

Pneumonectomy: Could it Have Been Another History?

To the Editor:

Peters et al.¹ have recently reported a case of pleural empyema with necrotizing pneumonia that required multiple interventions and surgery, finally leading to pneumonectomy due to persistent air leaks. Treatment of empyema is controversial, but a more conservative approach has been supported by recent reports.^{2,3} Reading this case makes me think about possible alternatives of management during the first 2 weeks after admission that I bring to collective reflection.

First of all, should that pleural empyema have been drained? From our experience and aforementioned articles, it depends on the need to alleviate the respiratory distress or to improve the hemodynamic status. The boy had a 3-week history of lethargy and shortness of breath: what about his vital signs, work of breathing, need for oxygen, or other signs of severe disease at the point of arriving at the hospital? This is not clearly stated in the article.

Secondly, pneumothorax was certainly related to the chest tube insertion because no air was found on the previous chest radiograph and ultrasound, and bubbling was noted at the end of the procedure. Pneumothorax has been reported as a complication of drainage procedures for empyema.³ Maybe a pneumothorax was going to happen anyway. . . but maybe not.

Thirdly, fever can persist 1–2 weeks in children with pleural empyema even if it has been drained.⁴ Necrotizing pneumonia usually has a complete restitution of lung parenchyma.⁵ Was it really necessary to remove the necrotic lung, preventing any possibility of a natural recovery? Could that necrotic tissue be the best glue for the treatment of air leaks? As a matter of fact, some right lung tissue was surprisingly growing a few months after the second pneumonectomy. Lung growth occurs in normal children during the first years of life, and it has even been observed to occur in adults,⁶ reflecting the ability of this organ for recovering.

We have attended a previously healthy 3-year-old girl presented with cough, rhinorrhea, and fever for 10 days. She had been treated for 7 days with amoxicillin. Chest radiograph showed right lung collapse and an air–liquid level occupying the right thorax (Fig. 1). Computed tomography confirmed the hydropneumothorax and disclosed the presence of cystic lesions in the collapsed lung (Fig. 1), suggesting necrotizing pneumonia. Cefotaxime was given and a chest tube was placed, yielding a sterile pyo-hematic fluid. Right lung expanded very slowly in the following days and a radiograph was almost normal 5 months later, with minimal

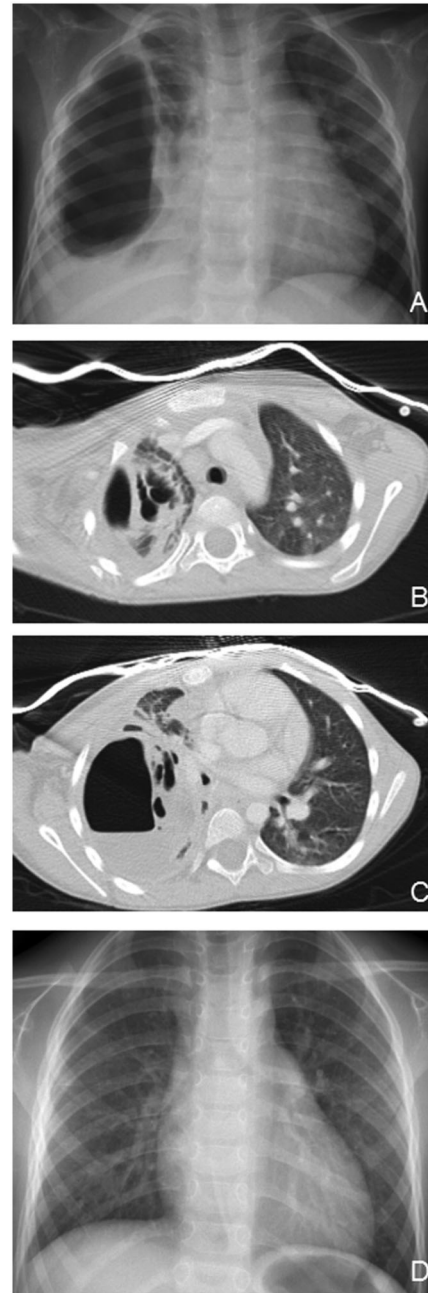


Fig. 1. Radiography (A) and CT scan (B,C) showing massive hydropneumothorax and necrotizing pneumonia. Complete radiographic resolution 5 months later (D).

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pleural thickening (Fig. 1). We have learnt a lot about the ability of a child's lung to recover from this and other cases.

There are no right answers for our questions and I only want to take advantage of this opportunity to rethink about the conservative treatment of pleural empyema in children. Could it have been a good option for that 2-year-old-boy? Maybe there was no choice. We will never know. Let's think about it when treating the next child with pleural empyema.

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