

# ADVANCES IN ENDOSCOPY

Current Developments in Diagnostic and Therapeutic Endoscopy

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## Food Bolus Impaction

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### **G&H** Could you describe the typical presentation of a patient experiencing a food bolus impaction?

**GG** Food bolus impactions are acute events that, for the most part, are immediately recognized by the patient. Most food bolus impactions resolve without intervention, either by moving forward to the stomach or by the patient regurgitating the ingested contents. When symptoms of obstruction persist and/or are accompanied by substantial chest discomfort, patients will seek medical attention. Patients primarily experience a sensation of squeezing in the chest, which can be frightening as it is difficult to discriminate from heart attack pain. However, food bolus impaction is additionally associated with sialorrhea or excessive salivation, which accompanies esophageal obstruction. Patients are also unable to eat or drink anything further when experiencing an impaction.

It is important to differentiate impaction from choking. Patients with food bolus impaction do not have any interruption of breathing. They can talk and they can cough, whereas a person who is truly choking is unable to do any of these things.

### **G&H** What are the primary causes of food bolus impaction?

**GG** Food bolus impactions are commonly accompanied by some underlying component of pathology, which can be either mechanical or functional. In terms of mechanical etiologies, strictures or narrowing of the esophagus are most commonly caused by Schatzki ring, peptic stricture, or, increasingly, the presence of eosinophilic esophagitis. In terms of motility disorders, diffused motor abnormalities of the esophagus or esophageal spasm can cause transient

food bolus impactions. In these patients, the impaction generally passes after a period of relaxation where the muscles of the esophagus are no longer constricted and allow the bolus to pass.

Some of the classic presentations of food bolus impaction are “the steakhouse syndrome” or the “backyard barbeque syndrome.” Not surprisingly, impactions occur more often when patients are eating meat and generally when they do not chew their food sufficiently. Contributing conditions could be poor dentation, ill-fitting dentures, the use of alcohol, or a predisposition to eat too quickly. The most commonly impacted foods are beef, chicken, pork, and al dente-cooked vegetables.

### **G&H** Should any steps be taken to differentiate an impacted food bolus from a foreign object?

**GG** It is important to discriminate a food bolus impaction from a true foreign object ingestion. This should be available through an honest and accurate history of presenting illness. Foreign object ingestion may be intentional or accidental. Ingested foreign objects are also, for the most part, radiopaque. Therefore, radiographic imaging should be incorporated into investigation and management in order to make that distinction. However, anything put into the mouth should ultimately be considered a foreign object, including the contents of a food bolus. Thus, one of the appropriate concerns in the evaluation and management of food bolus impaction, particularly in a meat impaction, is whether or not there may be unrecognized bones in the food bolus. Again, radiographic imaging can be helpful in this regard. Quality plain and lateral film of the chest and neck should be taken, depending on the location of the suspected impaction, and examined care-

fully for evidence of bones. This may also be scrutinized in the patient history.

### **G&H** What is the best treatment method for an unresolved food bolus impaction?

**GG** Patients with a food bolus impaction that persists to the extent that they present in the emergency department should receive a chest radiograph to rule out evidence of perforation or a radiopaque object in the esophagus. Once a foreign object is ruled out, endoscopy should be considered. Several factors should be considered regarding the timing of the endoscopy. The status of the patient's airway and ventilation needs to be evaluated to ensure adequate control and assess the risk of aspiration. Patients experiencing excessive sialorrhea who are unable to handle their secretions have an indication for urgent or emergent endoscopy. Further, it is known that food bolus impactions that persist more than 12–24 hours confer more risk for serious complications, including esophageal perforations.

Small doses of glucagon administered intravenously can be given to patients who are under evaluation for management of a food bolus impaction. This may help to relax the esophagus and allow spontaneous passage. However, it should not delay definitive investigation and management by endoscopy. Other historically noted approaches, including the administration of sodium bicarbonate (Alka Seltzer) tablets or carbonated beverages to increase the pressure in the esophagus and push things forward, or blind passage of a nasogastric tube to stimulate passage, are not endorsed.

Sedation for endoscopy in this setting should be individualized and dependent on the patient's airway risk. Initial endoscopic inspection is performed to identify the discrete location and characteristics of the food bolus and the extent of food or liquid that is stacked on top of the impaction. Placement of an esophageal overtube or endotracheal intubation should be considered when copious esophageal contents are encountered to minimize risk of aspiration. For patients who may require multiple insertions and withdrawals of the endoscope, esophageal overtube use can also facilitate this process.

On initial inspection with endoscopic insufflation and the relaxation imparted through standard sedation,

many food bolus impactions will pass spontaneously with extremely gentle forward pressure utilizing the tip of the endoscope. When this does not occur, an attempt can be made to steer the tip of the endoscope around the bolus. However, the endoscopist should not push hard nor should they attempt to blindly advance a device alongside the food bolus.

When an impaction is refractory to the above techniques, an attempt should be made to dislodge it, utilizing grasping forceps or other devices. This often results in a debulking of the food bolus that permits clearance in an antigrade fashion. When this cannot be achieved, piecemeal debulking and removal of the bolus contents retrograde, through an esophageal overtube, may be required.

### **G&H** Does an initial food bolus impaction predispose patients to further episodes or a chronic problem?

**GG** It is common that patients who present with food bolus impactions have a history of prior incomplete or spontaneously resolved food bolus impaction. When the underlying conditions are associated with gastroesophageal reflux disease, recurrent episodes can be anticipated, unless the patient achieves effective acid reflux suppression therapy. We commonly defer esophageal dilation therapy for strictures diagnosed at the time of endoscopic management of acute food bolus impaction until a separate endoscopy session 2–8 weeks later to allow healing of mucosal injury.

### **Suggested Reading**

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- Eisen GM, Baron TH, Dominitz JA, et al; American Society for Gastrointestinal Endoscopy. Guideline for the management of ingested foreign bodies. *Gastrointest Endosc.* 2002;55:802-806.
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