



J Emerg Trauma Shock. 2013 Jan-Mar; 6(1): 61–62.

PMCID: PMC3589865

doi: [10.4103/0974-2700.106331](https://doi.org/10.4103/0974-2700.106331)

All that wheezes is not asthma

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Sir,

A 50-year-old female recently diagnosed with bronchial asthma presented with acute dyspnoea and wheeze. She did not respond to conventional treatment and progressed to acute respiratory failure requiring ventilation. The initial chest radiograph [Figure 1] was unremarkable. Two days later the patient developed left lung atelectasis [Figure 2], fiber optic bronchoscopy revealed a foreign body [Video 1], a betel nut in the left main bronchus. The betel nut [Figure 3] was removed and the patient was extubated five days later. The patient was a betel nut chewer and had aspirated it. Wheeze would have been heard due to a check-valve mechanism of airflow past the foreign body, and eventually a stop-valve mechanism, resulted in atelectasis [Figure 4].

[Click here to view as Video 1](#)

Airflow through a narrow airway generates a coarse whistling sound, which is known as wheeze and is often equated with asthma. Chevalier Jackson recognized “all that wheezes is not asthma” and described the above mentioned mechanism of bronchial obstruction by a foreign body.[1,2] Another cause of wheeze that is at time misdiagnosed as asthma is pulmonary edema. Described as “cardiac asthma”, wheeze is heard due to bronchial wall and intraluminal edema fluid cause narrowing of the small airways.[3] Other processes that narrow the diameter of an airway inducing wheezing include chronic obstructive pulmonary disease, endobronchial or endotracheal stenosis, buildup of airway secretions, endobronchial obstruction, upper airway obstruction, and allergic reactions.[4]

Establishing that wheezing is not due to asthma requires attention to the patient's history, physical examination results, and response to therapy.

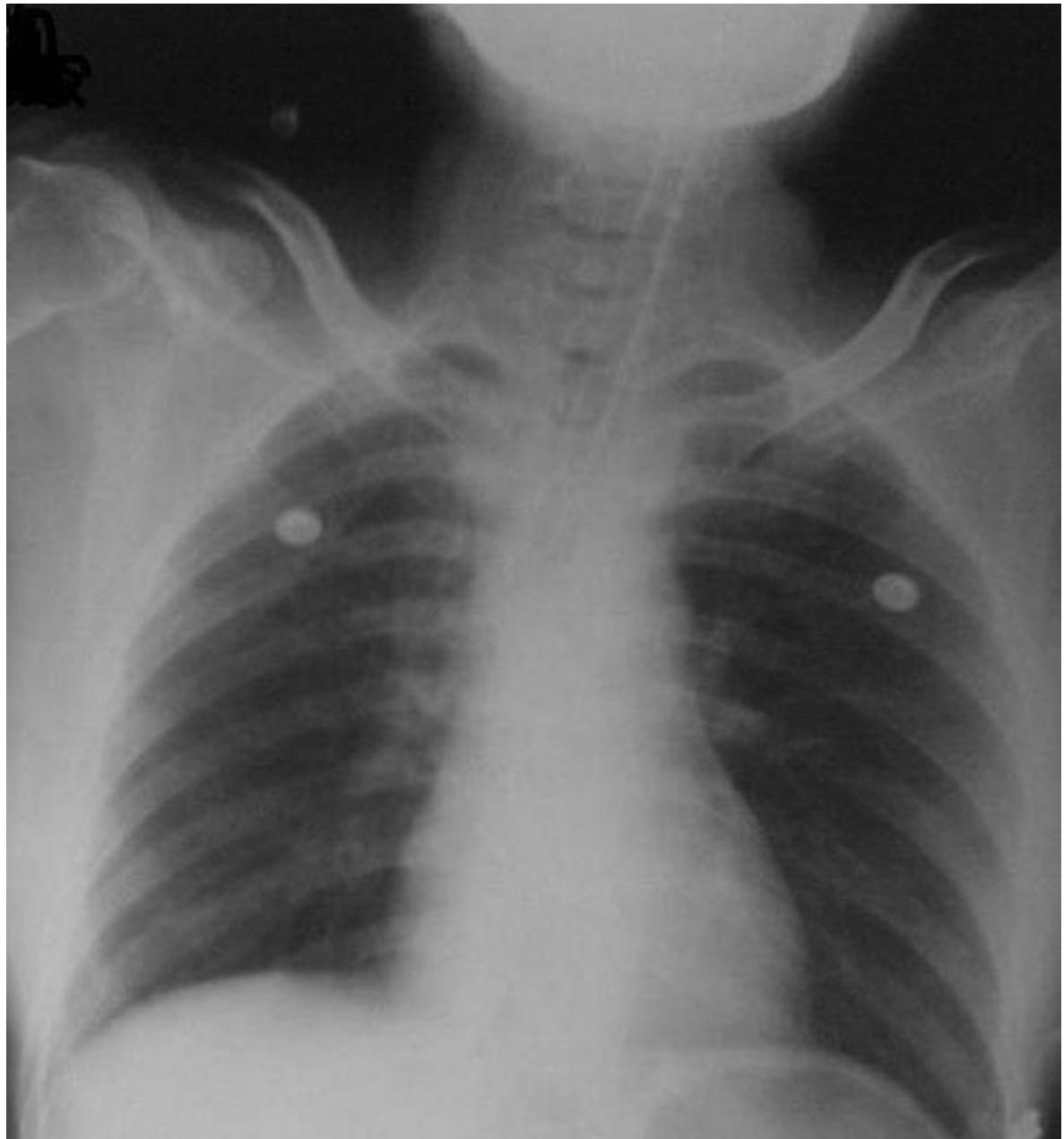
Video available on www.onlinejets.org

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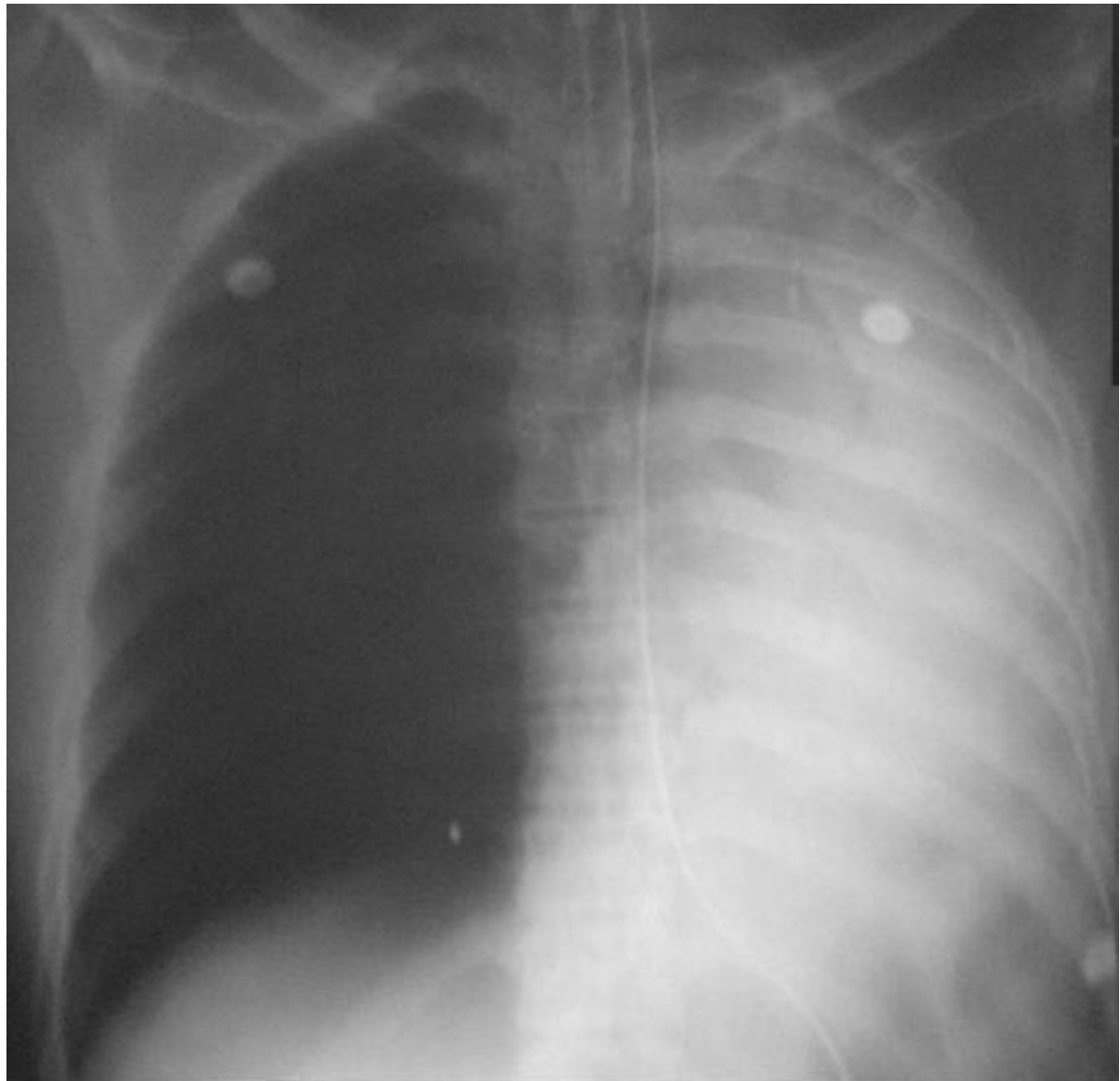
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Figures and Tables

Figure 1

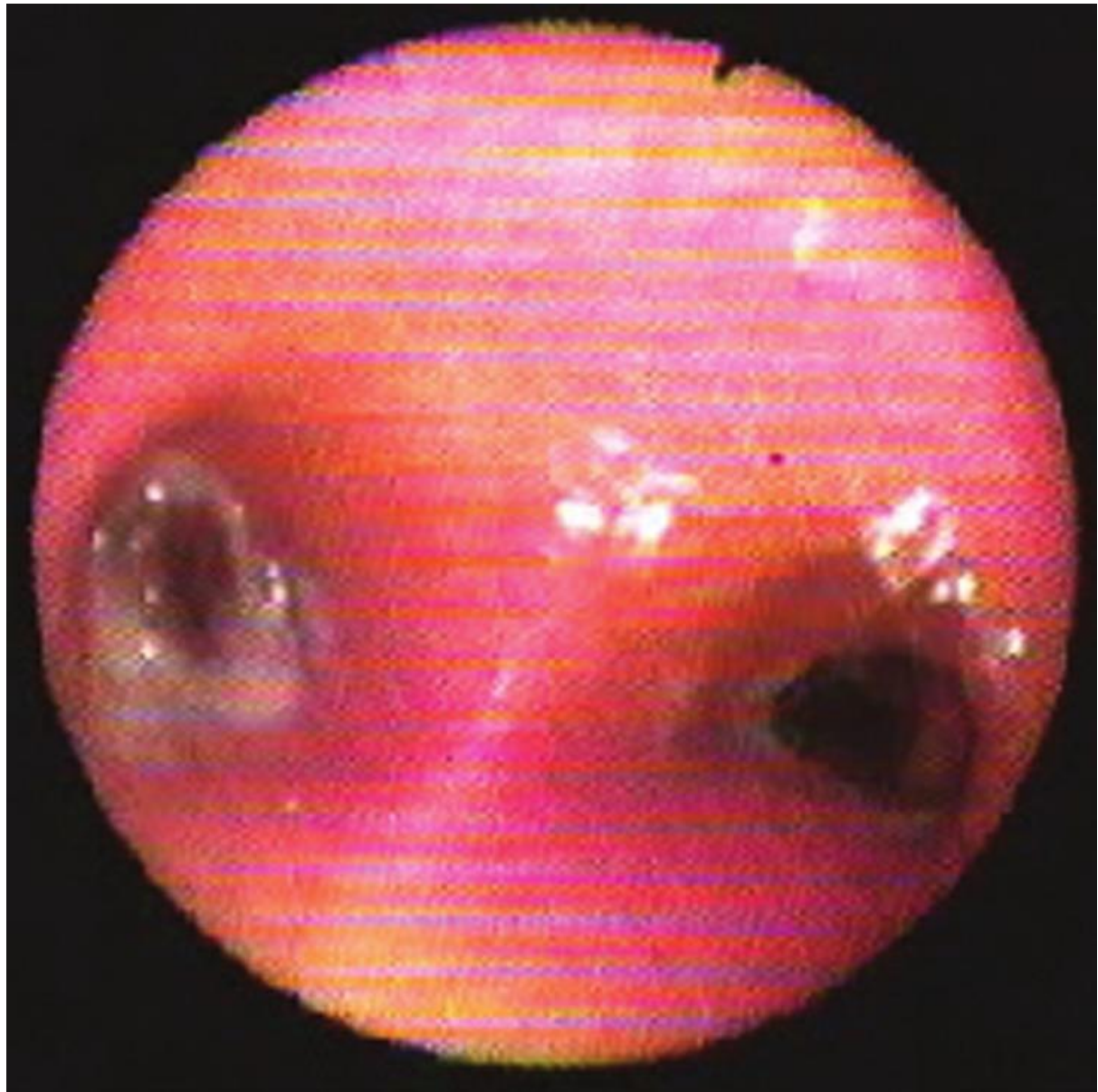


Chest radiograph on day 1 immediately after intubation unremarkable

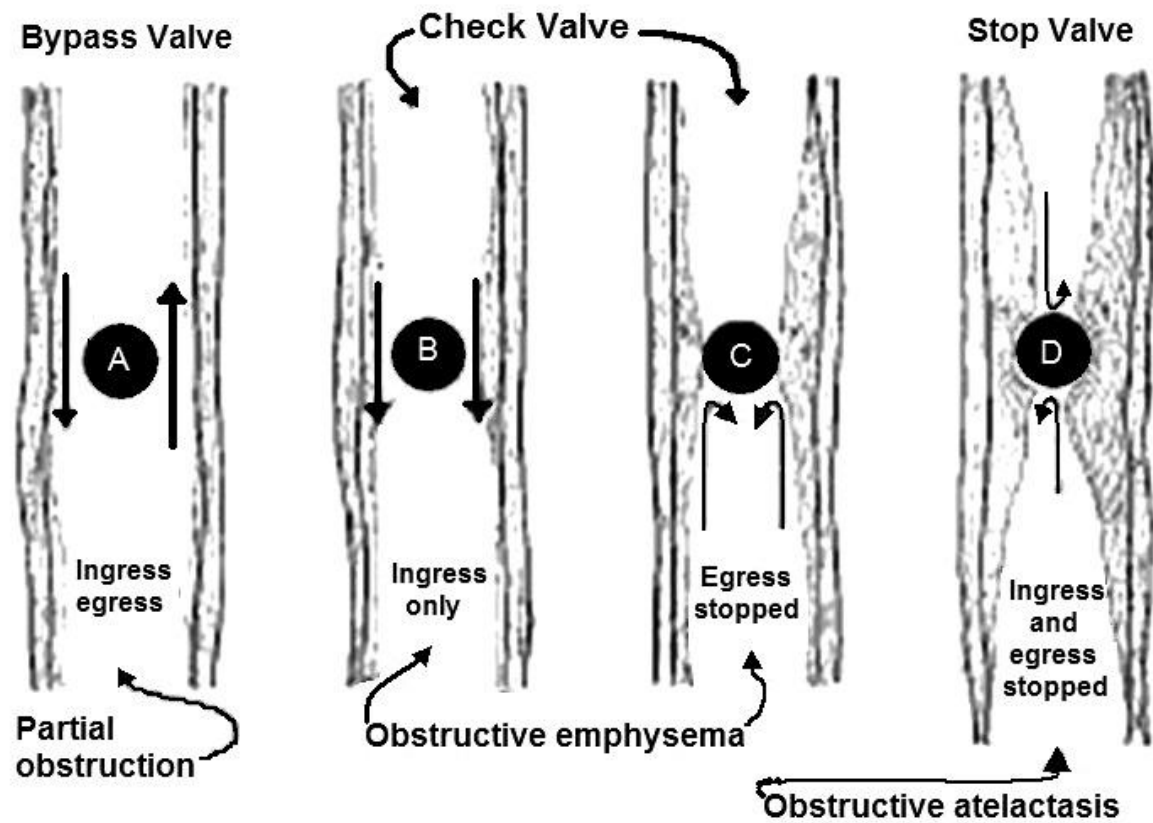
Figure 2

Chest radiograph on day 3, patient on ventilator, showing left ling atelectasis

Figure 3



Emergency bronchoscopy revealed a foreign body in left main bronchus

Figure 4

Pathogenesis of wheeze heard would have been due to a bypass/check-valve mechanism of airflow past the foreign body initially, and eventually a stop-valve mechanism, resulting in atelectasis