Successful endoscopic ultrasound-guided fine-needle aspiration through a gastroduodenal stent for the diagnosis of recurrent gallbladder carcinoma

Fig. 1 Diagnosis of recurrent gallbladder carcinoma. Computed tomographic scan showing gastric outlet obstruction with retained gastric contrast as well as a distended duodenal bulb.

Fig. 2 Duodenal stricture seen on initial upper gastrointestinal endoscopy.

Fig. 3 Endoscopic picture of the gastroduodenal stent, with the proximal end located in the prepyloric gastric antrum.

A 55-year old woman presented with epigastric pain and vomiting of 4 days' duration. She had a history of T2N0 gallbladder adenocarcinoma incidentally identified at cholecystectomy 6 months prior, for which she subsequently underwent resection of the cystic duct remnant. The patient declined adjuvant chemotherapy. On this admission, imaging revealed duodenal wall thickening with associated gastric outlet obstruction (● **Fig. 1**). Upper gastrointestinal endoscopy confirmed a duodenal bulb stricture through which a standard upper gastrointestinal endoscope could not be passed (● **Fig. 2**); biopsies showed peptic duodenitis. Endoscopic ultrasound (EUS) revealed wall thickening to 9.4mm with inability to

traverse the stricture. Cytology from fine-needle aspiration (FNA) with a 22-gauge needle was "suspicious for poorly differentiated carcinoma." A 22×90-mm uncovered metal gastroduodenal stent (Wallflex; Boston Scientific, Natick, Massachusetts) was placed 4 days later to relieve her gastric outlet obstruction (● **Fig. 3**).

At oncology follow-up, the results of cytology were deemed insufficient to diagnose carcinoma recurrence. At a second EUS procedure, the echoendoscope was again unable to traverse the stricture, although the duodenal stent facilitated further intubation. A 2.0-cm masslike thickening of the duodenal wall was present. Cytology of a specimen obtained from FNA through the stent (● **Fig. 4**, ● **Video 1**) with the 22-gauge needle confirmed the recurrence of gallbladder adenocarcinoma (● **Fig. 5**). The patient was subsequently started on combination chemotherapy with gemcitabine and cisplatin.

EUS is effective for the preoperative diagnosis and staging of gallbladder carcinoma [1]. Similarly, FNA for the histologic evaluation of gallbladder masses is both

accurate and safe [2]. In situations in which a significant luminal stricture is present, EUS staging is limited because the scope cannot traverse the lesion for a complete evaluation of the regional lymph nodes. We previously reported that FNA can be done through the interstices of a colonic stent [3]. This case builds on that experience and confirms the safety and efficacy of the technique in the upper gastrointestinal tract.

Endoscopy_UCTN_Code_TTT_1AS_2AF

Competing interests: Dr. DiMaio is a consultant for Boston Scientific, Natick, Massachusetts.

Video 1

On initial endoscopy, a gastroduodenal stent is seen partially occluded with debris. On the echoendoscopic view, a hypoechoic masslike invasion is seen. The fine needle used for aspiration is then passed through the interstices of the indwelling stent to obtain tissue for diagnosis.

Fig. 4 Endoscopic ultrasound image showing the fine needle used for aspiration in the mass after traversing the interstices of the duodenal stent.

Fig. 5 Fine-needle aspiration cytologic diagnosis of adenocarcinoma. **a** Smear stained on site with Diff-Quik. **b** Cell block stained with hematoxylin and eosin.

**Anoop Prabhu¹, Maoxin Wu²,
Christopher J. DiMaio¹**

¹ Department of Medicine, Division of Gastroenterology, Icahn School of Medicine at Mount Sinai, New York, New York

² Department of Pathology, Division of Cytopathology, Icahn School of Medicine at Mount Sinai, New York, New York

References

- 1 Sadamoto Y, Kubo H, Harada N et al. Pre-operative diagnosis and staging of gallbladder carcinoma by EUS. *Gastrointest Endosc* 2003; 58: 536–541
- 2 Wu LM, Jiang XX, Gu HY et al. Endoscopic ultrasound-guided fine-needle aspiration biopsy in the evaluation of bile duct strictures and gallbladder masses: a systematic review and meta-analysis. *Eur J Gastroenterol Hepatol* 2011; 23: 113–120
- 3 Trindade AJ, Khaitov S, Potack JZ et al. Successful EUS-guided FNA through a colonic stent array for diagnosis of an extraluminal pelvic malignancy causing colonic obstruction. *Gastrointest Endosc* 2012; 76: 1070–1072

Bibliography

DOI <http://dx.doi.org/10.1055/s-0034-1390751>
Endoscopy 2015; 47: E109–E110
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

Christopher J. DiMaio, MD

Dr. Henry D. Janowitz Division of Gastroenterology
 Icahn School of Medicine at Mount Sinai
 One Gustave L. Levy Place, Box 1069
 New York, NY 10029
 Fax: 1-212-426-5099
 Christopher.dimaio@mssm.edu