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Split-Dose Prep Preferred for Colonoscopy

A four-fold increase in detection of sessile serrated polyps

The use of split-dose bowel preparation was associated with a significantly higher detection rate for sessile serrated polyps during colonoscopy, a randomized study found.

The detection rate of these difficult-to-detect polyps was 9.9% with split-dose preparation vs. 2.4% for single-dose preparation, reported **Nicholas Horton, MD**, of the Cleveland Clinic, and colleagues.

The U.S. Multi-Society Task Force recommends the split-dose approach to colonoscopy to improve the quality of the preparation, because it has been recognized as increasing adenoma detection rates. "Multiple societies and guidelines advocate for split-dose preparation," he said. "However, it's not used as commonly as we would hope," Horton told *MedPage Today*.

"There's a reluctance on the part of primary care physicians ordering colonoscopies to order the split-dose preparation, because they consider the second dose an inconvenience for patients," he said.

However, little is known about the detection rates between single-dose and split-dose preparation. Accordingly, he and his colleagues enrolled 341 patients whose mean age was 54, assigning them to receive 2 L of the preparation, which included polyethylene glycol, sodium sulfate, sodium chloride, potassium chloride, sodium ascorbate, and ascorbic acid, either as a single preparation the night before the procedure or *half the night before and half the morning of the procedure*.

They also were instructed to consume clear liquids only.

The two groups were similar in age and sex and in most comorbidities, including chronic constipation, hypertension, diabetes, and congestive heart failure. Cirrhosis was more common in the single-dose group.

Indications for colonoscopy included high-risk screening in 59% of the single-dose group vs 32% of the split-dose group, polyp surveillance in 0.62% vs. 14.8%, symptoms in 14.3% vs. 16%, and inflammatory bowel disease in 9.3% vs. 11.2%.

Overall, there was no difference between the two groups in the detection rate of polyps and adenomas, or in the location, size, or number of polyps identified. Polyp detection

rates in the single-dose and split-dose groups were 55.1% and 58.7%, respectively, while adenoma detection rates were 31.7% and 36.6%. Any proximal polyps were identified in 67.4% of the single dose and 61.4% of the split-dose groups, respectively, while any distal polyps were detected in 66.3% and 70.3%.

"A total of 20% of all colorectal cancers are believed to have their origins from sessile serrated polyps as opposed to adenomas, and these lesions are considered more difficult to detect. They're usually in the proximal colon, they're flat and blend in with the mucosa, and their borders are commonly ill defined," Horton explained in an interview.

In addition, there's a different molecular pathogenic pathway than with adenomas, he noted.

"They also are interval cancers, in that after someone has a colonoscopy and no lesions are seen, they are told to follow-up according to the recommendations for that particular patient -- 5 to 10 years -- and then at that interim colonoscopy they end up finding colon cancer. The vast majority of those interim cancers derive from sessile serrated polyps, which highlights the fact that these lesions can be difficult to find," he said.

In a press conference at the meeting, [John Vargo, MD, MPH](#), also of the Cleveland Clinic but who was not involved in the study, commented that Horton's group "***found that the split dose benefited the patients in several important ways, such as allowing more flexibility in scheduling and most significantly, resulting in a higher detection rate of sessile serrated polyps.*** I think that their findings, along with previous research, will encourage many healthcare providers to reconsider making patients consume the bowel preparation in one large dose," he said.

Reviewed by [F. Perry Wilson, MD, MSCE](#) Assistant Professor, Section of Nephrology, Yale School of Medicine and [Dorothy Caputo, MA, BSN, RN, Nurse Planner](#)

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