Prevalence of Advanced Pathology in Small and Diminutive Polyps

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Abstract

With the increasing availability of CT colonography, the clinical significance of small polyps, and their potential for malignant transformation, will become an increasingly important issue with regard to colorectal cancer screening and surveillance. We sought to evaluate the prevalence of advanced pathology in small and diminutive polyps removed at colonoscopy.

Methods:
A retrospective review of all colonoscopies from September, 2001 through June, 2006 was performed. Polyp size and pathology were recorded. Advanced pathology was defined as high grade dysplasia, carcinoma, and polyps with >25% villous component.

Results:
A total of 5788 polyps were recorded and 4465 had complete data on size and pathology. Of these, 3017 (67.57%) were <10mm, 1009 (24.41%) were 6-10mm, and 398 (8.02%) were >10mm. The rate of advanced pathology was 1.80% in the 1-5mm group, 7.52% in the 6-10mm group, and 39.66% in the >10mm group.

Conclusions:
In our study, polyps <10mm contained significant rates of advanced pathology. Strategies to address small and diminutive polyps must be developed in light of the ever increasing availability of CT colonography.

Hypothesis

Small and diminutive colorectal polyps have a substantial malignant risk.

Background

The use and availability of CT colonography has increased in recent years.

CT colonography has similar sensitivity and specificity compared to traditional colonoscopy for detecting polyps >10mm in size.

CT colonography has lower sensitivity than traditional colonoscopy for detecting polyps <10mm in size.

The current practical limit of CT colonography is 6mm, due to slice thickness and resolution.

Prior studies using CT colonography have discounted polyps smaller than 6mm because some reports indicate that small and diminutive polyps confer no substantial metachronous risk of carcinoma.

Few large-scale studies have sought to quantify the pathology of small and diminutive polyps, those <10mm in size.

Recent studies demonstrate that there is significant and rapid growth of small and diminutive colorectal polyps, thereby increasing the potential rates of malignant transformation.

Results

A total of 5788 polyps were recorded, and 4465 had complete data sets on size and pathology.

The rate of advanced pathology was 1.89% in the 1-5mm group, 7.52% in the 6-10mm group, and 39.67% in the >10mm group.

Our study demonstrates that polyps categorized as <10mm in size contain a clinically significant rate of advanced pathology and should be removed at the time of traditional colonoscopy.

Future advances in CT colonography detection of polyps <10mm will require more large scale studies and clarification of the guidelines for their colonoscopic removal.