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## Treatment of H. pylori and Peptic Ulcers – Dr Hidayatul Radziah Ismawi

by [Hidayah](#) • May 14, 2024 • [0 Comments](#)

*“Is your gastric acid eroding your stomach wall? Does infection with this microbe make it worse?”*

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A peptic ulcer is a lesion or discontinuation in the lining of your stomach or the upper part of your small intestine. It happens when the protective layer of mucus that shields your stomach from its own acid is damaged or worn away. When this protective layer weakens, the strong stomach acid can irritate and erode the delicate lining underneath, leading to a painful sore known as an ulcer. This can happen due to factors like infection with bacteria called *Helicobacter pylori* (*H. pylori*), long-term use of pain relievers like aspirin or non-steroidal anti-inflammatory drugs (NSAID), excess acid production in the stomach, or lifestyle factors like smoking or stress. Peptic ulcers can cause

symptoms like stomach pain, bloating, nausea, and even bleeding in severe cases.

*H. pylori* is a spiral-shaped gram-negative bacterium and one of the most common causes of serious chronic bacterial infections worldwide. *H. pylori* infection is associated with a wide disease spectrum ranging from asymptomatic gastritis and peptic ulcer disease, to gastric cancer. In Malaysia, the prevalence of duodenal ulcers is 9.5% and 9.4% for gastric ulcers respectively. A study conducted in Kuala Lumpur reported ethnic variation in peptic ulcer incidence, stating that Chinese of both genders have a higher susceptibility. Additionally, *H. pylori* infection is associated with 90% of duodenal ulcers and 70-90% of gastric ulcers; therefore, eradicating the infection is a crucial part of management of peptic ulcers.

Several clinical guidelines recommend diagnostic testing for *H. pylori* infection in patients who have:

- active or past history of peptic ulcer
- chronic dyspepsia (indigestion – symptoms include bloating, stomach pain, nausea, or feeling too full even when they haven't eaten much)
- chronic NSAID or aspirin use
- precancerous gastric lesions
- gastric cancer
- mucosa associated lymphoid tissue (MALT) lymphoma
- family history of gastric cancer in a first-degree relative
- family history of peptic ulcer

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- having a household family member with an active *pylori* infection
- unexplained iron deficiency anaemia
- immune thrombocytopenic purpura (ITP) – a blood disorder characterised by a decrease in the number of platelets in the blood
- vitamin B12 deficiency

Treatment regimens for *H. pylori* peptic ulcers comprise of antisecretory drugs and antibiotics. Anti-secretory drugs prevent gastric acid secretion and antibiotics function to eradicate the infection. The choice of antisecretory drugs is



either proton pump inhibitor (PPI) or potassium-competitive acid blockers (P-CABs). At least two antibiotics are generally chosen in the standard regimens. According to Goh et al. (2023) in the “Malaysian consensus report on the diagnosis and treatment of *Helicobacter pylori* infection”, the recommended first-line therapy for *H. pylori* infection is a 2-week standard triple therapy (STT) consisting of a proton pump inhibitor (PPI) that reduces gastric acid, and two antibiotics: clarithromycin and amoxicillin. If the patient is allergic to penicillin, the amoxicillin is replaced with a different antibiotic, metronidazole. The same recommendations are made in clinical practice guidelines in South Korea. However, in Japan, the first line therapy consists of the newer drug P-CABs, which have been found to be superior to PPI, and a combination of amoxicillin and metronidazole due to the high incidence rate of clarithromycin-resistant strains in the country.

There are also multiple second line and other regimens for the treatment of *H. pylori* peptic ulcers including quadruple therapy (addition of ulcer protective agents such as bismuth), hybrid therapy and sequential therapy. The term salvage therapy is coined for the treatment of patients who failed to be treated with first line therapy.

By using evidence-based targeted antibiotic regimens alongside acid-reducing medications, we can effectively eradicate *H. pylori* and promote healing of peptic ulcers, ultimately improving patient outcomes and quality of life.

Written by,

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