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Evidence Updated: Systematic review added
Bottom Line: Unchanged
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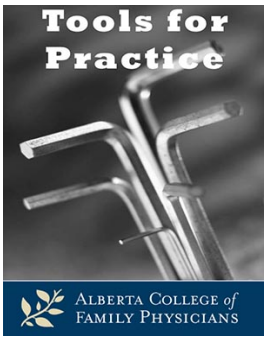

Is Quadruple the New Triple Therapy for H. Pylori?

Clinical Question: Does quadruple therapy (QT) result in superior eradication rates of H. pylori over traditional triple therapy (TT)?

Bottom-line: Optimal treatment regimens for H. pylori remain 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.

Evidence:

- An industry funded trial[1] of 440 European patients reported significant benefit with QT for 10 days compared to TT for seven days (93% versus 68% eradication, Number Needed to Treat (NNT)=5).
  - QT was omeprazole BID with bismuth subcitrate, metronidazole, and tetracycline QID.
  - TT was omeprazole, amoxicillin, and clarithromycin BID.
  - Concerns: Differing treatment durations, differing antibiotics, bismuth subcitrate not commercially available in Canada, questionable generalizability.
- Recent systematic reviews[2,3] found no difference in eradication rates, or adverse events between QT and TT:
  - For example, eradication rate 78% QT and 77% TT.[2]
  - Compliance minimally better with TT in one review (96% versus 92%)[3], with no difference in the other.[2]

Context:

- Eradication rates for H. pylori may be suboptimal (<80%) worldwide[4-6] due to increasing antibiotic resistance, but are >80% in Canada.[7]
  - Resistance varies by geographical region and local resistance patterns (which are often not known).[8]
- Clarithromycin resistance should guide initial H. pylori treatment choices.
  - Avoid if resistance rates ≥ 20%.[9]

- Canadian recommendations include both triple or quadruple therapy as first line therapies for H. pylori eradication, but prefer TT due to demonstrated equivalency and ease of dosing.[10]
- Cost effectiveness data comparing QT and TT and length of therapy is lacking.
- Emerging H. pylori eradication therapies that may have superior eradication rates compared with QT or TT (but whose results in North American patients are lacking) include:[11-14]
    - Sequential therapy (10 -14 days): Amoxil plus PPI for 5-7 days, then Metronidazole, Clarithromycin, and PPI for 5-7 days.
    - Concomitant therapy (TT plus metronidazole) for 7-14 days.

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Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at http://bit.ly/signupfortfp. Archived articles are available on the ACFP website.