

CT Colonography Refines Screening for Neoplasia

BY KATE JOHNSON
Montreal Bureau

Detection rates for advanced colorectal neoplasia were similar in a comparison of screening computed tomographic colonography versus conventional colonoscopy, but the numbers of polypectomies and complications were significantly lower with CT colonography, reported Dr. David H. Kim and colleagues.

CT colonography “may provide a more targeted screening approach for detection of advanced neoplasia,” they wrote, describing the method as “an effective filter” for conventional colonoscopy (*N. Engl. J. Med.* 2007;357:1403-12).

Universal polypectomy at the time of screening colonoscopy is widely considered the most effective means of capturing advanced adenomas—benign lesions with a high risk of progression to cancer, according to Dr. Kim, of the University of Wisconsin (Madison) and his colleagues. However, most subcentimeter polyps are not adenomatous, suggesting a need for more selective alternatives to the practice of universal polypectomy.

Their study compared results from 3,163 consecutive patients undergoing colonography screening and universal polypectomy with 3,120 consecutive patients undergoing CT colonography followed by a choice of same-day therapeutic screening for all polyps of at least 6 mm or CT surveillance for one or two polyps of 6-9 mm.

Within the CT group, a total of 246 patients (7.9%) were referred for therapeutic screening, whereas 158 patients (5.1%) with a total of 193 polyps chose CT surveillance.

Detection of polyps measuring 6 mm or more occurred in 12.9% of the CT group and 13.4% of the therapeutic screening group, and the prevalence and detection of advanced neoplasms also was similar, at 3.2% in the CT group and 3.4% in the therapeutic screening group; the differences were not significant.

However, these detection rates were achieved with the removal of 2,434 polyps in the therapeutic group, compared with just 561 in the primary CT group. In addition, there were seven colonic perforations in the therapeutic group (0.3%), four of which required surgical repair. There were no serious complications in the CT group during either the primary examination or subsequent therapeutic screening.

The results suggest that primary CT with selective therapeutic screening also deserves consideration as a preferred screening strategy “because it appears to achieve the same goals of detection and prevention but with the use of substantially fewer resources,” they wrote.

There is limited follow-up data for the subgroup of 158 CT patients who chose surveillance of their 193 polyps. To date, 54 have returned for follow-up, revealing that 96% of 70 polyps have either remained stable or decreased in size. Three polyps grew at least 1 mm and were removed, but none revealed high-grade dysplasia.

On the basis of previous experience with CT screening,

approximately 60% of polyps of 6-9 mm detected by CT would be expected to be adenomatous, and approximately 3% of CT-detected adenomas of 6-9 mm contain advanced histologic findings,” wrote the authors. “Therefore, we estimated that CT surveillance would yield three to four advanced adenomas,” resulting in a yield of advanced neoplasia among small lesions that was very similar to the yield associated with conventional therapeutic screening.

Although detection rates for lesions measuring 6 mm or more were similar for both groups, there was a significant difference in overall detection rates (12.9% in the CT group vs. 37.6% in the therapeutic group). This is explained by the difference between the two groups in the management of diminutive lesions (measuring 5 mm or less). All such lesions were removed during therapeutic screening, but were ignored in patients undergoing CT. Recommendations released in by the American Gastroenterological Association Institute Task Force on CT Colonography stipulate that:

► Any polyp measuring 6 mm or more at the widest diameter should be reported, and the patient should be referred for consideration of endoscopic polypectomy.

► Patients with three or more polyps of any size in the setting of high diagnostic confidence should be referred for consideration of endoscopic polypectomy.

► The appropriate clinical management of patients with one or two lesions measuring 5 mm or less is unknown; therefore, the follow-up interval should be based on individual characteristics of the patient and the procedure. ■

Anticoagulants, Polyp Size Affect Postpolypectomy Risks

BY DENISE NAPOLI
Assistant Editor

WASHINGTON — Large polyp size and the use of anticoagulants significantly raised the risk of delayed postpolypectomy hemorrhage, but aspirin and a history of hypertension did not, according to findings presented at the annual Digestive Disease Week.

The results are in contrast to studies finding that hypertension, polyp location, and sessile polyps were risk factors for delayed bleeding, wrote Dr. Nadim Salfiti and coinvestigators at the University of Minnesota, Minneapolis.

In the case-control, retrospective chart review, the investigators analyzed 41 cases of postpolypectomy bleeding and 132 control cases at the Minneapolis VA Medical Center from 1999 to 2006. The mean age of the 41 case patients was 64 years, all were male, and most were white.

Four a priori risk factors were analyzed for correlation with bleed risk: heparin or warfarin use within 1 week post polypectomy; at least one aspirin dose taken between 1 week before and 1 week after polypectomy; hypertension, defined as systolic pressure greater than 140 mm Hg, or diastolic pressure greater than 90 mm Hg, or the use of antihypertensive medication; and polyp diameter.

The mean polyp size for cases was 10.5 mm, compared with 6.7 mm for controls, a statistically significant difference; a total of 37% of cases and 11% of controls had a polyp size greater than 1 cm. Even more significant was the use of heparin or warfarin

within 1 week after polypectomy in 34% of the patients with hemorrhage, versus 9% of controls.

In contrast, at least one dose of aspirin was administered to roughly 40% of both cases and controls within the time period from 1 week before to 1 week after polypectomy, and slightly more than 60% of both cases and controls were hypertensive.

In a post hoc analysis, the researchers also tested to see whether diabetes, lung disease, coronary artery disease, or polyp type (sessile versus pedunculated) were related to postprocedure hemorrhage. Diabetes was present in 44% of cases and 24% of controls, and lung disease was identified in 34% of cases versus 19% of controls; both conditions were found to be moderately significant risk factors. Coronary artery disease was present in 59% of cases and 32% of controls, another statistically significant difference. However, after adjustment for the use of anticoagulants, all three conditions lost some significance. Polyp type was not a significant factor.

“This is the first study evaluating the risk of [using] anticoagulant medications after polypectomy,” Dr. Salfiti said in an interview. “These results need to be confirmed in prospective studies, but they do provide some information that could facilitate the decision regarding the timing of resuming anticoagulation.” Dr. Salfiti cautioned, however, that each patient should be evaluated individually. The risks of postpolypectomy bleeding versus the risk of a thromboembolic event need to be assessed. ■

Colorectal Neoplasms Appear More Common in Heart Disease

BY MARY ANN MOON
Contributing Writer

Colorectal neoplasms are nearly twice as common in patients newly diagnosed as having coronary artery disease than in those found not to have CAD based on coronary angiography, results of a cross-sectional study suggest.

The prevalence of colorectal neoplasms in patients with CAD in their study was nearly three times as high as that reported in the general population in either Hong Kong or the United States, study investigators reported.

Dr. Annie On Chan of the University of Hong Kong and her associates previously published a retrospective study showing a strong association between colorectal neoplasms and CAD. To further examine this link, they conducted a cross-sectional study of consecutive patients who were undergoing coronary angiography to assess suspected CAD, followed by colonoscopy.

In industrialized Hong Kong, the incidence rates of colorectal cancer and CAD, and the mortality rates from the conditions, are similar to the rates in Western countries, they noted.

The study included 206 patients who were found to have CAD, 208 patients who were found not to have CAD, and a control group of 207 people from the general Hong Kong population who were matched to the other subjects based on age and sex. The family histories were similar among the groups.

Colonoscopy revealed that colorectal neoplasms were much more prevalent in the CAD-positive group (34%) than in either the CAD-negative group (18%) or the control group (20%).

This 34% prevalence in patients newly di-

agnosed as having CAD was especially “remarkable,” compared with the current prevalences reported in the general population in Hong Kong (12%) and the United States (10%), Dr. Chan and her associates said (*JAMA* 2007;298:1412-9).

Similarly, the prevalences of advanced colorectal lesions (18%) and adenocarcinomas (4%) were much higher in the patients with CAD than in the patients who didn’t have CAD (6% and 0.5%, respectively) or the control subjects (5% and 1%, respectively).

The reason for this association between CAD and colorectal neoplasm is not yet known, but it is possible that the two disorders share common environmental risk factors. Both disorders have been linked to the metabolic syndrome and smoking, and both “probably develop through the mechanism of chronic inflammation,” they said. ■

