

# Now, More than Ever Before, Colonoscopy Is a Therapeutic Procedure

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## Keywords

Endoscopic full-thickness resection · Colonoscopy ·  
Colorectal lesions

**Agora, mais do que nunca, a colonoscopia é um  
procedimento terapêutico**

## Palavras Chave

Ressecção endoscópica transmural · Colonoscopia ·  
Lesões colorectais

Once considered a diagnostic procedure, colonoscopy is nowadays increasingly of a therapeutic nature. Taking into account that skilled endoscopists have polyp detection rates approaching 50% in screening colonoscopies and more than 50% after a positive fecal occult blood test [1, 2], colonoscopy is most of the times therapeutic, even in this screening setting.

The working channel is at the core of this mindset shift. It allowed different techniques to be developed for minimally invasive endoscopic surgery of early neoplasms of the gastrointestinal tract such as polypectomy, soon followed by endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD) [3].

Unfortunately, the histological assessment of the lesion following piecemeal EMR is difficult, and the proportion of recurrence requiring further intervention is high [4, 5]. ESD enables en bloc resection, although with a higher complication rate [4, 6]. Advanced polypectomy techniques are technically demanding, time-consuming, and when the follow-up overhead expenses are considered, the costs increase significantly. Furthermore, the balance between complications and the depth of resection for a curative treatment remains complex. Consequently, other techniques have been developed, such as endoscopic full-thickness resection (EFTR) methods. These procedures allow for endoscopic resection of the entire wall, providing a specimen superior to that achieved by EMR or ESD, without the risk of residual intramural disease. In addition, EFTR procedures can decrease postoperative morbidity and mortality associated with segmental colectomy.

EFTR appears to be of paramount relevance in colorectal lesions with negative lifting sign (recurrent, incompletely resected, or even untreated lesions), which are often unsuitable for resection using conventional techniques. Apart from these indications, EFTR may also be used for early carcinomas with indication for endoscopic resection, fibrotic lesions that have been previously sampled, small subepithelial tumors, and lesions located in

difficult anatomic places where the perforation risk is significant (e.g., para-diverticular or para-appendicular lesions) [7]. It could also be a valid alternative for patients who would otherwise qualify for surgical resection but are poor surgical candidates [8].

EFTR using a clip-assisted nonexposure technique has been used in lesions difficult to resect and is a less invasive alternative to surgical resection [8, 9]. It requires the learning of a set of skills to grasp the lesion into the cap for a precise resection resulting in a specimen with adequate negative margins. Initially, a precursor technique combining the application of a standard over-the-scope-clip (OTSC) and subsequent snare polypectomy has been developed to achieve full-thickness resection [10–12]. In 2014, a commercially available FTR device (FTRD; Ovesco Endoscopy, Tübingen, Germany) [13] has been developed, which is the first technique combining a modified OTSC and a monofilament electrocautery snare into one device, enabling a non-exposed EFTR in a single step [8]. The single-step defect closure of the FTRD is simple, causes minimal peritoneal irritation during resection, and is time-effective resulting in a procedural time of approximately 30–90 min.

The limitation of this technique is the size of the lesion and the fact that the long cap preloaded with the clip has an outer diameter of 21 mm, which impairs endoscopic vision and flexibility of the endoscope tip. The lateral margins of the lesion cannot be seen circumferentially but only in the upper part of the cap [8]. Another well-known limitation is the size of the lesion, which corresponds to the amount of tissue that can be grasped into the cap, which is variable according to the location. Lesions up to 30 mm in diameter may be successfully resected, but the resection success decreases significantly for lesions above 20 mm [8]. A combined technique has been described for larger lesions consisting in the reduction of the lesion size with EMR prior to same-session EFTR [14]. Damage to the superficial mucosa with the grasping forceps may also impair proper histological assessment.

In this issue of *GE – Portuguese Journal of Gastroenterology*, Mão-de-Ferro et al. [15] present a single-center prospective evaluation of their experience in EFTR of colorectal lesions in 9 patients using the FTRD.

It is important to emphasize the fact that this study includes only 9 patients, and in 2 patients there was mucosal tearing after OTSC deployment, resulting in the release of the lesion from the grasping forceps. This required the subsequent resection of the lesions with a conventional snare, an occurrence previously reported [7, 8].

Nevertheless, this is one of the few prospective studies evaluating the technique for these indications. The available evidence is scarce and inferred from few case series, small retrospective series, and a couple of prospective studies.

The methodology, procedures, and outcomes are concordant with previous reports. Technical success, defined as reaching the lesion, deploying the clip and performing an en bloc and macroscopically complete resection, and histologically complete (R0) resection was achieved in all patients. These rates of technical success and R0 resection are higher than previously reported, which range from 75 to 100% [7, 8, 16, 17] and from 75 to 83% [7, 8], respectively. No major complications were described, and only a minority reported abdominal pain.

Follow-up endoscopy after EFTR is recommended, since dysplasia can be missed, and recurrence of adenoma can occur at the original resection site, even when histology confirms R0 resection. It is not unlikely that the clips used for EFTR promote a foreign-body reaction inducing granulation tissue that endoscopically could appear as large nodular pseudopolyps mimicking adenomatous tissue [7]. In this study, colonoscopy results were available in 6 patients in whom no residual lesion was detected. Consequently, endoscopic cure was obtained in all patients, and no patient was referred for surgery.

As endoscopic devices improve, it is conceivable that EFTR will become a realistic alternative to segmental colectomy for some gastrointestinal superficial lesions. FTRD is a minimally invasive approach to resect selected non-lifting lesions with a good success rate of complete resection and minimal side effects. However, despite the promising data already available, prospective randomized trials with more patients are needed to further evaluate this device and compare it to other available resection techniques.

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#### Disclosure Statement

The authors have no conflicts of interest to disclose.

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