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Recurrent obstruction of biliary stent-in-stent: a heated solution

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Case report

Intraductal radiofrequency ablation (RFA) has been used in the management of malignant biliary obstruction (1) and ampullary neoplasms (2). Some small studies refer to its role in managing benign biliary strictures with some promising results (3). The complications are not neglectable, namely cholangitis, pancreatitis, bleeding, and perforation, although most of them can be managed conservatively (3). There are two catheters available. Only the ERLA (EndoLumunal Radiofrequency Ablation, Taewoong Medical) catheter can control temperature and impedance, allowing it to reduce the risk of complications (4).

We present a case of a 63-year-old woman who was diagnosed with a voluminous retroperitoneal mass with multiple lymph nodes. The mass biopsy showed a diffuse large B cell lymphoma, stage IV, with a presumed poor prognosis. The patient started

chemotherapy in January 2022. In February 2022, she presented acute cholangitis due to compression of the common bile duct (CBD), by the retroperitoneal mass. Accounting for the initial poor prognosis, it was placed an uncovered self-expandable metallic stent (SEMS) in distal CBD. In July and November 2022, she had two more episodes of acute cholangitis due to stent obstruction. In both cases, it was decided to do a mechanical cleaning of the stent and place another uncovered SEMS, stent-in-stent. After chemotherapy, in July 2022, the exams showed total lymphoma remission. In March 2023, she presented with hyperbilirubinemia and pruritus. The endoscopic retrograde cholangiopancreatography (ERCP) showed occlusion of the stents and was performed RFA inside the stent to reduce the hyperreactive tissue and increase stent patency (Figure 1). A 22 mm ERLA catheter was used with the following parameters: 75 ºC, energy 7W (increased to 10W during the procedure), 120 seconds. In the end, it was placed a plastic stent inside the stent-in-stent. No complications were registered. After one year, the patient stays asymptomatic and ERCP revealed total patency of the stent-in-stent, without need of further treatment for now.

When clinically indicated, an uncovered SEMS can be placed in the CBD, however, once there, it is difficult to remove it endoscopically. Less commonly, this can also happen with partially or covered SEMS. In this case, the oncologic disease was resolved and the patient didn't need the SEMS. However, it wasn't possible to remove it and mechanical cleaning and sten-in-stent procedure weren't enough. In case of stent occlusion by hyperreactive tissue, RFA can play a role, in increasing stent patency and reducing the number of procedures.

Disclaimers

The authors have no conflicts (financial, professional, or personal) to declare.

Support

The authors have no fund or financial relationships to declare.

Informed consent

The authors obtained an informed consent from the patient for the publication of their information and imaging.

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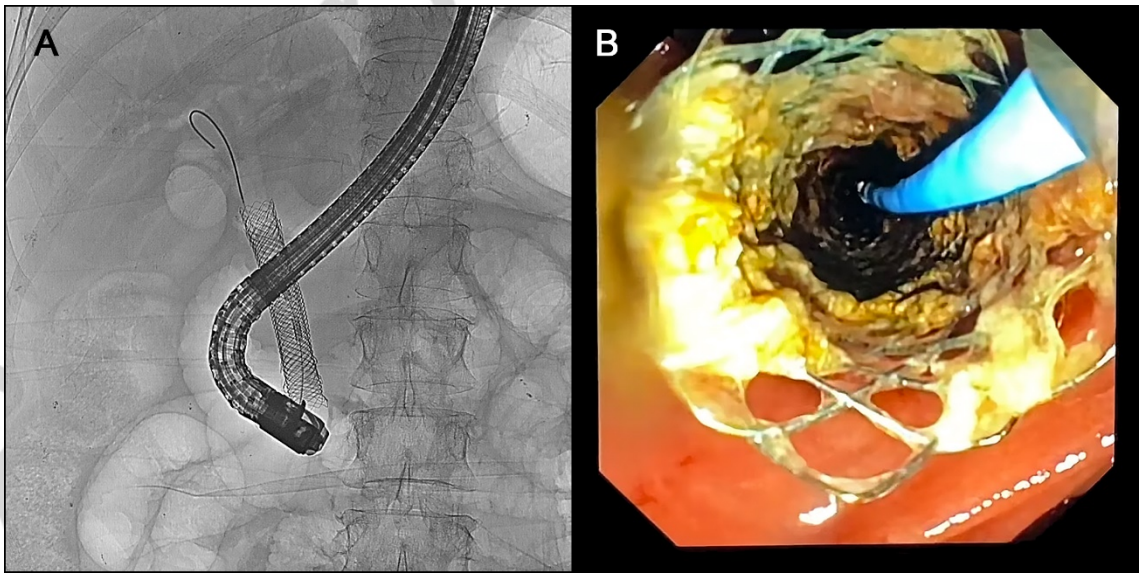

Fig.1. Fluoroscopy image of the stent-in-stent with the intraductal radiofrequency

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ablation probe (A), and the appearance of the stent lumen after intraductal radiofrequency ablation (B).

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