

BACKGROUND:

- Button batteries are common in many household items and among the most frequently ingested items requiring hospital admission in children.
- Saliva allows current to flow between the positive and negative poles of the battery in an electrolytic reaction. The sodium hydroxide formed is a strong alkali and causes **chemical burns**. This can result in erosion through the oesophagus into surrounding structures such as the trachea, bronchi, lungs, pleural cavity and aorta.
- Damage can occur **within 2 hours** of ingestion **although life threatening haemorrhage can occur up to 28 days later, even if the battery has been removed.**
- **Risk factors** for injury include oesophageal location, size (low risk if <12mm, higher if >20mm), prolonged mucosal contact and younger age.
- The risk of injury is low after the battery has passed into the stomach.
- History gathered from the parents/guardian should include a description of the battery (with uningested batteries obtained if possible), number of batteries ingested and history of oesophageal disease or surgery.

A BATTERY LODGED IN THE OESOPHAGUS IS A MEDICAL EMERGENCY EVEN IF ASYMPTOMATIC

There is a risk of death or serious harm from delays in recognising and treating ingestion of button batteries

SUSPECT BUTTON BATTERY IF:

- Symptomatic patient with no history of ingestion
- unexplained airway compromise, drooling, vomiting, choking, coughing,
- Presumed "Coin" Ingestion
- Unexplained GI bleed in a child < 6yrs of age

INGESTION CONFIRMED OR SUSPECTED

- Maintain airway, breathing and circulation
- NIL BY MOUTH
- Resuscitate as necessary
- Involve paediatric and critical care teams *early*

X-ray (chest / abdo / neck) to determine location

O E S O P H A G E A L

REQUIRES URGENT TRANSFER FOR REMOVAL!

- Contact KIDS on **0300 200 1100** immediately
- KIDS will conference surgical team and other speciality team at BCH
- Arrange Blue Light transfer via ambulance service with appropriate staff.
- KIDS will arrange bed.
- The child to be transferred to ED if no bed is available

B E L O W T H E D I A P H R A G M

- Contact BCH surgical team immediately
- Surgical team may suggest a follow-up XR within 24-48h to check the battery's progress.
- Parents / Guardians should be advised to return urgently if the child develops signs of bleeding or obstruction.