The Yield for Colorectal Cancer and Adenoma by Indication at Colonoscopy

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Summary

Colonoscopy is an integral part of the clinician armamentarium in the diagnosis of colorectal cancer and its precursor, the adenoma. Polypoid lesions when identified can be excised at colonoscopy and in turn reduce the risk of colorectal cancer. We prospectively evaluated the yield of colorectal cancer and adenomatous polyps by indication for colonoscopy over a one-year period. A total of 375 colonoscopies were carried out. The more common indications of colonoscopy were rectal bleeding, abdominal pain, surveillance of colorectal cancer and altered bowel habit. The highest yield for cancer was for rectal bleeding with 12.5% while surveillance of patients with a history of polyps yielded the highest percentage of new polyps. We conclude that rectal bleeding as an indication for colonoscopy yielded the highest number of cancers.

Introduction

Colonoscopy has today become the gold standard in the investigation of colorectal pathology. Detection and treatment of colorectal cancer and adenomas is probably the most important aspect of colonoscopy. Currently, patients are subjected to colonoscopy for a variety of indications and with an increasing burden on the health system, the waiting period for colonoscopy is gradually increasing. In order to place a priority on symptoms for colonoscopy, the yield for colorectal cancer and adenomas should be obtained in our local setting. We thus, analyzed the yield for colorectal cancer and adenomas with respect to the indication for colonoscopy in our patients.

Materials and Methods

We prospectively analyzed all patients undergoing colonoscopy at our unit over a period of one year. A consultant surgeon performed the colonoscopy and all biopsies were confirmed by histological analysis. Both inpatients and outpatients were included. The bowel preparation used was identical in all patients, which consisted of 2L colonic lavage solution (Delta West Limited, Australia) and 2 sachets of pico-salax (Ferring, Swedwn) before the colonoscopy the evening before the procedure. Patients were allowed clear fluids orally and fasted from midnight prior to the colonoscopy. The instrument used for the colonoscopy was the Pentax EC-3801F colonoscope. All patients were given midazolam 3mg (Roche, Nutley, USA) and 25mg pethidine intravenously. The colonoscopy was considered complete when the most proximal part of the colon had been visualized. Any suspicious lesion or polyp was biopsied using a snare or biopsy forceps.

Results

There were a total of 375 colonoscopies performed over the study period. There were 181 males and 194 females. The racial distribution was 168 Malays (44.8%), 130 Chinese (34.7), 61 Indians (16.3%), and 16 others (4.2%). The mean age of the patients

Table I
Yield for colorectal cancer and adenomas by indication for colonoscopy

Indication	n	Cancer n (%)	Adenoma n (%)
Rectal bleeding	88	11 (12.5)	17 (19.3)
Altered bowel habit	56	5 (8.9)	4 (7.1)
Abdominal pain	59	3 (5.1)	4 (6.8)
Abdominal mass	11	1 (9.1)	0 (0)
Cancer surveillance	59	1 (1.7)	14 (23.7)
Polyp surveillance	16	1 (6.2)	9 (56.2)
Anaemia	12	0 (0)	4 (33.3)
IBD surveillance	7	0 (0)	1 (14.3)
Others	67	0 (0)	0 (0)

undergoing colonoscopy was 51.7 years (range 13-92 years). The completion rate of the colonoscopies was 79% (n=295), with poor bowel preparation the main cause of incomplete colonoscopy.

The results of the yield for colorectal cancer and adenomatous polyps are summarized in Table I. Cancer was detected in 22 patients with 16 (72.7%) cancers located within the recto-sigmoid area. There were a total of 53 adenomas detected with 42 (79.2%) located within the recto-sigmoid area. Rectal bleeding, altered bowel habit and abdominal mass were the clinical indications that yielded the highest percentage of colorectal cancer. A history of colonic polyps, surveillance of colorectal cancer patients and rectal bleeding yielded the highest percentage of adenomas.

Discussion

Colorectal cancer is a curable disease if detected early enough[1]. Hence strategies to increase the detection rate of colorectal cancer other than screening should also focus on the detection of clinical features that are more likely to be associated with colorectal cancer and adenomas. Colonoscopy remains the investigation of choice with mounting evidence that it is superior to double contrast enema in the evaluation of symptomatic patients[2-4].

Guillem has reported that colonoscopy for rectal bleeding does have a substantial yield for colorectal cancer, with rates of 12.6% for colorectal cancer and 21.8% for adenomas in 372 consecutive colonoscopies[5]. Overall, several other reports show a substantial yield for neoplasia ranging from 29-40%[6,7]. However, Neugut reported that the yield for cancer was similar for bleeding and non-bleeding symptoms such as altered bowel habit[8]. Comparing the bleeding and non-bleeding symptoms in this study, it is clearly shown that colorectal cancer and adenomas are less common in non-bleeding symptoms.

Clearing colonoscopy in the setting of cancer resection refers to colonoscopy performed before resection or shortly after resection in obstructed patients to identify and remove any synchronous neoplasia. It has a high yield for synchronous cancer (2.2%) and adenomas (27%)[9]. Surveillance colonoscopy refers to interval colonoscopy after the clearing procedure. The yield for surveillance colonoscopy post colorectal cancer resection is 0.7-3.9% for metachronous lesions and 13-40% for adenomas[9-11]. In our study the figures are comparable.

In conclusion, patients with rectal bleeding have a higher yield of colorectal cancer and should be investigated by colonoscopy at the earliest possible time. Surveillance colonoscopy for adenomas is justified.

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