The Value of One Year Post-Operative Colonoscopy in the Surveillance of Cancer of the Colon and Rectum

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Abstract:
Intensive follow-up of cancer of the colon and rectum includes colonoscopy 1 year after curative resection and is the current practice in Calgary. There is much debate in the literature as to the value of this intensive follow-up, including 2 prospective randomized controlled trials showing no benefit. The purpose of this study was to assess the benefit of 1-year follow-up colonoscopy by documenting the findings at the time of the procedure. One hundred and four (104) charts were randomly selected and reviewed. All had undergone peri-operative colonoscopy, resection for curative intent and follow-up colonoscopy approximately 1 year post-op. There were 16 (15%) abnormal findings at the time of follow-up colonoscopy. In 10, the colon had not been “cleared” peri-operatively and the polyps identified were anticipated and removed. In 6 (6%) there were new findings not previously documented: 3 hyperplastic polyps; 2 small (<0.75 cm) adenomatous polyps and 1 anastomotic recurrence of a rectal cancer. The recurrent cancer was within reach of a rigid sigmoidoscope and the polyps can be considered not clinically significant. This review of our experience with surveillance colonoscopy 1 year after curative resection for cancer of the colon and rectum supports the previously published data from 2 randomized controlled trials showing no benefit.

Introduction:
Colo-rectal cancer is the third most commonly diagnosed cancer and the second leading cause of cancer death in the developed world. The surveillance of patients who had a curative resection for colo-rectal cancer has been debated widely in the literature. Different surveillance programs have been brought forward including one-year colonoscopy. This has been the practice in Calgary-Canada. This report is designed to look at the yield of the one-year follow-up plan.

Patients & Methods:
We randomly selected the charts of 104 patients who had a resection of colo-rectal cancer for curative intent. Those patients had a peri-operative colonoscopy and another colonoscopy at approximately one year. We then looked at the one-year colonoscopy findings. The value of these findings was analyzed as to their clinical benefit.

Results:
Out of the 104 patients 88 had a normal examination at one year. 16 were abnormal. Out of these 16 there were 10 patients whom their colons where not cleared of polyps prior to resection either due to obstructing lesions or poor preparation. 4 had adenomatous polyps > 1 cm, one metachronous lesion. The other 5 where polyps of varying sizes < 1 cm.

Out of the other 6 who’s findings where not previously documented, 3 were hyperplastic polyps. There were 2 small < 0.75 cm. Adenomatous polyps (as proven by histopathology) and one anastomotic recurrence. This was in a rectal cancer.

Discussion:
The American gastroenterological association recommended that patients with a colo-rectal cancer that has been resected with curative intent (but who did not undergo complete adequate colonoscopic examination preoperatively) should have a complete examination of the colon within 1 year after resection. If this or a complete preoperative examination is normal, subsequent examination should be offered after 3 years.

A. Barrier in his study also recommended a 3-year colonoscopy surveillance plan for patients who were cleared of polyps in the preoperative period.

In a prospective randomized study B.J. Kjeldsen showed that intensive follow-up of patients post resection of colo-rectal cancer did not improve survival of these patients. Other retrospective reviews had also found very little yield of the one-year follow-up colonoscopy.

Our study confirmed the above recommendation since only one significant finding was found in the 104 patients (1%). The
3 adenomatous polyps found where less than 1 cm. And since the time required to the development of invasive cancer would exceed the 3-year follow-up period proposed in the polyp literature. Therefore these findings where considered clinically insignificant.

Figure 1: Original tumor location

Figure 2: One year colonoscopy

The question of asymptomatic anastomotic recurrence is also controversial. A. Barrier suggests that anastomotic recurrence is limited to the distal colonic and rectal anastomosis. Therefore they are amenable to detection by either rigid or flexible sigmoidoscope, which can be safely performed in the clinic.

This certainly agrees with our findings of one anastomotic recurrence in an anterior resection for an upper rectal cancer. In our review no other recurrences were found.

Finally in patients where the colon was not inspected properly in the preoperative period the literature agrees on a closer follow-up period. This also was in agreement with our review since there were 5 significant findings in those patients whom did not have a full colonoscopy in the preoperative period. (4 adenomatous polyps >1 cm and one metachronous lesion).

Figure 3: Unexpected findings

Conclusion:

The yield of one-year follow-up colonoscopy is clinically insignificant in those patients whom had been cleared of polyps in the preoperative period.

Rectal anastomosis where anastomotic recurrences are most likely to occur can be inspected with either a rigid or a flexible sigmoidoscope. And this can be done in an office setting.

References:

