“LEGO®Man” Creates Asymptomatic Persistent Esophageal Foreign Body Identifiable On Barium Esophagram

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Introduction

Pediatricians and emergency room specialists are routinely faced with the challenge of management of young patients who are suspected to have accidentally swallowed foreign objects. These objects can become a pathologic esophageal or airway foreign body. The persisting esophageal foreign body, one that does not pass spontaneously through the gastrointestinal tract, is suspected based on patient history and clinical symptoms. These often include regurgitation, drooling and unrelenting discomfort worsened by attempts to swallow. However, there are times when persisting esophageal foreign body is asymptomatic. This report describes the utility of using a contrasted esophagram in identifying the presence of a large but asymptomatic persistent radiolucent esophageal foreign object, a “Lego Man”.

Case Presentation

A 10-year old male whose past medical history was significant only for Attention Deficit Hyperactivity Disorder presented to the Emergency Department six hours after having swallowed a “Lego Man” that he felt may have passed completely. Apart from mild generalized throat discomfort, he was asymptomatic at the time of presentation and at the time of specialty examination: he had no respiratory complaints, no drooling, no dysphagia, nor chest pain. He brought with him an example of the “Lego Man” (Figure 1).

Because it was unclear if this material was radio-opaque or radio-lucent, a plain film of an identical “Lego Man” alone on a radiographic plate was obtained. This demonstrated a partially radiopaque foreign object (Figure 2). Because of the possibility of some degree of radio-opacity based on the plain film, the emergency department obtained a formal posterior-anterior chest radiograph, a formal lateral chest radiograph, and then a KUB radiograph to evaluate for a possible enteric “Lego Man.”

Figure 1: Photograph of an identical “Lego man” brought in by the patient.

Figure 2: Plain radiograph image of the identical “Lego man” on radiographic plate by itself. Settings needed to obtain this image were far outside the settings used for obtaining plain radiographs of the body.

Figure 3: Screening plain radiograph of the patient’s chest, not specifically including the neck, but no foreign object is identified in the neck, chest, or stomach.
These imaging studies did not reveal the location of the foreign object (Figure 3).

In this case of an asymptomatic patient with clearly negative imaging and work up with overall satisfied parents, the provider was met with the diagnostic dilemma of observant discharge versus recommendation for further pursuit of the foreign body with a computed-tomography (risks being cost and radiation exposure) or operative diagnostic esophagoscopy, (risks being cost, anesthesia risks and a potentially unnecessary invasive procedure). A third diagnostic option was entertained: obtaining barium esophageal. Considering the large size of the foreign object and the relatively lower cost and X-ray exposure associated with this imaging modality, the decision was made to pursue this option. This imaging study clearly outlined the "Lego Man," persisting in the cervical esophagus (Figure 4).

The patient subsequently underwent therapeutic operative esophagoscopy in the operating room. This revealed the “Lego Man” lodged in the cervical esophagus, just below the upper esophageal sphincter. The “Lego Man” was removed atraumatically with very scant excoriation of the esophageal mucosa. The patient did well in the recovery room and was discharged home in stable condition.

Discussion

Pediatric specialists routinely face the challenge of evaluation and management of young patients who are suspected to have accidentally swallowed potentially dangerous foreign objects. The persisting esophageal foreign body is suspected based upon a parent-provided patient history (most often) and on active clinical symptoms, which usually include obvious regurgitation, drooling and unrelenting discomfort worsened by attempts to swallow. However, there are times when persisting esophageal foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed meat impacted for days on end; foreign body is asymptomatic. In clinical practice, every otolaryngologist has removed mea...
Table 1: Comparison of adjuncts to clinical assessment.

| Study            | Radiation Exposure (mSv) | Estimated Pricing* (USD) |
|------------------|--------------------------|--------------------------|
| Barium Esophagram| 2–3 [6]                  | $305 [7]                 |
| Spiral Chest CT  | 8 [6]                    | $300 - $1000 [7]         |
| Operative Diagnostic Endoscopy | 0                        | $7,164.78 [4]            |

It is well documented that pricing varies with locality and the contracted payor-biller relationship. This reflects assessments of billing patterns prior to institution of "facility fee" charges in addition to surgical anesthetic and operative time fees.

Conclusion

This case illustrates that even an asymptomatic patient deserves a high index of suspicion for persistent esophageal foreign body, and barium esophagram can be critical in identifying the presence of such an object for surgical decision making. Though availability of urgent fluoroscopy may be limited, there is overall lower radiation exposure than a CT scan [6–8], it is less costly than a negative operative endoscopy [3], and it may be safer than observant discharge.

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