Genetic factor undermines \textit{H. pylori} treatment
6 August 2021, by Bill Snyder

Reporting Aug. 3 in the journal \textit{Gastroenterology}, the researchers analyzed 57 studies from 11 countries, and found that the failure rate of \textit{H. pylori} eradication more than doubled in people who carried a version of the CYP2C19 gene that enhanced its metabolic activity.

There was no association between CYP2C19 variants and eradication failure, however, if the rapid metabolizers were treated with newer PPIs such as esomeprazole and rabeprazole, which are less metabolized by the enzyme or which bypass CYP2C19 metabolism entirely.

Further well-designed studies, especially in U.S. populations, are needed to determine whether giving higher or more frequent dosages of first-generation PPIs to people who have rapid-metabolizer variants of CYP2C19 might improve eradication rates, noted the paper's corresponding author, Shailja Shah, MD, MPH.

Studies of U.S. populations are needed because the majority of the studies have been conducted in Asian-Pacific countries, she said. Shah, a gastroenterologist and former assistant professor of Medicine at VUMC, is now at the University of California San Diego and the VA San Diego Healthcare System.

"Even small improvements in \textit{H. pylori} eradication rates would likely translate to substantial collateral health, economic and societal benefits," the researchers concluded.


Provided by Vanderbilt University