

Hot avulsion: a modification of an existing technique for management of nonlifting areas of a polyp (with video)



Sundaram G. Veerappan, MD, MRCPI, Donald Ormonde, MBBS, FRACP, Ian F. Yusoff, MBBS, FRACP, Spiro C. Raftopoulos, MBBS, FRACP

Perth, Western Australia

Background: Endoscopic management of the nonlifting areas of a colonic polyp is a significant challenge. The traditional approach has been to use ablative techniques with mixed long-term results.

Objective: To evaluate the safety and efficacy of hot avulsion (HA), a modification in the use of hot biopsy forceps in the management of the nonlifting areas of a colonic polyp.

Design: Retrospective review of data from a prospectively maintained colonic Endoscopic Mucosal Resection database.

Setting: Tertiary referral hospital.

Patients and Intervention: Twenty patients in whom HA was used as part of the polypectomy technique.

Main Outcome Measurements: Location and size of polyp, reasons for nonlifting, immediate success, residual rates, and adverse events.

Results: In our 20 patients studied, the main reasons for nonlifting were scarring from previous EMR attempts in 55% and scarring from previous biopsy in 35%. Mean size of avulsion was 4.4 mm (range, 1-15 mm). At the index procedure, HA was successful in removing macroscopic adenomatous tissue in all patients. At follow-up examinations, 85% (17/20) had no macroscopic or microscopic neoplasia residual and 15% (3/20) had a small area of residual that was easily treated with repeat HA. There were no immediate or long-term adverse events.

Limitations: Nonrandomized, single-center experience.

Conclusions: HA appears to be a safe and effective adjunct treatment to snare polypectomy for nonlifting areas of a colonic polyp. Further randomized multicenter studies are required with direct comparison to established techniques.

EMR is a well-established, safe, and effective technique for removal of colonic polyps.^{1,2} Complete polyp removal is usually achieved in most of these cases.^{1,3} The reported residual rates are 1% to 14%, with higher residual rates in larger polyps.⁴ The reported residual rates are also significantly higher when the polyp cannot be fully lifted with submucosal injection.³ These nonlifting areas of polyps are less likely to be removed successfully by snare excision alone,³ and when snare removal is unsuccessful, an ablative modality is typically used. Usually, argon plasma

coagulation (APC) or snare tip coagulation are used, both of which have their own inherent limitations.⁵

A number of causes for nonelevation of benign polyps (because of presumed submucosal fibrosis) have been described, including previous extensive biopsy of flat polyps (Paris Iia and Iib),⁶ SPOT injection into the polyp base,⁷ failed prior resection attempts,³ and polyp location (with rectal polyps more prone to submucosal fibrosis from defecatory forces). Polyps may also fail to lift because of malignant submucosal infiltration, and polyp appearance

Abbreviations: APC, argon plasma coagulation; HA, hot avulsion; HB, hot biopsy.

DISCLOSURE: All authors disclosed no financial relationships relevant to this publication.



Use your mobile device to scan this QR code and watch the author interview. Download a free QR code scanner by searching "QR Scanner" in your mobile device's app store.

Copyright © 2014 by the American Society for Gastrointestinal Endoscopy 0016-5107/\$36.00

<http://dx.doi.org/10.1016/j.gie.2014.05.333>

Received December 19, 2013. Accepted May 28, 2014.

Current affiliation: Department of Gastroenterology and Hepatology, Sir Charles Gairdner Hospital, Perth, Western Australia.

Reprint requests: Dr. Spiro C. Raftopoulos, Department of Gastroenterology and Hepatology, Sir Charles Gairdner Hospital, Perth, Western Australia 6009.

is a good indicator of this.³ We describe here our experience with hot avulsion (HA), which is a modification in the use of hot biopsy (HB) forceps for the management of nonlifting areas of polyps.

METHODS

The study center functions as a tertiary referral center for EMR. All EMR cases are collected and recorded in a prospectively maintained EMR database. This prospective database was designed to collect all aspects of endoscopic procedures relating to removal of colonic polyps, irrespective of size or technique used. The intended purpose therefore was to use these data for several descriptive studies. In this study, we retrospectively reviewed the data of all patients who had the HA technique used as an adjunct to snare polypectomy in the nonlifting areas of the polyp. All EMR cases were performed by 2 senior endoscopists with extensive EMR experience (S.C.R. and D.O.). HA was introduced in our unit in August 2011 for the treatment of nonlifting areas of polyps. All patients in whom HA was used as part of the EMR were entered in the study from August 2011 to September 2013 (Fig. 1).

Patients received standard bowel preparation regimen, and colonoscopy was performed using high-definition colonoscopes (PCF-HF180AL; Olympus Medical Systems Corp, Tokyo, Japan) either by anesthesia administered deep sedation or endoscopist-directed conscious sedation. EMR was performed by using a standardized inject-and-cut technique. Succinylated gelatine (Gelofusine; B. Braun Australia Pty Ltd, Bella Vista, Australia) with indigo carmine (20 mg/450 mL solution) was used as the injectate. Resections were performed using a 20-mm spiral snare (Olympus Medical System Corp), a 10-mm oval snare (Olympus Medical System Corp), or a 9-mm Exacto cold snare (US Endoscopy, Mentor, Ohio) as deemed necessary by the endoscopist. Nonlifting areas of polyps were defined as areas of the polyp that did not lift well or failed to lift after submucosal injection and snare resection was deemed inappropriate or technically not possible. Resection was not attempted if appearances suggested malignant infiltration.

All consecutive patients from our institution that underwent HA were included in this retrospective review, with none excluded based on histology. Our standard practice is for snare resection of all polyps regardless of size. In all our patients more than 90% of the polyp was resected by snare, with only small nonlifting areas of the polyp removed with HA. Snare resection was attempted with a number of different snares as mentioned above, and HA was only used when snare resection failed and when in the current practice either snare tip coagulation or APC would then have been ordinarily used.

Patients were followed up at 4 hours after the procedure, and all patients were contacted via telephone 2 weeks

Take-home Message

- Hot avulsion appears to be a safe and effective adjunct treatment to snare polypectomy for the nonlifting areas of colorectal polyps.

after the procedure to ensure no adverse events had occurred. Follow-up colonoscopy was performed between 4 and 12 months after the procedure. At repeat examination if no overtly adenomatous tissue was present, biopsy samples were taken from the polypectomy site to confirm histologic eradication. A minimum of 4 biopsy specimens were taken from the EMR sites; however, this varied depending on the size of the original polyp and therefore subsequent length of the EMR scar.

Primary outcomes were the rate of complete resection and residual rates. Complete resection was defined as the absence of any macroscopic polyp at the completion of EMR. Residual was defined as the presence of macroscopic or microscopic polyp tissue at the EMR site on follow-up. Secondary outcomes were the number of procedures required to achieve eradication and procedural adverse events (immediate and delayed bleeding, perforation, and serositis [defined by abdominal pain and fever]) that occurred within 14 days of the procedure. Information on age, gender, reason for failed snare resection (location, previous EMR attempt, SPOT tattoo in base, or multiple previous biopsy specimens), estimated size of residual polyp (open HB forceps 6 mm, closed HB forceps 2.2 mm; Boston Scientific, Natick, Mass), and location of the polyps were also collected.

Technique

HA was performed using an HB forceps (Boston Scientific). The neoplastic tissue was grasped within the forceps with slight traction away from the polyp base, and current was applied using HA settings EndoCut I (Vio 200/300, effect 2/timing 2/other 3; Erbe) or soft coagulation (ICC 200, Soft Coag 80 W; Erbe). This was delivered using a tapping technique, with each tap lasting approximately 1 second. If the neoplastic tissue did not avulse with application of current, further gentle mechanical traction was applied away from the polyp base until the tissue was avulsed. This process was repeated until all visible neoplastic tissue was removed (see Video 1, available online at www.giejournal.org). All avulsed tissue was collected and sent for histopathology assessment.

RESULTS

Demographic and polyp location data are summarized in Table 1. Ten men and 10 women with a mean (\pm SD) age of 69.9 ± 13.6 years (range, 37-86 years) were studied. The main reasons for nonlifting were scarring from previous

Download English Version:

<https://daneshyari.com/en/article/3302828>

Download Persian Version:

<https://daneshyari.com/article/3302828>

[Daneshyari.com](https://daneshyari.com)