Endoscopic drainage of an infected post-surgical abdominal fluid collection using a lumen-apposing metal stent

A 63-year-old man with a history of non-small cell lung cancer in remission following left upper lobe lobectomy was found to have a 5 cm mass along the inferior aspect of the stomach that had enlarged from a previous computed tomography (CT) scan. He underwent a Billroth II gastrectomy with resection of the mass, which was consistent with a metastasis of the primary tumor. Three weeks after abdominal surgery, he developed new-onset abdominal pain and fever to 102 degrees Fahrenheit. A CT scan showed a new 7.4 cm post-surgical abdominal fluid collection (AFC), just medial to the gastrojejunostomy anastomosis, which extended into the porta hepatis (Fig. 1). The fluid was of higher density than simple fluid and was thought to be infected.

The interventional radiology service was consulted for drainage of the infected post-surgical AFC but the window for drainage was not optimal, as the potential drainage paths had intervening bowel or liver. Therefore, our service was consulted for endoscopic ultrasound (EUS)-guided drainage.

Under linear echoendoscopic guidance, the fluid collection was visualized adjacent to the gastrojejunostomy anastomosis, the pancreas, and the liver (Fig. 2). A 15×10 mm lumen-apposing metal stent placed into the post-surgical abdominal fluid collection resulted in the drainage of frank pus (Fig. 3). A computed tomography scan showed resolution of the post-surgical abdominal fluid collection (Fig. 4).

Video 1 Placement of a lumen-apposing metal stent to drain an infected post-surgical abdominal fluid collection.
metal stent (LAMS; AXIOS; Boston Scientific, Marlborough, Massachusetts, USA) was placed, under EUS guidance, using an electrocautery-enhanced deliver device (▶ Video 1). Upon placement, frank pus was seen flowing from the stent (▶ Fig. 3). Within 24 hours, the patient’s fever and abdominal pain had resolved. A repeat CT scan 4 weeks later showed the collection had resolved (▶ Fig. 4). The stent was removed at 5 weeks after the initial placement. Although EUS-guided drainage of postsurgical AFCs has been described using plastic stents [1, 2], no literature exists on the use of LAMSs. This case demonstrates that the use of EUS-guided LAMS placement can be successful to drain these collections.

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Competing interests

None

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