Air Plombage Method to Prevent Pleural Dead Space after Pulmonary Decortication in Tuberculosis Patient: A Case Report

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Background

Persistent bronchopleural fistula and dead space after lung decortication are particularly difficult to treat, requiring prolonged hospitalizations and high efforts to cure. Plombage allows the obliteration of space and can be one of the main choice to cure the patients.

Case Presentation

A 31 year old male presented with shortness of breath for 4 months was admitted to our hospital. He already consumed anti-tuberculosis drug for 3 months, tested negative for sputum smear and negative for HIV test. Physical examination showed an absence of breath on the right side but no dullness on percussion. Further computer tomography (CT) scan showed right hydropneumothoraks with visceral pleural thickening and trapped right lung.

Right thoracotomy was perfomed, and we found fibrous peels on parietal and visceral pleura. We drained the caseous empyema and performed pulmonary decortication. The lung compliance was impaired and wasn't able to fully expand. We stripped the 3rd until 6th ribs subperiosteally. The pleura, periosteum, fascia and intercostal muscle were then dropped into contact with the lung beneath. A 32Fr chest tube was inserted intra pleurally, and then chest closure.. He was extubated in the OR and stay for 25 hours at the ICU. The chest x-ray evaluation showed no dead space, the lung was expanded. The patient's recovery after the operation was uneventful and he was discharged on postoperative day 8.

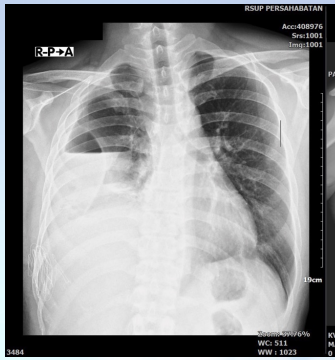

Figure 1

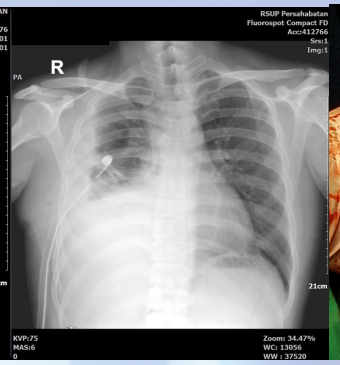

Figure 2

Figure 3

Figure 1. Chest X-ray Preoperative
Figure 2. Chest x-ray postoperative day 8
Figure 3.

Discussion

The air pocket intraoperatively was filled by muscles and blood of the patient. As the tissue heals, the lungs will slowly expands and push the pleura up until the chest wall. With this method, there were no chest wall deformities, faster and less traumatic recovery and no risk of paradoxical movement.

Conclusion

We perfomed successful air plombage to prevent the dead space in the patient with poor lung compliance after pulmonary decortication

Reference:
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