Low Literacy Sabotages Colonoscopy Preparation

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LOS ANGELES — Low literacy was by far the most common independent predictor of poor bowel preparation and incomplete colonoscopy in a study presented at the annual Digestive Disease Week.

Among 195 patients who underwent colonoscopy at an inner city hospital, John H. Stroger Jr. Hospital of Cook County, 30% had poor bowel preparation, requiring a repeat examination.

Another 22% had only "fair" bowel preparation, meaning small or flat lesions could be missed, reported Dr. Rony Ghaoui, a fellow in gastroenterology at Rush Medical College, Chicago.

Fully one-quarter of the colonoscopies were incomplete, 90% of them because of poor bowel preparation.

The patients included in the study ranged in age from 18 to 82 years (mean age 54). Most (64%) were women, and 49% were African American, 32% were Hispanic, and 11% were non-Hispanic white.

Written instructions given to patients at the time the colonoscopies were scheduled were available in either English or Spanish.

A 7-minute literacy test administered to patients on the morning of their examinations determined that 40% had low literacy, about 20% had marginal literacy, and about 40% had adequate literacy.

Among those with low literacy, 63% had poor bowel preparation, compared with 12% of those patients with marginal or adequate literacy.

Importantly, however, more than 80% of patients with low literacy said they had adhered to the bowel preparation instructions.

Just 5 of 78 patients with low literacy said they had difficulty reading in general, and only 8 said they had difficulty reading the bowel preparation instructions.

"[This] was, for me, an eye-opener as to how difficult it is for us as physicians to really detect the literacy problem," Dr. Ghaoui said. Although 40 million Americans—an estimated 26% of the population—have difficulty reading, "It's taboo. People don't talk about it," he said. In one study, nearly 70% of illiterate adults had not confided that fact to a spouse or child.

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The issue of literacy is critically important in current protocols for colonoscopy preparation, which rely on written instructions. When colonoscopies cannot be completed or must be repeated because of poor bowel preparation, there is "a long list of consequences," he stressed, including patient inconvenience and time away from work, scheduling burdens at busy facilities, a waste of resources, and potentially delayed or missed diagnoses of colorectal cancer.

The odds ratios for predicting poor bowel preparation (after adjusting for age, gender, ethnic group, and language) were 12 for low literacy, 6 for eating dinner the night before the examination, and 5 for not taking bisacodyl.

Other important predictors included eating lunch the previous day, and not finishing the polyethelene glycol solution. Receiving additional instructions about the preparation process from a physician or a nurse was somewhat protective, with an odds ratio of 0.5.

Using the best predictive model in a logistic regression analysis, the odds ratio for low literacy was even higher, at 22, Dr. Ghaoui said.

He called for more research into how low literacy translates into poor preparation—whether the instructions themselves are misunderstood, or whether patients with low literacy do not understand the importance of the test itself or of adherence to the instructions.

Because patients do not volunteer the fact that they have low literacy, brief tools to measure literacy might be helpful for physicians to use in their practices, he added.

Finally, better methods of explaining colonoscopy preparation must be developed and tested, Dr. Ghaoui said. ■