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INTRODUCTION

Unlike congenital pyloric stenosis which is relatively common that is estimated to occur in up to 3 out of every 1000 births. In contrast, idiopathic adult hypertrophic pyloric stenosis is a far rarer condition, first described in 1842.

Patients typically present with complaints of nausea, abdominal pain, and early satiety.

Three main subtypes (Table 1) are recognized, and differentiated based on various features including the demographic whom they affect as well as features found on endoscopy

CASE DESCRIPTION

We present a case of a 48 year old female with a past medical history of gastric ulcers, fibromyalgia, migraines, chronic pain on narcotic therapy, and exercise-induced asthma, who presented to the hospital with a chief complaint of abdominal pain. Her abdominal pain was associated with early satiety, reduced p.o. intake, nausea, and vomiting. As a result of her symptoms, she also incurred a weight loss of 5 pounds over the span of 2 weeks.

Prior to this hospitalization, the patient had undergone an endoscopy 1 month prior to presentation. At that time she was found to have a nonbleeding cratered pyloric ulcer with no stigmata of bleeding and narrowing of the pylorus which was unable to be transversed. Prior to presentation the patient had been started on Carafate without improvement of her symptoms.

During evaluation at our facility, she was evaluated once again by endoscopy. She was found to have massive gastric retention of particulate matter and liquid which precluded a detailed examination. The pylorus appeared stenotic with no significant active ulcerations. Pictures were obtained (**Figure 1**). At this point the CRE wire-guided Boston Scientific balloon was placed in this area and the guidewire was placed through this area and the balloon was then passed over the guidewire through the pyloric channel. Following the procedure, the patient was continued on full liquid diet and treated medically with Protonix and Carafate.

DISCUSSION

There are 3 subtypes that have been identified (table 1) ⁴⁻⁶

Causes of adult pyloric stenosis are varied, but are generally classified into either primary or secondary causes. Primary idiopathic pyloric stenosis is characterized as pyloric hyperplasia with gastric outlet obstruction and resultant delayed gastric emptying².

Secondary causes include malignancy, fibrous tissue replacement from healing gastric or duodenal ulcers, post inflammatory changes from inflammatory bowel disease, increased vagal activity and post-operative adhesions¹. It is also thought that a certain percentage of patients who present in adulthood represent a persistent juvenile form of pyloric stenosis.

Patients typically present with symptoms of early satiety, abdominal pain (often epigastric), nausea, and vomiting. Patients should be evaluated endoscopically to differentiate adult hypertrophic pyloric stenosis from other causes of gastric outlet obstruction. It is recommended to obtain biopsies during evaluation, to exclude extrinsic causes such as malignancy⁵.

In the case of our patient, she had a long standing history of gastric ulcerations which likely led to mucosal hyperplasia and fibrous tissue replacement which then led to the formation of a hypertrophied pylorus. Her symptoms were further exacerbated by use of narcotic agents, which led to her gastroparesis on an existing background of gastric outlet obstruction.

Treatment of pyloric stenosis ultimately comprises of surgical intervention consisting of gastric resection and Bilioth 1 re anastomosis.

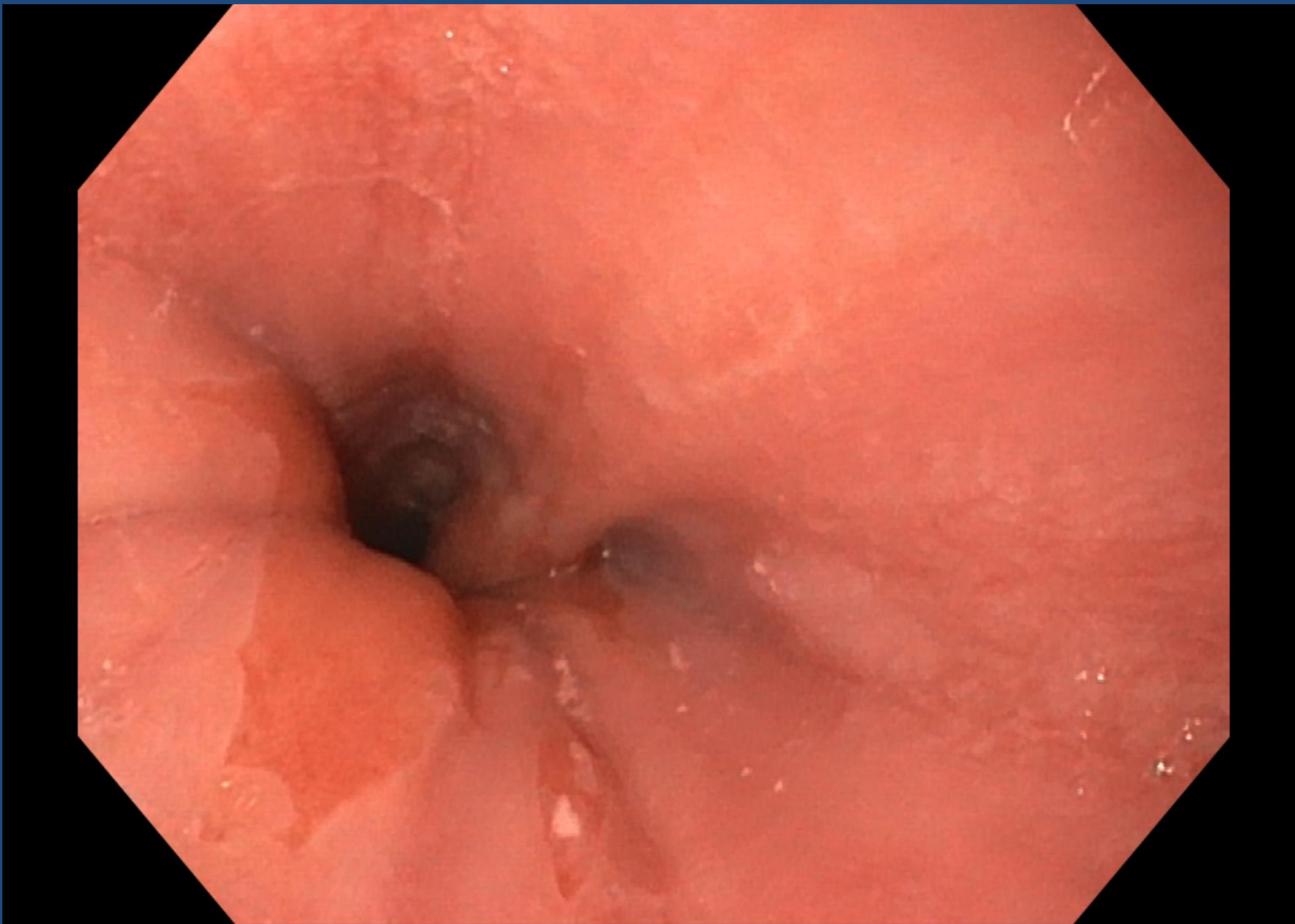


Figure 1:

Hypertrophic Pyloric Stenosis Subtypes

<u>Type 1</u>	<ul style="list-style-type: none">✓ Infantile HPS diagnosed at a late stage✓ Generally characterized by greater degree of hyperplasia and hypertrophy compared to Type 2 Pyloric Stenosis✓ Palpable abdominal mass✓ <u>Kirklín</u> Sign (convex indentation at the base of the duodenal bulb)
<u>Type 2</u>	<ul style="list-style-type: none">✓ Occurs during adult life✓ Secondary to underlying GI pathology, such as peptic ulcer disease, malignancy, and inflammatory conditions (e.g. inflammatory bowel disease)✓ Rare to have palpable abdominal mass✓ Cervix Sign (pylorus appears markedly narrow, with a smooth border)
<u>Type 3</u>	<ul style="list-style-type: none">✓ Idiopathic, adult onset✓ Rare to have palpable abdominal mass

Table 1: Hypertrophic Pyloric Stenosis Subtypes and Features

SOURCES

1. Graadt van roggen JF, Van krieken JH. Adult hypertrophic pyloric stenosis: case report and review. J Clin Pathol. 1998;51(6):479-80.
2. Manatakis D, Sioula M. Idiopathic pyloric stenosis. Pan Afr Med J. 2016;25:23.
3. Puri B, Sreevastava DK, Kalra AS. Idiopathic Hypertrophie Pyloric Stenosis : Our Experience. Med J Armed Forces India. 2006;62(3):216-9.
4. Hassan SM, Mubarik A, Muddassir S, Haq F. Adult idiopathic hypertrophic pyloric stenosis - a common presentation with an uncommon diagnosis. J Community Hosp Intern Med Perspect. 2018;8(2):64-67.
5. Danikas D, Geis WP, Ginalis EM, Gorcey SA, Stratoulías C. Laparoscopic pyloroplasty in idiopathic hypertrophic pyloric stenosis in an adult. JSLS. 2000;4(2):173-5.
6. Dye TE, Vidals VG, Lockhart CE, Snider WR. Adult hypertrophic pyloric stenosis. Am Surg. 1979;45(7):478-84.
7. Thielemann H, Anders S, Näveke R, Diermann J. [Primary hypertrophic pyloric stenosis. A rare form and stomach outlet stenosis in the adult]. Zentralbl Chir. 1999;124(10):947-9.