Is *Helicobacter pylori* a Biomarker of Laryngopharyngeal Reflux?

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Dear Editor,

We read the paper entitled: "Association Between *Helicobacter pylori* and Laryngopharyngeal Reflux Disease: A Systematic Review and Meta-Analysis."[1] The authors suggested through a systematic review and meta-analysis that there is a potential association between laryngopharyngeal reflux disease (LPRD) risk and *Helicobacter pylori* infection. We congratulate the authors for investigating an important topic. In this letter, we wish to draw attention to many points.

First, the authors stated that they included only high-quality studies according to the Newcastle Ottawa Scale.[1] However, the analysis of the included studies reveals that the 24-hour hypopharyngeal-esophageal multichannel intraluminal impedance-pH monitoring (HEMII-pH) was not used for confirming the LPRD diagnosis in all studies, which is a major limitation.[1] HEMII-pH is considered the gold standard approach for establishing the LPR diagnosis,[2] while clinical diagnosis is still unreliable.[3] The lack of use of HEMII-pH led to inclusion bias regarding the nonspecificity of laryngopharyngeal symptoms and signs that were used to include patients in most studies.[4,5] In this way, authors should have used "suspected LPRD" instead of "LPR disease."

Second, the several approaches used for the detection of *H pylori* (eg, PCR, rapid urease test, ^{14}C urea breath test) have different sensitivity and specificity values. Similarly, there was substantial heterogeneity in the tissue samples where *H pylori* was documented (eg, larynx, stomach, nasal cavity). Heterogeneity among included articles in LPRD diagnosis criteria, tissue samples, and methods for establishing the prevalence of *H pylori* infection should have statistically limited the pooling of the data into a formal meta-analysis, thereby limiting the analysis to a qualitative rather than quantitative summary of the available information.

To sum up, the potential association between *H pylori* and LPRD, which are both prevalent conditions in Western populations,[6,7] cannot currently be supported. Further investigations of such an association need to consider the use of rigorous and objective approaches for the LPRD diagnosis (24-hour HEMII-pH) and the detection of *H pylori* in laryngopharyngeal tissues where mucosal inflammation occurs.

Declaration of Competing Interest

The authors have no conflict of interest.

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