

Vonoprazan-based therapy has lower failure rate in eradicating helicobacter pylori compared to proton pump inhibitors-based therapy: A meta-analysis of randomized controlled trials

Type: Article

Abstract:

Introduction: Helicobacter pylori infection is worldwide health problems and well known as causative agent of gastric ulcer and gastric cancer. Main therapy of Helicobacter pylori infection is still Proton-pump inhibitor based therapy. However, previous studies using Vonoprazanbased therapy showed promising results. This study aims to compare the success rate and failure rate of Vonoprazan-based therapy with the Proton-pump inhibitor based therapy in eradicating Helicobacter pylori infection. Method: Comprehensive searching was done in online databases of Pubmed, EMBASE, and the Cochrane Library. Randomized controlled trials comparing eradication rate between Vonoprazan and first generation Proton Pump Inhibitor with Clarithromycin-sensitive Helicobacter pylori was included in this studies, while other study designs were excluded. Analysis of the studies was performed using Revman 5.3 (fixed effects model based heterogeneity test) to provide pooled risk ratio (RR) with 95% confidence intervals (CI). Result: Five Randomized controlled trials met inclusion criteria with total of 2753 patients. Vonoprazan-based therapy has higher eradication rate (pooled RR=1.11, 95% CI 1.07-1.16, $p < 0.00001$) and lower failure rate (pooled RR=0.43, 95% confidence intervals 0.34-0.55, $p < 0.00001$) compared with Proton-pump inhibitor based therapy. Conclusion: Vonoprazan-based therapy lower failure rate in eradicating Helicobacter pylori infection than Proton-pump inhibitor based therapy.

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