

PAEDIATRICS

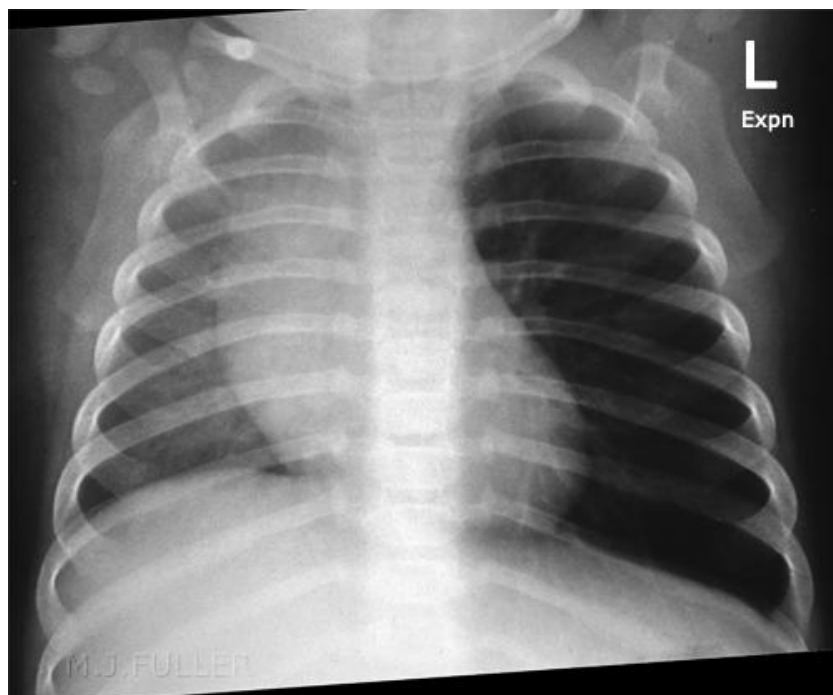
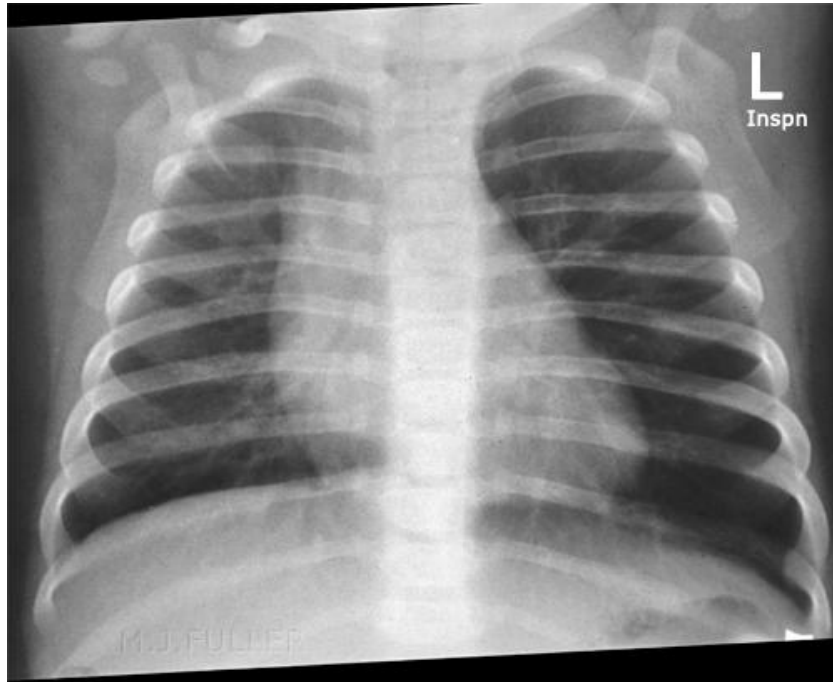
A CASE OF RESPIRATORY DISTRESS

A 7 month old boy presents to A&E with respiratory distress while playing with a plastic toy. His parents heard him crying and found him with laboured breathing.

He is distressed, coughing & crying. HR 198, CRT <2, RR 60, SpO2 93%, Temp 36.3

There is reduced air entry and expansion on the left with wheeze. The trachea is central.

You perform a CXR. What is your diagnosis? How will you manage him?



Discussion

It is likely that this boy has a **foreign body in the left main bronchus**, presumably part of the plastic toy he was playing with.

During inspiration the diameter of bronchi/bronchioles increases; during expiration diameter decreases. For this reason inhaled foreign bodies can cause a one way valve effect allowing air entry during inspiration but trapping it during expiration.

In this CXR no foreign body can be seen and the inspirational film looks normal. However, in expiration:

- Left lung volume is greater
- There is no upward movement of the diaphragm.
- There is movement of the mediastinum to the right (because during respiration pressure in the left chest remains constant while on the right it decreases).

Clinical Features of inhaled foreign body:

- Sudden onset in previously well child
- Observed coughing, choking or gagging while eating or playing
- Stridor (partial upper airway obstruction)
- Silent chest, paradoxical breathing (complete upper airway obstruction)
- Wheeze
- Chest wall recessions
- Reduced air entry in some or all of the affected side
- Hypoxia, tachypnoea, cyanosis
- May be asymptomatic with no clinical signs. Aspiration may also be unwitnessed.

Management:

If upper airway FB encourage cough. If the cough is ineffective give 5 back blows followed by 5 thrusts. If unconscious give 5 breaths then start CPR.

In lower airway FB treatment should be supportive with supplemental oxygen and referral to a paediatric bronchoscopist.

Complications:

- Pneumonia
- Bronchiectasis if chronic or recurrent infection (FB undetected and chronic)
- Tracheitis
- Lobar collapse/atelectasis