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ROLE OF ANTACID MEDICATION ON ANASTOMOTIC STRICTURE FORMATION FOLLOWING REPAIR OF OESOPHAGEAL ATRESIA

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Aims of study: Anastomotic stricture occurs in ≤50% of infants following repair of oesophageal atresia (OA) and causes significant morbidity. Exposure to gastric acid has been postulated to contribute to stricture development and severity leading to prophylactic antacid use by some surgeons. We aimed to investigate the effect of antacid medication on the development of anastomotic strictures.

Methods: Ethically approved (15/WA/0153), retrospective case-note review of all consecutive infants undergoing repair of OA with distal TOF (Type C) between Jan 1994 and Dec 2014. Only infants who underwent primary oesophageal anastomosis at initial surgical procedure were included. Stricture related outcomes were compared initially for infants who received prophylactic antacid medication versus no prophylaxis. Outcomes were also compared for infants grouped by antacid use at any stage. Data (median [IQR]) were compared with Fishers exact, Chi Square, Mann- Whitney and Kruskal-Wallis tests.

Results: One hundred and twenty infants were included. Seventeen received prophylactic antacid at surgeon preference. Of the remaining 103, 44 subsequently received antacid as treatment for GOR and 59 never received antacid medication. Incidence of stricture in the first year (8/17 vs 35/103; p=0.41) and time to first stricture (median 57 days [45-293] vs 93 days [42-355]; p=0.97) were similar for infants who received antacids as prophylaxis versus no prophylaxis. Incidence of stricture, age at first stricture and number of dilatations were similar for infants who received antacids as prophylaxis, those who received antacids as treatment for symptoms or signs of gastro-oesophageal reflux (GOR), and those who never received antacids (**Table**). All infants survived.

Conclusions: Prophylactic antacid medication does not reduce incidence or severity of anastomotic strictures following repair of OA. Treatment with antacids is best reserved for those with symptoms or signs of GOR.

	Prophylactic antacid (n=17)	**Antacid as treatment of GOR (n=44)**	**No antacid medications (n=59)**	**p value**
Incidence of stricture	9 (53%)	23 (52%)	22 (37%)	p=0.25
Age at first stricture (days, median[IQR])	57 (45-293)	93(42-377)	88 (39-351)	p=0.93
Numbers of dilatations per patient	3(1-7)	3(1-13)	3(1-8)	p=0.92