

Is quadruple therapy the new triple therapy for *H pylori*?

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Clinical question

Does quadruple therapy (QT) result in superior eradication rates of *Helicobacter pylori* compared with traditional triple therapy (TT)?

Evidence

A recent industry-funded trial¹ of 440 European patients reported significant benefit with QT for 10 days compared with TT for 7 days (93% vs 68% eradication, number needed to treat 5, $P < .001$).

- The QT was omeprazole twice daily with bismuth subcitrate, metronidazole, and tetracycline 4 times daily.
- The TT was omeprazole, amoxicillin, and clarithromycin twice daily.
- Concerns: differing treatment durations, differing antibiotics, bismuth subcitrate not commercially available in Canada, and questionable generalizability.

A recent systematic review² found no difference in eradication rates, compliance, or adverse events between QT and TT.

- For example, eradication rates were 78% for QT and 77% for TT (not statistically different).

Context

- Eradication rates for *H pylori* might be suboptimal (<80%) worldwide,³⁻⁵ owing to increasing antibiotic resistance. -Resistance varies by geographic region, and local resistance patterns are often not known.⁶
- Clarithromycin resistance should guide initial *H pylori* treatment choices. -Avoid clarithromycin if resistance rates are $\geq 20\%$.⁷
- Antibiotic resistance in *H pylori* treatment does not appear to be a problem in Canada,⁶ although updated rates are lacking.
- Canadian recommendations include TT or QT as first-line therapy for *H pylori* eradication, but prefer TT owing to demonstrated equivalency and ease of dosing.⁸
- Cost-effectiveness data comparing QT and TT are lacking.
- Other options being studied include sequential therapy (1 course followed by another) and hybrid therapies (sequential and QT).⁹ These require more research in North America before application to practice.¹⁰

Bottom line

Optimal treatment for *H pylori* remains controversial, with differences in number and type of drugs, dosing, and length of treatment suggested. Until local resistance patterns are identified and deemed a concern, there is no overwhelming evidence to change current prescribing patterns in primary care.

Implementation

Avoiding antibiotics that the patient has previously used (for *H pylori* eradication or other illnesses) will increase eradication success.¹¹ Eradication should be confirmed in patients with peptic ulcer disease, mucosa-associated lymphoid tissue lymphoma, or resected gastric cancer, and in those with persistent dyspepsia for whom the test-and-treat strategy was used.¹¹ Length of treatment remains controversial. Lengthening TT beyond 7 days might lead to marginal additional benefit.¹² Although some guidelines recommend TT for up to 14 days,^{7,11} others (including Canadian guidelines) recommend 7 to 10 days of treatment.⁸

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The opinions expressed in this Tools for Practice article are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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