Massive pneumoperitoneum during endoscopic ultrasound-guided drainage of a pancreatic cyst lesion, treated with an enteral self-expanding metal stent and paracentesis

A 54-year-old patient with a supposed 9-cm pseudocyst located in the pancreatic tail was referred to our unit for endoscopic ultrasound (EUS)-guided transmural drainage (Fig. 1). The fluoroscopic image showed the immediate creation of a pneumoperitoneum when the cystotome was used, because the cystic lesion was not adherent to the gastric wall (Fig. 2a). First, we attempted to seal the ostomy (or iatrogenic perforation), with the purpose of preventing leakage of fluids to the peritoneal cavity, by using a ‘diabolo’-shaped self-expanding metal stent (SEMS) (AXIOS 10mm×10 mm; Xlumena, Mountain View, California, USA), without success (Fig. 2b). Finally, a successful rescue maneuver was done in which a fully covered SEMS (60mm×16 mm, Hanaro; MI-Tech, Seoul, Korea) was delivered coaxially with the first and migrated stent (Fig. 3a, b). Computed tomography (CT) showed a sealed perforation without leakage of fluid, and a massive pneumoperitoneum (Fig. 4, Video 1). The patient had a favorable outcome from decompression paracentesis. The cystic fluid analysis showed high carcinoembryonic antigen (CEA) levels, identifying the lesion as a cystic tumor. To date, 1 year later, the patient is well and awaiting elective surgical resection. Endoscopic management is now considered to be the first-line therapy for pancreatic fluid collections. With improvement of the available equipment and development of new metallic stents, EUS transmural drainage techniques have become easier and less time-consuming. Even so, before drainage, evaluation of the lesion is necessary to rule out intervening vessels, to determine the adherence of the lesion, and to confirm that the nature of the lesion is other than inflammatory (i.e., a cystic tumor). The present report emphasizes the point that excellent pre-assessment is essential to avoid the mistake of confusing a cystic neoplasm with a pseudocyst [1 – 3].
In the case of massive pneumoperitoneum, the previously described rescue technique, of delivering a long enteral FC-SEMS and performing an emergency paracentesis, can be helpful [4,5].

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**References**


**Bibliography**

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**Corresponding author**

Joan B. Gornals, MD, PhD
Endoscopy Unit, Department of Digestive Diseases
Hospital Universitari de Bellvitge-IDIBELL
(Bellvitge Biomedical Research Institute)
Feixa Llarga s/n
08907 l’Hospital de Llobregat
Barcelona
Spain
Fax: +34-93-2607681
jgornals@bellvitgehospital.cat

Claudia Consiglieri1, Joan B. Gornals1, Carlos Huertas2, Zoilo Madrazo2, Carme Loras1

1. Endoscopy Unit, Department of Digestive Diseases, Hospital Universitari de Bellvitge-IDIBELL, Barcelona, Spain
2. Department of Surgery, Hospital Universitari de Bellvitge-IDIBELL, Barcelona, Spain