Endoscopic ultrasound-guided drainage of a liver abscess with a self-expandable metal stent as rescue therapy after plastic stent misdeployment

Endoscopic ultrasound (EUS) is an alternative to percutaneous drainage of abdominal abscesses [1]. Percutaneous abscess drainage may be challenging in poorly accessible locations [2].

A 53-year-old woman underwent palliative biliary drainage for a Bismuth IIIb hilar cholangiocarcinoma. A transpapillary plastic biliary stent was placed by endoscopic retrograde cholangiopancreatography (ERCP) into the right hepatic duct and EUS-guided hepaticogastrostomy performed with a metal stent into the left hepatic duct. Four weeks later, a 5-cm subphrenic abscess was noted in liver segment II (Fig. 1). The abscess location was deemed unfavorable for percutaneous drainage. An EUS-guided approach was suggested instead. The abscess was imaged under linear EUS and punctured with a 19-G needle from the distal esophagus. Serial dilation with a 6F cystotome and 4-mm balloon dilation was performed (Fig. 2). A 7-Fr 5-cm double-pigtail stent (DPS) was then inadvertently deployed fully within the abscess (Fig. 3). A covered biliary self-expandable metal stent (SEMS) was placed across the tract from the gastroesophageal junction just below the Z line into the abscess, balloon-dilated to 10 mm, and anchored to the esophageal wall with a hemostatic clip (Fig. 4, Fig. 5). A 0.035-inch guidewire was coiled within the abscess. The echoendoscope was removed over the wire. An ultra-slim gastroscope was carefully advanced over the wire through the SEMS into the abscess. The DPS was grasped with a 5-F tripod forceps under endoscopic view and repositioned into the stomach under gentle traction (Video 1).

A computed tomography (CT) scan performed 2 weeks later confirmed abscess resolution with in-situ SEMS and coaxial DPS. Both stents were removed 1 week later using a standard gastroscope.

Endoscopic ultrasound-guided drainage of high-grade hilar cholangiocarcinoma remains challenging. ERCP with transpapillary biliary stenting combined with left-sided EUS-guided hepatogastrostomy appears promising [3–4]. Misdeployment of a DPS within an acute collection is a potentially serious adverse event [5]. As in other related scenarios, placement of a fully covered SEMS bridged the puncture tract. This allowed transluminal access into the abscess similar to that provided by natural orifice transluminal endoscopic surgery (NOTES), and eventually DPS repositioning.

ing and successful transluminal abscess drainage.

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Competing interests

Dr. Manuel Perez-Miranda is a consultant for Boston Scientific, Olympus, Medtronic and M.I.Tech.

The authors

Esteban Fuentes-Valenzuela, Beatriz Burgueño Gomez, Carlos Chavarría, Ramon Sanchez-Ocana, Carlos de la Serna-Higuera, Manuel Perez-Miranda
Gastroenterology Department, Hospital Universitario Rio Hortega, Valladolid, Spain

Corresponding author

Manuel Perez-Miranda, MD, PhD
Gastroenterology Department, Hospital Universitario Rio Hortega, Calle Dulzaina 2, 47012 Valladolid, Spain
mperezmiranda@saludcastillayleon.es

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Video 1 Radiological view of the insertion through the self-expandable metal stent of an ultra-thin gastroscope with a tripod grasping forceps repositioning the previously misdeployed double-pigtail stent.

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