

Effectiveness of proton pump inhibitor in unexplained chronic cough

Chronic cough is a significant health issue affecting (8–12) % of adult^(1, 2, 3), and they experience poor quality of life, and increased healthcare utilization^(4, 5).

Gastroesophageal reflux disease (GERD) is one of the main etiologies of chronic cough, and current guidelines recommend that patients with unexplained chronic cough undergo empirical proton pump inhibitor (PPI) treatment^(6, 7). Recent studies concerning chronic cough also recommend the high dose of PPI⁽⁸⁾. However, this is based on uncontrolled studies and observational data only

A pilot study of a randomized controlled clinical trial published in October 10, 2017, approved by the Ethics Committee of the National Evidence-Based Healthcare Collaborating Agency, aimed to assess the effectiveness of empirical PPI therapy in patients with an unexplained chronic cough, and to determine the most effective PPI dose. In this study; 48 patients between the ages of (19 - 70) years who were admitted to Gangnam Severance Hospital for chronic cough lasting more than 8 weeks, were included in the study received postnasal drip (PND) medication, including first generation antihistamines, decongestants, and intranasal steroids for 2 weeks, then, patients who not respond to PND were randomized in a blinded fashion using a computerized random number generator for treatment with placebo, standard-dose PPI (esomeprazole) 40mg once daily, or high-dose PPI (esomeprazole) 40 mg twice daily at a ratio of (1:1:1) for 8 weeks. The primary outcome changes in the Leicester Cough Questionnaire (LCQ) and visual analogue scale (VAS) scores among groups from baseline to 4 weeks after and 8 weeks after treatment. Secondary outcomes were the prevalence of medication responders, subgroup analysis was planned; and the standard of classification for subgroup was the presence of reflux and the PPI dose⁽⁹⁾.

Results for this paper were the LCQ score and VAS score in the placebo group was not improved ($P = 0.110$). In contrast, in the PPI group (combined both the standard-dose and high-dose PPI group) significantly improved $P < 0.001$. The prevalence of medication responders in the PPI group (92.3%) was significantly higher than that in the placebo group (40.0%; $P = 0.044$) at 8 weeks. According to time and group. According to time and reflux; in the placebo group with or without reflux; the change in LCQ score between the 2 subgroups was significantly different ($P < 0.001$), in the PPI group with or without reflux; no significant difference in changes between the 2 subgroups ($P = 0.188$). According to time and dose of PPI; in the standard-dose PPI group and high-dose PPI group there was significantly improved, and there was no significant difference between the 2 groups ($P = 0.842$). For the safety and tolerability; in the placebo group, 1 patient experienced palpitation and another patient experienced urticaria. In the high-dose PPI group, 2 patients experienced urticaria. In the standard-dose PPI group, no subjects experienced any adverse event⁽⁹⁾.

In conclusion, this pilot study showed significant benefit from PPI therapy in patients with unexplained chronic cough regardless of whether reflux evidence was evident. The standard dose of PPI for more than 8 weeks is safe and effective. This supports many guidelines formed on the basis of expert opinion that have not been substantiated by sufficient scientific evidence.

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