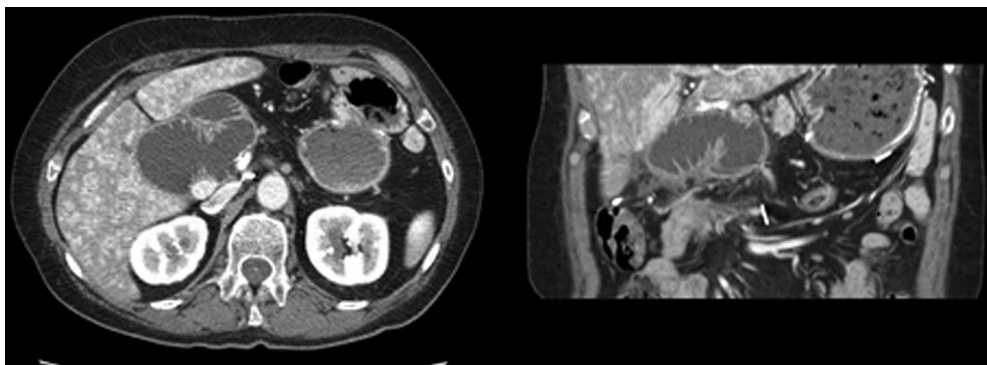


## Treatment of neoplastic afferent limb syndrome by endoscopic gastrojejunostomy with a lumen-apposing metal stent

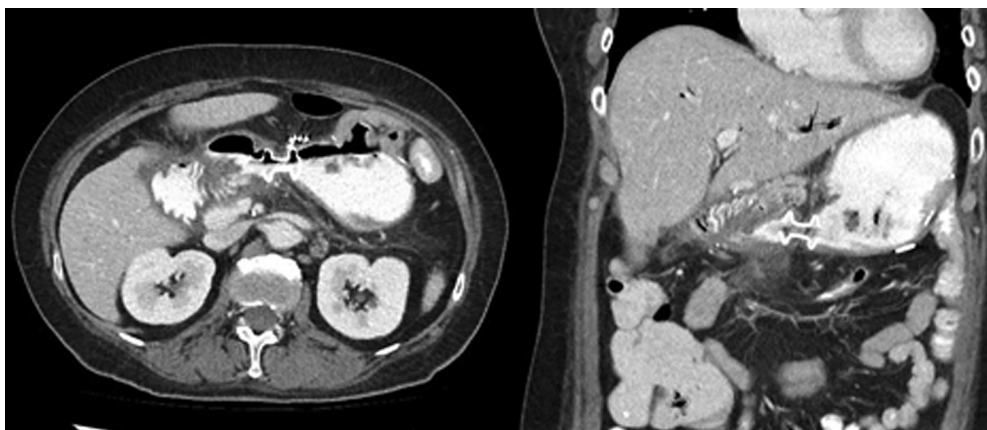
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A 65-year-old woman presented with sepsis secondary to cholangitis and was given antibiotics. She was known to have pancreatic adenocarcinoma and had undergone a Whipple pancreaticoduodenectomy 2 years earlier (Fig. 1). An abdominal CT scan confirmed afferent limb syndrome resulting from obstruction by recurrence of the tumor. Initially, her total bilirubin was 6.3 mg/dL; to treat the cholangitis, we attempted to stent the afferent limb by push enteroscopy. However, although the

afferent limb could be visualized, deep passage of the colonoscope was unsuccessful because of looping. Two days later, while the patient was under conscious sedation, we located the dilated afferent loop with EUS using a linear echoendoscope (UCT-180, Olympus Medical Systems, Center Valley, Pa) (Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)). A 10-mm × 10-mm lumen-apposing metal stent (LAMS) (Axios; Boston Scientific, Natick, Mass) was deployed to appose the dilated limb and



**Figure 1.** CT scan during initial diagnosis.



**Figure 2.** CT scan 2 days after stent deployment.

Written transcript of the video audio is available online at [www.VideoGIE.org](http://www.VideoGIE.org).



**Figure 3.** CT scan 30 days after stent deployment.

the stomach, and black bile spontaneously drained. The patient recovered from her cholangitis and was discharged from the hospital 72 hours after the procedure with proton pump inhibitors and oral antibiotics (Fig. 2). A CT scan obtained 12 days after discharge confirmed stent patency. A month later, the patient continued to do well, and her total bilirubin was back to normal (Fig. 3). A double-pigtail plastic stent was installed in the lumen of the LAMS to prevent stent overgrowth because it was decided to leave the stent in place indefinitely. The patient was referred for palliative and supportive care; she declined palliative chemotherapy and died 5 months later.

Afferent limb syndrome is a known adverse event in patients who have undergone a Whipple procedure. The overall incidence is estimated between 0.3% and 1.0%<sup>1</sup> and may be as high as 13% in patients with pancreatic cancer.<sup>2</sup> In cases wherein regional recurrence of malignancy is the cause of afferent limb syndrome, surgical treatment (bypass or excision) has traditionally been the primary therapeutic approach; treatment by endoscopic or radiologic interventions has recently emerged as an interesting palliative option. These less-invasive measures include dilation with stent placement and percutaneous biliary drainage.<sup>2,3</sup>

To our knowledge, only 2 other articles have discussed the placement of a LAMS to create a gastroenteric fistula in a patient with afferent limb syndrome resulting from tumor recurrence.<sup>4,5</sup> The main advantage of this technique is the ease and short time of deployment without any external drainage material. The risk of immediate bleeding can

be reduced by Doppler examination of the puncture trajectory. Stent migration and stent overgrowth are also concerns that can be countered with a double-pigtail plastic stent placement in the LAMS. Finally, the risk of friction ulceration and secondary bleeding is probably present as long as the LAMS is left in place; therefore, we chose to use prophylactic treatment with proton pump inhibitors. The long-term patency of the LAMS remains a question that needs to be answered with prospective trials.

In conclusion, based on this case report and the data from Shah et al<sup>4</sup> and Rodrigues-Pinto et al,<sup>5</sup> we believe that the treatment of neoplastic afferent limb syndrome by endoscopic gastrojejunostomy with a LAMS is feasible in selected cases.

## DISCLOSURE

*All authors disclosed no financial relationships relevant to this publication.*

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<https://doi.org/10.1016/j.vgie.2017.11.012>