Obtaining slight changes for the detection of nonerosive reflux disease needs assistance from magnifying endoscopy with narrow-band imaging

To the Editor:

Nonerosive reflux disease (NERD) is a subtype of GERD that is difficult to identify because of negative endoscopic findings. Narrow-band imaging (NBI) may provide a solution to this problem. The randomized controlled trial by Desai et al[1] confirmed that the morphologic characteristics of intrapapillary capillary loops (IPCLs) detected by NBI were favorable for predicting NERD. However, most other studies have used magnifying endoscopy with NBI (ME-NBI) to detect the morphologic features of IPCL. Therefore, we have some doubts about this study.

IPCL is a papillary capillary loop in the esophageal mucosa. It can be clearly seen by ME-NBI, and it presents differently in inflammatory, tumor, and cancer states. Inasmuch as the changes in IPCLs are very subtle, it is difficult to detect these changes without using ME-NBI. Previous studies have shown that ME-NBI can clearly observe the minor lesions of esophageal mucosa in patients with NERD, such as increased quantity of IPCLs and bending expansion in IPCLs.[2,3]

However, the type of endoscope used in this randomized controlled trial was not described and should be added. If ordinary endoscopy was used, the differences and commonalities for observing minor changes in IPCLs should be discussed. Moreover, tiny changes in IPCLs detected by ME-NBI reflect mild mucosal inflammation at the gastroesophageal junction, which may blur the distinction between NERD and mild esophagitis. Thus, distinguishing NERD patients with tiny IPCL changes from those with mild esophagitis is a problem worth discussing. All of these issues deserve further discussion and clarification.

DISCLOSURE

All authors disclosed no financial relationships.

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Corresponding author Kai Deng was supported by the National Natural Science Foundation of China (No. 81600511), Science Foundation of Sichuan Health and Family Planning Commission (No. 20PJYY0314), Sichuan Science and Technology.

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https://doi.org/10.1016/j.gie.2022.06.029

Response:

We read the commentary from Deng et al[1] pertaining to our study of narrow-band imaging (NBI) for nonerosive reflux disease (NERD).[2] We thank the authors for their interest in our study findings and the use of NBI for the workup of NERD. In our study, we recognized and noted subtle and distinct features in the distal esophagus using NBI in the near-focus magnification mode.[2] As the authors acknowledge, several of these features (such as intrapapillary capillary loops) can be ascertained by the use of dual mode (normal and near focus) of currently available high-definition gastroscopes with second-generation NBI technology (ie, Olympus GIF-HQ-190) that were used in this study. We cited the use of dual-focus endoscopes (normal mode and near focus) in the methods and provided examples of high-quality images as a supplementary Figure 1. The utility of this methodology has been

reported in several other studies.[3,4] Such dual-focus mode endoscopes are routinely used in the United States, and the high-magnifying endoscopes referred to by Deng et al[1] are not commercially available here.

We examined the presence of not only increased intrapapillary capillary loops in patients with NERD and control individuals but also features such as the ridge-villous pattern, increased vascularity, and columnar islands at or above the squamocolumnar junction. These features can be recognized without any magnification. Given that the dual-focus modes (with or without near focus) are commonly used in the United States, our study findings are generalizable and can be adopted by all practicing endoscopists in patients suspected to have GERD.

DISCLOSURE

Dr Sharma is a consultant for Medtronic, Olympus, Boston Scientific, Fujifilm, Salix Pharmaceuticals, and Lumendi, and the recipient of grant support from Ironwood, Erbe, Docbot, Cosmo Pharmaceuticals, and CDX laboratories. The other author disclosed no financial relationships.

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https://doi.org/10.1016/j.gie.2022.08.011

A potential impact *of Helicobacter pylori*–related metabolic syndrome on early and long-term outcomes of bariatric surgery

To the Editor:

Alqahtani et al[1] concluded that Saudi Arabian patients with metabolic syndrome–related parameters who undergo bariatric surgery show comparable features regarding the early and 3-year outcomes after endoscopic gastroplasty (EG) and laparoscopic sleeve gastrectomy (LSG).

Helicobacter pylori (H pylori)–related metabolic syndrome appears to be a predictor of post-LSG and/or post-EG early and long-term outcomes, especially in populations with a high prevalence of *H pylori* infection, including Saudi Arabians.[2,3]

Specifically, *H pylori* infection is very common, with a mean worldwide prevalence of 58%, partly owing to immigrants coming from regions with a high prevalence of *H pylori* infection.[2] Approximately 4.4 billion individuals are infected with *H pylori,*[2] and *H pylori* infection–related metabolic syndrome is hyperendemic in Saudi Arabia, with a prevalence >80%.[3] In particular, studies from Saudi Arabia have reported an *H pylori* infection prevalence rate of 88% among morbidly obese patients who underwent esophagogastroduodenoscopy (EGD) before bariatric surgery.

Moreover, the occurrence of *H pylori*–related metabolic syndrome may exert an impact on bariatric surgery outcomes, such as on body weight loss and homeostasis of glucose.[4] *H pylori* infection is considerably linked with postoperative adverse events after LSG,[5] and preoperative EGD in Saudi obese patients is mandatory to recognize concerns such as *H pylori* infection that could modify, delay, or postpone the bariatric procedures, including LSG/EG.[6] Likewise, our studies[7] indicate higher rates of premalignant pathologic changes in the gastric mucosa (eg, atrophic gastritis and intestinal metaplasia) and also of metabolic syndrome–related parameters, including insulin resistance and arterial hypertension, in patients with active *H pylori* infection undergoing LSG. Furthermore, bariatric patients with metabolic syndrome–related *H pylori* infection might be vulnerable to gastroesophageal reflux disease (GERD) development[8] and *H pylori* with metabolic syndrome-related GERD or Barrett's esophagus/esophageal adenocarcinoma sequence in certain subpopulations.[9] Therefore, preoperative *H pylori* eradication may decrease the early and long-term outcomes of LSG and/or EG. *H pylori* eradication may improve metabolic syndrome–related insulin resistance and arterial hypertension in the early and long term after LSG/EG,[2,10] whereas persistent *H pylori* infection after LSG or EG might deteriorate such aforementioned metabolic syndrome–related components. Thus, further large-scale prospective controlled studies are warranted.

DISCLOSURE

All authors disclosed no financial relationships.

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