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## IS PROPHYLACTIC ANTI-REFLUX MEDICINE EFFECTIVE AFTER ESOPHAGEAL ATRESIA REPAIR?SYSTEMATIC REVIEW AND META-ANALYSIS

Hiromu Miyake, Yong Chen, Alison Hock, Yuhki Koike, Shogo Seo, Agostino Pierro
*The Hospital for Sick Children, Toronto, Canada*

**Aim of the Study**: Gastroesophageal reflux (GER) after surgical repair of esophageal atresia (EA) can be associated with complications, such as anastomotic stricture (AS). Recent guidelines recommend prophylactic anti-reflux medication (PARM) including proton pump inhibitor (PPI) and H2 blocker for all patients after EA repair. In addition, a recent survey revealed that more than half of pediatric surgeons use PARM after EA repair. However, the effectiveness of PARM is still unclear. The aim of this study is to review the clinical effects of PARM in children operated for EA.

**Methods**: We performed a systematic review and meta-analysis. We searched Medline, EMBASE, and the Cochrane Databases from inception until the end of 2016 for comparative studies between PARM use and non-PARM use. Primary outcome was postoperative AS.

**Main Results**: We identified four observational studies that focused on AS as an outcome. AS was defined as the stricture required dilatation. There was no significant difference in AS between the PARM group and the non-PARM group (Risk ratio = 1.13; 95% CI = 0.76-1.69; p = 0.53; $I^2$ = 43%). Proton pump inhibitors (PPI) are thought to be the most effective PARM to prevent esophageal stricture. Two of the four included studies used only PPI as PARM. However, there was no significant difference in AS between PARM group and non-PARM group in these 2 studies (Risk ratio = 1.08; 95% CI = 0.76-1.54; p = 0.65, $I^2$ = 43%).

**Conclusion**: Our results indicate that PARM does not reduce the incidence of AS after EA repair, while there were some variations among included studies, such as type, duration and dose of PARM. This study has not supported the prophylactic use of anti-reflux medication (PPI or H2 blocker) after EA repair.