Endoscopic Ultrasound

OPEN

A novel case of EUS–guided targeted radiofrequency ablation of metastatic duodenal renal cell carcinoma

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Gastrointestinal metastases are infrequent and represent the late stage of the malignant disease. Renal cell carcinoma (RCC) metastases to the small intestine are extremely rare. Duodenum is the least involved segment of the small intestine with RCC metastatic lesions, with only a few published cases in the literature. Typically, treatment options for these cases are limited.[1]

EUS–guided radiofrequency ablation (EUS-RFA) has emerged as a technology for managing unresectable malignancies such as pancreatic and hepatobiliary cancers.[2,3] Herein, we report a case of duodenal metastasis from RCC, which resolved entirely using EUS-RFA.

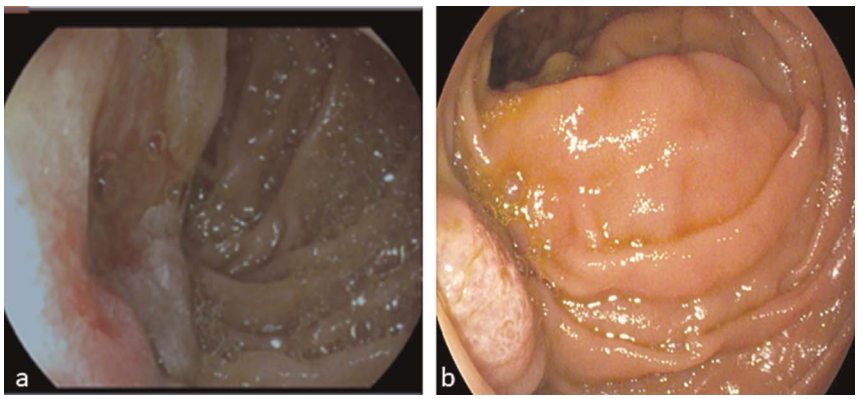

Figure 1. a, Duodenal lesion on esophagogastroduodenoscopic examination on presentation. b, Duodenal lesion with a decrease in size.

A 77-year-old woman with primary clear cell type RCC Fuhrman grade 4 presented with melena and anemia. Abdominal imaging demonstrated a 3.4 × 3.1 × 2.9-cm heterogenous mass immediately medial to the pancreatic head, invading the first and second portions of the duodenum. Esophagogastroduodenoscopy revealed an infiltrative ulcerated mass in the second portion of the duodenum [Figure 1]. EUS examination showed a well-circumscribed 25-mm vascular hypoechoic mass invading the duodenal wall layers. Because this patient was not a surgical candidate, a mutual decision was made to treat the lesion using EUS-RFA.

The patient received 3 cycles of EUS-RFA using a 19G Taewoong EUSRA RFA electrode every 4 weeks. There was a significant decrease in the mass size, with only fibrotic-appearing tissue remaining on esophagogastroduodenoscopy and EUS examination after the last EUS-RFA. Abdominal imaging 3 months after the final RFA cycle showed a significant decrease in the size of the duodenal mass [Figure 2].

Mounting evidence has shown that RFA could be used as a safe and effective adjunct to chemotherapy, including metastatic pancreatic, thyroid, and colon cancers.[2–4] Our case shows that EUS-RFA could be a promising treatment option for inoperable metastatic lesions, including palliative purposes.

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Endoscopic Ultrasound (2023) 12:5

Received: 24 November 2022; **Accepted:** 1 June 2023

Published online: 18 October 2023

http://dx.doi.org/10.1097/eus.0000000000000026

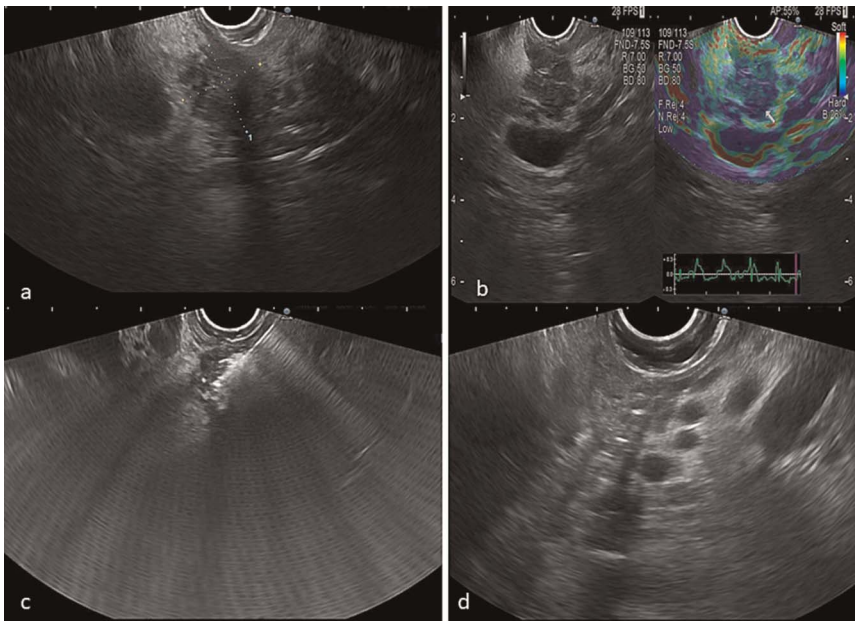

Figure 2. a, EUS examination of the duodenal metastatic lesion showing a hypoechoic lesion. b, Elastographic images of the lesion at the time of presentation. c, Radiofrequency ablation of the metastatic lesion. d, EUS examination of the lesion showing hyperechoic fibrotic tissue with complete disappearance of the mass.

Declaration of Patient Consent

The authors declare the study was anonymous and does not have a patient consent statement.

Conflict of Interest

All authors declare no potential conflict of interest.

Source of Support/Funding

Nil.

Acknowledgments

Nil.

Author Contributions

Hemant Goyal and Nirav Thosani did the conception and design. Muhammad Vohra and Hemant Goyal did the literature search. Muhammad Vohra and Hemant Goyal did the first draft of the manuscript. Mairin Joseph-Talrja, Putao Cen, and Nirav Thosani did the critical revision and editing. The manuscript has been read and approved by all the authors, the requirements for authorship as stated earlier in this document have been met, and each author believes that the manuscript represents honest work.

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