

## BARRETT ESOPHAGUS

## Acetic acid dye spray shows efficacy for detecting neoplasia

Acetic acid dye spray may offer a viable alternative to protocol-guided quadrant biopsy sampling for the detection of Barrett neoplasia, say Pradeep Bhandari and colleagues from the Queen Alexandra Hospital, Portsmouth, UK.

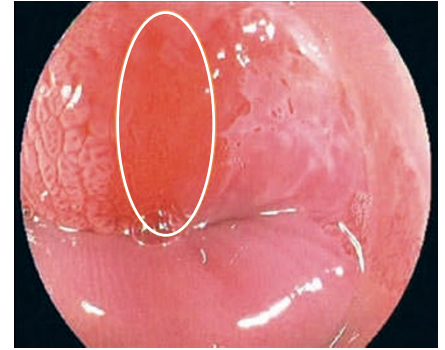
This new study of 190 procedures on 119 patients with Barrett esophagus shows that acetic acid dye spray can identify neoplasia in the majority of cases (95.5%) and is significantly superior to the gold standard method of collecting a number of random biopsy samples from the Barrett segment.

Acetic acid has been used for many years for the detection of squamous dysplasia and intramucosal cancer of the cervix and is also used in Japan to detect early gastric cancer. This background motivated Bhandari to try the technique in patients with Barrett esophagus. “The endoscopic evaluation of Barrett esophagus remains a challenge and is currently based on protocol-guided biopsies. This is ineffective, time-consuming and expensive,” explains Bhandari. “Endoscopists like me performing endoscopic mucosal resection for Barrett dysplasia need to accurately identify the dysplastic foci,” he continues. As electronic imaging techniques are not widely available, including at the authors’

institution, Bhandari sought to evaluate chromoendoscopy as a possible alternative strategy for the detection of Barrett dysplasia as this technique is cheap, quick and universally available.

All 119 patients with Barrett esophagus were examined by a single endoscopist who initially used white light endoscopy to identify visible abnormalities and then used acetic acid dye spray to identify potentially neoplastic areas from which targeted biopsy samples were taken. Protocol-guided quadrant biopsy specimens were obtained at 2 cm intervals from the remaining Barrett segment. Chromoendoscopic diagnosis was compared with histologic diagnosis. The sensitivity and specificity of acetic acid dye spray for the detection of neoplasia was 95.5% and 80%, respectively. Correlation between acetic acid dye chromoendoscopy and histology was excellent for the identification of neoplastic lesions ( $r=0.98$ ). Use of white light endoscopy alone significantly under-diagnosed neoplasia; acetic acid dye spray significantly improved the rate of detection of neoplastic lesions 2.5-fold.

“These findings call for a change in the current paradigm of endoscopic evaluation of Barrett neoplasia,” says Bhandari. He



Area of dysplasia (circle) after acetic acid dye spray. Courtesy of G. Longcroft-Wheaton.

believes that acetic acid chromoendoscopy has the potential to improve both the effectiveness of surveillance as well as related costs by reducing the number of biopsies taken for each patient. The team now plan to evaluate this technique in a multicenter, randomized, controlled trial of surveillance in patients with Barrett esophagus.

*Rachel Thompson*

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