESS



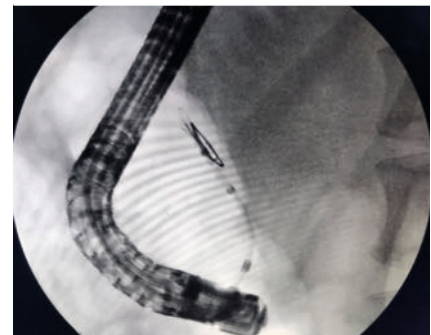
► **Fig. 1** Visualization of the guidewire. **a** The residual guidewire was observed in the pancreatic duct under X-ray. **b** Peroral choledochoscope exploration of the pancreatic duct showed the residual guidewire embedded in the mucosa of the pancreatic duct.



► **Fig. 2** Preparing to retrieve the residual guidewire. **a,b** The guidewire was inserted into the gap between the residual guidewire and the pancreatic duct mucosa with the assistance of a transoral choledochoscope.



► **Video 1** The residual guidewire embedded in the mucous membrane of the pancreatic duct was removed with the assistance of a peroral choledochoscope.

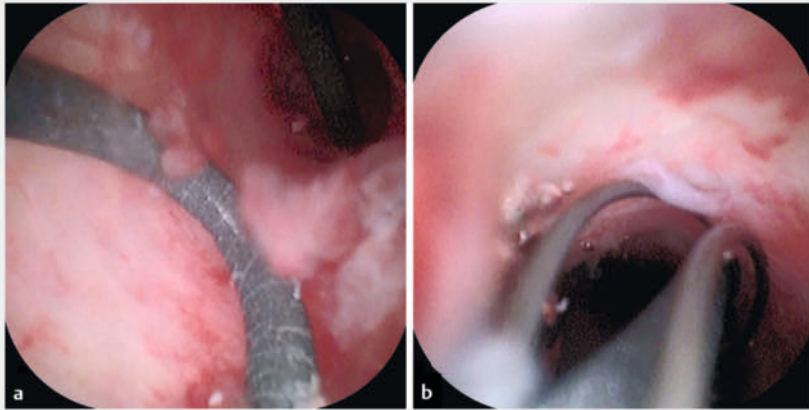


► **Fig. 3** A balloon was inserted along the guidewire into the gap formed by the residual guidewire and the mucous membrane of the pancreatic duct.

A 36-year-old man underwent endoscopic retrograde cholangiopancreatography (ERCP) at a local hospital for chronic pancreatitis, after which the broken end of a guidewire remained in the pancreatic duct. The patient had intermittent postoperative abdominal discomfort and was referred to our hospital.

The patient underwent ERCP, and fluoroscopy showed the residual guidewire in the pancreatic duct (► **Fig. 1a**). Neither a basket nor balloon could successfully remove the residual guidewire from the pancreatic duct. Subsequently, a peroral choledochoscope was used to explore the pancreatic duct, and revealed that the guidewire was embedded in the mu-

cosa of the pancreatic duct and could not be removed (► **Fig. 1b**). We inserted a guidewire into the gap between the residual guidewire and the pancreatic duct mucosa with assistance from the choledochoscope (► **Fig. 2**, ► **Video 1**). Then, we inserted a balloon along the guidewire and inflated the balloon when it entered the gap (► **Fig. 3**). On reinsertion of



► **Fig. 4** Retrieval of the guidewire. **a** Both ends of the guidewire protruded from the mucous membrane of the pancreatic duct. **b** A net basket was used to retrieve the residual guidewire.



► **Fig. 5** The guidewire was removed from the body.

the choledochoscope, both ends of the guidewire could be seen (► **Fig. 4a**). The guidewire was removed with a net basket under direct view through the choledochoscope (► **Fig. 4b**, ► **Fig. 5**).

Guidewire fragments left in the pancreatic duct are rare and usually occur in the treatment of complex diseases such as chronic pancreatitis [1]. This increases the risk of pancreatitis flare-ups and perforations. Surgical treatment is required when the fragment cannot be removed [2]. Endoscopic removal of residual guidewires is very challenging [3, 4]. In our case, the residual guidewire was embedded in the mucous membrane of the pancreatic duct and could not be removed with conventional tools. The guidewire was removed from the mucosa by inserting a balloon into the gap and inflating it with the assistance of a transoral choledochoscope. This procedure offers a new option for endoscopic

retrieval of foreign bodies in the pancreatic duct.

Endoscopy_UCTN_Code_TTT_1AR_2AK

Conflict of Interest

The authors declare that they have no conflict of interest.

Funding Information

Natural Science Foundation of Hebei Province
<http://dx.doi.org/10.13039/501100003787>
 H2021206439

The authors

Yaoting Li¹, Lichao Zhang¹, Baoru Zhang², Tingting Yu¹, Yankun Hou¹, Jiao Tian¹, Senlin Hou¹

- 1 Department of Biliopancreatic Endoscopic Surgery, The Second Hospital of Hebei Medical University, Shijiazhuang, China
- 2 Gastroenterology Department, The 981st Hospital of PLA, Chengde, China

Corresponding author

Senlin Hou, MD

Department of Biliopancreatic Endoscopic Surgery, The Second Hospital of Hebei Medical University, 9 Heping Road Shijiazhuang, Hebei 050000, China
 housenlin@hebm.edu.cn

References

- [1] Kim S, So H, Jung SW et al. Guidewire impaction in the main pancreatic duct in a patient with chronic pancreatitis: a case report. *Korean J Gastroenterol* 2023; 81: 36–39
- [2] Heinerman M, Mann R, Boeckl O. An unusual complication in attempted non-surgical treatment of pancreatic bile duct stones. *Endoscopy* 1993; 25: 248–250
- [3] Pruitt A, Schutz SM, Baron T et al. Fractured hydrophilic guidewire during ERCP: a case series. *Gastrointest Endosc* 1998; 48: 77–80
- [4] Kitagawa S. Successful endoscopic retrieval of a retained fractured guidewire from the main pancreatic duct. *GE Port J Gastroenterol* 2022; 29: 364–365

Bibliography

Endoscopy 2024; 56: E230–E231
 DOI 10.1055/a-2271-3944
 ISSN 0013-726X

© 2024. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited.
[\(https://creativecommons.org/licenses/by/4.0/\)](https://creativecommons.org/licenses/by/4.0/)
 Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

