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REVIEW OF A SERIES OF PROCTOSIGMOIDOSCOPIES  
DONE AT WALLOPS STATION, VIRGINIA

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(a) The Subject:

The subject of this study is a series of 530 proctosigmoidoscopy examinations done at the Health Unit at the NASA installation at Wallops Station, Virginia, between the years 1964 and 1969. The only positive findings I am reporting is the number and incidence of polyps found on these examinations during this period of time. I am not attempting to report on any other pathology such as hemorrhoids or fissures, etc.

(b) The Value of Routine Proctosigmoidoscopy:

In a paper in the Journal of the American Academy of General Practice in the June 1960 issue, Dr. Gordon McHardy, Louisiana State University School of Medicine, New Orleans, and his associates, pointed out the value of routine proctosigmoidoscopies. He stated that routine proctosigmoidoscopy in asymptomatic patients may result in the early detection of cancer of the rectum and sigmoid with curative operation and therefore greater survival rate in addition. Early detection of a malignant polyp without invasion beyond the stalk may permit a less extensive curative operation than a complete proctectomy and colostomy required when the lesion is discovered in more advanced stages. He further quotes some statistics from the American Cancer Society showing the estimated number of deaths from cancer of the colon and rectum in 1965 was 43,000. This was second only to death from cancer of the lung which was 50,000. New cases of cancer of the colon and rectum in 1965 number approximately 73,000 while of the lung only 55,000, so we can see from this high instance of cancer of the colon and rectum every effort should be made toward early diagnosis. There certainly is some controversy among surgeons about the value of routine proctosigmoidoscopy and also the relationship of polyps to carcinoma. I do not intend to go into this in this report.

(c) The Material:

Gentlemen, I wish to stress the fact that these examinations were done on routine physical examinations on completely asymptomatic patients as far as symptoms of the bowel are concerned. The proctosigmoidoscopy was offered to everybody receiving a physical exam at Wallops, and approximately 50% accepted them. As I say, we did not attempt to just offer the examination to symptomatic patients. In fact, in several cases where the patients would complain of diarrhea or something like that, they were referred to their own physician for an examination. These proctos were done on pre-employment physicals, health

maintenance examinations, and job physicals. The only cases where we did not offer exams were to a few young co-op students in the age group 19, 20, and 21 years. The personnel were in a great majority from NASA installations but we had a few from the United States Weather Bureau at Wallops and also from the Tiros Operational Satellite Station. We do not examine at Wallops any of the contract personnel so they were not included in this study or they did not get an examination.

(d) The Equipment:

The proctosigmoidoscope was a Welsh-Allen scope. The table used was a Ritter hydraulic table. I will show a picture of this in a few minutes.

(e) The Preparation of the Patient:

When we first started doing these examinations, these proctosigmoidoscopies, we had a much more elaborate preparation of the patient than we do now. At that time, we regulated the patients diet the night before. We did not permit a big meal such as cabbage or a lot of meat or spaghetti or anything like that. And, also, we gave him a laxative on the evening prior to the examination such as milk of magnesia or mineral oil. The next day we tried to get him to take an enema before he left home and then we would repeat the enema just before the examination. However, we found that this elaborate preparation discouraged a lot of people from having the examination, so we finally decided to just give an enema before the examination. So now when the patient presents for the examination, we give him a fleets enema which he gives to himself and after initially using the ingredients in the fleets enema we then tell him to put some tepid water from the tap in the bathroom and repeat the enema three or four times or until it comes back clear and with this we have had good results and been able to get a good visualization of the rectum and part of the sigmoid. This is not as sterile a bowel or as clean a bowel as a surgeon would like to have, but we were doing this just as a screening procedure. I realize that when pathology is found and the patient goes to the surgeon, or patient has symptoms, the surgeon is going to fulgurate or biopsy or something like this, then he needs the bowel to be as clean as possible, but for a routine examination I think a fleets just prior to the examination is all that is needed or in our experience is all that is needed.

(f) Some Excuses for not Having the Procto Done:

Now as I said previously, approximately 50% of the people at Wallops took the examination and approximately 50% turned it down. Now the reasons for turning down the examination were several. One reason was that the examination and the prep interfered with the patients

bowel movements and his normal routine. However, when we stopped the elaborate preparation that I mentioned a minute ago, this excuse disappeared and several people who did refuse it now take the examination. Other excuses were hemorrhoids, not having any trouble right now, not having any trouble with their bowel movements so why take the examination, and this we are slowly trying through the process of education to make the people realize that the examination is best for them before symptoms occur. We are having some luck in doing this and the percentage is starting to pick up some.

(g) Types of Polyps:

All the polyps were found to be adenomas.

(h) During the Examination:

As I said, after the patient takes the enema, he gets fairly well cleaned out. He is put on our table and the table inverted and I keep trying to reassure and tell the patient that any time he wants me to stop I will be glad to stop. I think this gives the patient a better feeling, realizing that if it gets painful, I will stop immediately. With the patient in an inverted position, I first do a rectal examination covering all points of the rectum, going around the rectum clockwise, and this I think helps relax the anal sphincter a little bit and makes it easy to introduce the scope. The subjects complain more of my finger than the scope.

(i) Discussion:

There is certainly, at the present time, some discussion among surgeons about whether polyps or little adenomas when they are found, if they should be removed or followed, well, the majority of surgeons in our area feel that these polyps should be removed, so any polyps found were referred to the surgeon and they were fulgurated or whatever was needed. Usually went through LMD, but few people do not have LMD, so we refer directly. Whether carcinoma arises from polyps is still controversial. At the present, some people believe they do and other people believe there is no relation between the little polyp on the adenoma, and carcinoma. However, as Dr. R.D. Liehty and his group at the Department of Surgery stated in a paper on disease of the colon and rectum, May 1968, that if polyps are found, even though they are not malignant, they may signal the need for barium enema and the malignancy might be found further up. They reviewed 2,261 cases of cancer of the colon and rectum over a twenty-year period and found that over 50%, or 1,120 lesions, were situated less than 25 centimeters from the anal verge and were in reach of the proctosigmoidoscope.