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ROUTINE UPPER GASTROINTESTINAL SERIES BEFORE GASTROSTOMY TUBE PLACEMENT: IS IT NECESSARY?

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Background: Gastrostomy tube placement is a common procedure performed by pediatric surgeons, with approximately 9,000 performed annually in the United States. An upper gastrointestinal (UGI) series is routinely obtained preoperatively to define the patient's anatomy. We hypothesized that the incidence of significant anatomic abnormalities is low and that routine UGI may not be justified before feeding gastrostomy.

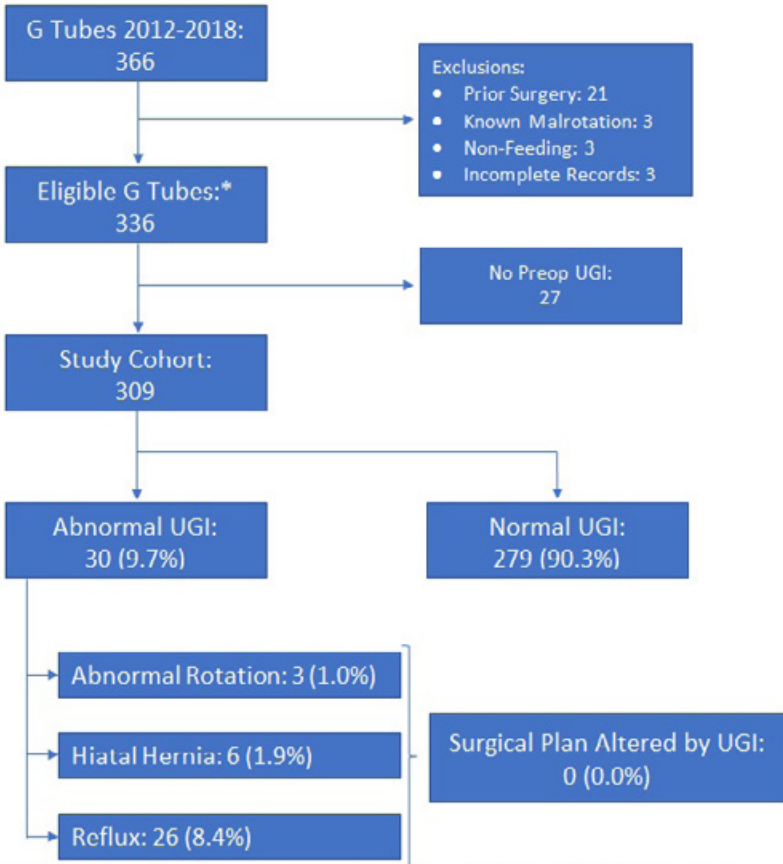
Methods: Patients <18 years of age undergoing feeding gastrostomy between 2012 and 2018 were retrospectively reviewed. Demographics, comorbidities, and preoperative UGI results were recorded.

Results: 366 patients underwent gastrostomy of which 336 were eligible for study inclusion. Exclusions included prior abdominal surgery (21), known malrotation (3), gastrostomy for purposes other than feeding (3), or incomplete records (3). 309 (92.0%) eligible patients had a preoperative UGI and subsequently underwent gastrostomy alone (176) or gastrostomy with Nissen fundoplication (133). Associated anomalies were chromosomal or metabolic in 34.0%, cardiac in 27.5%, craniofacial in 7.1%, GI in 0.6%, and neurologic impairment in 43.7%. There were 30 (9.7%) abnormal UGIs, including abnormal rotation in 3 (1.0%), gastroesophageal reflux in 26 (8.4%), and hiatal hernia in 6 (1.9%). In 2 cases of suspected malrotation on UGI, laparoscopy confirmed normal anatomy. The third had a rotational variant deemed not to require Ladd's procedure due to a wide mesenteric base and absence of Ladd's bands. Four of the 6 patients with hiatal hernias required repair. However, all 4 cases were scheduled for Nissen fundoplication based on clinical reflux symptoms, so the hernias could have been identified intraoperatively irrespective of the UGI findings.

Conclusion: Our study did not identify any patients that required additional procedures based solely on UGI findings, suggesting that the routine use of UGI before gastrostomy may not be warranted.

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*Eligible G tube means a primary gastrostomy tube placed for the purpose of feeding in a patient without an exclusion including: known malrotation or an anomaly known to be associated with it (eg gastroschisis), prior intraabdominal surgery, or tubes placed for a purpose other than feeding (eg gastropexy following gastric volvulus).