# Princess Margaret Hospital for Children Emergency Department Guideline

PAEDIATRIC ACUTE CARE GUIDELINE			
Inhaled Foreign Body			
Scope (Staff):	All Emergency Department Clinicians		
Scope (Area):	Emergency Department		

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# **Inhaled Foreign Body**

• If there is upper airway compromise, refer to choking child guideline

#### Assessment

#### History

- Sudden respiratory arrest and collapse is caused by complete obstruction of the upper airway by an inhaled foreign body.
- There may be a history of choking, gagging or coughing during eating or playing, and sometimes parents will recall seeing the child with something in their mouth before the event.
- Occasionally, children who were not previously suspected to have inhaled a foreign body may present to ED with persistent cough or wheezing.
- Pneumonia not responding to treatment or recurrent pneumonia in the same lobe / segment should raise concerns about an inhaled foreign body.

#### **Examination**

- Stridor indicates a partial obstruction of the upper airway by an inhaled foreign body
- Clinically there may be asymmetric chest movement and/or asymmetric breath sounds
- A foreign body acting as a ball valve may cause air trapping with subsequent hyperinflation of the particular lung/lobe and deviation of the trachea
- There may be localised wheezing, crackles or decreased breath sounds, or signs of consolidation suggesting collapse of a lobe/segment
- In some children there will be no abnormal findings

### **Investigation**

- Radiological studies are only indicated if there is doubt regarding the presence of a foreign body.
- Children with history and examination findings suggestive of inhaled foreign body should be referred to the respiratory specialist (refer to <u>Management</u>)

If history and/or examination findings are inconclusive, imaging should be performed as follows:

- In hours: CT chest (request to state "?bronchial foreign body"). This is based on sensitivity and specificity approaching 100% with a radiation dose similar to conventional chest X-Ray.
- **After hours:** Inspiratory and expiratory PA chest X-Rays, plus a lateral chest X-Ray looking for:
  - An opaque foreign body may occasionally be seen. The lateral CXR will confirm its presence in the bronchial tree as opposed to the oesophagus.
  - Segmental or lobar collapse
  - Difference in lung expansion between the two sides
  - Localised hyperinflation or interstitial emphysema may result from a ball valve obstruction
  - Be aware that CXR may be normal

## Management

#### For suspected upper airway foreign bodies

- Allow the child to sit upright in the position in which they are most comfortable
- If airway is compromised refer to **Choking** guideline
- Urgent referral to ENT

# Indications for referral to respiratory medicine for suspected lower airway foreign bodies

Cases which meet **2 out of 3** of the following criteria:

- 1. Suggestive history and/or symptoms that could be explained by inhaled FB
- 2. Examination findings compatible with an inhaled FB
- 3. Radiological changes compatible with an inhaled FB

The respiratory team will contact ENT if a bronchoscopy is indicated.

## Fast from time of clinical suspicion

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