Two intraluminal duodenal diverticula treated with a “clip-assisted incision” technique

A 37-year-old woman presented to the emergency department with an 8-year history of recurrent melena. Laboratory tests showed a hemoglobin of 76 g/L. Esophagogastroduodenoscopy showed a huge mass in the descending duodenum; however, within a few seconds, the mass collapsed. After a careful inspection of the duodenum, two closely located intraluminal diverticula were identified (▶Fig. 1). The previously noticed mass had been formed by eversion of the wall of one diverticulum. The true lumen was hidden within the septum between the two diverticula. A barium examination and computed tomography scan confirmed the diagnosis (▶Fig. 2 and ▶Fig. 3).

Given that the patient was symptomatic, we decided to attempt a diverticulotomy for better canalization of the duodenum. Two clips were firstly placed on one side of the separated septum between the two diverticula (▶Fig. 4a). A hook knife was then used to carefully incise the septum (▶Fig. 4b). After the septum had been cut to the same depth as the distal end of the clips, a further two clips were placed on each side of the cut edge (▶Fig. 4c). The aim of these clips was to block possible blood vessels and prevent massive bleeding during the procedure. This pattern of clip placement ahead of incision was then repeated to incise the septum completely (▶Fig. 4d). Subsequently, the same procedure was implemented for the other side of the septum.

Following the diverticulotomy, the entrance to the true duodenal lumen became much wider, thereby facilitating the passage of food (▶Video 1). No adverse events occurred and the wound was well healed at 3-month follow-up.

Endoscopic management of an intraluminal duodenal diverticulum has typically included diverticulectomy and diverticulotomy. Though less invasive compared with surgery, endoscopic procedures have a high rate of post-procedural bleeding [1]. In this case report, we introduce a novel approach, “clip-assisted incision,” which may help to reduce the risk of post-procedural bleeding.

Funding

1·3·5 project for disciplines of excellence, West China Hospital, Sichuan University ZYJC21011

Endoscopy_UCTN_Code_TTT_1AU_2AF

E-Videos

Fig. 1 Endoscopic view showing two closely located intraluminal diverticula either side of the true duodenal lumen (white arrow).

Fig. 2 Barium examination showing the “windsock sign” (white arrows).

Fig. 3 Computed tomography scan showing the two diverticula (white arrows) in the descending duodenum.
Competing interests

The authors declare that they have no conflict of interest.

The authors

Yilong Feng1*, Liwen Guan2*, Liansong Ye1, Bing Hu1
1 Department of Gastroenterology, West China Hospital, Sichuan University, Chengdu, China
2 Department of Gastroenterology, Sanya Central Hospital, Sanya, China

Corresponding author

Bing Hu, MD
No. 37 Guoxue alley, Wuhou, Chengdu, Sichuan 610041, China
hubingnj@163.com

Reference


Bibliography

Endoscopy 2022; 54: E452–E453
DOI 10.1055/a-1628-1827
ISSN 0013-726X
published online 27.9.2021
© 2021. Thieme. All rights reserved,
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS
https://eref.thieme.de/e-videos

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

* Equal first authors

Video 1 Two intraluminal duodenal diverticula are treated with the “clip-assisted incision” technique.

Fig. 4 Illustration of the “clip-assisted incision” technique showing: a the two clips that were first placed; b an incision in the septum that was carefully made to the same depth as the distal ends of the clips using a hook knife; c a further two clips that were placed on each side of the cut edge with the aim of blocking possible blood vessels and preventing massive bleeding during the procedure; d the repeated pattern of placing clips ahead of each incision being made. Source: Xinyue Hu.