Endoscopic resection is a widespread, advanced endoscopic technique that can be used to remove superficial lesions in the gastrointestinal tract. Lesions present in all parts of the gastrointestinal tract, such as the oesophagus, stomach, duodenum, small intestine and, above all, colon, can be removed by endoscopic resection. Lesion detection and characterization, the use of appropriate resection devices and methods, and the management of malignant polyps are all important parts of a multistep process that requires training, experience, expertise and a multidisciplinary approach.

The diagnostic and therapeutic mistakes discussed here are based on our endoscopic experience. We present the most important mistakes that are often seen in endoscopic resection in our practice and have major consequences for the patient. We propose, from our experience, a simple approach to avoid these mistakes.

Mistake 1 Focusing only the polyp and forgetting the patient
Don’t think only about the polyp itself. When undertaking endoscopic resection, there are many issues that require attention. The patient must be made aware of the lesion, the scheduled endoscopic technique, potential therapeutic alternatives and the differences between standard polypectomy and endoscopic mucosal resection (EMR). It is also essential to ensure the patient has given full consent for the procedure. The patient’s medical history, including the list of medications, should be reviewed and any comorbidities incorporated into the decision-making process. In case of a colonic polyp, attention should also be paid to bowel preparation in accordance with the scheduled time of the procedure and any previous bowel cleansing.

The endoscopist should be prepared and organized in advance of the procedure. A dedicated list of the devices and scopes that are on hand should be made available and all required equipment should be present in the endoscopy suite. Both the physician and the nurse must know how to operate the equipment being used.

Mistake 2 Not spending enough time assessing the lesion to be treated
Do not look too briefly—make sure you assess the lesion that is to be treated. Ensure that you spend enough time assessing the morphology of the lesion according to the Paris classification, and vascular and glandular patterns. This is not a waste of time, in fact, you will gain time by deciding the best way to approach the lesion! Pay attention to the margins, as they may extend beyond the fold. Inspect the lesion with high-definition white light and chromoendoscopy or ‘virtual chromoendoscopy’ (Figure 1).

A thorough assessment can identify lesions with possible submucosal invasion. Patients who will benefit from endoscopic submucosal dissection (ESD), rather than piecemeal EMR, are those who have superficial lesions with submucosal invasion that cannot be...
Mistakes in...

removed en bloc by EMR. Nongranular lesions demonstrating true depression have a higher risk for cancer, and ESD may be warranted if available. Even piecemeal EMR can be used to treat these lesions, but the patient may be referred for surgery if there is submucosal invasion, regardless of the depth of invasion.²,³

Mistake 3 Underestimating the relevance of the lesion’s position
Do not underestimate the importance of the position of your lesion. When performing endoscopic resection, be sure that your access is secure. Have a good endoscopic position with a shortened, straight and relaxed scope. Position the lesion at 5–6 o’clock in the endoscopic field. The device and the scope must respond one-to-one to the movements of the hands, of the fingers and the wheels as well. Working in the best position is extremely useful for minimizing the risks and maximizing the resection outcome. If a variable stiffness scope is being used, take advantage of the potential for retroflexion of the tip. Place the patient in a way that any fluid or resected pieces accumulate away from the lesion, so that the working field is kept clean and the optimal view is available in the event of a complication.²,³

Mistake 4 Snaring too much and scaring much more
Depending on the morphology or size of the polyp, selecting the most appropriate snare can make a difference to the success of the procedure and, therefore, the outcomes. Small (10–20 mm) or large (25–33 mm) stiff snares that have a braided wire should be preferred for piecemeal and en bloc EMR, respectively. Small, thin wire snares (mono-filament) could be better for capturing tissue from poorly lifting lesions (i.e. recurrence after EMR or lesions for which resection has been previously attempted). In case of a lateral spreading lesion, granular and mixed type with big nodules, you can use snares of a different size to properly resect it. Use the device as an extension of your hand, placing it parallel to the wall. Adapt the cut to the plane of the lesion, piece by piece. The more angle you create between the snare and the wall the more likely you will engage the muscularis propria. Close the snare tightly to hold the lesion in place before resecting it (Figure 2).

Mistake 5 Panicking about intraprocedural bleeding
When intraprocedural bleeding (IPB) occurs, don’t panic—it’s just a bleed. Although it is true that only hands-on experience can make you confident when faced with IPB, you should be prepared to approach it systematically and rationally, as you would any other endoscopic procedure. Before starting the procedure, you should be sure that your endoscopy suite is fully equipped and capable of dealing with all types of IPB. Make conscious use of everything you can without panicking. Use the washing pump to remove the blood from the target tissue and clear the point at which you need to intervene (Figure 3; Online Video 1). If you judge the vessel to be ‘small’ (up to about 2mm) you can coagulate it with the tip of your snare and the soft coagulation output of your electric power generator (snare tip soft coagulation). If you think the vessel is >2mm ask your assistant for electric coagulation forceps.

Meanwhile, when you pass your device through the operator channel, if you have a distal attachment or ‘cap’, use it as a ‘finger’ and put pressure on the vessel. When you’re ready with your device, use the water pump again to clean the area. If you are making a snare tip soft coagulation ensure that the device’s sheath is sufficiently out of sight and that the tip of the snare is out ≤2mm. Now, control the scope rather than the device and coordinate your hand, your foot … and the time you spend! If you are using electrified forceps for coagulation then you should catch the vessel upstream of the bleeding enough to trap it and bring it towards you and away from the wall before coagulation. The use of argon plasma coagulation (APC) during EMR should be minimized, especially if resection is not complete. Likewise, haemostatic clips should be used when you’ve tried everything and the bleeding continues, and the bleeding scares you even more than placing the clips.³

Mistake 6 Losing a resected duodenal polyp
In case of endoscopic resection in the duodenum, either with a lateral vision or frontal scope, do not forget peristalsis and gravity – do not let your polyp get away.
Immediately after having cut a piece of tissue, whether it is an ampulla or a laterally spreading lesion, en bloc or piece-meal resection, the first task is to recapture the lesion with the snare before bowel movements take it away. If you’re worried about the cutting base, get it and pull the handle out of the lens, and look at the mucosal defect. While retrieving the scope, think about your next step.

Mistake 7 | Forgetting to follow up with the patient

The endoscopist is responsible for ensuring that patients return for surveillance, do not forget the follow-up. In the case of large EMR in the colon, the first surveillance colonoscopy is performed 3–6 months after the index procedure, according to the grade of dysplasia, to assess the scar area for any recurrent/residual tissue. The scar is studied carefully using both high-definition white light and chromoendoscopy or ‘virtual chromoendoscopy’. Checking for recurrence should be performed at a long and medium distance and close up to the lesion to assess the deformation of the lumen and folds, the scar, and possibly any adenomatous residual, respectively.

Biopsy samples should be obtained from any suspicious areas within the scar. Hot snare resection or cold avulsion followed by thermal ablation are options for the treatment of residual/recurrent tissue. A second surveillance colonoscopy should be performed after an additional 12 months and then in accordance with current recommendations for post-polypectomy colorectal cancer screening and prevention.¹ ²

References

Your endoscopic resection briefing

Online courses
- ‘Clinical introduction to colorectal polyps’ from UEG [https://www.ueg.eu/education/online-courses/clinical-introduction-to-colorectal-polyps/].

UEG Week
- “Therapy update: Transluminal endoscopy in the upper GI tract – from bench to clinical practice” session at UEG Week 2016 [https://www.ueg.eu/education/session-files/?session=1596&conference=144/].
- ‘Surgery meets endoscopy in the colon’ session at UEG Week 2016 [https://www.ueg.eu/education/session-files/?session=1653&conference=144/].
- ‘Resection and ablation of early neoplastic Barrett’s: What’s the best approach?’ session at UEG Week 2016 [https://www.ueg.eu/education/session-files/?session=1633&conference=144/].
- Further relevant presentations can be found by searching the UEG Library [https://www.ueg.eu/education/library].

Standards & Guidelines
- Further relevant articles can be found by navigating to the ‘Endoscopy’ category in the ‘Standards & Guidelines’ repository. [https://www.ueg.eu/education/standards-guidelines/].