International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2019): 7.583

Image Role in the Diagnosis and Management of Foreign Esophageal Bodies in the Pediatric Population

Running Title- Case Report: 4 Months Child with a Metallic Foreign in Esophagus

Dr Madi Sihem[1], Dr Zoheirkermezli[2]

[1]Acting Consultant ENT King Khaled Hospital Tabuk Saudi Arabia
Email: *cabinet.orl.madi[at]gmail.com*

[2]Senior registrar ENT king Khaled hospital Tabuk Saudi Arabia
Email: *kermezli.zohir[at]gmail.com*

Abstract: ***Ingestion of different kinds of foreign objects (FBs) is common among children, such as coins, toy bits, jewelry pieces, needles and pins, fish and chicken bones and button-type batteries. Children's curiosity and their ability to explore the world around them placed them at greater risk of ingesting FB. Fortunately, 80 percent-90 percent of foreign ingested products that enter the stomach will pass indecisively without effect. In the esophagus or other food-borne regions, the remainder can become blocked, placing the pediatric patient at risk of severe complications such as aspiration, obstruction, bleeding, perforation, fistulization, sepsis, and death. The aim of the initial examination of pediatric patients is to evaluate the shape of the ingested substance, its location in the gastrointestinal tract and the presence of associated complications. A Sharpe FB, a wide-diameter FB, and symptoms were factors found to increase the risk of complications. In the assessment of ingested FBs in pediatric patients, clear radiographs often play an important role: plain film of the neck, face, and abdomen is very useful in confirming the diagnosis of FB ingestion, since most of the FBs ingested are radiopaque***

Keywords: foreign objects, children, radiographs, radiopaque, esopharyngoscope

1. Case Report

The 8-month-old boy was admitted to the hospital for emergency after unintentionally swallowing a metallic foreign body. He was coughing up a bloody sputum. Physical examination was revealed the kid was alert and sensitive. He was being subdued. Its temperature and vital signs were within acceptable range. The analysis of the mouth, chest and abdomen was unremarkable. The drooling of spit, however, started at home and became more exhausted, A metal detector reported the existence of a metallic foreign body in the emergency room suspected the swallowed foreign body. X-rays of the chest, abdomen, and upper body showed a radio opaque object in the esophagus. He received rigid upper esopharyngoscope examination under general anesthesia and THE PIECE OF TOY was removed (Figure 3). The patient's condition improved, and he was discharged on day 2

Figure 1 & 2: Frontal and lateral x-rays demonstrating an ingested metallic foreign body lying in the esophagus of an8-month-old boy

Figure 3
Removed metal foreign body by the regid oesophagoscope

2. Discussion

Infants are known to put almost everything in their mouths. Patients with foreign bodies in the upper GI tract typically fall into one of three categories: infants, psychiatric patients and prisoners and edentulous patients].[2]

Coins are the most common foreign body swallowed by children; others include dolls, toys, magnets, batteries, safety pins, screws, marbles, bones, and food boluses. Foreign bodies in the esophagus can cause various symptoms, including dysphagia, drooling, and sometimes airway obstruction. All children with a history of foreign body ingestion should be examined with X-rays of the neck, chest and abdomen. Radiolucent artifacts require direct visualization or contrast radiography. Pathophysiological factors for ingested foreign bodies include the anatomy of the lodging location, the physical properties of the foreign body (size, shape and composition) and the response of the body to the foreign body.[3] Emergent endoscopy is recommended in patients with button batteries or sharp objects in the esophagus, as was done in our case. [4]

In the following conditions, non-urgent endoscopy may be done:[5]

- In an asymptomatic patient, coins in the esophagus can be seen 12-24 hours before endoscopic removal.
- Stomach artifacts that are >2.5 cm in diameter
- Disk batteries and cylindrical batteries can be observed for as long as 48 h in the stomach of patients with no signs of GI damage. Batteries left for more than 48 h in the stomach should be eliminated.

When one of the following warning signs is present, urgent intervention is indicated:[6]

- When sharp, long (>5 cm) and in the stomach or esophagus of the ingested object.
- If a high-powered magnet or magnet is the ingested object,
- When a disk battery is in the oesophagus (and in some cases in the stomach)
- If the patient shows symptoms of airway compromise,
- Where there is proof of near total obstruction of the esophagus (e.g., patients are unable to swallow secretions))

3. Conclusion

FB ingestion is common in the pediatric population. Plain radiographs also play an important role in the evaluation of ingested FBs in pediatric patients: radiographs are helpful in demonstrating the position of radiopaque FBs in craniocaudal and anteroposterior aircraft. The 2-view chest radiography makes it possible to distinguish between FBs in the airway and FBs in the esophagus. Simple film of the neck, face, and abdomen is very useful in confirming the diagnosis of FB In the pediatric population, FB ingestion is normal. In the assessment of ingested FBs in pediatric patients, simple radiographs often play a significant role: radiographs are helpful in demonstrating the position of radiopaque FBs in craniocaudal and anteroposterior aircraft. Chest radiography with 2 views makes it possible to differentiate between FBs in the airway and FBs in the esophagus. In confirming the diagnosis of FB ingestion, simple film of the neck, face, and abdomen is very useful, because the majority of FBs ingested are radiopaque.

4. Funding

No financial support was provided in the preparation of this report

5. Authors' Contributions

This study was done in collaboration with all the contributor

References

[1] Webb WA. Management of foreign bodies of the upper gastrointestinal tract: Update. GastrointestinalEndosc. 1995;41:39–51. [PubMed] [Google Scholar]
[2] Munter DW, Dronen SC. Medscape (Internet) 2012. May 24, [Last cited on 2013 Aug 25]. Available from: http://emedicine.medscape.com/article/776566-clinical .
[3] Mathew S, Dale M. Ingested foreign bodies in children: BC Children's Hospital emergency room protocol. BCMJ. 2008;50:257–62. [Google Scholar]
[4] Ikenberry SO, Jue TL, Anderson MA, Appalaneni V, Banerjee S, Ben-Menachem T, et al. ASGE Standards of Practice Committee. Management of ingested foreign bodies and food impaction. GastrointestEndosc. 2011;73:1085–91. [PubMed] [Google Scholar]
[5] 5.Dahshan A. Management of ingested foreign bodies in children. J Okla State Med Assoc. 2001;94:183–. [PubMed]
[6] Gilger MA, Jain AK, McOmber ME. Foreign bodies of the esophagus and gastrointestinal tract in children. Literature review current through. 2013. Aug, [Last cited on 2013 Aug 23]. Available from: http://www.uptodate.com/contents/foreignbodies of the esophagus and gastrointestinal tract in children .