Endoscopic ultrasonography-guided fine-needle biopsy from ascending colon using a novel curved linear echoendoscope

Use of colonic endoscopic ultrasonography-guided fine-needle aspiration/biopsy (EUS-FNA/B) remains limited owing to the maneuverability of the conventional curved linear echoendoscope, particularly for right-sided colonic lesions [1]. A 52-year-old man with an abdominal tumor was admitted to our department. Computed tomography (CT) revealed colonic lesions of the cecum, extracolonic lesions adjacent to the ascending colon, and ascites in the surface of the liver (▶Fig. 1). Colonoscopy showed extrinsic compression in the proximal ascending colon (▶Fig. 2, ▶Video 1); however, biopsy specimens showed no evidence of malignancy. The patient underwent transcolonic EUS-FNB. A conventional colonoscope was inserted into the cecum, followed by a 0.035-inch ultra-stiff guidewire (Wrangler SUS endoscopic guidewire; Piolax Medical Devices, Yokohama, Japan) placed in the ascending colon. A novel curved linear echoendoscope (EG-580UT; Fujifilm, Tokyo, Japan) was then inserted in the cecum over the guidewire under fluoroscopic and endoscopic guidance (▶Fig. 3, ▶Video 1). Endoscopic ultrasonography (EUS) revealed a hypoechoic extracolonic mass. EUS-FNB for the mass (▶Fig. 4, ▶Video 1) and abdominal paracentesis, performed using a 22-gauge Franseen needle (Acquire; Boston Scientific Japan, Tokyo, Japan), showed adenocarcinoma consistent with cecal cancer.

Advancement of a conventional curved linear echoendoscope beyond the sigmoid colon requires previous placement of an overtube and a guidewire [1]. Although the use of forward-viewing echoendoscope for right-sided colon examination demonstrated the efficacy and safety of EUS-FNA/B [2], the larger scope diameter and narrower ultrasound scanning range (90°) of the forward-viewing echoendoscope may increase the difficulty of scanning and manipulation. The novel curved linear echoendoscope allowed for safe and reliable intu-
bation into the right-sided colon owing to its frontal endoscopic view and flexible scope tip [3] (Fig. 5, Video 1). Ultimately, the combination of colonoscopy-navigated ultra-stiff guidewire placement with intubation by the novel curved linear echoendoscope facilitates EUS-FNA/B from the right-sided colon.

**Competing interests**

None

**The authors**

Hiroshi Kawakami1,2, Tesshin Ban1,2, Yoshimasa Kubota1,2, Takaho Noda2, Kazusato Oshikawa2
1 Division of Gastroenterology and Hepatology, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan
2 Department of Gastroenterology and Hepatology, Division of Endoscopy, and Center for Digestive Disease, University of Miyazaki Hospital, Miyazaki, Japan

**Corresponding author**

Hiroshi Kawakami, MD, PhD
University of Miyazaki, Division of Gastroenterology and Hepatology, Department of Internal Medicine, Faculty of Medicine, 5200 Kihara, Kiyotake, Miyazaki, Miyazaki 889-1692, Japan
Fax: +81-985-85-9802
hiropon@med.miyazaki-u.ac.jp

---

**Fig. 3** Radiograph showing the guidewire-assisted intubation of a novel curved linear echoendoscope in the ascending colon following colonoscope intubation (inset: endoscopic view).
References


Bibliography

DOI https://doi.org/10.1055/a-0982-2688
Published online: 9.8.2019
Endoscopy 2020; 52: E24–E26
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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

Fig. 4 Echoendoscopic color Doppler image showing the hypoechoic mass (15 × 14.5 mm in diameter) punctured using a 22-gauge Franseen needle.

Fig. 5 Comparison of scope tips of a forward-viewing echoendoscope (TGF-UC260J; Olympus; top), a standard curved linear echoendoscope (GF-UCT260-ALS; Olympus, Tokyo, Japan; middle), and the novel curved linear echoendoscope (EG-580UT; Fujifilm, Tokyo, Japan; bottom); all of scopes are in the maximum up-angulation position.