Gastroenterology Research and Practice

Hindawi

Special Issue on

Therapy of *Helicobacter pylori* Infection: Current Status and Advances

CALL FOR PAPERS

The discovery of *Helicobacter pylori* (*H. pylori*) as a primary risk factor for peptic ulcer disease suggested that gastric and duodenal ulcers could potentially be treated by eradicating the bacterium. Subsequently, the association of *H. pylori* with gastric cancer was established, and it was indicated that chemoprevention by *H. pylori* eradication could eliminate gastric cancer. However, three decades after the discovery of *H. pylori* by Warren and Marshall, it is evident that *H. pylori* eradication is not as easy as it was believed. Over the years, researchers have identified plausible reasons for the difficulty to eradicate the bacterium. The location of *H. pylori* in the stomach protects it against antibiotics, as they are not effective in an acidic environment. Hence, antisecretory agents, most commonly proton pump inhibitors, are an integral component of any *H. pylori* eradication regimen to facilitate antibiotic therapy. Multiple antibiotics including clarithromycin, amoxicillin, metronidazole, ciprofloxacin, tetracyclines, and bismuth containing compounds were found to be effective against *H. pylori*.

Clarithromycin, a macrolide antibiotic, is the most effective drug against *H. pylori* and is an important constituent of standard triple therapy, in addition to amoxicillin or metronidazole in combination with a proton pump inhibitor. However, due to the widespread usage of macrolide antibiotics for the treatment of various infections such as respiratory infections as well as inappropriate antibiotic regimens, resistance to clarithromycin of more than 15% has become common in many regions. Thus, the standard triple therapy that is effective in >90% of patients has become a less effective regimen with a decline in eradication rate to less than 70% in many countries. In the era of antibiotic resistance, culture of *H. pylori* and antibiotic susceptibility testing is the ideal method of choosing an appropriate regimen for *H. pylori* eradication. However, this approach is not feasible in many countries as these tests are not widely available. Hence, multiple alternative regimens were introduced in which either the number of drugs was increased to four (quadruple therapy) or the sequence of antibiotic administration is modified (sequential therapy). An extended duration regimen in which antibiotics were administered for two weeks was also found to be effective against *H. pylori*. In addition, rescue therapies based on levofloxacin or rifabutin were introduced. With the availability of multiple regimens, it is imperative to select the appropriate treatment regimen for a specific patient. However, there are several unanswered questions due to the varying prevalence of *H. pylori* infection and antibiotic resistance.

To resolve these management issues and to provide treatment guidelines, we invite investigators to contribute original research articles, as well as review articles on various aspects of *H. pylori* eradication therapy.

Potential topics include but are not limited to the following:

- Evolution of *H. pylori* eradication therapy: have we made progress?
- Standard triple therapy for *H. pylori* eradication: is it still relevant?
- Sequential therapy for *H. pylori* eradication: is it the new standard?
- Quadruple therapy for *H. pylori* eradication: is more better?
- Hybrid therapy for *H. pylori*: current evidence
- Rescue therapy for *H. pylori*: is it effective?
- *H. pylori* culture and antibiotic susceptibility testing: current challenges
- Vaccine for *H. pylori*: hope or hype?
- *H. pylori* eradication therapy: molecular targets and guide to future research?

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/grp/heli/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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