MINDful polypectomy: a quality improvement initiative to improve complete resection of colorectal polyps

Incomplete resection of colon polyps is common, and the rate is significantly higher for 1- to 2-cm polyps (17.3%) than for smaller, 5- to 9-mm polyps (6.8%) [1]. We instituted a quality improvement measure to evaluate whether a “MINDful polypectomy” mnemonic summarizing a standardized approach for the resection of polyps ≥ 1 cm in size would decrease the rates of incomplete resection among outpatients undergoing routine colonoscopy. This earlier version of the mnemonic was: “Move polyp to 6-o’clock position; Inspect carefully, consider NBI and dye spray. If flat, inject contrast mixed with saline for submucosal lift. Note whether borders are completely removed. Due diligence with photo documentation of resection.” The mnemonic was presented to all endoscopists, with a reminder poster placed in each endoscopy room. We measured compliance with the mnemonic based on whether biopsy of the polypectomy edge was completed for polyps ≥ 1 cm.

Over 1 year, we found compliance with the mnemonic for 38 of 230 polyps ≥ 1 cm in size. Among the endoscopists who followed the protocol, evidence of incomplete resection was found in 4 of the 38 patients (10.5%). Furthermore, of the 38 patients in whom post-polypectomy edge biopsy specimens were taken, 3 (7.9%) had bleeding due to biopsy of the resection site, with 2 requiring immediate endoscopic hemostasis and the third requiring hospitalization for a post-polypectomy bleed 72 hours after initial colonoscopy. Anecdotally, concern regarding bleeding was commonly cited as a reason for not following the original mnemonic. Based on this experience, we conclude that (i) the original mnemonic, promoted by education at baseline and posted reminders, was insufficient to result in consistent efforts to optimize complete polyp resection, and (ii) edge biopsies may not be a feasible way of measuring complete resection in usual practice. We propose that further research is required to identify practices for reducing and measuring incomplete resection. We present a modified polypectomy protocol, coupled with a visual mnemonic to serve as a memory aid, as one potential approach to consider in future studies (Fig. 1).

Fig. 1 Proposed modified mnemonic for a structured approach to achieving and documenting complete resection of polyps ≥ 1 cm in size. NBI, narrow-band imaging.

Acknowledgment

This project was supported in part by Merit Review Award number I 101 HX001574-01A1 (Gupta, PI) from the U.S. Department of Veterans Affairs Health Services Research & Development Service of the VA Office of Research and Development. The views expressed in this article are those of the authors and do not necessarily represent the views of the Department of Veterans Affairs.

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Competing interests: None