

# Esophageotracheas Fistula Secondary to a Button Battery Ingestion

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## **Abstract:**

*This is a case of 2 years and 6 months girl who has been suffering from shortness of breath, vomiting and dysphagia with solid food since one month. She was diagnosed initially in a local hospital with hyperactive air way disease and given sulbutamol with minimal improvement.*

*One day prior to presentation to our hospital she was eating (olives) then she aspirated, get choking and developed cardiac arrest.*

*CPR done in the local hospital and we have received her intubated.*

*Investigations and interventional procedures including a chest X-ray showed a total collapse of the right lung due to a round foreign body occluding g right main bronchus which was removed via a bronchoscopy with round metallic foreign body consisting with a button battery in the upper esophagus which was removed by oesophoscopy with communication with trachea.*

*This child would not have developed serious complications such esophagotracheal fistula if the foreign body had been identified and removed early on.*

## **Case Report**

This is a case of 2 years and 6 months girl who was referred to our Emergency Department intubated. She was suffering from shortness of breath, vomiting and dysphagia with solid food . At that time she was treated with sulbutamol as a case of hyperactive airway disease with no improve.

While she was eating olives one she was 2 days prior her presentation to our hospital she choked, became cyanosed apnic and collapsed. She resuscitated immediately at ED in the local hospital, intubated and transferred to our hospital.

Past medical history: she was healthy and never has similar attack of shortness of breath. No previous admissions. She is well developed and the first child of healthy non consequent parents.

## **Investigations and hospital course:**

She arrived intubated and vitally stable

Chest X ray showed round metallic foreign body in the upper esophagus and collapsed right lung (figure 1, 2)

CT Chest showed total collapse of the right lung due to round foreign body occluding right main bronchus. Round metallic foreign body at upper esophagus with communication with trachea. No mediastinal collection

Rigid oesophoscopy done and showed disc battery at upperesophagus about 15 cm from incisors. It found eroding the esophageal wall and after removal an opening of 1.5 cm between the esophagus and the trachea was discovered (large fistula). (figure3, 4)

Bronchoscopy showed an olive seed obstructing the right bronchus which has removed.

She improved. On gastrostomy for feeding

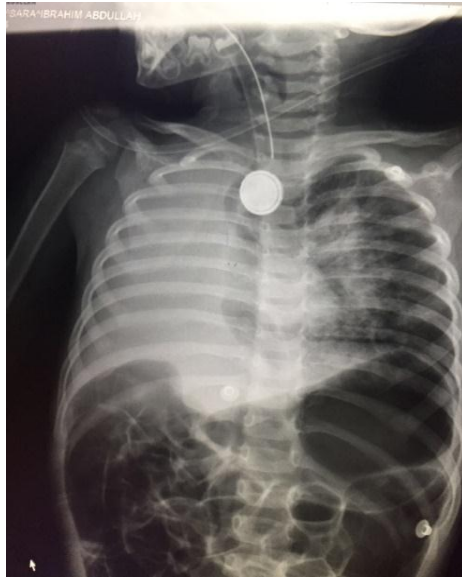


Figure 1



Figure 2



Figure 3

Foreign body ingestion is a frequent problem in pediatric age groups with 80% occurring at age between six months and three years. Most foreign bodies pass harmlessly and eliminated in the stool. Esophageal foreign body impaction is a rare presenting complaint due to late presentation after ingestion. Upper esophagus is the most site for impaction which represents the highest risk for injury.

The presenting symptoms can be completely asymptomatic or overt including stridor, shortness of breath, cough, vomiting, dysphagia, chest pain, abdominal pain and feeding refusal.

The child described here has ingested a button battery. The mechanism of injury in these cases is related to the generation of hydroxide radicals in the mucosa, resulting in a caustic injury from high pH, instead of an electrical-thermal injury.

This case indicates the importance of having high suspicion and early intervention. Animal data document that necrosis within the esophageal lumen may begin as soon as 15 minutes from the time of ingestion, with extension to the outer muscular layer within 30 minutes and significant esophageal stricture within 2 hours. When children present with GI or respiratory symptoms, the pediatrician should suspect foreign body ingestion. Parents of young children should be aware about hazards of ingestible items especially the ones that have a chemical composition like the button batteries.