A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS OF COMPARATIVE EFFICACY AMONG VONOPRAZAN AND PROTON PUMP INHIBITORS FOR HEALING OF REFUX ESOPHAGITIS

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Objective: To evaluate the comparative efficacy among vonoprazan, a potassium-competitive acid blocker, and proton pump inhibitors (PPIs) for healing of reflux esophagitis. Methods: MEDLINE and Cochrane Central Register of Controlled Trials (CENTRAL) were used to search literatures. Selected articles were double-blind randomized controlled trials (RCTs) written in English or Japanese of vonoprazan and/or PPIs and/or placebo for healing of adult reflux esophagitis patients. Eligible studies were those conducted using recommended dosage(s) and administration, and which included information about healing rate. Number of all patients randomized (intention-to-treat population), and those who achieved treatment success were extracted from the studies. Bayesian network meta-analyses were carried out using White et al. (2011)'s consistency models where the consistency assumption among studies was assessed via a Wald-like test statistic in fitted inconsistency models and deviance informative criterion. WinBUGS were used to analyze data in this study. Results: Of 4,001 articles identified in the database search, 42 RCTs were eligible. One study described in a package insert was also included from a manual search. A total of 14 drugs including placebo were extracted, and the direct comparison network diagram was created as shown in Figure 1. The consistency hypothesis was not rejected. Odds ratios of vonoprazan (20 mg) to esomeprazole (20 mg), rabeprazole (20 mg), lansoprazole (30 mg), and omeprazole (20 mg) were 5.28 (95% credible interval [CI], 1.01-38.7), 12.9 (95% CI, 2.3-120.5), 5.96 (95% CI, 1.14-38.7), and 6.31 (95% CI, 2.66-44.5), respectively. Limitations: Differences of attribute of each patient group (mean age, sex ratio, severity, etc.) and treatment period in each RCT may affect the analysis. For many treatment dosages only one trial arm was available for analysis. Conclusions: It is suggested that the maintenance effect of vonoprazan for reflux esophagitis was on the same or higher level than PPIs based on the network meta-analysis. Direct comparison studies between vonoprazan and these drugs should be conducted to confirm this result. Systematic Review Registration Number PROSPERO registry CRD42015024880

Figure 1. The direct comparison network diagram of maintenance treatment of included studies. TD, twice daily; 3TD, 3 times daily, number of studies are shown as numerical values.

A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS OF COMPARATIVE EFFICACY AMONG VONOPRAZAN AND PROTON PUMP INHIBITORS FOR HEALING OF REFUX ESOPHAGITIS

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Objective: To evaluate the comparative efficacy among vonoprazan, a potassium-competitive acid blocker, and proton pump inhibitors (PPIs) for maintenance treatment of reflux esophagitis. Methods: MEDLINE and Cochrane Central Register of Controlled Trials (CENTRAL) were used to search literatures. Selected articles were double-blind randomized controlled trials (RCTs) written in English or Japanese of vonoprazan and/or PPIs and/or placebo for maintenance therapy for adult reflux esophagitis patients. Eligible studies were those conducted using the recommended dosage(s) and administration, and which included quantifiable information about maintenance effect such as remission and relapses. Number of all patients randomized (intention-to-treat population), and either the number of patients without remission/relapses, or proportion of patients without remission/relapses were extracted from the studies. Bayesian network meta-analyses were carried out using White et al. (2011)'s consistency models where the consistency assumption among studies was assessed via a Wald-like test statistic in fitted inconsistency models and deviance informative criterion. WinBUGS were used to analyze data in this study. Results: Of 4,001 articles identified in the database search, 28 RCTs were eligible. A total of 14 drugs including placebo were extracted, and the direct comparison network diagram was created as shown in Figure 1. As the result of inconsistency test, consistency hypothesis was not rejected. Odds ratios of vonoprazan (10 mg) to esomeprazole (20 mg), rabeprazole (10 mg), lansoprazole (15 mg), and omeprazole (20 mg) were 2.55 (95% credible interval [CI], 0.682-9.52), 6.04 (95% CI, 1.43-25.5), 3.83 (95% CI, 1.72-7.5), and 4.01 (95% CI, 0.968-16.6), respectively. Limitations: Differences of attribute of each patient group (mean age, sex ratio, severity, etc.) and treatment period in each RCT may affect the analysis. For many treatment dosages only one trial arm was available for analysis. Conclusions: It is suggested that the maintenance effect of vonoprazan for reflux esophagitis was on the same or higher level than PPIs based on the network meta-analysis. Direct comparison studies between vonoprazan and these drugs should be conducted to confirm this result. Systematic Review Registration Number PROSPERO registry CRD42015024880

Figure 1. The direct comparison network diagram of maintenance treatment of included studies. TD, twice daily; 3TD, 3 times daily, number of studies are shown as numerical values.

GERD PREVALENCE AND TREATMENT IN PRIMARY CARE PATIENTS IN RUSSIA: PRELIMINARY DATA OF THE MULTICENTER STUDY

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Background: Population-based MEGRE study (7812 subjects in 6 cities of Russia) performed in 2005-2006 showed that the average prevalence of GERD according to Mayo Clinic Questionnaire proved to be 13.3%. The aim of our study was to determine the current...
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