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**ABOUT COVER**

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## Role of magnifying narrow-band imaging endoscopy for diagnosis of *Helicobacter pylori* infection and gastric precancerous conditions: Few issues

Saroj Kanta Sahu, Ayaskanta Singh

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### Abstract

Standard endoscopy with biopsy and narrow-band imaging with guided biopsy are techniques for the detection of *Helicobacter pylori* (*H. pylori*)-related gastritis and precancerous lesions. In this study, the authors compared standard endoscopy and magnified narrow-band imaging (commonly known as NBI-M) in the diagnosis of *H. pylori* infections, atrophic gastritis, and intestinal metaplasia. Although the sensitivity of NBI-M is better than standard endoscopy, the diagnostic accuracy did not differ substantially between the diagnostic modalities. Future prospective studies may guide endoscopists in difficult cases regarding which modality is more useful and cost-effective for the diagnosis of *H. pylori*-related gastritis and precancerous conditions.

**Key Words:** Standard endoscopy; Magnified narrow band imaging; *Helicobacter pylori*; Atrophic gastritis; Intestinal metaplasia; Pepsinogen

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**Core Tip:** Magnified narrow band imaging (NBI-M) is used for diagnosis of dysplastic and cancerous lesions. The study is the first of its kind to evaluate this modality for detection of *Helicobacter pylori* related gastritis and precancerous lesions. A procedure to be widely accepted should be cost effective and less time consuming. Whereas white light endoscopy is commonly used by endoscopist to detect any cancer or precancerous lesions, formal endoscopic training regarding use of NBI-M enhances feasibility and detection rate. Whether the combination of NBI-M and artificial intelligence can replace biopsy remains a million dollar question.

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## TO THE EDITOR

We read with avid interest the study by Cho *et al*[1]. The authors compared standard endoscopy and magnified narrow-band imaging (NBI-M) in the diagnosis of *Helicobacter pylori* (*H. pylori*) infections, atrophic gastritis (AG) and intestinal metaplasia (IM). The authors have done excellent work comparing the role of NBI-M and standard endoscopy in the diagnosis of these entities.

Although several studies show the benefits of NBI-M in the diagnosis and characterization of AG and IM, this is perhaps one of the first studies that evaluated the role of NBI-M in *H. pylori* infections[2,3]. We want to raise a few minor points for discussion.

The financial implications and procedure time of NBI-M in relation to standard endoscopy should have been compared. The authors discussed that routine normal white light endoscopy combined with mucosal biopsies is time-consuming and costly. However, we feel that NBI-M evaluation for *H. pylori* infections, IM, and AG may increase procedure time (especially for an inexperienced endoscopist) and have an additional economic impact on the patients. The present study showed that there is no substantial disparity between standard endoscopy and NBI-M with respect to the diagnostic accuracy for detection of *H. pylori* gastritis, severe atrophy, and IM. The economic and time aspect will decide the utility of this procedure. Hence, future prospective studies should focus on this. Moreover, diagnostic accuracy was demonstrably low for the detection of precancerous lesions (72.6% and 61.1% for severe atrophy and IM in the corpus, respectively) even with NBI-M.

The experience of the endoscopist plays a significant role when the question of a definitive diagnosis of *H. pylori* gastritis and precancerous lesions using NBI arises. The diagnostic probability of AG and IM increases when the endoscopist has formal training regarding the diagnosis of AG and IM[4]. The authors have rightly pointed out this limitation in their study that a single experienced endoscopist was used. Artificial intelligence with NBI-M will likely increase the diagnostic yield. However, future robust prospective studies are required to confirm this hypothesis.

## FOOTNOTES

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