

STANDARDIZING THE REMOVAL OF LARGE COLON POLYPS: AN EVIDENCE-BASED APPROACH

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Introduction

Endoscopic mucosal resection (EMR) is a procedure used for the removal of large colon polyps (>2 cm) that has fewer complications and cost than surgical resection. Complications of EMR include bleeding, perforation, incomplete polyp removal, and post-polypectomy syndrome. Currently, wide variation in training experience exists with EMR approach, technique, and follow-up. We hypothesized that such variation affects the efficacy and complication rates of EMR. We performed a quality improvement intervention that aims to 1) have at least 80% of GI providers follow a standardized protocol for assessing, removing, and following large colon polyps in at least 80% of large colon EMRs in 3 months and 2) reduce the complication rates of EMR while increasing the rate of complete resection at initial endoscopy.

Methods

A process map was made, and a standardized protocol was developed based on review of the literature, highlighting polyp characterization with Paris/Kudo classification, EMR technique (eg: en toto resection vs. piecemeal resection), peri-procedure antithrombotic management, and surveillance colonoscopy using non-band imaging (NBI) and tattooing. A plan-do-study-act (PDSA) cycle was undertaken. MV and GK presented the protocol to GI faculty, and a dedicated procedure report template was distributed. Physicians were then surveyed to assess adherence to the standardized technique. Chart review was done to assess the incidence of bleeding, incomplete resection, and referral to surgery pre-intervention (n=48) vs. post-intervention (n=35).

Results

After 3 months, 7/8 (87.5%) physicians were following at least 80% of the steps during every EMR. 5/8 (62.5%) physicians were routinely using the standardized procedure note template. All physicians reported minimal additional time in large polyp EMR and no unintended adverse events.

Incidence of intra- and post-procedural bleeding decreased from 18.8% to 11.4%, incomplete resection decreased from 14.6% to 11.4%, and referral to surgery decreased from 10.4% to 5.7%. These changes are currently not statistically significant. The effect on residual polyps is to be determined, as most patients in the post-intervention group have not yet had follow-up colonoscopies.

Conclusions

A simple intervention of a focused lecture/training and distribution of a standardized template resulted in significant adherence to a standardized approach by our physicians. A reduction in complications, specifically bleeding, has already been noted, though not statistically significant. Limitations of the study include its focus on physicians, without associated education of nurses and staff. Additional PDSA cycles are planned to address these limitations and achieve 100% adherence to standardized protocol.

Incidence of Adverse Events

