

## Case Report

# Multiple oesophageal coin-like foreign bodies appearing like one: A caution for otorhinolaryngologist

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Ingestion of foreign bodies is a common pediatric problem. Majority of ingested foreign bodies pass freely without causing any injury. Ingestion of multiple foreign objects and recurrent episodes are uncommon. Thus we present a case of multiple foreign body ingestion to caution otorhinolaryngologist. We present a six year old boy admitted eight hours following ingestion of a multiple roundish metallic object. There is associated dysphagia to solids and liquid feeds with drooling of saliva. He has had two episodes of induced non-projectile vomiting which contains recently ingested feeds prior to admission. There is no cough or difficulty in breathing. Examination of the neck revealed a positive pointing sign. Plain radiograph of the soft tissues neck revealed a spherical radio-opaque object of metallic density within the oesophagus at the level of C5 to C7. Patient had rigid oesophagoscopy under general anaesthesia with extraction of the multiple metallic foreign bodies. It was uneventful both post operatively and on follow up. The study thus revealed though multiple oesophageal foreign body is rare, there is need for caution among the otorhinolaryngologist when extracting the oesophageal foreign bodies and also stressed the need to double check again following extraction, that is, to repeat endoscopy.

**Key words:** Multiple, oesophageal, foreign bodies, endoscopy, otorhinolaryngologist.

## INTRODUCTION

Ingestion of foreign body is relatively common in the aero-digestive tract among the paediatric population world wide. However some of them get impacted because of either their large size or shapes (Amadasun 1995; Hawkins 1990; Crysdal et al., 1991; Davey and Burkitt 1989; Jackler and Kaplan 1989), while some may pass through the gastrointestinal tract freely uneventful (MacManus 1941). Aerodigestive foreign body ingestion among the paediatric population is a preventable problem (Afolabi et al., 2009). Management of foreign body ingestions varies and it depends upon the object ingested, its location, the patient's age and past history. Once a foreign body is impacted in the throat, it become associated

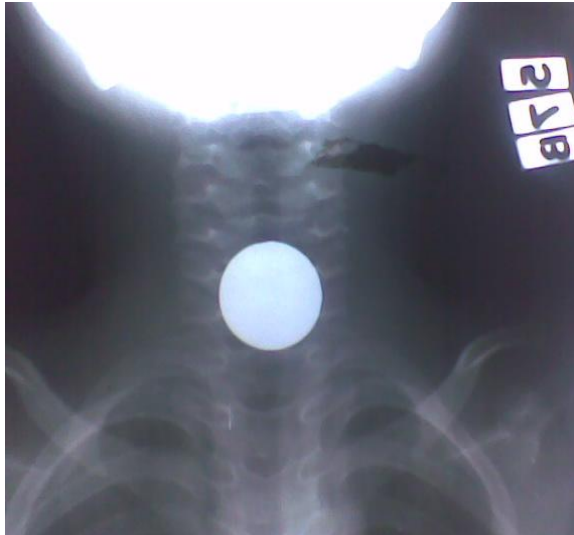
with dramatic presentation of dysphagia and or drooling of saliva which may be a source of apprehension to the patient, to the care giver and the healthcare providers.

Ingestion of multiple foreign objects and repeated episodes are uncommon. Thus we present our case to caution otorhinolaryngologist who is providing the rescue services to have a second and third look.

## CASE REPORT

Patient I.A. is six year old school boy who was admitted through the emergency Paediatric Unit eight hours post foreign body ingestion. The patient was said to have swallowed a roundish metallic object,

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**Figure 1.** Plain radiographs of the soft tissues of the neck (anterior-posterior view).



**Figure 2.** Plain radiographs of the soft tissues of the neck (lateral view).

while he was playing. There is associated odynophagia, dysphagia to solids and liquid diet and there is drooling of saliva. He has had two episodes of induced non-projectile vomiting of which contains recently ingested food prior to admission. There was no cough and difficulty in breathing. There was no abnormal neck swelling. There were no otologic or nasal symptoms. The patient was not a known psychiatric or asthmatic patient. He is from a monogamous family and the first child of the family. There was noticed failed attempt at removal using bolus of meal.

Clinical examination revealed a boy not in any obvious cardio-respiratory distress, not pale, afebrile, but with drooling of saliva and a positive pointing sign at the level of cricothyroid cartilage

joint.

The patient has good oro-dental hygiene but with pooling of saliva in the oral cavity; dentition was intact with no use of dentures, no foreign body visualised in the oropharynx. He has a granular posterior pharyngeal wall.

Otologic and anterior rhinoscopy was essentially normal. There was tenderness at the front of the neck on palpation and scarification marks were noticed at these points.

A diagnosis of impacted pharyngo-oesophageal foreign body ingestion was made. Plain radiographs of the soft tissues of the neck (AP and lateral view) revealed a spherical radio-opaque object of metallic density within the oesophagus at the level of C5 to C7, with air-oesophagogram in which the lower limit cannot be delineated (Figures 1 and 2).

The patient's haemogram and blood biochemistry were all within normal limits. Patient had rigid oesophagoscopy using paediatric Karl Storz oesophagoscope with gentle extraction of foreign body under general anaesthesia with small size 3.0 endotracheal tube intubation. The surgical findings were multiple, silver coloured spherical metallic objects of the same size were extracted at about 12 to 14 cm from the upper incisor, at the level of the cricopharyngeus. These objects were superimposed on one another. Repeat endoscopy was done to ensure no other foreign bodies were left out.

Post operatively, patient was uneventful. Patient commenced oral intake, 48 h post-operatively with no evidence of oesophageal perforation. The patient was discharged home 72 h post operatively. Follow up revealed he has remained well for six months now.

## DISCUSSION

The majority of foreign body ingestions occur in the paediatric population with a peak incidence between ages six months and six years (Afolabi et al., 2009; Webb 1995; Cheng and Tam 1999; Hachimi-Idrissi et al., 1998). The age group which our index case presented falls into, may be associated with peer group influence. In children, the true duration of the foreign body in the oesophagus may be unknown until it is discomforting; however in the index case the duration was said to be about eight hours when the attention of the care giver was drawn to it. Nevertheless, the exact timing of insertion may be difficult. Male are at risk of foreign body insertion or ingestion as in the index case reported, this may be associated with the increased risk of exploration of all cavities and high level of inquisitiveness among the male children than the female children similar to previous reports (Afolabi et al., 2009).

In adults, true foreign object ingestion occurs more commonly among those with psychiatric disorders, mental retardation or impairment caused by alcohol, and those seeking some secondary gain with access to a medical facility (Webb 1995; Blaho et al., 1998; Kamal et al., 1999). Edentulous adults are also at greater risk for foreign body ingestion, including their dental prosthesis (Blaho et al., 1998; Abdullah et al., 1998).

The most common site of foreign body impaction in the oesophagus is the cervical oesophagus at the level of the cricopharyngeus which is similar to our finding; in the report presented, the foreign body lodged was lodged at



**Figure 3.** Multiple metallic foreign body.



**Figure 4.** Diameter of multiple metallic foreign body.

about 12 to 14 cm from the upper incisors. The next commonest site is the thoracic oesophagus at the level of the aortic arch (Nandi and Ong 1978). This radiographic investigation done in our index case if combined with the clinical findings of his pointing sign as it corresponded to the location of the foreign body increases the specificity. (Lue et al., 2000) reported a sensitivity and specificity of 39 and 72%, respectively while a recent study quoted

54.8 and 100% (Akazawa et al., 2004), for their plain radiographs. The present report does not report a certain percentage as it was a single case report.

Two radiological views as is customarily done in our centre was buttressed by Whelan-Johnson S, Hall CE, who equally stated that two radiological views are recommended in the assessment of oesophageal foreign bodies (Whelan-Johnson and Hall 2009).

Oesophageal foreign bodies are commonly encountered in otolaryngology practice. Such circumstances are often compounded by pre-existing psychiatric problems such as bulimia and/or anorexia nervosa (Sastry et al., 2008). Patients with bulimia may often present with a very similar pattern of multiple episodes of ingestion of large foreign bodies. Identification of this eating disorder (especially when there is a recurrent history of large, accidentally ingested foreign bodies) and prompt psychiatric referral is essential for efficient long-term management of this condition (Sastry et al., 2008). Our patient has no psychiatric illness.

Management of the patient is influenced by the patient's age and clinical condition; the size, position of the coin if vertical or horizontal, shape, and classification of the ingested material; the anatomic location in which the object is lodged; and the technical abilities of the endoscopist (Ginsberg 1995; Faigel et al., 1997; Michaud et al., 2009). The index patient presented had the multiple foreign body that is metallic, silver coloured with a diameter of about 4 cm (Figures 3 and 4) which is equivalent to the oesophageal diameter in vertical position relative to the oesophageal lumen; thus there was no sign of airway compression and allows minimal swallowing, thus no total dysphagia. The timing of endoscopic intervention in foreign body ingestion is dictated by the perceived risks of aspiration and/or perforation base on the position/placement. In this situation, the intervention was after 12 h of injury due to investigative procedure and sourcing for finance. This extraction was done under general anaesthesia with a Karlstorz rigid oesophagoscope and foreign body removed. Further delay in the removal may predispose the patient to corrosion of the metallic object with increased risk of perforation and mucosal reaction.

## Conclusion

Multiple oesophageal foreign body though rare, is an emergency with need for caution among the otorhinolaryngologists/endoscopist. As it is common among the paediatric population, all patients with foreign bodies in the aero-digestive tract should have adequate history, ear, nose and throat examination along with the pointing sign (if the child is old enough) which should be combined with the radiological investigation. Patients should be assumed to have multiple foreign bodies thus the need to scope the aero-digestive tract and re-scope

after extraction to look for a remnant if there are and to ascertain the integrity of the site of impaction of the FB, in this case the mucosa.

## REFERENCES

- Abdullah BJJ, Teong LK, Mahadevan J, Jalaludin A (1998). Dental prosthesis ingested and impacted in the esophagus and orolaryngopharynx. *J. Otolaryngol.* 27:190-4.
- Afolabi OA, Okhaku AL, Adeosun AA (2009). Re-Emergence Of Coin In Nigerian Currency: Implication In Medical Practice. *Intern. J. Otorhinolaryngol.* 9(1):4.
- Akazawa Y, Watanabe S, Nobukiyo S, Iwatake H, Seki Y, Umehara T, Tsutsumi K, Koizuka I (2004). The management of possible fishbone ingestion. *Auris Nasus Larynx* 31(4):413-416.
- Amadasun EO (1995). Coin as oesophageal foreign body: Effect of change in minting. *Afr. Med. Rev.* 6-8.
- Blaho KE, Merigian KS, Winbery SL, Park LJ, Cockrell M (1998). Foreign body ingestions in the emergency department: case reports and review of treatment. *J. Emerg. Med.* 16:21-6.
- Cheng W, Tam PK (1999). Foreign-body ingestion in children in children: experience with 1265 cases. *J. Pediatr. Surg.* 34:1472-6.
- Crysdal WS, Sendi KS, Yoo J (1991). Oesophageal foreign bodies in children: 15 years review of 684 cases. *Ann. Otol. Rhinol. Laryngol.* 100:320-68.
- Davey WW, Burkitt DP (1989). Foreign body in the oesophagus in: companion to surgery in Africa. Churchill livingstone, London P182
- Faigel DO, Stotland BR, Kochman ML, Hoops T, Judge T, Kroser J, Lewis J, Long WB, Metz DC, O'Brien C, Smith DB, Ginsberg GG (1997). Device choice and experience level in endoscopic foreign object retrieval: an in vivo study. *Gastrointest. Endosc.* 45:490-2.
- Ginsberg GG (1995). Management of ingested foreign objects and food bolus impactions. *Gastrointest. Endosc.* 41:33-8.
- Hawkins DB (1990). Removal of blunt foreign bodies from oesophagus. *Ann. Otol. Rhinol. Laryngol.* 9:684-688
- Hachimi-Idrissi S, Corne L, Vandenplas Y (1998). Management of ingested foreign bodies in childhood: our experience and review of the literature. *Eur. J. Emerg. Med.* 5:319-23.
- Jackler RK, Kaplan MJ (1989). Oesophageal foreign bodies in Schroeder SA, Krupp MA, Trernney TR and Stephen-Agrwalk TM (eds) *Current Medical diagnosis and Treatment.* Lange (publisher) London P. 128
- Kamal I, Thompson J, Paquette DM (1999). The hazards of vinyl glove ingestion in the mentally retarded patient with pica: new implications for surgical management *Can. J. Surg.* 42:201-4.
- Lue AJ, Fang WD, Manolidis S (2000). Use of plain radiography and computed tomography to identify fish bone foreign bodies. *Otolaryngol. Head Neck Surg.* 123:435-8.
- MacManus JE (1941). Perforations of the intestine by ingested foreign bodies: report of two cases and review of the literature. *Am. J. Surg.* 53:393-402.
- Michaud L, Bellaïche M, Olives JP (2009). Groupe francophone d'hépatologie, gastroentérologie et nutrition pédiatriques (GFHGNP). Ingestion of foreign bodies in children. Recommendations of the French-Speaking Group of Pediatric Hepatology, Gastroenterol. Nutr. *Arch. Pediatr.* 16(1):54-61.
- Nandi P, Ong GB (1978). Foreign body in the esophagus: review of 2394 cases. *Br. J. Surg.* 65:5-9.
- Sastry A, Karkos PD, Leong S, Hampal S (2008). Bulimia and oesophageal foreign bodies. *J Laryngol Otol.* 122(7):e16.
- Webb WA (1995). Management of foreign bodies of the upper gastrointestinal tract: update. *Gastrointest. Endosc* 41:39-51.
- Whelan-Johnson S, Hall CE (2009). Multiple oesophageal foreign bodies: the importance of two radiological views. *J. Laryngol. Otol.* 123(1):121-2.