Successful endoscopic closure of iatrogenic duodenal perforation with the new Padlock Clip

Although duodenal perforations are rare [1], they represent one of the most critical complications of endoscopic ultrasound (EUS) and may be fatal in elderly patients. Following the introduction of endoscopic clips, stents, and over-the-scope systems into clinical practice, endoscopic management of perforations has become the first therapeutic option [2, 3].

We present the case of a 62-year-old man with jaundice, who was referred to the Digestive Endoscopy Unit of Humanitas Research Hospital (Rozzano, Italy) to undergo EUS-guided fine-needle aspiration of a solid lesion in the pancreatic head (Fig. 1). The EUS was performed using a linear echoendoscope (GF-UCT140; Olympus Optical Co., Tokyo, Japan), CO₂ insufflation, and with the patient under deep sedation with propofol.

During scope withdrawal through the duodenum, we observed a type-1 [4], full-thickness defect, of 13 mm in diameter, at the upper duodenal knee (Fig. 2).

A stiff guidewire was placed in the duodenum to help expose the defect. A twin grasper (Ovesco Endoscopy AG, Tübingen, Germany) was used to approximate the mucosal edges of the perforation. Then, a gastroscope loaded with the new Padlock Clip (Aponos Medical Co., Kingston, New Hampshire, USA).

E-Videos
ston, New Hampshire, USA) (Fig. 3) was used to seal the defect (Video 1). Finally, a contrast radiograph confirmed the complete closure of the perforation (Fig. 4, Fig. 5).

The Padlock Clip is a new over-the-scope system designed to be placed parallel to the endoscope, without occupying the operative working channel [5]. To our knowledge, this is the first clinical experience of closure of a duodenal iatrogenic perforation using the Padlock Clip.

Endoscopy_UCTN_Code_CPL_1AL_2AB

Competing interests

None

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DOI http://dx.doi.org/10.1055/s-0042-124177
Endoscopy 2017; 49: E58–E59
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X