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**Title:** Esomeprazole, versus esomeprazole and domperidone in treatment of gastroesophageal reflux in children with difficult-to-treat asthma

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**Body:** Background and Objectives: Gastroesophageal reflux (GER) is a common finding in asthmatic children and has been identified as a potential trigger for asthma. The aim of this study was to investigate the efficacy of combined use of both esomeprazole and antidopaminergic prokinetic domperidone versus the sole use of esomeprazole in improving asthma severity in children with difficult to treat asthma. Patients and Methods: Our study included 89 children with difficult-to-treat asthma. GER was assessed using upper GIT endoscopy. Those who had GER were randomly blindly divided into 2 equal subgroups the first subgroups was treated with esomeprazole and domperidone for 12 weeks while the other subgroup was treated with esomeprazole. Childhood-Asthma Control Test (C-ACT), Forced Expiratory Volume in 1 second (% of predicted) [FEV1], Peak Expiratory Flow (PEF) variability, induced sputum substance P (SP) and endoscopic reflux score (ERS) were recorded before and after the treatment. Results: The (C-ACT) showed significant improvement, the induced sputum SP and ERS showed significant reduction while FEV1% and PEF variability showed no significant changes in the subgroup treated with both esomeprazole and domperidone than the subgroup treated with esomeprazole only. Conclusions: Gastro-esophageal reflux (GER) was observed in about 45% of children with difficult-to-treat asthma. Combination of domperidone and esomeprazole was more effective in improving the endoscopic reflux score, childhood asthma control test (C-ACT) and FEV1 (% of predicted) and significantly reduced the sputum SP than the use of esomeprazole only in children with difficult-to-treat asthma.