

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Inhaled Foreign Body

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Description

Sudden onset of respiratory difficulty with coughing, stridor or wheezing

Occurs most often in previously healthy people

Highest incidence in children (10 – 36 mo)

Where there is serious obstruction of the airway, immediate intervention can be life-saving.

Symptoms

- *1/3 children who later prove to have aspirated have no history of inhalation of a foreign body.*
- *Choking: often holding or pointing to the throat if obstruction is complete or nearly complete*
- *Sudden onset of wheeze or cough*
- *Respiratory difficulty*
- *Recurrent chest infections*
- *Any unexplained Respiratory complaint*

Signs

- *Presentation ranges from cardiac arrest to asymptomatic*
- *Acute total respiratory obstruction in a few cases*
- *Marked respiratory effort*
- *A varying degree of respiratory obstruction; a partial obstruction is more common.*
- *Poor or asymmetrical chest expansion*
- *Tracheal deviation if complete obstruction with ball-valve obstruction of one mainstem bronchus*

Signs cont.

- *Reduced air entry on auscultation; may be unilateral if the foreign body is distal to the carina*
- *Hyper-resonance on percussion on the side of the foreign body (if ball-valve obstruction is present)*
- *Cyanosis, alterations in consciousness, and circulatory collapse*
- *Rales - if pneumonia develops distal to the obstruction; may present days, weeks, or even months after the aspiration episode*

Examination

- *Check ABCs*
- *Check the patient's color*
- *Examine the pulse and measure the blood pressure*
- *Is the patient more comfortable leaning forward?*
- *Is the patient fully conscious?*

Examination cont.

- *Assess the patient's breathing*
- *Examine the trachea*
- *Percuss the chest*
- *Listen to the chest*
- *Check for fever*



Tests

- *Do not allow investigation to delay the relief of the obstruction in the choking or seriously obstructed patient.*
- *The main investigation is the chest X-ray. Anteroposterior and lateral views should be obtained and, if there is a suspicion of a one-way valve effect of intermittent obstruction, obtain inspiratory and expiratory views.*
- *Bear in mind the possibility of radiolucent objects.*
- *Look for hyperinflation, lung or lobe collapse, and infiltrates .*

CXR

- *The foreign body may itself be visible on the X-ray, but many inhaled objects are not.*
- *The chest X-ray may be normal even in the presence of a foreign body.*

Abnormal CXR

- *Objects lodged peripherally can obstruct the outflow of gas during expiration, trapping air in the affected portion of the lung.*
- *A chest X-ray taken with the affected side downmost might be helpful. In these instances, the mediastinum will not shift toward the dependent side if there is a foreign body causing a ball-valve effect on that side.*
- *Inspiratory/expiratory films may also be helpful. An obstructed area will not deflate as much as the normal lung, and so will remain inflated in expiration and the mediastinum will shift away from the side with the foreign body.*

Abnormal CXR

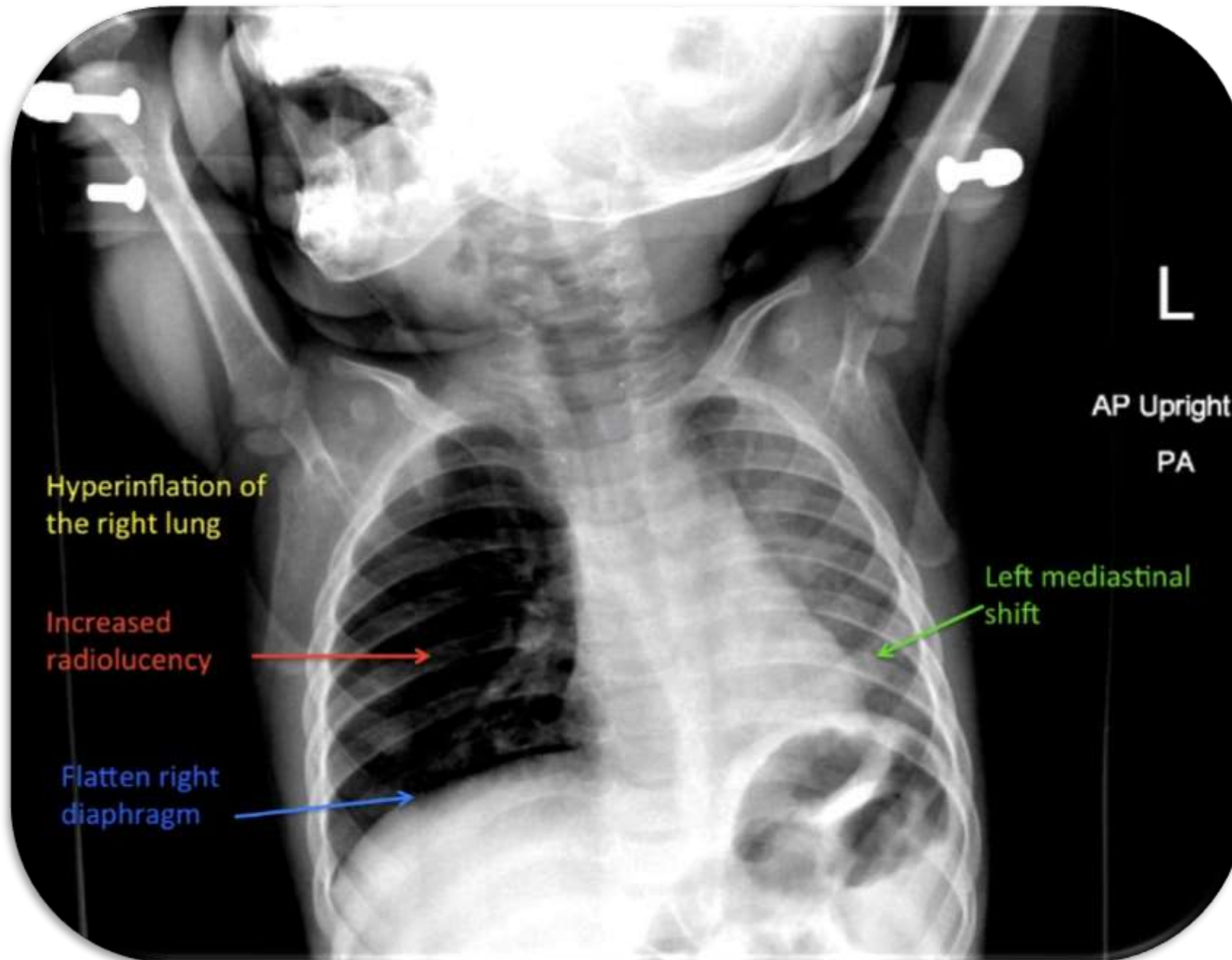
- *There may also be a mediastinal shift away from the obstruction during normal respiration.*
- *Where there is recurrent infection, the chest X-ray might show signs of inflammation, abscess, or infiltrate.*
- *Keep in mind the possibility that an aspirated foreign body may not be visible on X-ray.*

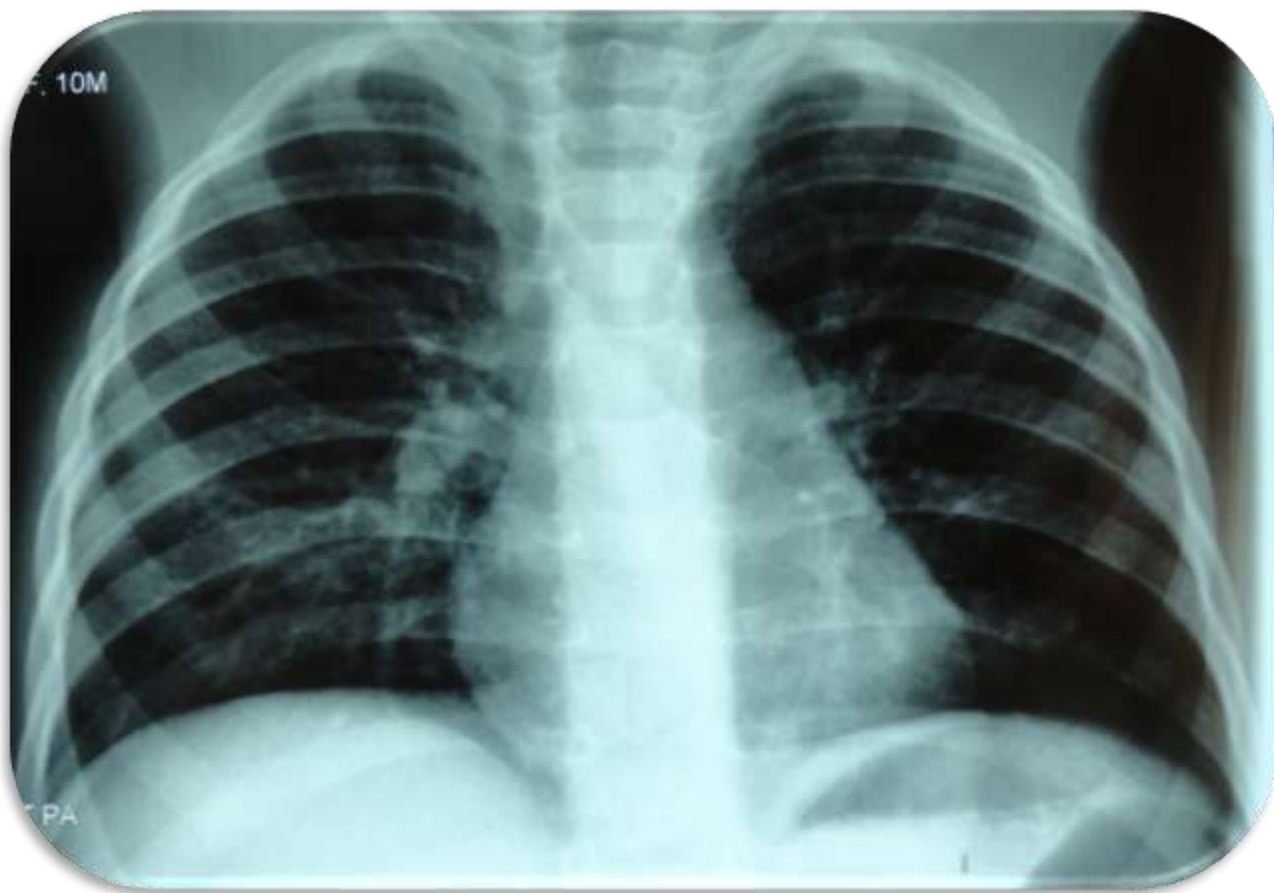
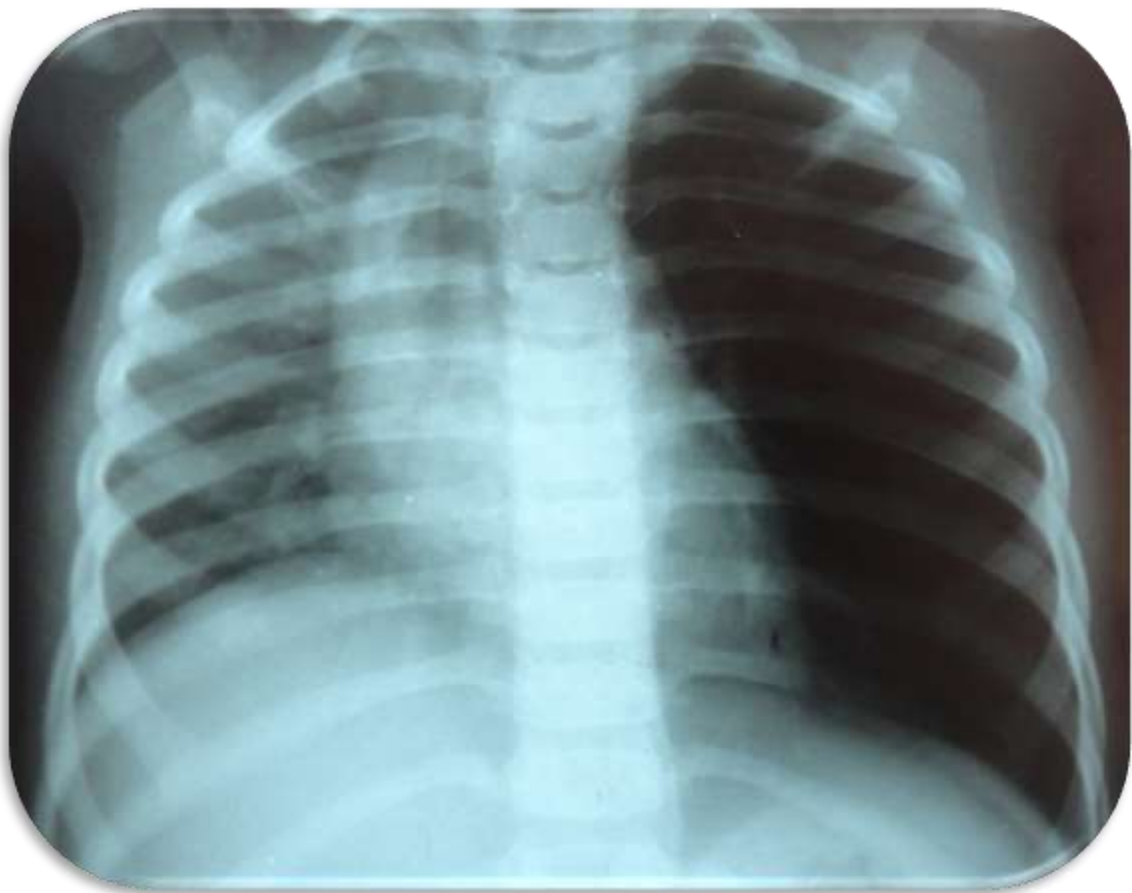
Never

- *Never attempt to manipulate or instrument a child's airway if the child is able to breathe spontaneously and is alert.*
- *Never perform a blind finger sweep. Always visualize before trying to remove a foreign object in the airway*

Primary prevention

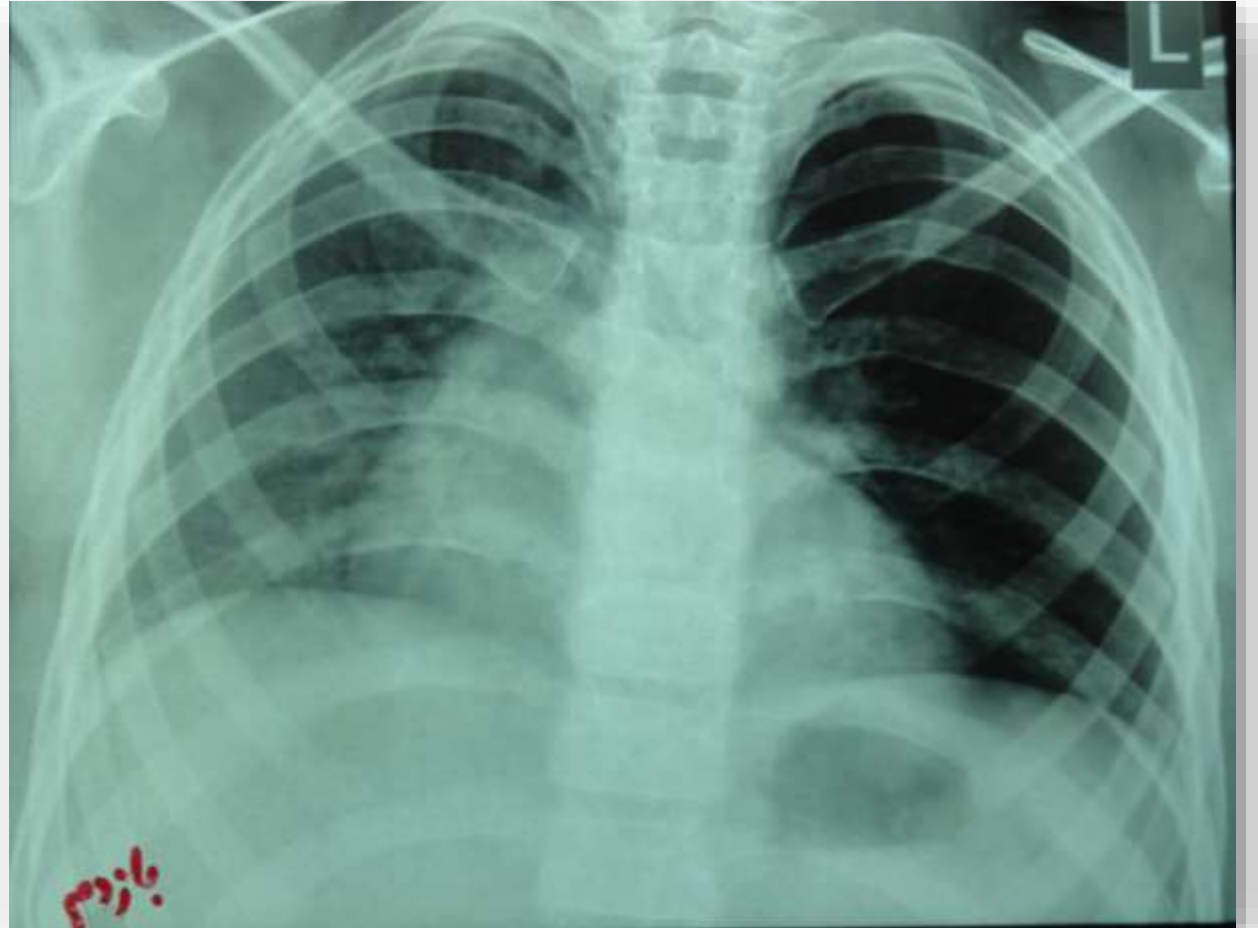
- *Education is the most important measure in this regard:*
- *Keep small objects from small children .*
- *Do not allow children to eat nuts, popcorn, hot dogs, raisins, hard candies, or other small, hard foods that could obstruct their airways.*
- *Keep rubber gloves and balloons away from small children.*
- *Always chew food properly.*



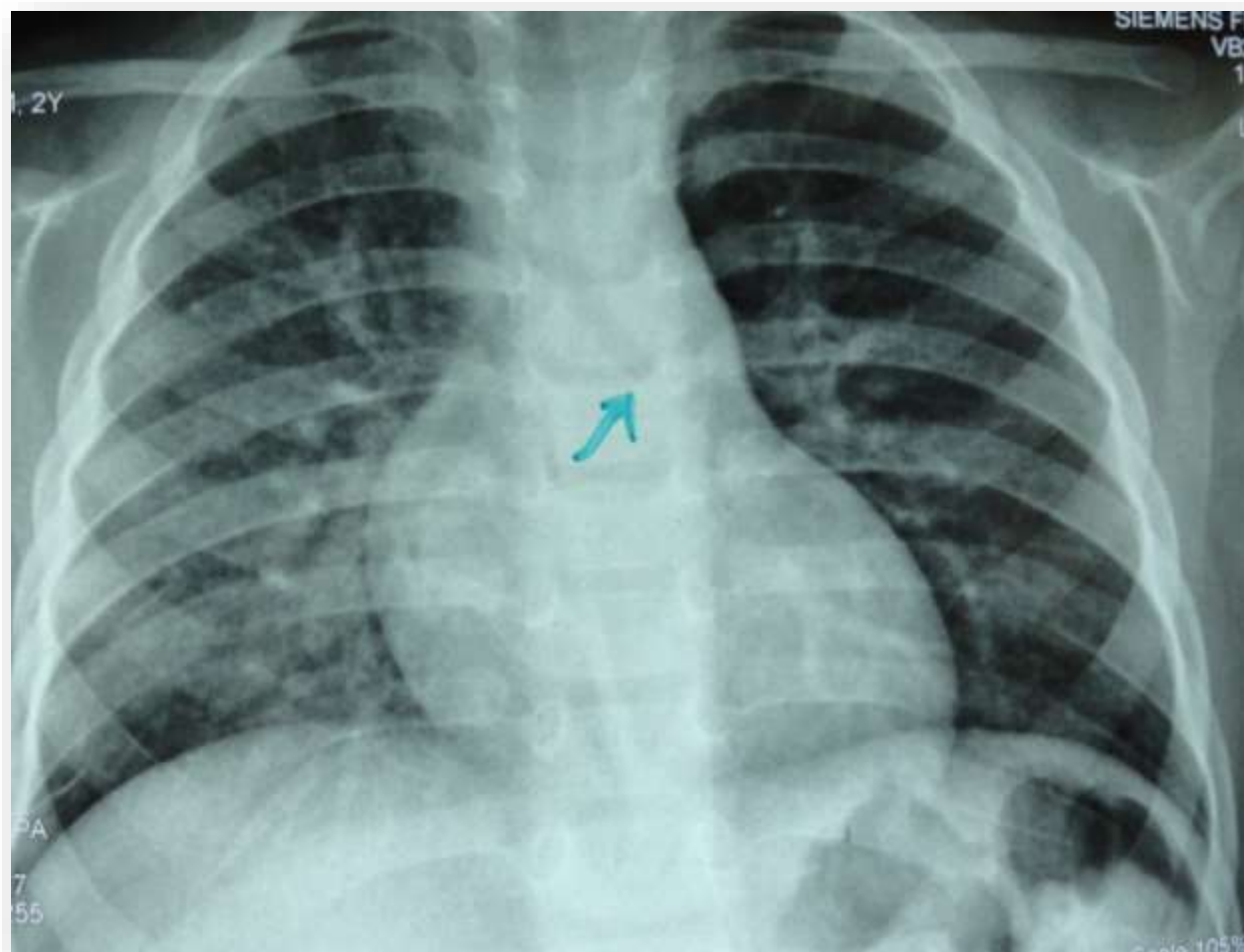




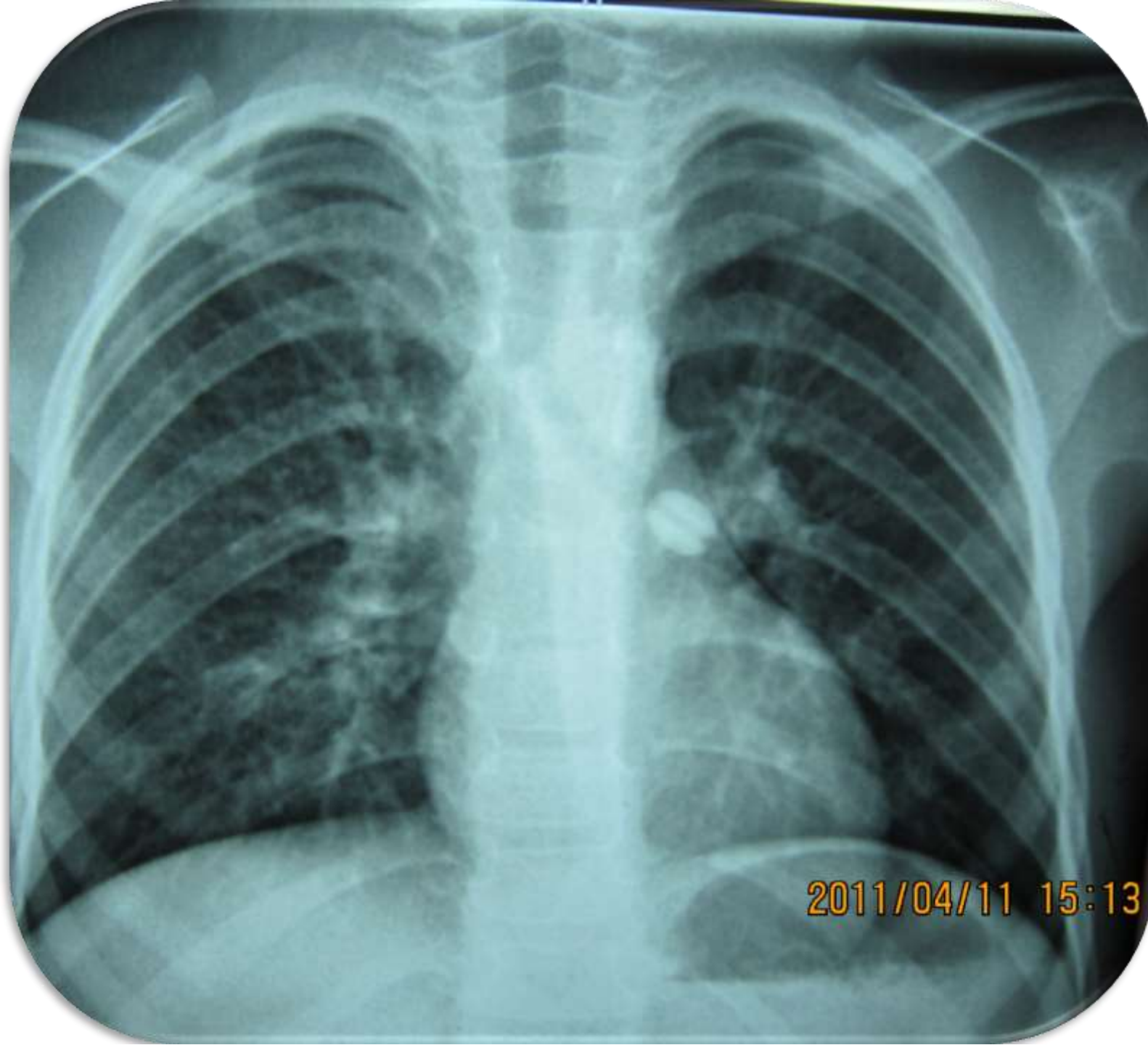
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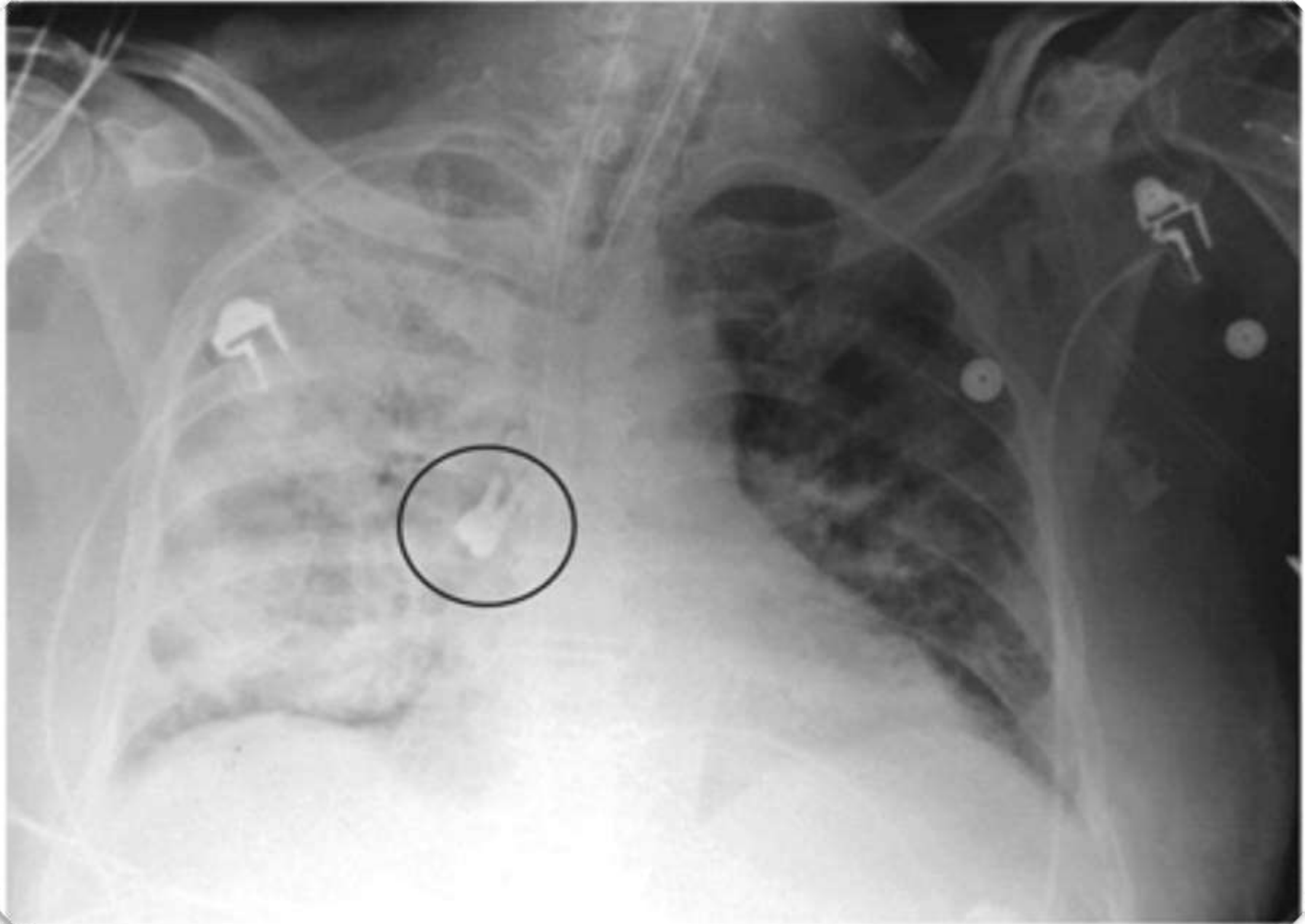


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Immediate action

If there is stridor, inability to speak, or total obstruction to airflow, start maneuvers to relieve the obstruction.

Techniques for immediate treatment of the choking patient

The choice of technique depends upon the situation, size, and age. •

(The patient has a poor cough, increasing respiratory difficulty, or a high-pitched noise on inspiration indicating a major degree of obstruction, or there is absence of speech, breathing or cough indicating a total obstruction)

(Patient is standing or sitting)





(Infants - under age one year)



(Infants - under age one year)



(Infants - under age one year)



(Older children)



Failure

- If these procedures fail to relieve the obstruction, and the patient is in danger of asphyxiation, then a surgical airway is indicated

Cricothyrotomy

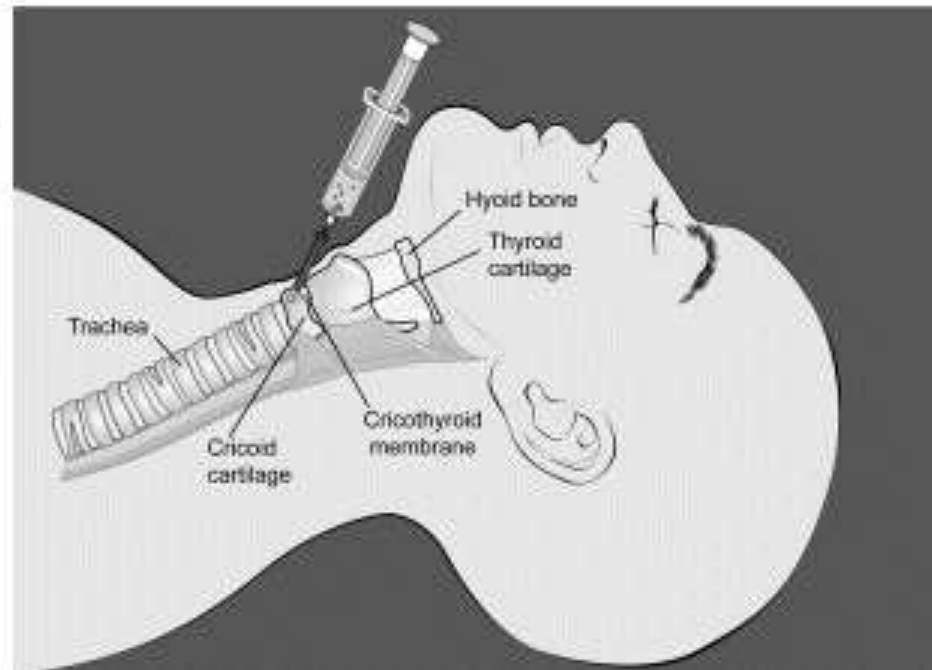
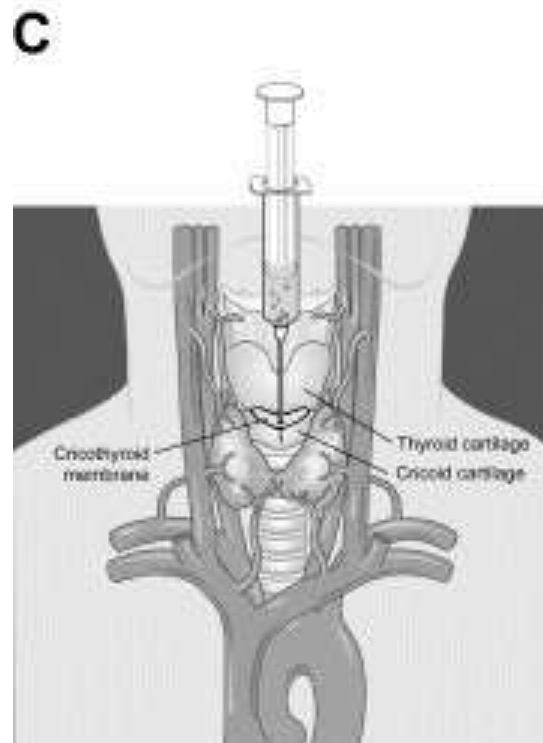
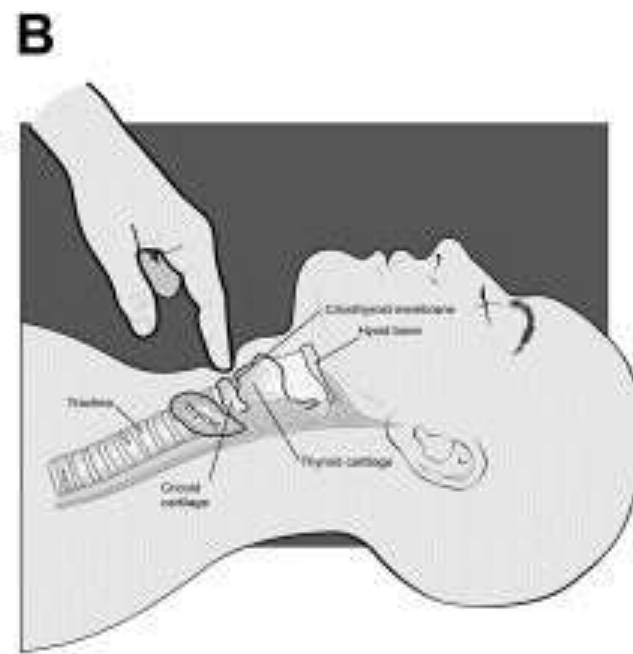
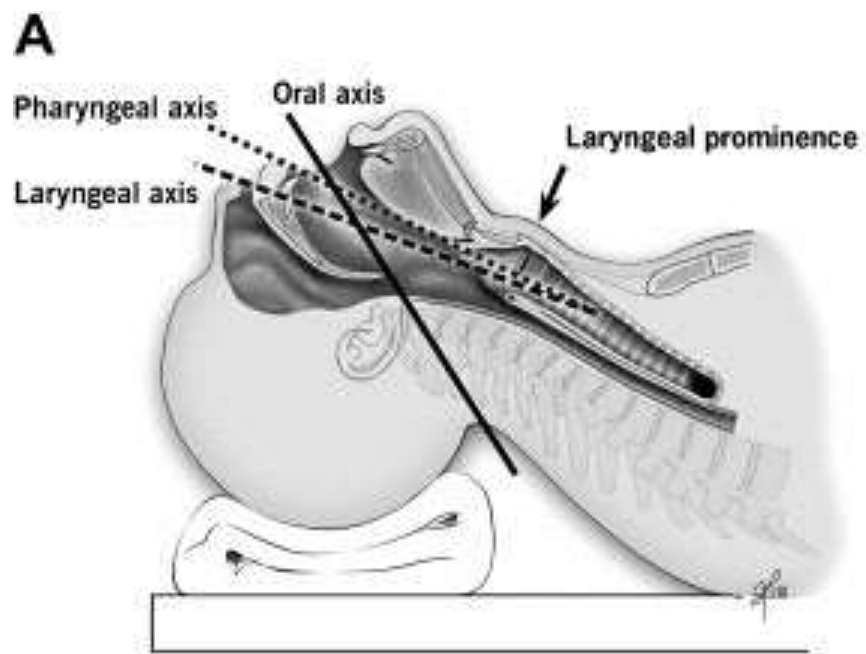
Creation of an airway through the cricothyroid membrane can be achieved using a cannula (needle cricothyrotomy) or by open surgical cricothyrotomy.

**The latter is preferable if the equipment and expertise is available.
In younger children, a needle cricothyrotomy may be the only emergency airway management alternative**

Needle cricothyrotomy

Needle cricothyrotomy involves inserting an intravenous cannula through the cricothyroid membrane into the trachea.

It is only suitable to maintain oxygenation for 10-20min as carbon dioxide builds up and elimination is a problem because the patient is not ventilating



Complications of needle cricothyrotomy

Asphyxia

Aspiration

Esophageal perforation

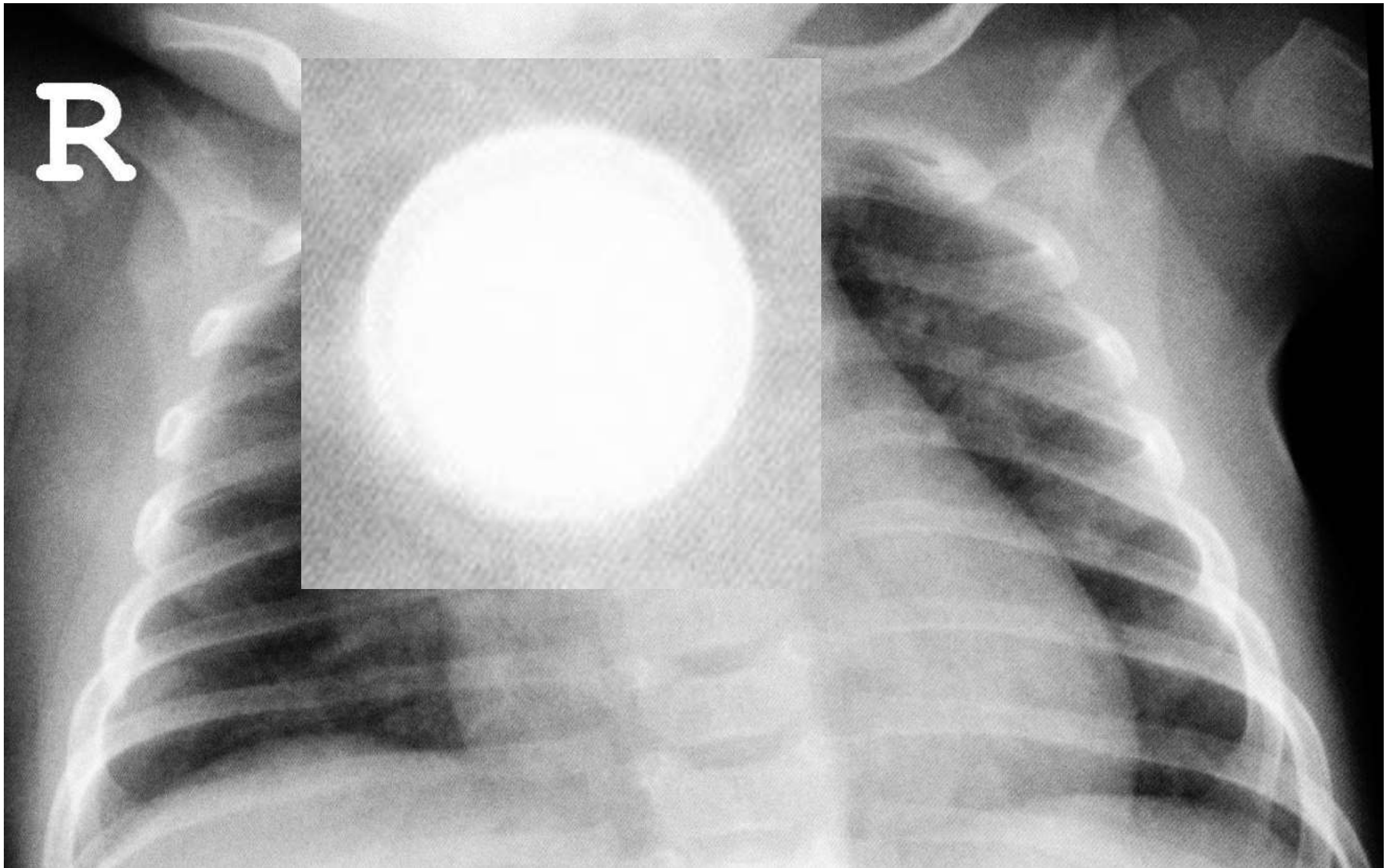
Hemorrhage

Posterior tracheal wall perforation

Subcutaneous or mediastinal emphysema

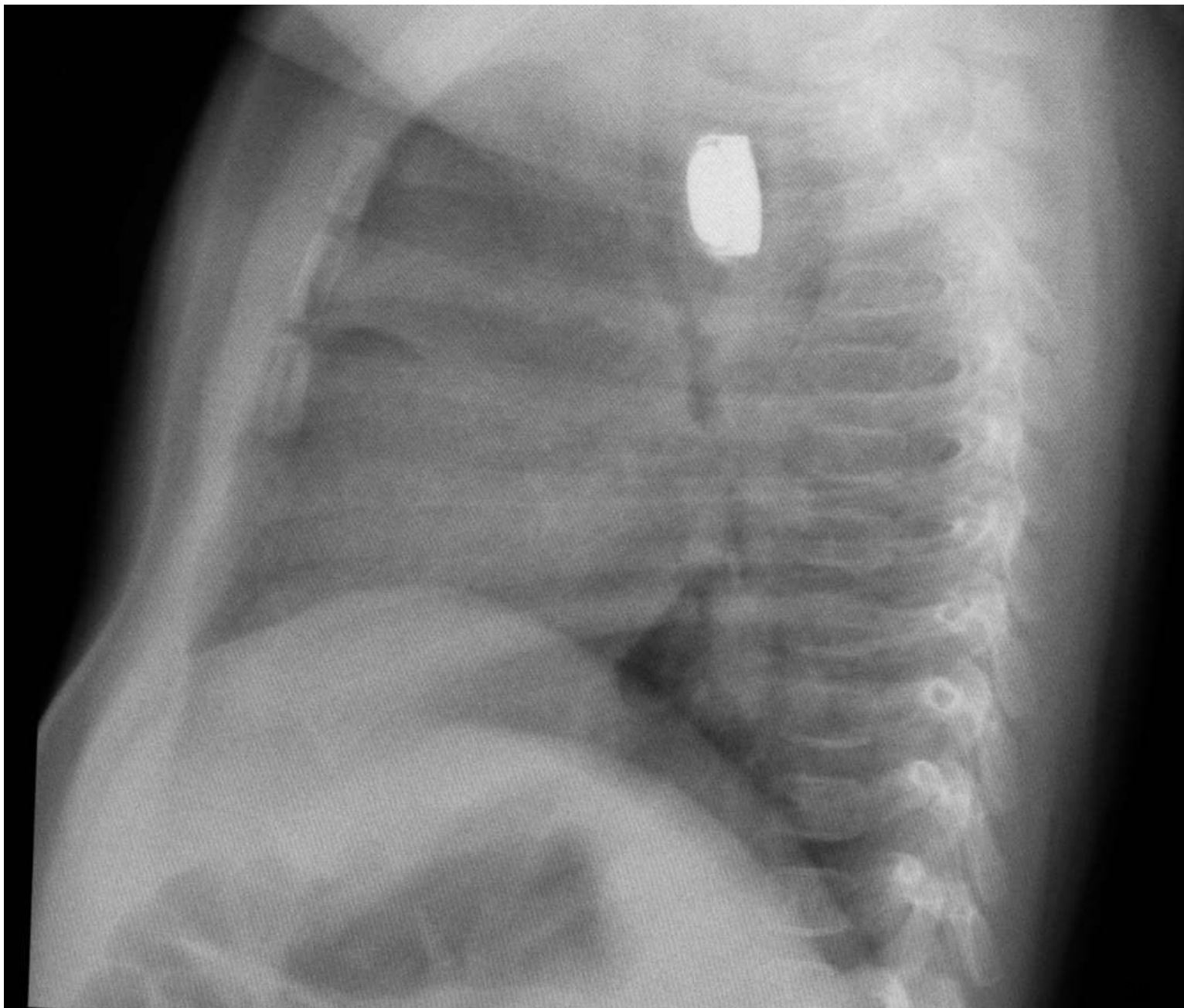
Inadequate ventilation: hypoxia and death

Infection



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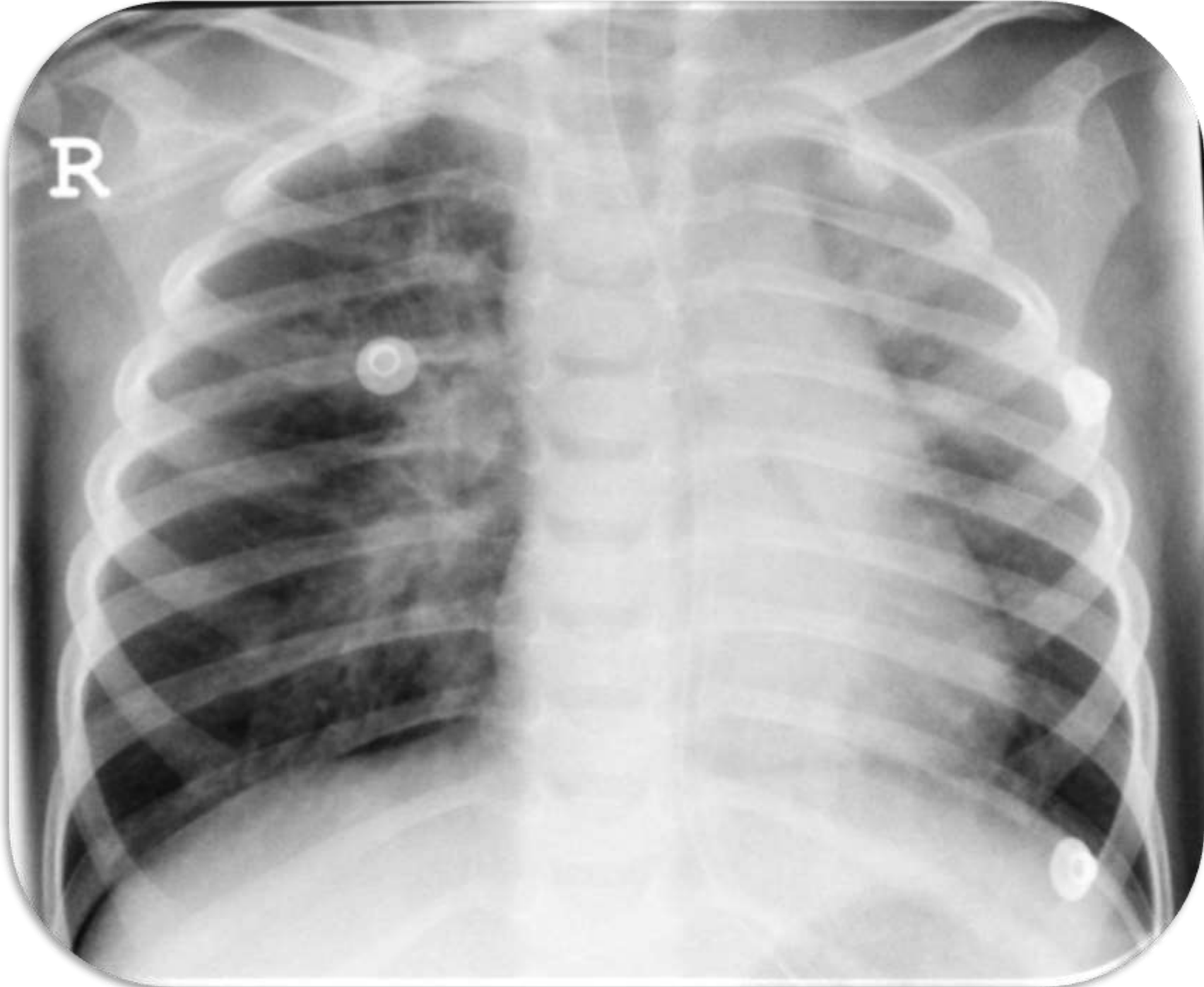
12.77mm



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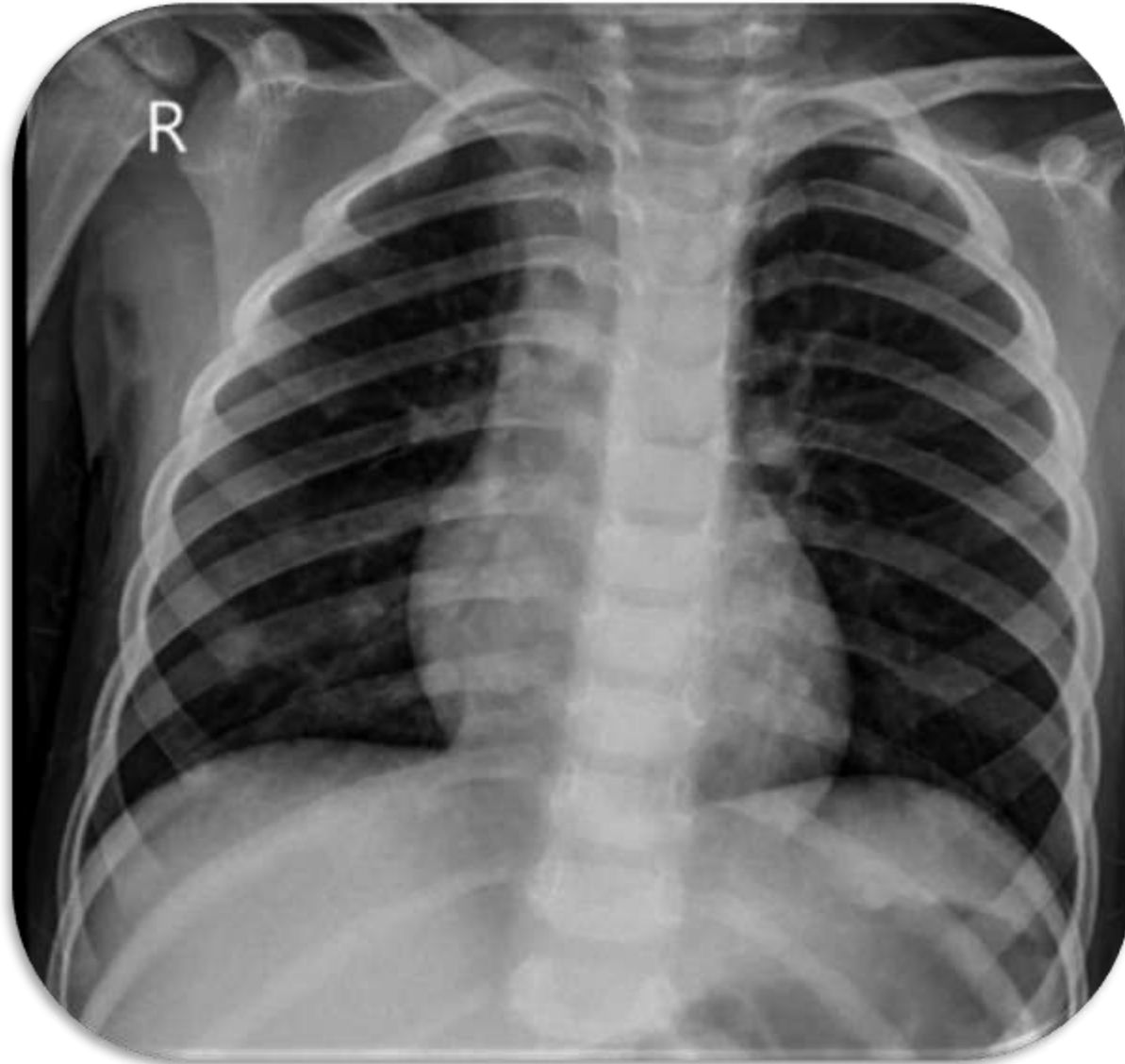
After remove of FB



Foreign body aspiration



After Bronchoscopy & removal of foreign body



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خدا قوت

