Microscopic Colitis Foundation

MICROSCOPIC COLITIS NEWSLETTER

Volume 9, Issue 7
July, 2023

Continuing Problems with Digestive System Imaging

by Wayne Persky

In 2019, we published an article in our newsletters regarding the problems associated with contaminated scopes used for diagnosing digestive tract problems. At the time, many new digestive system infections were being caused by the use of duodenoscopes that were contaminated because they were improperly cleaned after a previous use.

The manufacturers of the scopes responded

by developing models designed for single use, and models with disposable elevator caps, designed to eliminate the contamination problems associated with the older scopes. An analysis of data collected during a study of 259 patients who had procedures using disposable elevator cap duodenoscopes, and 259 patients who experienced procedures with standard duodenoscopes, from December 2019 to February 2022, showed a contamination rate of 3.8% for disposable elevator cap duodenoscopes, and 11.2% for standard duodenoscopes (Forbes, et al. 2023)[1]. Presumably, single use duodenoscopes should not normally be associated with a contamination issue.

But this hasn't completely resolved the problems.

The FDA Manufacturer and User Facility Device Experience (MAUDE) database shows that from July 2018 to June 2021, there were 185 reports of 201 device issues that involved 118 patient adverse events (Ofosu, et al., 2022)[2]. Most of the problems associated with the single-use devices, were due to optical problems, and there were 7 reports of this. The most commonly reported problem for devices with detachable/disposable caps, was due to bacterial contamination, and there were 53 reports of bacterial contamination. There were 90 reports of microbial contamination (all bacteria are microbes, but not all microbes are bacteria). Overall,

patient tissue injury was the most frequently reported adverse event, and there were 63 reports of this, including 8 reports of perforation, and 7 reports of bleeding.

Endoscopic procedures involve significant health risks.

Virtually all of us remember when comedian Joan Rivers died following cardiac arrest during an endoscopy procedure. Joan was 81 at the time. She died due to low blood oxygen after being sedated with propofol. Upper endoscopic exams are used to diagnose health issues of the upper digestive tract, and although many of us have had one or more of these procedures, the diagnosis of MC requires a colonoscopy, during which biopsy samples from the lining of the colon are taken, and later examined under a microscope by a pathologist.

And as we're all aware,

the colonoscopies that all of us go through for an MC diagnosis, and routine cancer screening, carry a significant risk of perforations (of the colon), or other injury of the tissues in the colon. According to a World Journal of Gastroenterology article published in 2010, the risk of experiencing a perforation during a colonoscopy ranges from 0.016% to 0.2%, depending on the hospital, skill of the gastroenterologist, age, general health, and comorbidities of the patient, and the risk can be as high as 5% with some colonoscopic procedures[3]. Not surprisingly, a perforation requires immediate emergency surgery. Although there are exceptions, in general, the older the patient, the riskier the procedure.

This often leads to a dilemma.

Because colonoscopies are used to help diagnose various digestive system diseases, especially IBDs, and colon cancer, many colonoscopies are performed by gastroenterologists each year. They're relatively easy for an experienced gastroenterologist to perform, and they provide a steady income stream. Consequently, most gastroenterologists appear to be overly eager to recommend the procedure. For example, any time we decide to switch gastroenterologists, even if we've recently had a colonoscopy performed by our previous gastroenterologist, our "new" gastroenterologist, will ask to perform another colonoscopy, as though our previous colonoscopy is worthless.

If the treatment our gastroenterologist prescribes to treat our MC doesn't put our disease into remission, and keep it there, he or she will surely want to perform another colonoscopy to try to locate whatever issue they might have failed to discover during their previous colonoscopy.

When should we say, "No"?

A repeat colonoscopy virtually never reveals any new problem that might be causing the diarrhea, because no other issue exists — we have MC, and MC is causing the symptoms. Typically, their prescribed treatment was ineffective, because they don't understand MC, and consequently, they don't understand how to properly treat the disease. So why should we feel an obligation to go through the discomfort, expense, and health risk of another (totally unnecessary) colonoscopy, for their benefit (although they will insist, and probably actually believe, that a repeat colonoscopy would be for our benefit, not theirs)?

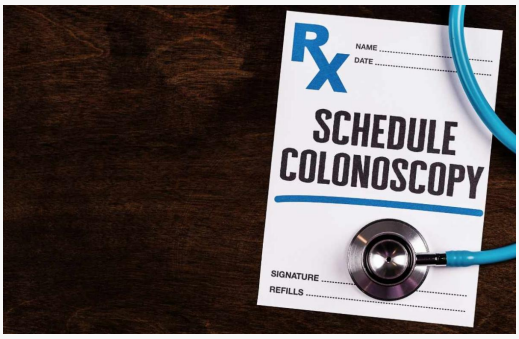
In a cross-sectional study of 7067 older patients

who had cancer screening colonoscopies, patients were divided into three age groups, 76 to 80, 81 to 85, and 86 and up (Halabi, et al., 2023, April, 3)[4]. 37.7 % of the entire group were found to have a non-advanced tumor, and 5.7% had an advanced tumor, including 0.2% who had colorectal cancer (CRC). Note that 0.2% is a very small number — only 14 out of 7067 patients. Tumors can be either benign, or malignant, and the study didn't specify (except for the CRC

percentage). Of the three age groups, advanced tumors were classified as 5.4%, 6.2%, and 9.5%, respectively.

Most tumors found in the colon are benign.

Statistics show that over 90% of tumors found in the colon are typically benign, and only 5 to 10% of polyps ever become malignant. Additionally, if they do become malignant, it typically takes years (about 10, more or less) for them to reach a malignant stage at which they might be considered a threat



Here are the official CDC screening recommendations.

The US Centers For Disease Control and Prevention (CDC) recommends that all adults aged 45 to 75 should be screened for colorectal cancer, and patients between the ages of 76 and 85 should consult with their doctors and make a decision on an individual basis (U.S. Preventive Services Task Force (Task Force). 2023, February 23) [5]. For screening tests, they list these options:

Stool Tests

The guaiac-based fecal occult blood test (gFOBT) uses the chemical guaiac to detect blood in the stool. It is done ***once a year****. For this test, you receive a test kit from your health care provider. At home, you use a stick or brush to obtain a small amount of stool. You return the test kit to the doctor or a lab, where the stool samples are checked for the presence of blood.*

The fecal immunochemical test (FIT) uses antibodies to detect blood in the stool. It is also done ***once a year*** *in the same way as a gFOBT.*

The FIT-DNA test (also referred to as the stool DNA test) combines the FIT with a test that detects altered DNA in the stool. For this test, you collect an entire bowel movement and send it to a lab, where it is checked for altered DNA and for the presence of blood. It is done ***once every three years****.*

Flexible Sigmoidoscopy

For this test, the doctor puts a short, thin, flexible, lighted tube into your rectum. The doctor checks for polyps or cancer inside the rectum and lower third of the colon.

How often: Every 5 years, or every 10 years with a FIT every year.

Colonoscopy

This is similar to flexible sigmoidoscopy, except the doctor uses a longer, thin, flexible, lighted tube to check for polyps or cancer inside the rectum and the entire colon. During the test, the doctor can find and remove most polyps and some cancers. Colonoscopy also is used as a follow-up test if anything unusual is found during one of the other screening tests.

How often: Every 10 years (for people who do not have an increased risk of colorectal cancer).

CT Colonography (Virtual Colonoscopy)

Computed tomography (CT) colonography, also called a virtual colonoscopy, uses X-rays and computers to produce images of the entire colon, which are displayed on a computer screen for the doctor to analyze.

How often: Every 5 years.

Some researchers suggest a less frequent schedule.

Medical research suggesting a 20-year screening interval (or more) exists (Brenner, Chang-Claude, Seiler, Stürmer, and Hoffmeister, 2006) [6]. However, such recommendations are for patients with no family history of colon cancer, and no evidence of polyps or other tumors found during a colonoscopy.

At what age does CRC screening become impractical?

A primary benefit of CRC screening is the detection of noncancerous growths (adenomas), that may progress to CRC in 10 to 15 years. Considering the time frame defined by that relatively slow progression, and in view of the increasing risk of adverse events associated with colonoscopies of aging patients, and realistic life expectancies of those patients, the basic question to be considered is, "When do the potential benefits no longer justify the risks?"

In view of the benefit to risk ratio,

Halabi, Burke, Hariri, et al., (2023, April, 3)[4], concluded that CRC screening becomes impractical for a patient whose remaining life expectancy is less than 10 years. Obviously, this requires that the doctor (or someone else) must calculate the patient's remaining life expectancy, based on their age, general health, comorbidities, and any other relevant issues.

So what can we conclude from all this?

The main point to remember here, is the fact that screening test options and frequencies, and colonoscopy requirements in particular, are not chiseled in stone — there are many issues to be considered before making a decision, especially as we get older.

References

1. Forbes, N., Elmunzer, B. J., Allain, T., et al. (2023). Effect of Disposable Elevator Cap Duodenoscopes on Persistent Microbial Contamination and Technical Performance of Endoscopic Retrograde Cholangiopancreatography: The ICECAP Randomized Clinical Trial. JAMA Internal Medicine, 183(3),191–200. Retrieved from https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2800828

2. Ofosu, A., Ramai, D., Mozell, D., Facciorusso, A., Juakiem, W., Adler, D. G., & Barakat, M. T. (2022). Analysis of reported adverse events related to single-use duodenoscopes and duodenoscopes with detachable endcaps. Gastrointestinal Endoscopy, 96(1), P 67–72. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0016510722001183

3. Lohsiriwat, V. (2010). Colonoscopic perforation: Incidence, risk factors, management and outcome. World Journal of Gastroenterology, 16(4), 425–430. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2811793

4. Halabi, J. E., Burke, C. A., Hariri, E., et al. (2023, April, 3). Frequency of Use and Outcomes of Colonoscopy in Individuals Older Than 75 Years. JAMA Internal Medicine, Published online. Retrieved from https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2803491

5. U.S. Preventive Services Task Force (Task Force). (2023, February 23). Colorectal Cancer Screening Tests. Centers For Disease Control And Prevention (CDC), Retrieved from https://www.cdc.gov/cancer/colorectal/basic_info/screening/tests.htm

6. Brenner, H., Chang-Claude, J., Seiler, C. M., Stürmer, T, and Hoffmeister, M. (2006). Does a negative screening colonoscopy ever need to be repeated? Gut. 2006 Aug;55(8):1145-50. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1856263/