The Difficult Colorectal Polyp

Mark J. Pidala, MD[a,*], Marianne V. Cusick, MD[b]

KEYWORDS

• Colorectal polyps • Colonoscopy • Polypectomy • Endoscopic mucosal resection
• Endoscopic submucosal dissection • Laparoscopic colon surgery

KEY POINTS

- The definition of a "difficult" polyp is a moving target, but traditionally refers to polyps not amenable to endoscopic removal by the average endoscopist.
- Many patient-specific and polyp-specific factors impact the approach to difficult polyps.
- Conventional and advanced endoscopic techniques are usually successful in removing precancerous polyps with low complication rates.
- Almost 20% of polyps that are premalignant on initial biopsy will harbor an invasive malignancy that is discovered after complete resection.

INTRODUCTION

The direct relationship between neoplastic colorectal polyps and colorectal cancer has been well established.[1] Known as the adenoma to carcinoma sequence, this relationship has become the cornerstone of colorectal cancer prevention.[2,3] Screening colonoscopy with polypectomy has been linked to a decrease in the incidence of colorectal cancer and its associated mortality.[4–6]

Of the various screening modalities available for early detection of colorectal cancer, only endoscopic polypectomy offers the ability to remove premalignant lesions before they develop into cancer. Most polyps identified at screening colonoscopy are amenable to conventional forceps or snare polypectomy.[7] However, approximately 10% to 15% of polyps encountered at colonoscopy may be considered difficult because of their size, location, and/or morphology.[8] These difficult polyps are the topic of this article.

Disclosures: Dr M.J. Pidala is a proctor for Intuitive Surgical. Dr M.V. Cusick has nothing to disclose.

[a] Colon & Rectal Surgery, University of Texas/McGovern Medical School, 800 Peakwood Drive, Suite 2C, Houston, TX 77090, USA; [b] Colon & Rectal Surgery, University of Texas/McGovern Medical School, Smith Tower, Suite 2307, 6550 Fannin Street, Houston, TX 77030, USA
* Corresponding author.
E-mail address: mark.j.pidala@uth.tmc.edu

Surg Clin N Am 97 (2017) 515–527
http://dx.doi.org/10.1016/j.suc.2017.01.003
surgical.theclinics.com

DEFINITION OF A DIFFICULT POLYP

The definition of the difficult polyp is not well established. As implied in the name, these polyps are difficult to remove and often pose a challenge to endoscopists. As a result, patients with difficult polyps frequently require referral to a more experienced endoscopist or surgeon. These polyps are typically defined by their size, morphology, and/or location (**Box 1**). Difficult polyps are macroscopically benign, generally greater than 20 mm in size, and frequently have a flat or sessile morphology.[9] Most are found in the right colon, where the thinner colonic wall adds a degree of complexity to polypectomy.[10,11] These polyps may also pose a challenge when they are found wrapped around haustral folds or around sharp bends that are difficult to access.[8,12,13] The term giant polyp has been used to describe polyps greater than 30 mm.[14,15] Large pedunculated polyps, most often encountered in the left colon and sigmoid, also present difficulties because their removal carries increased risk of bleeding from larger vessels within the stalk.[16,17]

In practice, what constitutes a "difficult" polyp is very subjective.[18] What may appear difficult for one endoscopist may be routine for another.[19,20] As a result, any polyp referred to another physician for removal following an initial colonoscopy may be considered "difficult." These referrals are based on the endoscopist's comfort, level of experience, equipment availability, and support structure. In today's medicolegal climate, some endoscopists are unwilling to accept the risk, albeit small, of removing these larger lesions due to their increased risk of complications.[21,22] In addition, it has been shown that the physician work required to remove these difficult polyps (>20 mm) is more than twice that for more routine polyps (<20 mm), despite minimal or no impact on reimbursement.[23] As there is ongoing pressure on physicians to maintain higher case volumes, busy endoscopists may be reluctant to manage these more difficult lesions.

Premalignant Polyps Versus Invasive Cancers

The initial goal of the endoscopic evaluation of any colorectal polyp is to localize it and determine if it contains an invasive malignancy. Histologic predictors of malignancy include polyp size[24] and villous histology.[25–28] Macroscopic signs include ulceration, induration, friability, and fixation to the colonic wall. High-grade dysplasia on initial biopsy has also been shown to be an indicator of a potential underlying invasive cancer (**Box 2**).[11,25,26,29,30]

A saline lift not only assists with polypectomy and limits associated bleeding but can also be used to identify invasive cancers. Following submucosal injection, benign adenomas are lifted off the muscularis propria. On the contrary, cancers often have fibrosis and desmoplastic reaction and will not lift with saline injection.[31] Although

Box 1
Features of the difficult colorectal polyp

1. Macroscopically benign
2. Large (typically >20 mm)
3. Flat or sessile
4. Located around folds or kinks
5. Most in right colon or cecum
6. Large pedunculated polyps with thick stalk