COLONOSCOPY TO FIND COLON CANCER IN ASYMPTOMATIC ADULTS

By: Gil Lederman, M.D.

Colonoscopy examination is the placement of a colonoscope or long tube with fibro-optic capability that allows direct visualization of the colon. It is mostly performed by gastroenterologists or physicians trained in the specialty of diseases affecting the tube and organs connected between the mouth and anus.

Colonoscopy is routinely performed for patients who have symptoms such as change in bowel habits, bleeding, weight loss, or anemia. It evaluates a part of the body that is not well-seen by CT scan or other testing. It is also performed as a routine test to find abnormalities in the bowel prior to symptoms. Studies have shown benefit to colonoscopy as part of good medical care reducing the incidence of colonic malignancies.

A recent evaluation by Lieberman et al, published in the prestigious New England Journal of Medicine, defined the likelihood of finding asymptomatic people having colon cancer found by colonoscopy. That is, who and how many people benefit from regular screening when there are no symptoms? Should one fix something that is not broken? Why is this an important issue? Colon and rectal cancers are the second cause of death in North America. It is felt that there can be markedly diminished incidence if colonoscopy exam is performed.

Patients entering the study were enrolled between 1994 and 1997 from 13 VA (Veterans' Administration) Hospitals. Patients were either recruited by random selection based upon age, finding asymptomatic patients referred for sigmoidoscopy which is an examination of a small portion of the rectum (closest to the anus) or by advertising for patients with a family history of colorectal cancer.

Patients were excluded from this study if they had rectal bleeding more than once in the prior six months, change in bowel habit or lower abdominal pain - symptoms which require medical evaluation in other events.

Patients were also excluded if they had a history of diseased colon such as cancer, colitis or polyps or peri-colonic surgery, prior colonic examination within ten years, a medical condition that increased the risk of colonoscopy which is cardiac or pulmonary disease or co-morbid disease that would minimize the benefits of colonoscopy screening such as cancer or terminal illness; a prosthetic heart valve, anti-coagulation therapy, psychiatric disorders, lack of transportation, alcoholism, and other similar conditions.

More than 17,000 people were screened and there were 3,196 enrolled in this study. Colonoscopy evaluation was completed to the cecum - a distant portion of the intestines in 3,121 patients or 97.7%. In 1,680 patients or 53.8% 5,218 polyps were removed. Twelve percent or 391 people had hyperplastic polyps and 118 or 3.8% biopsy of what appeared to be a polyp showed normal mucosa or other findings. In 62.5% of patients no neoplasia was found.

Thirty-seven and one-half percent of patients or 1,171 people had one or more adenomas or invasive cancer. In 842 patients there was an adenoma that was less than 1cm in diameter. Advanced disease was seen in 329 patients or 10.5%. These were defined as adenoma of at least 1cm or with villous features or high-grade dysplasia or invasive cancer. Thirty patients or 1% had invasive cancer. Six patients had lymph node involvement with the cancer and two had cancer to metastatic or distant sites.

Despite having different ways of recruiting patients into the system there were no differences in the likelihood of advanced neoplasia. Patients having family history however did have a higher

rate of advanced neoplasia compared to those with no family history. One would expect such a result.

Ten patients or 0.3% had serious complications including bleeding requiring hospitalization, myocardial infarction, stroke, gangrene or phlebitis. Three patients died within thirty days after colonoscopy although none were felt to be related directly to the procedure. There were no perforations of the colon. Perforations are tears in the wall of the intestine.

The authors concluded, "We believe that the use of colonoscopy to screen asymptomatic men for colorectal cancer is feasible and that such screening can identify patients with advanced neoplasia who may benefit from the detection and removal of the lesions. The majority of advanced are distal to the splenic flecture. However, our data shows that more than half the cases of advanced proximal neoplasia would not be detected with sigmoidoscopy to the splenic flecture. Patients with distal adenomas of any size have a higher risk of advanced proximal neoplasia than patients with no distal adenomas.

In the group of patients in our study who had no distal adenomas, 2.7% have advanced proximal lesions, which would not have been detected with sigmoidoscopy alone. It remains to be determined whether a total colonoscopy examination will lead to a greater reduction in the rate of mortality from colorectal cancer than other methods of screening."

They stated that, "Our study has several important limitations. First, the results are applicable only to men. There is considerable evidence that men have higher age-adjusted rates of cancer than women. In addition, a definition of the distal colon that includes the left colon to the splenic flexure may not reflect the actual depth of insertion of a sigmoidoscope. Therefore, we determined the yield of an examination that reached the junction of the sigmoid colon and the descending colon. Our data demonstrate that a more extensive examination of the colon leads to a higher rate of detection of advanced neoplasia. Finally, the effectiveness of colonoscopy depends on the expertise of the endoscopist. In our study, all the endoscopists had substantial experience with colonoscopy, as reflected by the higher rate of successful cecal intubation. The results of examinations performed by less experienced endoscopists may be different.

We believe that the use of colonoscopy to screen asymptomatic men for colorectal cancer is feasible and that such screening can identify patients with advanced neoplasia who may benefit from the detection and removal of the lesions. The majority of advanced lesions are distal to the splenic flexure. However, our data show that more than half the cases of advanced proximal neoplasia would not be detected with sigmoidoscopy to the splenic flexure. Patients with distal adenomas of any size have a higher risk of advanced proximal neoplasia than patients with no distal adenomas. In the group of patients in our study who had no distal adenomas, 2.7 percent had advanced proximal lesions, which would not have been detected with sigmoidoscopy alone. It remains to be determined whether a full colonic examination will lead to a greater reduction in the rate of mortality from colorectal cancer than other methods of screening."

One should speak to their physician and gastroenterologist about performing colonoscopy. It appears to be a test that is useful and generally safe.