

## Endobronchial ultrasonic videoscope for transgastric/transesophageal fine-needle aspiration in special situations: another tool for the gastrointestinal endosonographer

Strictureing lesions of the esophagus or pharynx may impede passage of standard linear echoendoscopes and thus preclude tissue sampling/staging of malignancy [1]. Esophageal dilation may be risky and not always feasible. We report on the successful use of the endobronchial ultrasound (EBUS) videoscope in three patients with strictureing lesions.

Case 1 was a 75-year-old man with a recently dilated esophageal stricture who was referred with lesions in the pancreas (Fig. 1). Gastroscopy (Olympus XQ260; Olympus, Tokyo, Japan) revealed an esophageal stricture (Fig. 2), which the linear echoendoscope (Pentax EG-3870UTK; Pentax, Tokyo, Japan) was unable to pass. The EBUS scope (Pentax EB-1970OUK

passed through the area of stricture and demonstrated multiple lesions in the pancreas. Tissue elastography revealed a blue (hard) pattern with elevated strain ratio (Fig. 3). Fine-needle aspiration (FNA) confirmed metastatic renal carcinoma.

Case 2 was a 63-year-old woman who presented with stridor and dysphagia secondary to a large mediastinal mass (Fig. 4). The linear echoendoscope could not be passed. The EBUS scope documented mediastinal lymphadenopathy (Fig. 5). FNA confirmed small cell carcinoma.

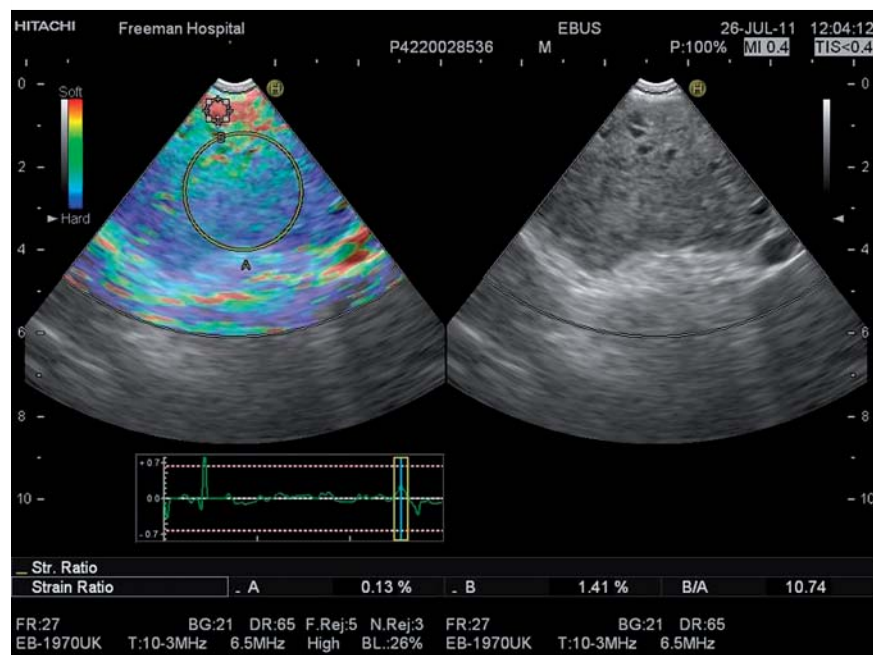
Case 3 was a 70-year-old man who presented with a suspected pancreatic mass. The linear echoendoscope would not pass the gastroesophageal junction secondary to achalasia cardia. The EBUS scope was utilized and showed a 27-mm tumor in the pancreas, which was infiltrating the superior mesenteric artery. FNA was unsatisfactory.

The insertion tube diameter of the EBUS-EB-1970OUK (6.2 mm) is thinner than that of the EG-3870UTK (12.8 mm). Limitations of the EBUS scope for gastrointestinal use include the short working length (60 cm), which precludes examination of the head of the pancreas from the duodenum, and the fact that there is no facility for air insufflation; the latter problem can be circumvented by injecting air through the working channel.

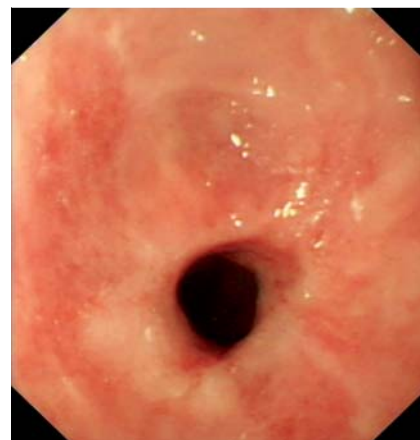
The EBUS scope therefore has the ability to evaluate patients who would otherwise be ineligible for endoscopic ultrasound examination due to pharyngeal/esophageal narrowing [2]. An EBUS scope is a useful addition to the armamentarium available to the gastrointestinal endosonographer.



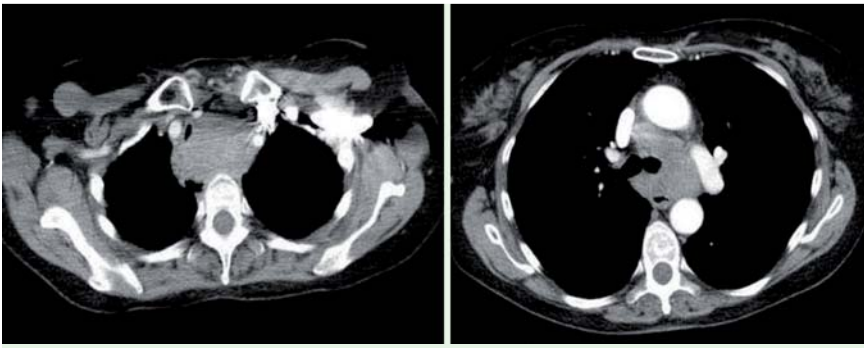
**Fig. 1** Computed tomography scan demonstrating multiple irregular lesions in the body and tail of the pancreas.



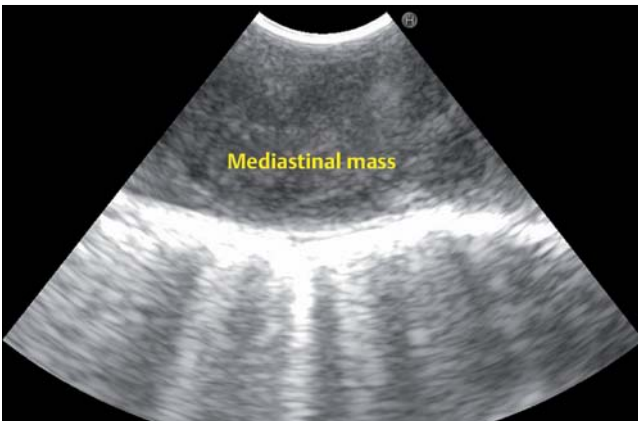
**Fig. 3** Endobronchial ultrasound dual views of elastography (left) showing blue/hard predominant pattern and B-Mode (right) showing multiple hyperechoic lesions in the body of pancreas.



**Fig. 2** Endoscopic view of the esophageal stricture, which the linear echoendoscope was unable to pass.



**Fig. 4** Computed tomography scan showing massive mediastinal lymphadenopathy causing extrinsic esophageal compression (right) and tracheal compression (left).



**Fig. 5** Endobronchial ultrasound view demonstrating massive mediastinal lymphadenopathy.

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**Competing interests:** None

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#### Bibliography

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