

Transgastric retrograde endoscopic ultrasound sampling of a mediastinal mass in a patient with radiation-induced trismus

Endoscopic ultrasound (EUS) guidance is a safe and effective technique for sampling mediastinal lesions [1–3]. We report a case where an EUS was done in retrograde fashion through a gastrostomy because of the patient's limited degree of mouth opening due to trismus. We present the case of a 42-year-old man with oropharyngeal squamous cell carcinoma (SCC) who had had a suboptimal response to chemoradiation and was therefore undergoing evaluation for surgery. A positron emission tomography (PET) scan showed a hypermetabolic mediastinal lesion. If this mediastinal lesion was a metastatic focus, the patient would not benefit from surgery and therefore sampling was required. An initial EUS-guided fine needle aspiration (FNA) failed as the echoendoscope could not be passed through the patient's mouth because of his radiation-induced trismus. After multidisciplinary discussion, we proceeded with retrograde EUS-FNA of the mediastinal mass performed through the patient's pre-existing gastrostomy (►Video 1).

The procedure was performed with the patient under general anesthesia. The existing gastrostomy tube was removed and, after serial dilation of the gastrostomy tract, was replaced with a 15-mm laparoscopic trocar. A standard gastroscope was passed through the trocar and two hemoclips were placed in the gastric cardia to aid identification of the gastroesophageal junction (GEJ) during echoendoscope passage. A radial echoendoscope (GF-UE160-AL5; Olympus, Tokyo, Japan) was inserted through the trocar and advanced in retrograde fashion through the GEJ until the mediastinal mass was identified (►Fig. 1). The radial echoendoscope was then exchanged for a linear echoendoscope (UC140P-AL5; Olympus) to perform the EUS-FNA (►Fig. 2). Two passes with a 22G needle were diagnostic for carcinoma by on-site cytology. The linear



► Fig. 1 The mediastinal mass is shown: **a** by the radial echoendoscope first used to locate it; **b** on a computed tomography (CT) scan, which produces a similar image.

echoendoscope and trocar were removed and a balloon-type gastrostomy tube was placed.

Final pathology confirmed metastasis of the SCC. The patient was discharged on the same day without complications and was later started on palliative immunotherapy.

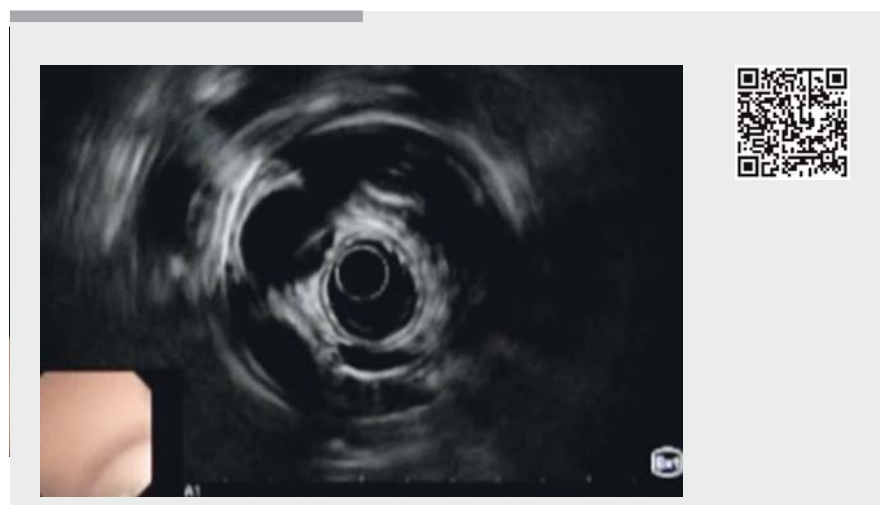
Retrograde EUS-FNA through a gastrostomy for mediastinal mass sampling

seems to be safe and feasible, and offers a novel solution for patients in whom the antegrade route is not available.

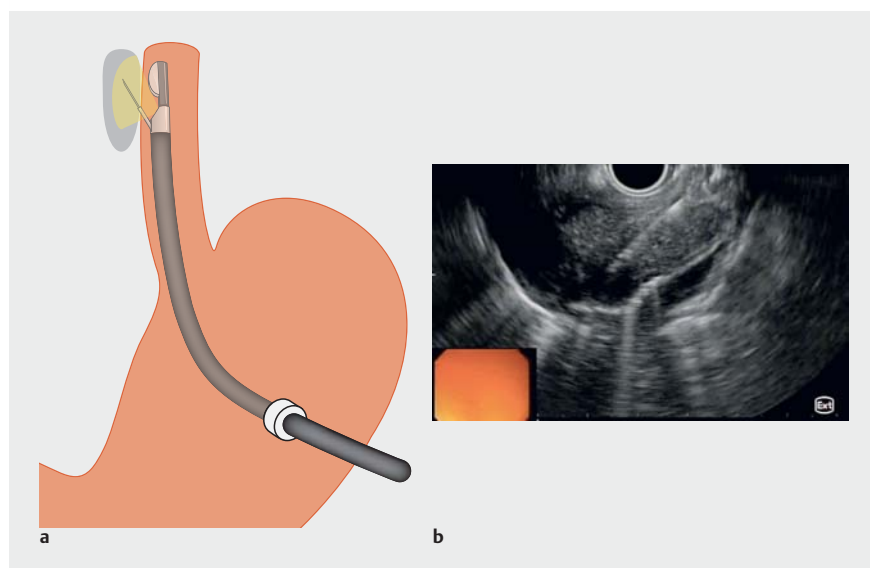
Endoscopy_UCTN_Code_TTT_1AS

Competing interests

None



► Video 1 Video demonstrating retrograde endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) through an existing gastrostomy for sampling of a mediastinal mass in a patient with radiation-induced trismus.



► **Fig. 2** Tissue sampling from the mediastinal mass was obtained by endoscopic ultrasound-guided fine needle aspiration (EUS-FNA). **a** Schematic showing the linear echoendoscope inserted through the existing gastrostomy. **b** EUS image during tissue acquisition with a 22G needle.

References

- [1] Fritscher-Ravens A, Sriram PV, Bobrowski C et al. Mediastinal lymphadenopathy in patients with or without previous malignancy: EUS-FNA-based differential cytodiagnosis in 153 patients. *Am J Gastroenterol* 2000; 95: 2278–2284
- [2] Powers CN, Silverman JF, Geisinger KR et al. Fine-needle aspiration biopsy of the mediastinum. A multi-institutional analysis. *Am J Clin Pathol* 1996; 105: 168–173
- [3] Pedersen BH, Vilmann P, Folke K et al. Endoscopic ultrasonography and real-time guided fine-needle aspiration biopsy of solid lesions of the mediastinum suspected of malignancy. *Chest* 1996; 110: 539–544

Bibliography

DOI <https://doi.org/10.1055/s-0043-109425>
Endoscopy 2017; 49: E177–E178
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

The Authors

Matheus C. Franco¹, Andrew T. Strong²,
 Prabhleen Chahal¹, Joseph Veniero³, Brian
 Burkey⁴, John J. Vargo¹, Amit Bhatt¹

- 1 Department of Gastroenterology and Hepatology, Cleveland Clinic, Cleveland, Ohio, USA
- 2 Department of Surgery, Cleveland Clinic, Cleveland, Ohio, USA
- 3 Department of Diagnostic Radiology, Cleveland Clinic, Cleveland, Ohio, USA
- 4 Head and Neck Institute, Cleveland Clinic, Cleveland, Ohio, USA

Corresponding author

Amit Bhatt, MD

Department of Gastroenterology and Hepatology, Cleveland Clinic, 9500 Euclid Avenue, Cleveland, OH, 44195, USA
 bhata3@ccf.org

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at
<https://mc.manuscriptcentral.com/e-videos>