

An Unusual Case of Gastric Outlet Obstruction in a Ghanaian Woman

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How to cite this paper: Amoako, J., Obaka, H., Affram, N., Theodore, W. and Asumda, F.Z. (2017) An Unusual Case of Gastric Outlet Obstruction in a Ghanaian Woman. *Case Reports in Clinical Medicine*, 6, 206-210.

<https://doi.org/10.4236/crcm.2017.67020>

Received: June 3, 2017

Accepted: July 24, 2017

Published: July 27, 2017

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Abstract

Foreign body ingestion is an uncommon cause of gastric outlet obstruction in adults. Not all ingested objects pass the gastrointestinal tract spontaneously. In most cases, endoscopic removal is required. A surgical approach is required if endoscopic removal is unsuccessful or in the event of a complication. We present a case of a 45-year-old woman, previously diagnosed endoscopically with chronic duodenal ulcer with pyloric stenosis, who presented with copious effortless offensive non-bilious vomiting, and epigastric pain of three weeks' duration. She was dehydrated with positive gastric succussion splash. Esophago-gastro-duodenoscopy showed an impacted neck-pendant occluding a stenosed pylorus which dislodged on attempts to extract it and was later excreted in the stool, with resolution of her symptoms.

Keywords

Neck-Pendant, Chronic Duodenal Ulcer, Gastric Outlet Obstruction

1. Introduction

Foreign body ingestion is a common occurrence in children [1]. Sharp objects are especially problematic. There is a high risk of alimentary canal wall perforation with subsequent hemorrhage and impaction [1] [2] [3]. Within the adult population, foreign body ingestion is commonly seen in patients with psychiatric or intellectual impairment, and in alcoholics [1] [2]. It is important to note that most ingested foreign objects spontaneously pass through the gastrointestinal tract with minimal clinical or surgical intervention [1]-[6]. Endoscopic or surgical intervention is required in about 20% of cases [1] [2]. Intermittent gastric outlet obstruction is usually explained by duodenal ulcer with recurrent edema [1] [2] [3]. We present a case of a patient with acute gastric outlet obstruction due to an impacted neck pendant within a stenosed pylorus.

2. Case Report

A 45-year-old Ghanaian woman, presented to the emergency room with a three week history of projectile non-bilious, offensive vomiting and non-radiating epigastric pain. She denied intentional induction of emesis. She denied smoking, alcohol or drug use. She appeared anxious, dehydrated, weak and lethargic. She was afebrile with a blood pressure of 150/80 mmHg and a pulse of 110 bpm. Her abdomen was distended, with a visible abdominal mass. It was tympanic on percussion, and succession splash was positive. Initial laboratory results (electrolytes, hemoglobin, white blood cell count, platelets, creatinine blood urea nitrogen, lipase, amylase, albumin, serum alkaline phosphatase, alanine transaminase, aspartate aminotransferase and total bilirubin) were unremarkable. On further questioning, we discovered that she had a five-year history of recurrent non-radiating epigastric pain exacerbated by hunger, and alleviated by anti-ulcer medication. She was hospitalized two years prior to this current presentation with severe worsening epigastric pain. An esophago-gastro-duodenoscopy (EGD) done at the time revealed “chronic duodenal ulcer with severe stenosis at the pylorus”. At the time, she denied ingesting a foreign body and had no previous medical history of psychiatric impairment. Alcohol or drug intoxication was not suspected at the time, and she had no history of an eating disorder. As a first step, we put her on continuous naso-gastric drainage and resuscitation. EGD was done after 48 hrs—it revealed moderate amounts of residual food and secretion that was washed with a water-jet. It also showed gastritis of the lesser curvature, edema and fixity of the antrum and pylorus. We observed a bronze colored foreign body in the first part of the duodenum (**Figure 1**). It was impacted into the wall and occluded the lumen (**Figure 1**). Multiple attempts to extract the foreign body through the working channel of the endoscope and with the

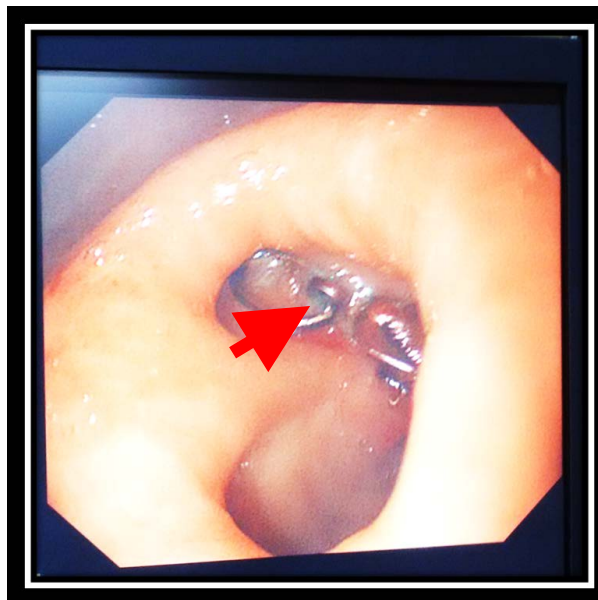


Figure 1. EGD of patient demonstrating bronze colored foreign body embedded within the duodenal wall.

teeth of the grasper were unsuccessful. After numerous attempts, the object dislodged further down the duodenum. We observed minimal bleeding at the site of impaction. The patient's symptoms resolved on the same day and she was returned to normal diet and fluids without incident. We followed her with serial chest and abdominal X-rays (**Figure 2** and **Figure 3**). Six days after her initial presentation to us, the patient passed a bronze colored pendant, complete with its hook, in her stool (**Figure 4**). A repeat EGD after two weeks showed mild inflammation at the pylorus with significant stenosis. Given the recurrent nature of her ulcer disease, we elected to perform a Billroth I partial gastrectomy which was successful. The patient was discharged home following an uneventful recovery.



Figure 2. Chest X-ray of patient demonstrating enlarged gastric silhouette secondary to gastric outlet obstruction.



Figure 3. Abdominal X-ray of patient.



Figure 4. Bronze colored pendant, complete with its hook, passed in patient's stool.

3. Discussion

The prevalence of recurrent ulcer disease has declined due to the effective treatment regimen currently available. In addition to proton pump inhibitors, we now have medications with proven efficacy against *Helicobacter Pylori* infection. We present a unique case of recurrent ulcer disease compounded by a stenosed pylorus. Our initial finding of a foreign object embedded in the wall of the duodenum was unexpected. Her first EGD two years prior to her current presentation showed chronic ulcer disease with severe stenosis of the pylorus in the absence of an ingested foreign object. Despite careful questioning and history taking, we were unable to ascertain the specific time point at which the patient might have accidentally ingested the foreign object. About 80% - 90% of ingested foreign objects pass through the gastrointestinal tract with minimal intervention [4]. Another 10% - 20% of such cases require endoscopic removal [4] [5] [6]. Perhaps the greatest determinants of impaction and perforation are the size of the object and the narrowing of the canal [6] [7] [8]. In this specific case, the foreign object was impacted in the pylorus. Our initial suspicion that the object had in all probability been accidentally ingested at least a year prior to presentation was confirmed by the degree of impaction within the wall of the duodenum. All attempts at extraction proved futile. We concluded that the primary contributing factor to pyloric obstruction in this patient was the resulting edema and fibrosis of the duodenal wall from chronic ulceration as well as obstruction by the foreign body. Her chronic ulcer disease might have been exacerbated by the foreign body's obstruction but occurred independent of its ingestion. A repeat EGD conducted two weeks after her initial presentation showed persistent narrowing of the pylorus due to her chronic duodenal ulcer. To prevent a recurrent obstruction of the gastric outlet, we performed a Billroth I partial gastrectomy.

4. Conclusion

We report a unique case of gastric outlet obstruction with chronic duodenal ulceration compounded by a previously ingested foreign object.

Conflicts of Interest

The authors report no specific funding in relation to this research and no conflicts of interest to disclose.

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