Endoscopic ultrasound-guided transgastric biliary metal stent placement after dilation with tapered-tip Teflon catheters and marking with a clip

We report the case of a 74-year-old man with known type 2 diabetes mellitus, hypertension, and retinal detachment who was referred for endoscopic retrograde cholangiopancreatography (ERCP) for biliary drainage because of a fever and severe upper abdominal pain for a few days. An ultrasound of his upper abdomen showed a 4×5-cm heterogeneous hypoechoic area in the gallbladder fossa with intrahepatic bile duct dilatation, which was suspected to be gallbladder cancer. He therefore proceeded to ERCP for biliary drainage.

The patient was given intravenous sedation and was placed in the left lateral decubitus position. After duodenal intubation, cannulation of the common bile duct (CBD) was performed with the release of a large amount of purulent discharge (Fig. 1). We were unable to pass the guide wire into the intrahepatic ducts because of intracavitary tumor (Fig. 2). Therefore, we decided to perform endoscopic ultrasound (EUS)-guided antegrade stent placement using the rendezvous technique.

A metal clip (Quick Clip HX-201UR-135; Olympus Medical Systems, Tokyo, Japan) was placed through the duodenoscope just beside the ampulla for localization (Fig. 3). We then punctured segment 2 of the left lobe of the liver using a 19-gauge needle guided by a curvilinear echoendoscope (GF-UE140P; Olympus, Tokyo, Japan) with color Doppler to avoid intervening vascular structures. A 0.035-inch guide wire was passed down to the ampulla and the tract was dilated using tapered-tip Teflon catheters of size 7 Fr, and a stent was inserted antegrade into the bile duct.

The stent was then placed through the metal clip and positioned next to the ampulla (Fig. 4). The stent was then dilated and placed in an antegrade fashion using an EUS-guided rendezvous technique (Fig. 5). The placement was confirmed radiographically (Fig. 6).
then 8.5 Fr, and finally 10 Fr. An uncovered self-expanding metal stent (SEMS; D-type Niti-S biliary stent; TaeWoong Medical, Gyeunggi-do, Korea) was inserted over the wire through the tract and down to the level of metal clip (Fig. 4) and deployed in a good position (Fig. 5 and Fig. 6). The patient was observed for 2 weeks in the hospital and discharged without any complications.

To date there are only a few reports of EUS-guided antegrade stent insertion with few complications. Most of the procedures have been performed using balloon dilation techniques [1–3]. For this particular patient, we used tapered-tip Teflon catheters that we had made ourselves for “sequential dilatation”, as previously reported [4], and marked the ampullary area using a metal clip to achieve accurate positioning of the stent. We found this alternative technique was also feasible.

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Competing interests: None

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References

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