Deeper sedation may help find difficult-to-detect polyps during colonoscopy

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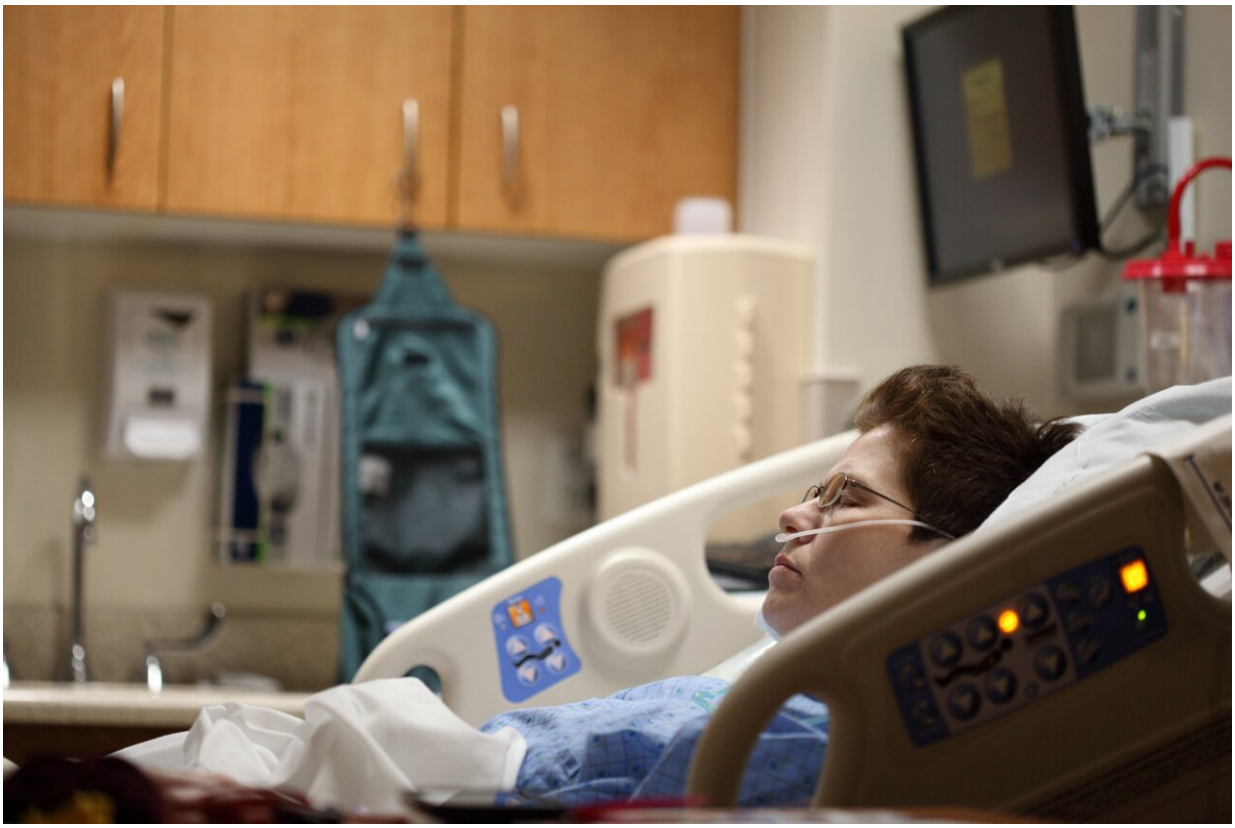

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In patients undergoing colonoscopy to screen for colorectal cancer, deeper sedation using the anesthetic drug propofol may improve detection of "serrated" polyps—a type of precancerous lesion that can be difficult to detect, reports a study in the online first edition of *Anesthesiology*.

"Our study provides the first evidence that monitored anesthesia care with propofol might increase detection of serrated polyps, which are more likely to be missed than adenomatous polyps during colonoscopy," said lead author Aurora N. Quaye, M.D., member of the Acute Pain and Regional Anesthesia Service at Maine Medical Center, Portland.

"Propofol-based anesthesia may contribute to a more effective screening process for colorectal cancer, especially in patients with risk factors for serrated polyps."

Nearly all colorectal cancers start off as small growths called polyps. Identifying and removing polyps during colonoscopy screening can prevent them from developing into cancer. Compared to a more common type of polyp called adenoma, serrated polyps may be harder to see, because they are often flatter and blend into the folds of the colon tissue.

Propofol is an alternative to moderate sedation—sometimes called "conscious" sedation—for colonoscopy. "Propofol results in deeper sedation, and also begins to work and wears off more quickly, compared to conscious sedation," Dr. Quaye explained.

Research has shown that propofol-based anesthesia is more efficient and improves patient and provider satisfaction ratings. The new study is the first to assess whether propofol may be associated with improved

detection of serrated polyps.

The analysis included detailed information on more than 54,000 completed colonoscopies drawn from the New Hampshire Colonoscopy Registry. The procedures were performed between 2015 and 2020; all patients were older than 50 years. Rates of polyp detection, including serrated polyps and adenomas, were compared for patients receiving moderate sedation versus propofol-based anesthesia.

The overall polyp detection rate was higher when colonoscopy was performed using propofol: 34%, compared to 24.5% with moderate sedation. The results were similar on analysis of a "restricted" sample of about 19,000 colonoscopies performed at facilities that did not predominantly use one form of sedation over the other: overall polyp detection rate was 30.3% with propofol versus 25.7% with moderate sedation.

After adjustment for other confounding factors among these 19,000 colonoscopies, propofol was still associated with a clinically and statistically significant 13% higher likelihood of serrated polyp detection, although other types of polyps did not demonstrate a difference in detection.

The conclusions are strengthened by the use of systematically collected clinical registry data, the researchers note. However, the study cannot provide any information on how propofol might improve detection of serrated polyps.

"It may be that propofol increases patient comfort and relaxation, optimizing detection of polyps that are more difficult to see," said Dr. Quaye. "Additionally, propofol may cause smooth muscle relaxation in the colon, allowing more careful inspection and improved visualization."

The researchers emphasize the need for further studies to clarify the possible advantages of propofol for polyp detection. "The finding that propofol-based anesthesia might improve the detection of precancerous polyps may bring us closer to our goal of further optimizing the use of colonoscopy for the prevention and early detection of colorectal cancer," said Dr. Quaye.

The modest but significant reported association between propofol use and the detection of serrated polyps illustrates the "promise and peril" of studies using clinical registry data, according to an accompanying editorial by Douglas A. Colquhoun, MB, ChB, MSc, MPH, University of Michigan, Ann Arbor, and colleagues.

While warning that the results must be interpreted with caution due to limitations in analyzing registry data, the editorial authors highlight the importance of preserving access to propofol and call for further, "rigorously conducted" studies focusing on the value of anesthesia care for patients undergoing colonoscopy.

More information: Aurora N. Quaye et al, Association between Colonoscopy Sedation Type and Polyp Detection: A Registry-based Cohort Study, *Anesthesiology* (2024). DOI: 10.1097/ALN.0000000000004955

Douglas A. Colquhoun et al, Does Propofol Improve Polyp Detection during Colonoscopy? The Promise and Peril of Clinical Registry Data, *Anesthesiology* (2024). DOI: 10.1097/ALN.0000000000004987

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