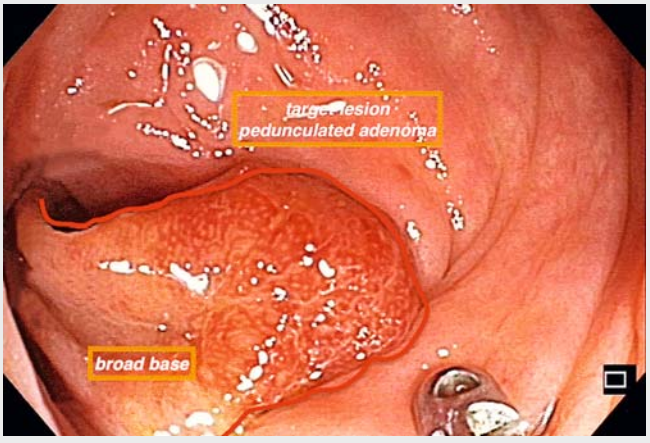
Use of an additional working channel for endoscopic mucosal resection (EMR+) of a pedunculated sessile serrated adenoma in the sigmoid colon

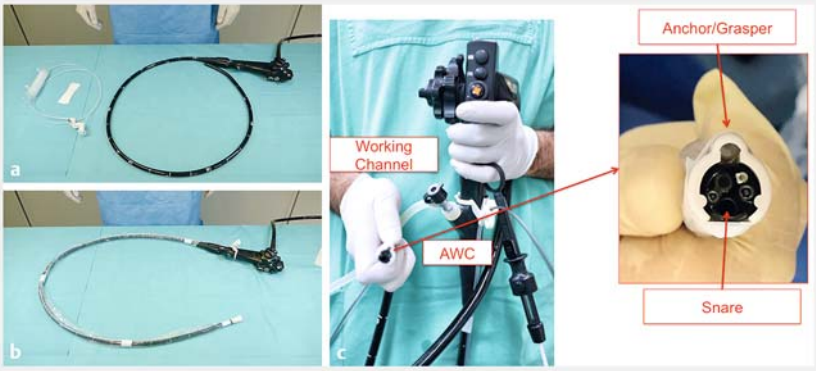
A 64-year-old man was admitted to our hospital after screening colonoscopy revealed multiple polyps including a tumor-suspicious lesion in the transverse colon. Ileocolonoscopy revealed a flat adenoma at the cecum and a colorectal tumor of the transverse colon in close proximity to the right colonic flexure. As an extended right hemicolectomy was considered the treatment of choice, neither lesion was removed during colonoscopy. In the rectosigmoid, however, an additional large pedunculated polyp (Paris 0-Ip, 2 × 1 × 5 cm) with a broad base was detected. Owing to the flat base, an unfavorable location behind a colonic fold, and high mobility of the polyp, a conventional endoscopic mucosal resection (EMR) procedure was difficult to perform. Consequently, we decided to perform a novel grasp-and-snare technique termed EMR + technique (▶ **Video 1**).

After submucosal injection of hydroxyethyl starch 6 % (B. Braun, Melsungen, Germany), the polyp was successfully resected (Endocut Q 1/1/1) in toto with a 20 mm snare (Captivator II; Boston Scientific, Marlborough, Massachusetts, USA) after pulling the polyp with a standard grasper via an additional working channel (AWC) (▶ **Fig. 1**) through the snare (▶ **Fig. 2**). Histopathology revealed low grade dysplasia in a sessile serrated adenoma and R0 resection.

Classical EMR is an established endoscopic procedure for resection of colonic polyps [1]. Nevertheless, large or laterally spreading lesions ≥ 2 cm can be challenging and, in fact, EMR often results in a piecemeal resection with unclear completeness of the resection base [2]. Recently, a commercially available system called EMR+ was launched [3], where EMR is conducted with an AWC (Ovesco Endoscopy AG, Tübingen, Germany). The AWC is mounted at the tip of a standard gastroscope or pediatric colonoscope [3], resulting in a double-channel endoscope system that potentially improves the resection rate of challenging lesions by using the grasp-and-snare technique [4 – 5]. By turning the cap, variable positions of both working channels (AWC plus standard channel) can be achieved. The EMR + technique using the AWC could be a practical and inexpensive method of overcoming the limitations of classical EMR and may enable intraluminal bimanual working for resections larger than ≥ 2 cm.



Video 1 The endoscopic mucosal resection (EMR) with additional working channel (EMR +) procedure for removal of a pedunculated serrated adenoma in the sigmoid colon. Source for graphical details in the video: Ovesco Endoscopy AG, Tübingen



▶ **Fig. 1** The novel endoscope system. **a** The additional working channel (AWC) before installation. **b** The scope after installation of the AWC. **c** The working instruments through the AWC and the working channel. In addition, the position of the AWC can be changed at the distal end of the endoscope in order to vary the angle of the instruments.

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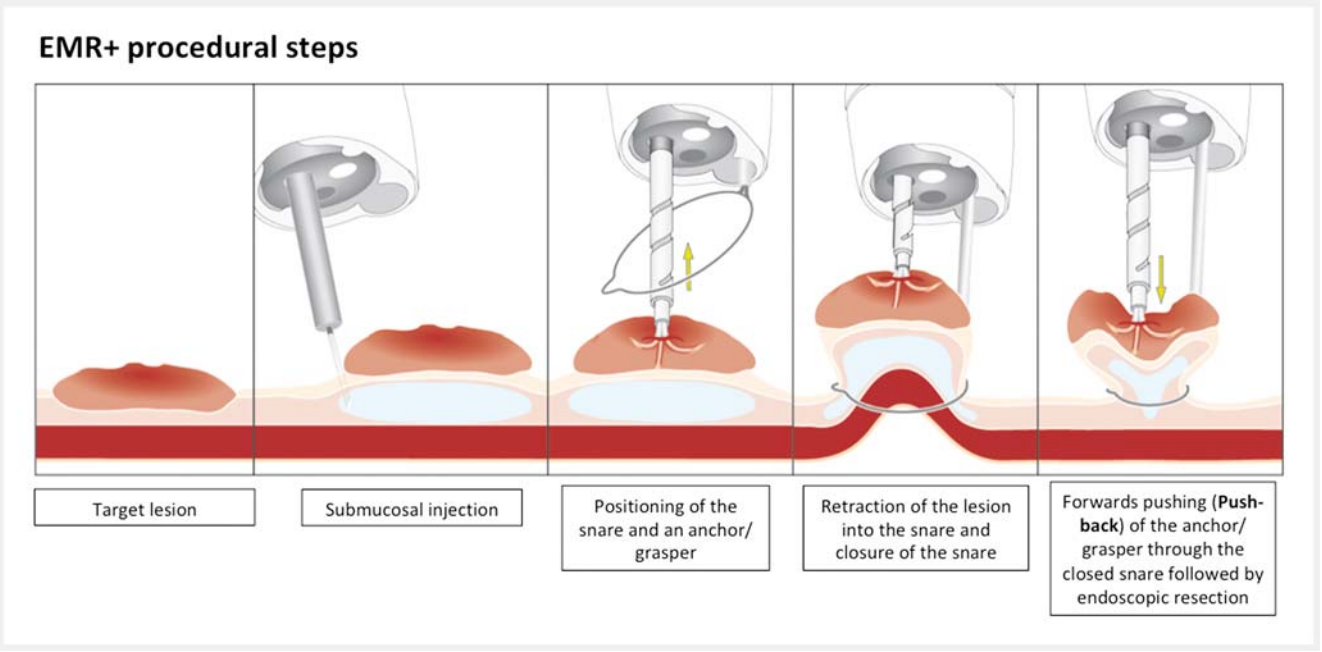

▶ **Fig. 2** Procedural steps of endoscopic mucosal resection (EMR) with the additional working channel (EMR+). Source: Ovesco Endoscopy AG, Tübingen

Competing interests

None

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