Vascular Ring in an Adolescent Patient with Nausea and Mild Dysphagia

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Vascular Ring in an Adolescent Patient with Nausea and Mild Dysphagia

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Introduction

• Vascular rings are a congenital anomaly that can cause gastrointestinal and respiratory symptoms due to compression of the esophagus and trachea. The vascular ring can comprise a right sided aortic arch, left subclavian artery and a left ligamentum.
• It is a rare cause of dysphagia in adolescent patients.

Case Presentation

• 13 yr old otherwise healthy male presented to the clinic with 8 months of early morning nausea and intermittent non-bloody, non-bilious emesis. Symptoms were not associated with food or activity. Complaint of mild dysphagia with breads, but otherwise patient denied abdominal pain, dyspepsia, abnormal bowel movements, weight loss or change in appetite.
• Patient was placed on omeprazole 20 mg once daily with mild improvement of nausea.
• Labs obtained - TTG IGA, IGA , TSH, T4, lipase, amylase, chemistry panel, complete blood count and sedimentation rate were all unremarkable.
• Barium Esophagram showing: Right-sided aortic arch with aberrant left subclavian artery. Otherwise, normal esophagus, stomach, and duodenum.
• Cardiac MRI – with and with out IV contrast showed right aortic arch with aberrant left subclavian artery originating from a retroesophageal diverticulum. This anatomic substrate constitutes a vascular ring. There is associated narrowing at the level of the ring. There is also narrowing of the right mainstem bronchus as it courses underneath the right aortic arch.
• Cardiothoracic surgery ultimately performed thoracic surgery to ligate the ring.
• After surgery patient denies gastrointestinal complaints, including nausea and vomiting. He no longer requires medication.

Imaging

Barium Esophagram

Discussion

• Vascular rings are genetic anomalies that present in infants with respiratory difficulties and abnormalities, but they should also be considered when a patient presents with persistent nausea and vomiting at any age.
• It is important to do thorough history taking when seeing a patient in order to determine the appropriate testing

Conclusions

• Vascular rings should be considered part of the differential for patients of all ages who present with persistent nausea and/or vomiting.
• Oral contrast studies such as a barium esophagram are an important test in determining anatomic abnormalities in patients.