Needle-knife deroofing of a symptomatic type III choledochal cyst

An 11-year-old patient was referred to our endoscopy unit following two bouts of acute pancreatitis of unclear cause. Because autoimmune or toxic causes were ruled out and mutation analysis for cystic fibrosis transmembrane regulator and serine protease inhibitors, Kazal type 1, was unrevealing, cross-sectional imaging by magnetic resonance imaging (MRI) and a subsequent endoscopic ultrasound (EUS) were performed, both showing a cystic structure at the distal common bile duct (CBD). It was stipulated that local compression of a choledochal cyst could be directly causing the recurrent episodes of acute pancreatitis. The patient therefore consented to undergo endoscopic retrograde cholangiopancreatography (ERCP) with sphincterotomy. ERCP revealed a cystic, pre-papillary contrast opacification, findings compatible with a Todani type III choledochocele. Following sphincterotomy, insufficient drainage was achieved because the cystic juxtapapillary lesion remained unchanged. Subsequently, a needle-knife-assisted technique was used (NeedleCut3V, Olympus Medical Systems, Tokyo, Japan), which achieved a successful cystotomy and complete drainage of the choledochal cyst. One month later at endoscopic follow-up, resolution of the choledochocele was seen.

Described for the first time in 1977, the Todani classification is used for describing the various configurations of choledochal cysts, varying from simple segmental bile duct dilatation (type I) to overt Caroli’s disease (type V). Type III choledochal cysts are characterized by a cystic malformation of the distal CBD, typically extending into the duodenal wall, with simultaneous drainage of the CBD and pancreatic duct into the cyst. This increases intraluminal pressure, which may give rise to cholangitis and pancreatitis by inducing reflux of pancreatico-biliary fluids. Unique to type III cysts, treatment typically consists of a simple sphincterotomy. However, our case illustrates that when sphincterotomy fails, needle-knife-assisted cystotomy can provide sufficient drainage in patients with type III choledochal cysts. After 3 years of follow-up, the patient has remained asymptomatic.

Endoscopy_UCTN_Code_TTT_1AR_2AK

Competing interests

None

The authors

Giuseppe Vanella1,2, Michiel Bronswijk1, Schalk van der Merwe1
1 Department of Gastroenterology and Hepatology, University Hospitals Leuven, KU Leuven, Belgium
2 Endoscopy Unit, Sant’Andrea Hospital, Sapienza University of Rome, Italy
Corresponding author

Michiel Bronswijk
Herestraat 49, 3000 Leuven, Belgium
MJH.bronswijk@gmail.com
Fax: +32 473886089

References


Bibliography

DOI https://doi.org/10.1055/a-1067-4271
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Vanella Giuseppe et al. Needle-knife deroofing of a symptomatic type III choledochal cyst. Endoscopy