Double endosonography-guided transgastric and transduodenal drainage of infected pancreatic-fluid collections using metallic stents

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INTRODUCTION

The use of self-expanding metallic stents (SEMSs) in draining PFC has been reported in small case series (1,2). The practice of more than one transluminal drainage is rarely described (3,4).

CASE REPORT

A 34-year-old male was referred to our hospital for drainage of symptomatic pancreatic fluid collections (PFCs) secondary to an acute pancreatitis. He was affected by gastro-duodenal and biliary obstruction. CT scan images revealed 1 perigastric pseudocyst (well-defined wall, without necrosis content, 70 x 120 mm) and 1 periduodenal walled-off pancreatic necrosis (WOPN) (thickened wall, partially liquefied collection containing solid content, 80 x 90 mm).

Both PFC were accessed under endoscopic ultrasound (EUS)-guidance with a 6 Fr-cystotom and dilation tract using a 10 mm balloon (Fig. 1). First, the pseudocyst was drained transgastrically with a fully covered SEMS with bilateral anchor

Fig. 1. EUS image of the walled-off pancreatic necrosis located in the end of the pancreas.

Fig. 2. Endoscopy view through the AXIOS stent showing a significant resolution of the lesion after the spontaneous drainage of 800 ml of turbid fluid.
flanges (AXIOS™, 10 x 15 mm; Xlumena, MountainView, CA) and 800 ml of turbid fluid was aspirated (Fig. 2). Five days later, a WOPN was drained under EUS-guidance via transduodenal and a 10 x 40 mm fully covered SEMS (WallFlex biliary Rx, Boston Scientific, Natick, MA) plus a coaxial 10 Fr x 5 cm, double-pigtail stent to prevent migration were delivered and a purulent fluid was drained.

At day 6, abdominal pain and duodenal obstruction were persistent and a CT scan showed total resolution of the perigastric PFC and a decrease in size of the WOPN by < 30% with presence of necrotic contents (Fig. 3). An necrosectomy was performed delivering a new specific SEMS (Yo-Yo stent, 10 x 10 mm, Niti-S; TaewoongMedical, Seoul, Korea) to keep open the duodenostomy (Fig. 4).

Fig. 3. CT scan coronal-sagittal oblique view (A) and 3-dimensional reconstruction (B) after the second drainage including both SEMS in the same plane: A cytogastrostomy (with a diabolo-shaped SEMS) and a cystoduodenostomy (with FCSEMS plus a coaxial plastic pigtail stent).

Fig. 4. Endoscopic necrosectomy of an infected walled-off pancreatic necrosis performed 6 days after a single transmural drainage (A). This maneuver allowed the extraction of non-adherent solid components of the infected cavity (B), improving patient symptoms.
Patient symptoms improved, with a significant resolution of the WOPN in a CT scan 15 days later. At 3 weeks follow-up, complete lesion resolution was revealed in CT scan images and all stents were removed.

**DISCUSSION**

The practice of more than one transmural drainage with SEMSs is effective for the treatment of infected PFC. The use of diabolo-shaped SEMSs improved the overall management.

**REFERENCES**