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The full report is titled “Complications of Colonoscopy in an Integrated Health Care Delivery System.” It is in the 19 December 2006 issue of *Annals of Internal Medicine* (volume 145, pages 880-886). The authors are T.R. Levin, W. Zhao, C. Conell, L.C. Seeff, D.L. Manninen, J.A. Shapiro, and J. Schulman.

Complications of Colonoscopy

What is the problem and what is known about it so far?

Colonoscopy is a procedure that involves a doctor inserting a thin, flexible, tube-shaped, lighted instrument through the rectum to examine the inside of the large intestine (colon). Sometimes doctors use colonoscopy to look for the cause of a patient’s symptoms (diagnostic colonoscopy). Another use of colonoscopy is to look for polyps (growths that can become cancer) or cancer (screening colonoscopy). During colonoscopy, it is possible to take samples of the colon (biopsies), to remove polyps or small cancers, and to stop bleeding from abnormalities within the colon. Complications of colonoscopy include perforation (a hole in the wall of the colon), bleeding at the site of a biopsy or polyp removal, postpolypectomy pain due to damage of the colon wall during polyp removal, and diverticulitis. Diverticulitis is an infection that can occur in people who have diverticulosis. In diverticulosis, small pouches are in the wall of the colon. Colonoscopy is thought to be a relatively safe procedure. However, much of the information on complications has come from studies or referral centers and might not reflect what actually happens in the general community.

Why did the researchers do this particular study?

To study the frequency of complications during colonoscopies that were done in a community setting.

Who was studied?

The researchers studied the electronic records for 16, 318 colonoscopies performed between January 1994 and July 2002 in patients older than 40 years of age who were enrolled in the Kaiser Permanente Health System. Almost all colonoscopies were diagnostic colonoscopies.

How was the study done?

The researchers reviewed the electronic medical records to determine the number of hospital admissions within 30 days of each colonoscopy for perforation, bleeding, diverticulitis, postpolypectomy pain, or other serious illness directly related to colonoscopy.

What did the researchers find?

Among the 16, 318 colonoscopies studied, 82 complications occurred—that is, about 5 complications for every 1000 colonoscopies. Complications occurred in less than 1 of 1000 colonoscopies without biopsy and in about 7 of 1000 colonoscopies with biopsy or polypectomy. Perforations were the least common complication, and bleeding was the most common complication.

What were the limitations of the study?

Many colonoscopies are done to screen for colon cancer, and few of the colonoscopies in the study were screening colonoscopies.

What are the implications of the study?

Serious complications occurred in about 5 of every 1000 colonoscopies in the community setting. Complications were least frequent in colonoscopies without biopsy or polyp removal (less than 1 complication for every 1000 colonoscopies done). These numbers may not apply to screening colonoscopies.

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