Endoscopic ultrasound-guided drainage and necrosectomy of walled-off pancreatic necrosis using a metal stent with an electrocautery-enhanced delivery system and hydrogen peroxide

Direct endoscopic necrosectomy of walled-off pancreatic necrosis (WOPN) has recently been reported to have comparable success rates to surgery, but with lower morbidity and mortality [1, 2]. The procedure is, however, time consuming and requires multiple device exchanges [3], which may increase the risk of complications. A novel, dedicated device, the Hot AXIOS (Fig. 1), has recently become available. This consists of a large-diameter, fully covered self-expanding metal stent (FCSEMS) with antimigration flanges, which is mounted on a 10.8-Fr delivery system with an electrocautery blade at the distal tip. The Hot AXIOS system allows a cystenteric fistula to be created and the FCSEMS (bottom right) to be delivered without the need for device exchange. (Image courtesy of Xlumena Inc., Mountain View, California, USA.)

Fig. 1 A novel through-the-scope, fully covered, self-expanding metal stent (FCSEMS) delivery system with an electrocautery blade at the distal tip. The Hot AXIOS system allows a cystenteric fistula to be created and the FCSEMS (bottom right) to be delivered without the need for device exchange. (Image courtesy of Xlumena Inc., Mountain View, California, USA.)

Fig. 2 Endoscopic ultrasound (EUS) image of the distal flange of the self-expanding metal stent being released under EUS guidance.

An area of walled-off pancreatic necrosis (WOPN) is drained using the Hot AXIOS delivery system under endoscopic ultrasound and endoscopic guidance only. A standard gastroscope is then inserted into the cavity of the WOPN and direct endoscopic necrosectomy is performed. Finally, the stent is removed using an endoscopic snare.

The four patients underwent a median of five endoscopy sessions (range 4–6). A pneumoperitoneum occurred in one patient and was treated conservatively. The FCSEMSs were easily removed in three patients. In the remaining patient, who did not present for follow-up until 138 days after insertion of the FCSEMS, overgrowth of normal mucosa had occurred and a decision was made to leave the stent permanently in place.

No recurrence of WOPN has been observed after a mean follow-up of 8.5 months (range 5–10 months).

Endoscopy_UCTN_Code_TTT_1AS_2AD

Competing interests: Dr. Alberto Larghi is a consultant for Xlumena Inc., Mountain View, California.

Domenico Galasso1, Todd H. Baron2, Fabia Attili1, Khaled Zachariah1, Guido Costamagna1, Alberto Larghi1

1 Digestive Endoscopic Unit, Catholic University, Rome, Italy
2 Division of Gastroenterology and Hepatology, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA

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DOI http://dx.doi.org/10.1055/s-0034-1391244
Endoscopy 2015; 47: E68
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Corresponding author
Alberto Larghi, MD, PhD
Digestive Endoscopy Unit
Catholic University
Largo A. Gemelli 8
Rome 00168
Italy
Fax: +39-06-30157220
albertolarghi@yahoo.it