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 (Xlumena Inc., Mountain View, California, USA) (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 its 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.)

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 and performed direct endoscopic necrosectomy. We then used extraction nets, baskets, and forceful irrigation to clean the necrotic material (Video 1).

The four patients underwent a median of five endoscopy sessions (range 4–6). A pneumoperitoneum occurred in one patient and was treated conservatively. The FCSEMS 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).

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

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