

LAMS to the SEMS Rescue!

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LAMS ao resgate da SEMS!

Palavras Chave

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We present the case of an 80-year-old woman with gastric outlet obstruction syndrome due to colorectal cancer metastasis in the distal duodenum. A 9-cm luminal uncovered self-expandable metal stent (SEMS) (Wallstent[®], Boston Scientific, Marlborough, MA, USA) was inserted, with the proximal flange located in D2. The obstructive symptoms resolved but the patient was admitted a week later due to jaundice (total bilirubin 4.07 mg/dL, direct 2.84 mg/dL). Abdominal computerized tomography revealed marked dilation of the common bile duct (CBD) up to the level of the papilla (Fig. 1).

An endoscopic retrograde cholangiopancreatography (ERCP) was scheduled. Anticipating difficulties in accessing the duodenal papilla, an endoscopic ultrasound-guided biliary drainage (EUS-BD) was also planned in advance. As suspected, the metal mesh in the duodenum hindered duodenoscope progression, precluding any attempt at biliary cannulation. Since the duodenal bulb was free, we decided to perform a choledochoduodenostomy using a 6 × 8 mm lumen-apposing metal stent (LAMS) (Hot AXIOS[®], Boston Scientific, Marlborough, MA, USA). A therapeutic echoendoscope was advanced to the duodenal bulb and a 19-gauge needle was used to puncture the dilated CBD and aspirate bile. A 0.035-inch guidewire was then inserted into the CBD and the LAMS was deployed following the manufacturer's instructions (Fig. 2).

After the procedure, jaundice resolved and the patient was able to resume the palliative chemotherapy prescribed, with no recurrence of obstructive symptoms or jaundice in 4 months of follow-up. Figure 3 shows a pre-discharge gastroduodenography, revealing patency of the duodenal stents and oral contrast opacifying the biliary tree through the LAMS.

This case highlights biliary obstruction as an uncommon adverse effect of endoscopic SEMS placement. We attributed jaundice to the procedure and not to malig-

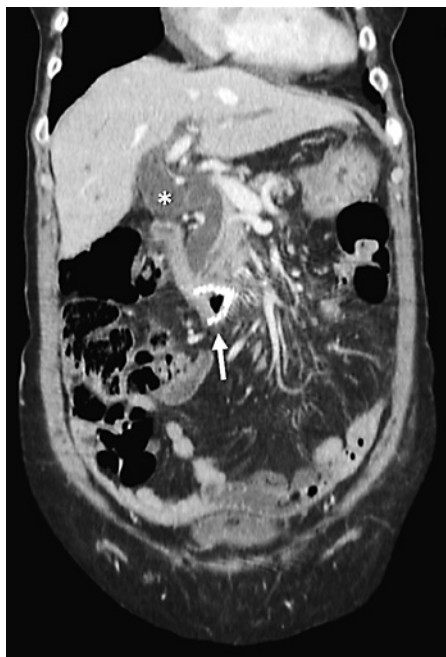


Fig. 1. Abdominal computerized tomography showing marked common bile duct dilation up to the level of the papilla (asterisk) and the proximal end of the enteric stent in the second duodenal portion (arrow).

nant invasion due to the close temporal association between the two events. The situation was further complicated because the SEMS itself impeded papillary access and ERCP.

EUS-BD has emerged in the last decade as a valid alternative to percutaneous or surgical drainage in cases of ERCP failure or unfeasibility, with success and complication rates of 90 and 19%, respectively [1]. EUS-BD comprises a heterogeneous group of procedures that utilize the echoendoscope for biliary drainage. Access to the biliary tree may be achieved at intra- or extrahepatic sites and drainage can be accomplished through a transmural, antegrade, or rendez-vous method [1].

A recent meta-analysis comparing all EUS-BD techniques with percutaneous transhepatic biliary drainage (PTBD) found similar rates of technical success but better clinical outcomes, a better safety profile, and a lower rate of re-intervention for EUS approaches [2].

There is currently no consensus on the preferred EUS-BD method and only recently have decision algorithms been proposed [3, 4]. In general, rendez-vous or antegrade drainage methods have lower success rates and longer procedure times, while transhepatic puncture site has

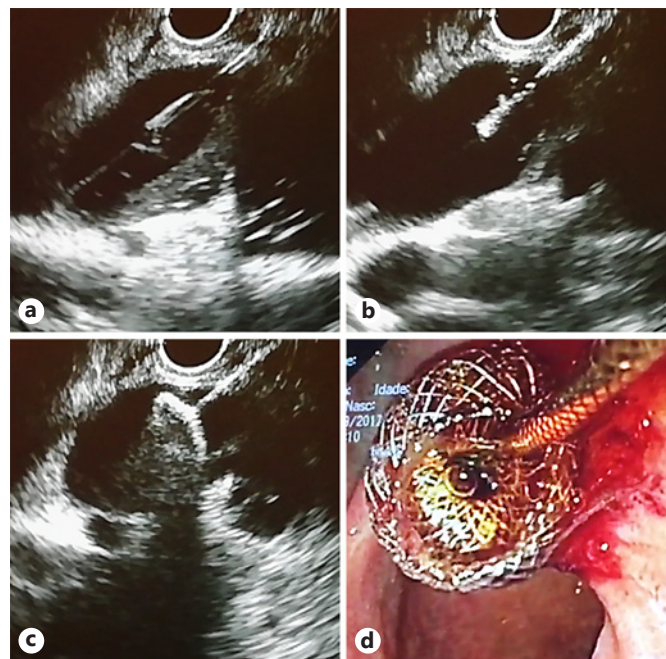


Fig. 2. **a** Puncture of the common bile duct through the first duodenal portion and passage of guidewire. **b** Insertion of the LAMS (Hot AXIOS®, Boston Scientific) into the common bile duct lumen. No fistula dilation was necessary as this particular stent is equipped with a cautery wire in the distal tip which obviates this step. An Erbe VIO 300d (Erbe USA) electrosurgical unit in AUTO CUTe mode was used. **c** Deployment of the stent's proximal flange inside the common bile duct. **d** Deployment of the stent's distal flange in the duodenal bulb. Balloon dilation of the LAMS stent was not performed since abundant bile flow was readily apparent after its full deployment.

more complications when compared to transduodenal access [1].

Bile leak is the most common complication of EUS-BD [2]. Recently, dedicated LAMS have been used instead of regular metal stents to create a choledochoduodenostomy. These are short, fully covered stents with wide flanges, developed specifically for EUS-guided drainage. This particular type of stent may reduce the risk of biliary leak and tends to make the procedure simpler and faster. A recent multicenter series of 57 choledochoduodenostomies in malignant biliary obstruction using AXIOS® or Hot AXIOS® stents reported excellent technical (98.2%) and clinical (94.7%) success rates, with re-intervention rates of 9.3% during a mean follow-up of 151 days. All re-interventions were endoscopic and biliary drainage was maintained through the LAMS [5].



Fig. 3. Upper gastrointestinal series images showing opacification of the biliary tree (asterisk) through the LAMS (arrow), as well as patency of the duodenal stents (a second duodenal stent was required due to distal migration of the first one).

EUS-BD, when performed by an experienced echoendoscopist, should be preferred to PTBD in malignant biliary obstruction after ERCP failure, and may become the first-line drainage procedure in the near future [4].

Disclosure Statement

The authors have no conflicts of interest to declare.

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