

Title:

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The impact of image-enhanced endoscopy on the detection of parasites in the gastrointestinal tract. Comments on “Endoscopic microanatomy of anisakis. In vivo study”

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Dear Editor,

I read with great interest the article by Wong Becerra et al., presenting vivid images of *Anisakis* larvae captured using blue-laser imaging (BLI) and magnification (1). I would like to congratulate the authors on providing novel insights into the identification and extraction of parasites in the stomach. I would like to comment on the utility of image-enhanced endoscopy (IEE) in cases other than neoplasms. From my own experience (2), conventional white light endoscopy can sometimes have difficulty distinguishing the larvae from white mucus threads, light reflections, and the inflamed or edematous background mucosa. Narrow-band imaging (NBI), a form of IEE, emphasizes the larvae by enhancing the contrast between their bodies and the surrounding mucosa, making them more visible (3, 4). Wong Becerra and colleagues have suggested that BLI, which

operates via a different mechanism to IEE, could be useful in improving the detection and facilitating treatment of gastric anisakiasis. While the typical symptoms of severe abdominal pain and a detailed patient history of consuming raw fish can lead to a diagnosis of anisakiasis and the decision to perform an endoscopy, a recent large-scale Japanese study revealed that 22.2% of the 212 cases of gastric anisakiasis were asymptomatic (5). Furthermore, older patients, male patients, and patients with gastric mucosal atrophy were less likely to exhibit abdominal symptoms. Thus, IEE can help to prevent the penetrating *Anisakis* larvae from being overlooked, even in asymptomatic patients. In conclusion, Wong Becerra's excellent images highlight the importance of IEE in detecting parasites in the gastrointestinal tracts. Further studies are needed to evaluate the utility of IEE in this condition.

Conflict of interest: the author declares no conflict of interest.

Artificial intelligence: the author declares that he did not use artificial intelligence (AI) or any AI-assisted technologies in the elaboration of the article.

References

1. Wong Becerra L, Rojas V, Muñoz González R, et al. Endoscopic microanatomy of anisakis. In vivo study. Rev Esp Enferm Dig 2025 Jun 12. DOI: 10.17235/reed.2025.11323/2025
2. Hokama A, Oshiro T, Tomisato K, et al. Gastric anisakidosis: an unfavorable taste of sushi. Pol Arch Intern Med 2019;129:547-8. DOI: 10.20452/pamw.14838
3. Taranto D, Sessa G, Tortora R, et al. Narrow band imaging enhancement could improve gastric anisakis detection. Dig Liver Dis 2011;43:e5. DOI: 10.1016/j.dld.2010.02.007
4. Arai T, Yamada H, Edagawa T, et al. Easy detection and fast removal of gastric *Anisakis* during narrow-band imaging endoscopy with L-menthol administration. Case Rep Gastroenterol 2019;13:305-309. DOI: 10.1159/000501067

5. Okagawa Y, Sumiyoshi T, Imagawa T, et al. Clinical factors associated with acute abdominal symptoms induced by gastric anisakiasis: a multicenter retrospective cohort study. BMC Gastroenterol 2023;23:243. DOI: 10.1186/s12876-023-02880-7