

Small Opening, Big Problem: Esophageal Food Bolus Impaction and Microstomia

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ABSTRACT

Patients presenting to the hospital with esophageal food bolus impaction often need urgent upper endoscopy. However, patients with trismus and microstomia can pose a real challenge because endoscopic access in these patients can be difficult. We present a unique transoral endoscopic approach for esophageal food bolus disimpaction in a patient with microstomia and trismus resulting from chronic graft-vs-host disease.

INTRODUCTION

Endoscopic disimpaction is the treatment of choice in patients who present with esophageal food bolus impaction. However, performing endoscopy in patients with microstomia could pose a challenge because of the patient's inability to adequately open the mouth. To our knowledge, there has not been a case reported of a 5-mL syringe used as a bite block for esophageal food bolus disimpaction. We present a unique transoral endoscopic approach for esophageal food bolus disimpaction in a patient with microstomia and trismus resulting from chronic graft-vs-host disease.

CASE REPORT

A 28-year-old man with a history of acute myeloid leukemia, treated with allogeneic stem cell transplant, and microstomia secondary to chronic graft-vs-host disease presented with the sensation of food being stuck in his esophagus. His symptoms started while he was eating pork 30 minutes before presentation. While in the emergency department, the patient was unable to swallow his saliva but was otherwise vitally stable with the following vital signs: temperature of 97.9°F, heart rate of 110 beats per minute, blood pressure of 121/85 mm Hg, and saturating 98% on room air. He endorsed a history of frequent dysphagia symptoms and episodes of food impaction in the past, which were self-managed by induction of the gag reflex. Based on his clinical presentation, a diagnosis of esophageal food bolus impaction was performed, and a decision was made to proceed with urgent endoscopy.

However, evaluation of the oral cavity showed that his mouth opening was severely restricted. This posed a challenge regarding the placement of a standard bite block in the mouth before endoscopy. Moreover, transnasal endoscopy could not be performed because instruments such as Roth net and snare cannot pass through the biopsy port of the ultrathin scope. Before taking the patient to the operating room for endoscopy, oral placement of a pediatric bite block was attempted, which failed. The patient was subsequently intubated intranasally in the operating room, due to high risk airway and possible prolonged length of the procedure and while troubleshooting, a 10 mL syringe was attempted as a makeshift bite block which failed. Ultimately, a 5-mL syringe was placed in the mouth, which achieved a snug fit (Figure 1).

The flanges of the 5-mL syringe held the piece in place against the restricted oral cavity, thereby serving as a stable bite block. After this, an adult-sized gastroscope was introduced orally through the 5-mL syringe. The upper esophageal sphincter was at 15 cm, and an affected food bolus was seen at 20 cm from the incisors. Using a Talon grasping forceps, snare, and Roth net, several pieces of the food bolus were removed, after which the remainder was pushed into the stomach. During withdrawal, a smooth, benign-appearing



Figure 1. (From left to right) Flange of a 5-mL syringe, flange of a 10-mL syringe, a pediatric bite block, and an adult bite block.

stricture was seen in the upper esophagus, at 20 cm from the incisors (Figure 2). Endoscopic evaluation of the stomach and duodenum was largely unremarkable. The postprocedure course was uneventful, and the patient was discharged home later that day.

DISCUSSION

The normal range of opening of mouth is approximately 40 to 60 mm.¹ This allows a normal bite block of approximately 20 mm in diameter to be placed comfortably in patients undergoing esophagogastroduodenoscopy (EGD). Microstomia is

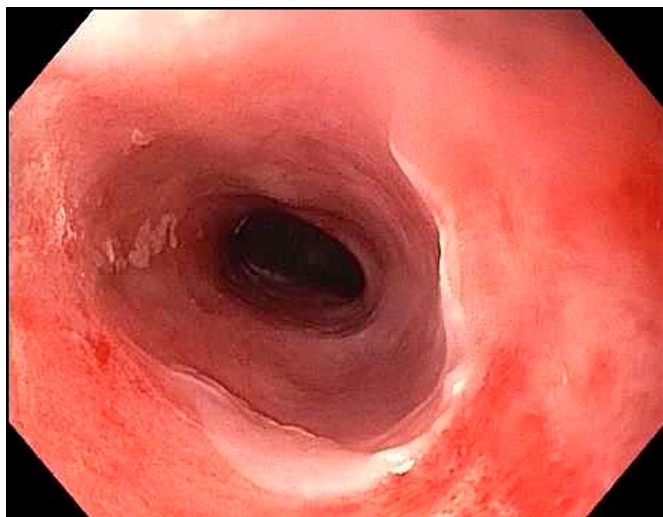


Figure 2. Esophageal stricture noted at 20 cm from the incisor.

the term used to describe a congenital or acquired reduction in the size of the oral aperture that is severe enough to compromise cosmesis, nutrition, and quality of life, which in turn leads to limitation of mouth opening.² The presence of trismus and microstomia could potentially complicate EGD, especially when it is imperative that an oral rather than a transnasal route is used for access.

Our patient had microstomia, trismus, and a proximal esophageal stricture, making it the perfect storm for esophageal food impaction, which required urgent therapeutic EGD. There has been a report in the literature of the ingenious use of a 10-mL syringe as a bite block when the standard adult-sized and pediatric-sized bite blocks would not fit.³ However, this is the first report in the English literature of using a 5-mL syringe as a bite block, which we believe is the smallest bite block ever used. In our patient, the adult and pediatric bite blocks and the 10-mL syringe (14.5 mm in diameter) cut to size could not fit because of very severe microstomia and reduced interincisal distance.

The only recourse was the use of the barrel of the standard 5-mL syringe (12.06 mm diameter), through which the Olympus gastroscop GIF H190 (9.2 mm distal end diameter) could just fit through. In summary, for patients with microstomia who require urgent EGD, alternatives to the regular adult and pediatric bite blocks include the 10-mL and even 5-mL syringe barrel cut to size. The 5-mL syringe is most likely the smallest bite block that one can clinically use.

DISCLOSURES

Author contributions: M. Madhu and C. Mbachi drafted and revised the manuscript. E. Aisien, B. Attar, and V. Kotwal revised the manuscript. C. Mbachi is the article guarantor.

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Informed consent was obtained for this case report.

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