

中文題目：探討14天四合一藥劑在第三線幽門螺旋桿菌殺菌治療效果

英文題目：Efficacy of a 14-day quadruple-therapy regimen for third-line *Helicobacter pylori* eradication

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Aim: To assess the efficacy of amoxicillin, tetracycline, high-dose metronidazole, and a proton pump inhibitor for third-line *Helicobacter pylori* eradication.

Methods: We enrolled 70 consecutive patients who were prospectively registered, failed to respond to two rounds of *H. pylori* eradication, and underwent endoscopy for *H. pylori* culture. Seven patients were lost to follow-up. Patients were treated according to the results of antibiotic susceptibility testing reports (cultured group, n=39). Those who failed the *H. pylori* culture were prescribed 14-day quadruple therapy containing esomeprazole 40 mg twice daily, amoxicillin 1 g twice daily, tetracycline 500 mg four times daily, and metronidazole 500 mg three times daily (empirical group, n=24). A follow-up urea breath test was performed 8 weeks later.

Results: The antibiotics resistance rates were as follows: clarithromycin (79.5%), levofloxacin (94.9%), metronidazole (66.7%), amoxicillin (2.6%), and tetracycline (0%). The eradication rates attained by the cultured group and empirical group were 89.7% (95% confidence interval [CI] = 72.72–97.11) and 58.3% (95% CI = 36.61–77.86) in per-protocol analysis (p=0.004) and 81.4% (95% CI = 66.60–91.61) and 51.8% (95% CI = 31.9–71.29) in intention-to-treat analysis (p=0.014), respectively. Culture-guided therapy was the only clinical

factor influencing the efficacy of *H. pylori* eradication (OR: 0.16; 95% CI 0.04–0.60, $p=0.006$). Despite the high metronidazole resistance rate (66.7%) after two treatment failures, the eradication rate in patients with this condition was 84%.

Conclusion: Empirical 14-day quadruple therapy is not an acceptable third-line rescue *H. pylori* treatment despite the low resistance rates of amoxicillin and tetracycline. The success rate of the third-line susceptibility-guided treatment was only moderate (<90%).

Keywords: Third-line *Helicobacter pylori* eradication; Empirical quadruple therapy; Culture-guided therapy