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Long Standing Foreign Body Oesophagus Masquerading Bronchial Pneumonia: A Case Report

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Abstract

Foreign bodies in the oesophagus can be unrecognised by parents/caregivers and health care providers especially when there is no clear history. Depending on the stage of developmental milestones, children explore the environment and can ingest foreign bodies which cannot be clear to the parents/caregivers and health care providers especially when it presents with vague symptoms. This case report describes a 2 year-old female child who presented with mild cough, poor feeding and on and off irritability associated with excessive crying for 3 weeks. The Chest x-ray revealed oesophageal foreign body. This case showed that the foreign body was missed and instead the child was treated as a case of bronchial pneumonia.

Key Words: *Foreign body, Oesophagus, Bronchial pneumonia.*

Introduction

Diagnosing a foreign body in the oesophagus can be a challenge for Otorhinolaryngologists and paediatricians especially if it occurs in young children with no clear history (1). Thus, many unsuspected foreign bodies (FBs) are initially diagnosed as viral, upper respiratory, or gastrointestinal illnesses and may be discovered incidentally on a chest radiograph intended to rule out a pulmonary process. When present, persistent neck extension is a selective sign. Clues to the presence of radiolucent oesophageal FBs are best seen on lateral neck and chest films, looking for a localized tracheal compression, tracheal deviation, and air within the oesophagus (2).

Depending on the presentations they can be managed as conditions related to sore throat such as throat infections (1). An oesophageal foreign body (EFB) is a relatively common complaint in the emergency room. The clinical presentation can be dysphagia, retrosternal pain, and occasionally abdominal pain (1,2). An EFB is often accompanied by serious medical conditions, such as cervical abscess, mediastinitis, aortoesophageal abscess, tracheoesophageal fistula, pneumonia, and pneumothorax, most of which are caused by oesophageal perforation. Thus, an EFB can lead to death if the diagnosis is significantly delayed (4). However, in children the time between ingestion and effective treatment can be delayed which can lead to more injuries and cause complications. In addition, many studies report interesting cases of patients ingesting unusual EFBs. For instance, Walton encountered a case that presented with torticollis after ingesting a button battery (3), and Agrawal reported a case that ingested a metallic magnet with sharp metallic hooks on its surface (4).

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Case presentation

A 2-year-old female child presented in multiple paediatric clinics with on and off dry cough, poor feeding associated with recurrent acute onset of excessive irritability, crying and sleepless nights for three weeks duration. She had neither fever nor difficulty in breathing. These symptoms had begun during the period when both parents were away from home which might have contributed to vague history and lack of evidence of foreign body ingestion. Initially the child was taken to several paediatric clinics where she was treated as a case of bronchial pneumonia and throat infections with various antibiotics, steroids and analgesics with no improvement. After 3 weeks of illness and treatment without improvement she was then referred to Otorhinolaryngologist for further management.

At the otorhinolaryngology clinic, the history was taken followed by general and systemic examination which revealed no any evidence of throat infection or bronchial pneumonia. Her vital signs upon review at the clinic were as follows: temperature, 37.1ºC; blood pressure, 90/60 mmHg; heart rate, 130-140 beats/min; respiratory rate, 30-35 breaths/min and peripheral oxygen saturation, 97-98% in room air. The chest examination revealed bilaterally normal breath sounds, with no transmitted sounds, wheezing or whispered pectoriloquy. Chest X-Ray was done which revealed radio-opaque FB at the oesophagus (see figure 1). The diagnosis at this stage was foreign body oesophagus. The child was admitted and in the same day emergency direct oesophagoscopy was performed under general anaesthesia by using rigid paediatric oesophagoscope. Secretions were suctioned from the oesophagus and a sharp metallic foreign body was revealed at the level of upper oesophagus (18 cm from upper incisor). After removal of the sharp metallic FB the child was observed and upon be fully awake she was transferred to paediatric ward where close monitoring for any features of mediastinitis or other complications was done. Antimicrobial and analgesic therapies were prescribed. On the third day a control chest X-ray was done which revealed normal chest findings. The child was discharged from the paediatric ward on the fourth day in a good condition with normal feeding, no more cough, excessive crying or irritability.

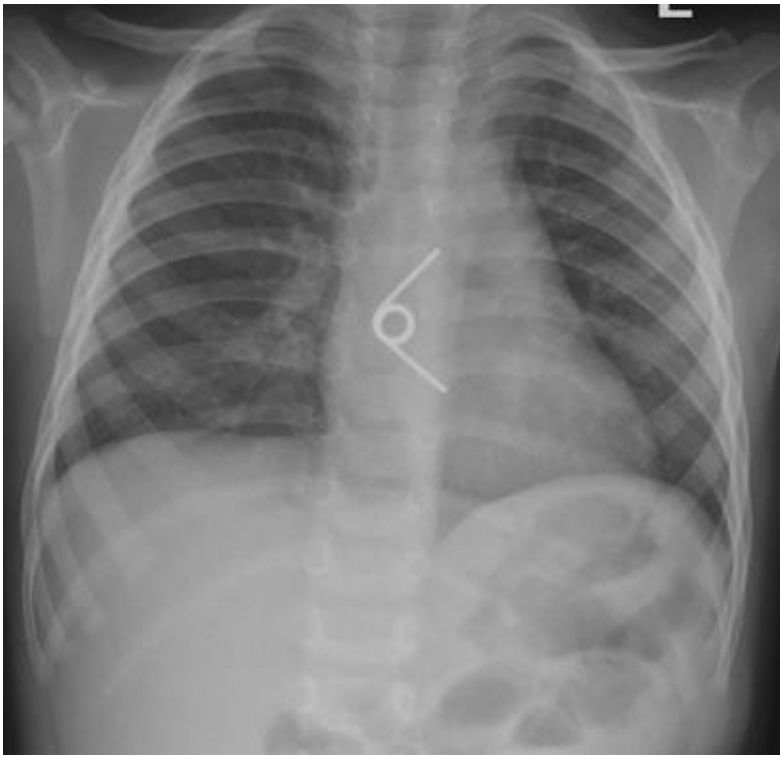

Figure 1. Chest x-ray showing FB in the oesophagus

Discussion

More than 75% of oesophageal foreign bodies are found in children aged 18 to 48 months, and the most commonly ingested foreign bodies are coins, followed by food particles and bones (2, 3). The remaining small proportion of offending objects includes buttons, plastic items, marbles, crayons, batteries, screws, and pins. Although ingestions are often asymptomatic and self-resolving, more than two thirds of children with oesophageal foreign bodies are brought to medical attention within the first 24 hours after the event (3, 4, 5). The patient presented did not have an obvious history of foreign body ingestion and had vague manifestations which delayed diagnosis despite being attended by experienced paediatricians. Excessive crying which was episodic, signified a sharp FB inflicted pain which favoured the diagnosis of sharp FB oesophagus. Symptoms and signs of ingested foreign bodies are often vague but may include vomiting, dysphagia, ptyalism, gagging, poor feeding, and irritability. Larger ingested foreign bodies may manifest with airway symptoms such as wheezing, stridor, cough, and recurrent aspiration of secretions. The child was thereafter referred to Otorhinolaryngology clinic where the otorhinolaryngologist for the first time diagnosed FB in the oesophagus. Oesophageal foreign bodies are a common emergency

department complaint, particularly in children. Most foreign body ingestions and aspirations are not witnessed by parents or other caretakers which was also the case in this patient.

Misdiagnosis is common, with up to 30% of children treated as other upper respiratory tract infections (URTI) or pneumonia (5, 6). Bigger or sharp objects can lodge or pierce in the oesophagus and cause pressure effect, perforation, pain or inflammatory reactions, mimicking infective disease processes (7, 8). Dense foreign bodies composed of metal may be readily seen on chest x-ray. Other foreign bodies may be radiolucent and invisible on x-ray. Work up for oesophagoscopy and foreign body (FB) removal under general anaesthesia (GA) was done which included complete blood count (CBC), C-reactive protein (CRP) and consent for the procedure under general anaesthesia (GA) was sought. The Rigid oesophagoscopy was done and a metallic foreign body (FB) found at the upper oesophagus and was removed successfully. Most ingested foreign bodies are retained at the level of the cricopharyngeus muscle (upper oesophageal sphincter), about 15% at the level of the aortic arch at the mid-esophagus, and the rest at the level of the lower oesophageal sphincter. Quarters are most commonly seen at the level of the cricopharyngeus, whereas smaller coins are seen more distally. Unrecognized or prolonged oesophageal foreign bodies may lead to devastating complications. These may include but are not limited to oesophageal diverticulum, mediastinitis, bronchoesophageal fistula, aortoesophageal fistula, and death (5,6,7,8).

Conclusion

Depending on the type of FB and duration they can be associated with devastating life-threatening complications. The condition can easily be missed by parents/caregiver and health care providers especially if there is no clear history of FB ingestion or specific clinical features. It should be in the differential diagnosis of all children presenting with vague features which might mimic upper or lower respiratory infections. The paediatricians and other health care providers should have high degree of suspicions in children with vague respiratory and abdominal complaints. Chest X-ray is useful in confirming most of chest pathologies including the aerodigestive foreign bodies.

Consent

Written informed consent was obtained from the parents for publication of this case report and accompanying images.

Competing interests

The author declares no competing interests.

Authors' contributions

ERM contributed to conception and design, carried out the literature search, manuscript preparation and manuscript review.

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Abbreviations

CBC Complete Blood Count
CRP C-Reactive Protein
EFB Oesophageal Foreign Body
FB Foreign Body
GA General Anaesthesia
URTI Upper Respiratory Tract Infection.

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