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Screening for *Helicobacter pylori* infection in patients with cardiovascular and gastrointestinal disease

In the Review by Talasaz et al. (Optimizing antithrombotic therapy in patients with coexisting cardiovascular and gastrointestinal disease. *Nat. Rev. Cardiol.* https://doi.org/10.1038/s41569-024-01003-3, 2024)[1], the authors comprehensively address the clinical challenge of balancing the reduction in the risk of cardiovascular events and the occurrence of spontaneous gastrointestinal bleeding (GIB) with the use of antithrombotic agents in patients with concurrent cardiovascular and gastrointestinal conditions. When discussing strategies to prevent GIB, the authors emphasize the importance of decreasing bleeding risk using proton pump inhibitors and risk stratification to individually tailor the antithrombotic therapy regimen. However, they only briefly touch on *Helicobacter pylori* infection as a risk factor for GIB. We believe that *H. pylori* infection warrants deeper scrutiny in patients with cardiovascular and gastrointestinal disease who are receiving antithrombotic agents.

H. pylori is one of the most common chronic infections worldwide, with an estimated global prevalence of 50%, causing gastrointestinal pathology ranging from gastritis to malignancy[2]. Concurrent *H. pylori* infection in individuals receiving antithrombotic agents increases the risk of GIB by roughly 1.7-fold with low-dose aspirin and by roughly 8.4-fold with dual antiplatelet therapy[3,4]. *H. pylori* infection can be diagnosed non-invasively with a high degree of accuracy[2] and at the bedside as part of routine clinical practice during, for example, hospitalization for myocardial infarction[5], thereby enabling widespread screening. Notwithstanding individual and regional resistance profiles, first-line therapy with antibiotics and proton pump inhibitors leads to a high degree of *H. pylori* eradication[2]. Consequently, *H. pylori* infection might be an assessable target to reduce the risk of GIB in this patient population, thereby also enabling uninterrupted antiplatelet therapy, both of which could have beneficial effects on subsequent cardiovascular outcomes[6].

Owing to the lack of data derived from randomized clinical trials, *H. pylori* screening is advocated only for long-term users of aspirin by expert consensus in gastroenterology guidelines[2,7] and has largely been overlooked in cardiology guidelines. Results from the randomized, controlled HEAT trial[8], which enrolled 30,166 individuals receiving ≤325 mg of aspirin daily, demonstrated a significant reduction in upper GIB through routine *H. pylori* eradication. However, the observed treatment effect was only transient, with the benefit lost after 2.5 years of follow-up[8]. Limitations included a lower-than-expected outcome rate and a possible biased selection of patients with low bleeding risk and who had tolerated long-term aspirin use[9]. Few enrolled individuals (0.7%) were prescribed dual antiplatelet therapy or an anticoagulant. Therefore, controversy persists regarding the optimal target population and timing for implementing a routine *H. pylori* test-and-treat strategy[6,9].

Focusing on patients with a strong indication for potent antiplatelet therapy and a high risk of upper GIB might optimize the risk–benefit ratio of routine *H. pylori* screening. A Swedish nationwide, registry-based, cluster-randomized, clinical trial (HELP-MI, NCT05024864) from the SWEDEHEART network is studying the potential benefits of systematic *H. pylori* screening on the incidence of upper GIB and cardiovascular outcomes among 20,000 patients with myocardial infarction during a median follow-up of 2 years. The first results are expected in 2025.

In summary, we agree that patients with coexisting cardiovascular and gastrointestinal disease warrant collaborative attention[10]. In addition to the concepts reviewed by Talasaz et al.[1], routine *H. pylori* screening and eradication might be a modifiable risk factor to optimize the ischaemia–bleeding trade-off and improve the overall prognosis for patients in this unique clinical domain[6].

There is a reply to this letter by Talasaz, A. H. et al. *Nat. Rev. Cardiol.* https://doi.org/10.1038/s41569-024-01029-7 (2024).

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Competing interests

The authors declare no competing interests.