Protocol Title:

Comparison of colon adenoma detection rate using two distal colonoscope attachments.

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Author of Protocol:

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UC Davis Researcher - Yes

Researcher from other institution
Private Sponsor
Cooperative Group
Other: _____

IRB Review History

N/A

Objectives

The goal of our study is to compare the effect of two different distal colonoscopy attachments on:

(i) Adenoma detection rate
(ii) Right sided adenoma detection rate
(iii) Sessile serrate adenoma detection rate
(iv)Terminal ileum intubation rate

Background

Although mortality from colon cancer is decreasing, it remains the second leading cause of cancer related death in the United States [1]. There are multiple factors contributing to this decrease, such as increased awareness, improving screening techniques, etc.
Of the available modalities approved for colon cancer screening in the United States, colonoscopy is considered the gold standard. Colonoscopy has the advantage of being both diagnostic and therapeutic, allowing the removal of pre-cancerous polyps, before the polyps can transform into cancer. Colonic polyps can occur at any location from the rectum to the cecum. Colonoscopy has been shown to be more effective in decreasing incidence of cancer in the left colon but remains limited in the detection of right sided polyps /lesions [2]. This difference based on location is thought to be due to several reasons. Typically the right side of the colon is less clean than the left side during colonoscopy, thereby impairing visualization of polyps. This problem has been overcome by incorporating a "split bowel preparation", which has not become standard of care. However, the problem of not being able to visualize polyps behind folds seen in the colon persists despite improvements in the quality of cleansing of the colon. Various endoscopic technologies have been introduced with the goal of assisting with the manipulation of such colonic folds, and thereby reducing chances of missing polyps behind fold.Two such colonoscope assisted devices including the distal transparent cap , and the Endocuff device.

The Endocuff overtube is a small device with flexible arms arranged in 2 rows. Each row has 8 short, soft arms projecting away from the device. These arms are used to peel back the colonic

folds without causing physical damage to enable visualization behind colonic folds. The use of Endocuff overtube has shown promising results in terms of cecal intubation rate and time as well as adenoma detection rates [3].

The transparent cap attachment is a clear plastic device that fits at the end of the colonoscope and extends a short distance past the tip of the colonoscope. It aids in the manipulation of folds and in maintaining a suitable distance from the mucosa, with the goal of improving visualization. Although some studies comparing cap fitted colonoscopy to standard (non- attachment) colonoscopies have shown improved adenoma detection [4], others have shown no significant benefit [5].

Although, these devices have been compared with conventional colonoscopies (i.e without any distal attachment), to our knowledge, there are currently no studies that have compared these two distal colonoscope attachment devices head-to-head, and none has specifically evaluated effects on detection of right sided adenomas. Also, here at UCDavis, these devices are being used specifically in diagnostic colonoscopies for removal of large polyps and the choice of which specific device used is dependent on level of comfort of the advanced endoscopist. The endoscopists participating in our study do not currently use these devices as part of their routine colonoscopies, thus it is important to provide head to head comparison of these devices to help guide management practice.

Therefore, our goal is to compare the transparent cap fitted, Endocuff fitted and non-cap fitted (standard) colonoscopy in patients presenting to UC Davis Medical Center for screening colonoscopies.

Reference

1) U.S. Cancer Statistics Working Group. United states Cancer Statistics: 1999-2011. Incidence and Mortality Web based Report. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2014.

2) Hermann Brenner, Michael Hoffmeister, Volker Arndt, Christa Stegmaier, Lutz Altenhofen, Ulrike Haug. Protection From Right- and Left-Sided Colorectal Neoplasms After Colonoscopy: Population-Based Study JNCI J Natl Cancer Inst (2010) 102 (2): 89-95 doi:10.1093/jnci/djp436 first published online December 30, 2009

3) Mathieu Pioche, Minori Matsumoto, Hiroyuki Takamaru, Taku Sakamoto et al. Endocuff®-assisted colonoscopy increases polyp detection rate: a simulated randomized study involving an anatomic colorectal model and 32 international endoscopists. Surgical Endoscopy And Other Interventional Techniques Official Journal of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and European Association for Endoscopic Surgery (EAES) 2015:4208 . DOI: 10.1007/s00464-015-4208-8

4) Westwood DA, Alexakis N, Connor SJ. Transparent cap-assisted colonoscopy versus standard adult colonoscopy: a systematic review and meta-analysis. Diseases of the Colon and Rectum 2012; 55(2): 218-225

5) Harada Y, Hirasawa D, Fujita N, et al. Impact of a transparent hood on the performance of total colonoscopy: a randomized controlled trial. Gastrointest Endosc 2009;69:637-446) Dik VK Gralnek IM, Segol O, Suissa A Multicenter, randomized, tandem evaluation of EndoRings colonoscopy - results of the CLEVER study. Endoscopy. 2015 Jul 28

Inclusion and Exclusion Criteria

Our goal is to study patients presenting to UC Davis Medical Center Endoscopy suites for screening colonoscopies.

Inclusion criteria:

All Patients over the age of 50 presenting to Outpatient Gastroenterology labs for screening or surveillance colonoscopy located at the UC Davis Endoscopy suites located in Folsom, Elk Grove and Sacramento, California between September 2015 and September 2016 will be offered this study.

Exclusion criteria:

(i) Age less than 50
(ii) Prior history of colon cancer
(iii) Patients with inflammatory bowel disease
(iv) Patients suspected to have colon cancer based on non invasive tests such as stool tests for hemoglobin or DNA, or imaging finding suggestive of colon cancer (CT or barium enema).
(v) Patients undergoing colonoscopy for evaluation of symptoms such as abdominal pain, rectal bleeding, diarrhea, constipation, etc, or patient with iron deficiency anemia suspected to be due to ongoing bleeding inside the colon
(vi) Patients with family history of colon cancer in 1st degree relative below the age of 60
(vii) Patients with family history of hereditary polyposis syndromes such as Lynch syndrome, familial adenomatous polyposis etc, which are associated with an increased risk of colon cancer
(viii) Patients unable to consent
(ix) Pregnant patients
(x) Incarcerated patients

Number of Subjects

144 patients will be enrolled

Recruitment Methods

Patients presenting to the UC Davis Medical Center Endoscopy Suites located in Folsom, Elk Grove and Sacramento for screening colonoscopy with be recruited on the day of their procedure.

Typically, these patients are either referred to UC Davis for screening colonoscopy or already being followed here.

One of our study investigators (listed on personnel sheet) will review the history of patients scheduled for their colonoscopies. Patients that meet eligibility requirements will be contacted by telephone within a week prior to their scheduled procedure (see attached telephone script). The contact information collected will used solely for this purpose. This will provide an opportunity for the patient to have initial study information as well as sufficient time to decide on whether or not they would be interested in participating in the study. Any personal health information collected will be destroyed at the earliest opportunity

A written information sheet (see form 502) containing important study information will be given to patient prior to or during their check in process. After adequate time has been provided to the patient to read and understand the study details, the physician performing the patient's procedure will explain the study and answer all questions pertaining to the study. Patients interested in participating will be consented.
Patients not interested in participating will proceed with their routine scheduled procedure without the use of any distal attachment on the colonoscope.

As part of the recruitment process, we would need to preview records of scheduled patients including PHI- name, medical record number and age, past medical and family histories as well as contact information. Given that this is the pre-selection review, it would be impossible to collect this information / screen for patients that meet criteria for inclusion without access to the patient information. For patients that do meet requirement for enrollment, we will be contacting them by phone to provide initial study information.

Information collected, including contact information will not be disclosed to any other persons or organization and information collected will not be re-used for any purpose outside of the study.

Compensation to the Subjects

There will be no compensation to the participants.

Study Timelines

Timeline for enrolment of subjects will be September 2015 – September 2016. This will be a one-time participation during the date of their procedure only.

Patient medical records will be accessed within 4 weeks of their colonoscopy for collection of final pathology report (adenomatous vs non adenomatous polyps). Patients will not be contacted afterwards for research purposes. They will only be contacted by their endoscopist for communication of colonoscopy results per regular standard practice at UC Davis.

Study Endpoints

Primary Endpoint
-Adenoma detection rate

Secondary Endpoints
-Proximal adenoma detection rate
-Polyp detection rate
-Cecal intubation rate
-Intubation time
-Withdrawal time
-Major complication rate (includes perforation, bleeding requiring transfusion).

Procedures Involved

Our proposed study is a randomized control trial in which patients are randomized in a single-blinded fashion into one of 3 study arms. One arm of subjects will undergo their screening colonoscopy without any colonoscope attachments (conventional). A second arm of subjects will undergo their screening colonoscopy with transparent cap attachment and a third arm will undergo their colonoscopy with the Endocuff attachment.

All methods (colonoscopy without any attachment, colonoscopy with transparent cap attachment and colonoscopy with Endocuff attachment) are approved standard of care options, and are already in clinical use.

Data that will be reviewed as part of the study includes the number of polyps, location of polyps removed, size of the polyps removed, histopathology of the polyps, and whether or not the terminal ileum was intubated if necessary. These are data points that are routinely collected and reported as part of regular care of patients.
Each study patients will be assigned a study number, which will be de-identified. No patient identifiers will be collected as part of the study.

Data and Specimen Banking

Data collected will be saved on an encrypted, password-protected computer at UC Davis Medical Center, division of Gastroenterology office located at 2315 Stockton Boulevard , South 3 Room 3016.

Data Management and Confidentiality

Data collected will be saved on an encrypted, password-protected computer at UC Davis Medical Center. The computer is stored in the GI office in PSSB building. This room is accessible by staff/ faculty members of the UC Davis Gastroenterology department. Also, each study patients will also be assigned study number, which will be de-identified. This information will only be accessible by the investigators involved in the study (listed on form 211).

The data collected will be analyzed using one way ANOVA. To detect an effect size of 20%, with a power of 0.809, we would need 42 subjects in each study arm. We therefore aimed to

enroll 48 subjects into each arm (total of 4 arms) to ensure we have enough subjects in each arm to detect an effect if present. An interim analysis to test for futility will be done after 6 months.

Provisions to Monitor the Data to Ensure the Safety of Subjects

This research does not involve more than minimal risk to the subject

Withdrawal of Subjects

Participation in the study is completely voluntary, thus patients can withdraw at any time during or after the procedure. Written consent will be obtained from all subjects. Withdrawing from the procedure has no negative implication on their colon cancer screening and subsequent clinical care.

A patient may be withdrawn from the research at the discretion of the endoscopist or PI. The PI may withdraw a subject if there is a clinical suspicion for hereditary polyposis syndrome / new case of inflammatory bowel disease (IBD) based on the colonoscopy. Also, there are scenarios where the regular colonoscope is switched to a pediatric colonoscope. This occurs in patients with altered/ post-surgical anatomy. In these cases, subjects may be withdrawn from the study.. This may be needed in patients with difficult anatomy or post-surgical anatomy preventing completion of the procedure using a standard colonoscope.

Risks to Subjects

The attachment devices proposed in our study are currently approved for use in colonoscopy. Although we will make every effort to ensure that your information remains confidential, there is the risk of loss of confidentiality

Potential Benefits to Subjects

Subjects may benefit from increased adenoma detection.

Vulnerable Populations

Vulnerable populations are not included in this study

Multi-Site Research

Only UC Davis Medical Center Endoscopy suites will be involved in this study

Community-Based Participatory Research

Not applicable

Sharing of Results with Subjects

Under current standard of practice, patients are contacted by the Endoscopist either through the phone, mail, my chart or in person during a clinic visit to discuss endoscopic and pathology results. The results of the study will not be shared with subjects until the study has been completed and all of the data has been analyzed.

Setting

Our research will take place at the University of California, Davis Medical Center outpatient Endoscopy Suites. These are located in Elk Grove, Folsom and at the main hospital here in Sacramento.

Potential subjects are patients that are presenting for outpatient screening colonoscopies.

Resources Available

The Endoscopists performing these procedures are board certified Gastroenterologists, with knowledge regarding the colonoscopes and attachment devices. They will provide potential subjects with the consent forms as well as answer any questions that they may have regarding the procedure.

There are no expected physical or emotional consequences as a result of participating in this study

Prior Approvals

Not applicable

Provisions to Protect the Privacy Interests of Subjects

The only people that will have access to subject personal information are the principal investigators during the study period. All information collected (including age, gender, number and types of polyps removed, cecum intubation time and complications of procedure) will be de-identified immediately after data collection.

Compensation for Research-Related Injury

No Compensation provided

Economic Burden to Subjects

Patients presenting for colonoscopies are typically insured and are not expected to pay for screening colonoscopies. The distal attachment device will be provided at no additional cost to the patients, thus there will be no additional economic burden to the subjects

Consent Process

Currently, the standard of practice is to obtain consent prior to a colonoscopy. Some of the patients presenting for their colonoscopy are via open access, thus no colonoscopy specific clinic appointments are done before their actual procedure.

For those choosing to participate in our study, an additional consent form will be needed. Patients that are identified as being eligible for the study will be contacted 3 weeks prior to their procedure (if possible) but no less than one week via telephone by Dr Alli-Akintade or Dr Marsano or Dr Tejaswi. Information regarding the procedure (including the goal of the study) will be discussed with them to provide sufficient time prior to their procedure for them to consider participating or not participating. Once the subject has been contacted by telephone and has agreed to participate, the investigators will obtain the subject's address and mail them a copy of the consent form (if they are contacted three weeks before the procedure) or obtain the

subject's email address and send them a copy of the stamped consent form via email (if they are contacted fewer than three weeks before the procedure)
On the day of the procedure, the endoscopists will discuss further with the patients about the procedures - including consent, medication/ history review as well as discussions about the risks and benefits of the procedure. This conversation typically occurs in a quiet corner/ section in the pre-op rooms about 30-60 minutes before the procedure. The written consent discussion specific to our study will also be done in this same area. There is usually adequate time prior to the procedures for the consents to be done.

Please see attached Consent form (HRP-502). Non English speakers not be included in the study due to the practical difficulty with translating the study materials and consents Patients that are unable to provide consent will not be included in their study.

HIPAA Authorization for Research

Consent will be obtained from all participants and patients not able to consent (such as cognitively impaired adults) will be excluded from the study. Children are also not included in this study

Process to Document Consent in Writing

Please see attached HRP form 502

Drugs or Devices

The attachment devices being used are approved for use during colonoscopies. No investigational devices are being used in this study.

	Applicable to:		
FDA Regulation	***IND studies***	***IDE studies***	***Abbreviated IDE studies***
21 CFR 11 • Electronic Records and Signatures	*X*	*X*	

21 CFR 54 • Financial Disclosure by Clinical Investigators	*X*	*X*	
21 CFR 210 • Current Good Manufacturing Practice in Manufacturing, Processing, Packing, or Holding of Drugs	*X*		
21 CFR 211 • Current Good Manufacturing Practice for Finished Pharmaceuticals	*X*		
21 CFR 312 • Investigational New Drug Application	*X*		
21 CFR 812 • Investigational Device Exemptions		*X*	*X*
21 CFR 820 • Quality System Regulation		*X*	