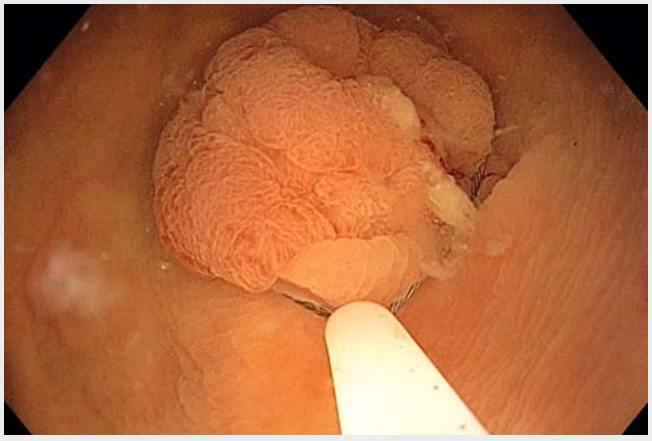
Underwater endoscopic mucosal resection of an adenomatous lesion with deep extension into the appendiceal orifice

▶ **Fig. 1** "Donut"-shaped laterally spreading tumor under narrow-band imaging.

▶ **Fig. 2** Postresection scar after 6 months showing no residual tissue. Narrow-band imaging.



Video 1 Underwater endoscopic mucosal resection of a "donut"-shaped laterally spreading tumor involving the appendiceal orifice.

Endoscopic mucosal resection (EMR) of lesions involving the appendiceal orifice is technically challenging because of poor endoscopic access due to the narrow lumen of the appendix. This brings a high risk of perforation because of the thin colonic wall at the base of the cecum. In expert hands, EMR is a safe and effective treatment of laterally spreading tumors (LST) surrounding the appendiceal orifice, but if more than 50 % of the circumference of the orifice is involved, surgery should be considered [1].

Underwater EMR (UEMR), described by Binmoeller et al. in 2012 [2], has been shown to enable safe resection of appendiceal orifice lesions, especially those limited to the rim. It allows endoscopic resection without previous submucosal injection, as the colonic lesion "floats" in a lumen filled with water, making lesions involving the appendiceal orifice more accessible to endoscopic resection [3].

Herein we present a case of a 73-year-old man referred to our unit for treatment of a "donut"-shaped granular-type LST completely encircling the AO. No deep submucosal invasion signs were observed (▶ **Fig. 1**).

UEMR was performed using room-temperature sterile water to fill the lumen and a 15-mm stiff, rounded snare (Captivator II; Boston Scientific, Voisins-le-Bretonneux, France) through a single-channel colonoscope using AutoCut Mode (VIO 3; Erbe Elektromedizin, Tübingen, Germany) (▶ **Video 1**). During the procedure, deep extension into the appendiceal orifice was observed. After a combination of air suction and more water infusion, the deep residual tissue everted, making it accessible for snare resection.

The procedure lasted 24 min and the patient was discharged after 2 h without complications. The histological diagnosis was low-grade dysplasia adenoma.

Follow-up colonoscopy after 6 months showed no residual lesion (▶ **Fig. 2**).
UEMR may allow safe complete endoscopic resection in cases of nonmalignant lesions with deep extension into the appendiceal orifice.

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Competing interests

The authors declare that they have no conflict of interest.

The authors

Hugo Uchima, Juan Colan-Hernandez, Noemí Caballero, Ingrid Marín, Margalida Calafat, Daniel Luna, Vicente Moreno
Gastroenterology Department, Hospital Universitari Germans Trias I Pujol, Badalona, Barcelona, Spain

Corresponding author

Hugo Uchima, MD
Endoscopy Unit, Gastroenterology Department, Hospital Universitari Germans Trias I Pujol, Carretera de Canyet s/n, 08916 Badalona, Barcelona, Spain
huchima.germanstrias@gencat.cat

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