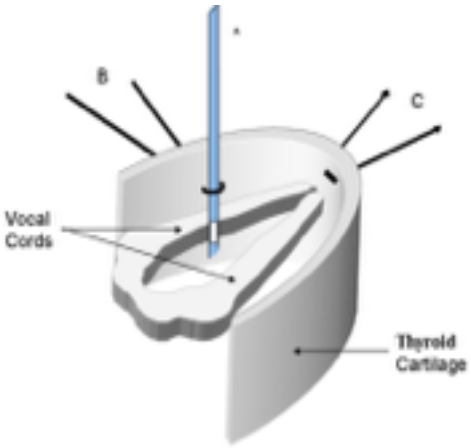
The Yale Larynx Laboratory

A Clinical Review

Behold the Inlet Patch!

Clarence T. Sasaki MD, Jared Langerman MD



Laboratory Note

The purpose of this newsletter is to update our readers with the evidence-based management of certain Head & Neck disease presentations. In this issue we shall focus on the inlet patch.

The Yale Larynx Laboratory was founded by John A. Kirchner in 1967. Since 1975 this laboratory has been in continuous operation under the direction of Clarence T. Sasaki, the Charles W. Ohse Professor and has been funded by the National Institutes of Health and by endowments of grateful patients.

Case Presentation

A 69 year old male, former smoker, presented with an esophageal mass found on screening CT scan. He was asymptomatic with regard to reflux, heartburn, dyspepsia or dysphagia. The esophageal lesion was subsequently biopsied and staged as T1b moderately differentiated adenocarcinoma extending from 20-26cm within the esophagus, surrounded by an inlet patch extending partially to the upper esophageal sphincter. He is scheduled for surgical resection.

Discussion

Inlet patches represent ectopic gastric mucosa, typically found in the proximal esophagus within the first 3cm of the upper esophageal sphincter. Embryologically, the luminal esophagus begins as columnar epithelium and, at 24 weeks gestation, transitions to squamous cells bi-directionally, starting in the mid-esophagus with the proximal portion last to stratify. Failure of mucosa to undergo this transition results in heterotopic mucosa, or inlet patches.

They are present in up to 10% of patients, are typically asymptomatic and found incidentally, not requiring intervention. When symptomatic, their acid secreting properties cause heartburn, globus sensation, sore throat, cough and dysphonia, mimicking laryngopharyngeal reflux. Also related to acid secretion are rare complications including bleeding, perforation, fistula, stricture and malignant transformation. On endoscopy, they appear as salmon colored patches with sharp edges that can be flat or slightly elevated. Definitive diagnosis is by biopsy showing the presence of gastric mucosa. When symptomatic, acid reducing medications such as PPIs or

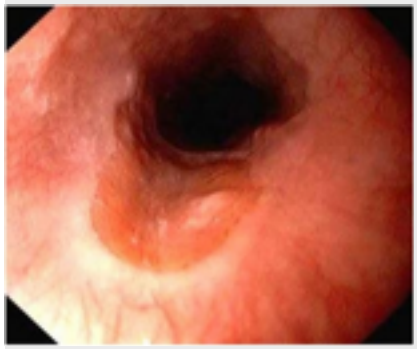


Figure 1. Esophageal inlet patch

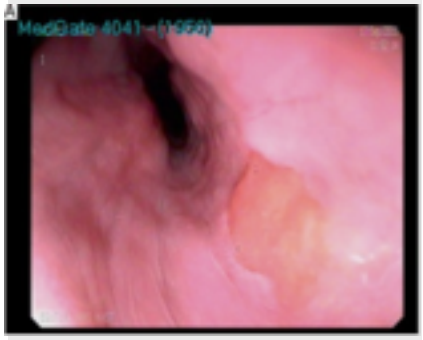


Figure 2. Esophageal inlet patch

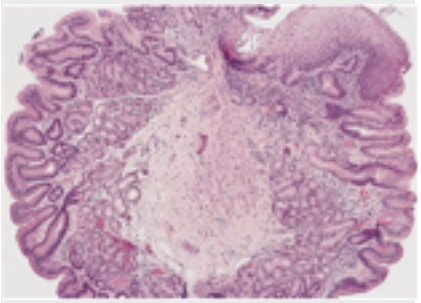


Figure 3. Ectopic gastric mucosa surrounded by normal esophageal mucosa

H2 blockers, as well as ablation or resection can be helpful.
Of signifiant clinical importance, as seen in our patient, is the formation of adenocarcinoma within an inlet patch, reported to occur in less than 1.5% of patches and never reported in the pediatric population.
Of the limited number of reported cases, risk factors are male gender, older age, and smoking. Dysphagia is the most common presenting symptoms and lesions are typically more advanced when found.

Summary

- Inlet patches occur in 10% of patients overall
- They consist of heterotopic gastric mucosa that can secrete acid
- Acid secreting patches can produce symptoms mimicking laryngopharyngeal reflux (globus, cough, hoarseness) in the *absence* of documented pH probe findings distally
- Diagnosis is made by esophagoscopy and biopsy
- Adenocarcinoma occurs in 1.5% of patches

References

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Images courtesy of the National Library of Medicine.

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