

## Bronchopleural fistula caused by lung abscess was blocked by bronchoscopy with autogenous blood and hyperglycemia

### Abstract:

**Objectives:** To discuss the treatment of alveolar pleural fistula by bronchoscopic intervention.

**Methods:** A 70-year-old male individual with lung abscess, septic shock, sequelae of cerebral infarction admitted to China Aerospace Science & Industry Corporation 731 hospital. A large amount of pus was drained after chest closed drainage tube was given, and shock was controlled after active anti-infection. Fluid pneumothorax was found in lung CT scan, and alveolar pleural fistula was considered not to be excluded. After intraperitoneal injection of methylene blue, blue fluid was coughed up from the bronchus, confirming the presence of an alveolar pleural fistula. Thoracic surgery consultation, considering that the patient was septic shock and unable to undergo surgery, suggested conservation treatment. One month later, the patient's alveolar pleural fistula did not improve. After a thorough multidisciplinary discussion, the decision was made to administer bronchoscopic intervention. Autologous blood occlusion was performed under bronchoscopy and hyperglycemia was injected into the thorax. On the second day, there was no gas extraction in the chest closed drainage tube. One week later, pulmonary CT showed atelectasis of the left upper lung and closed alveolar pleural fistula. Two weeks later, the thrombus in the posterior segment of the upper lobe of the left lung was removed by bronchoscopy, and no gas appeared in the closed thoracic drainage bottle. Over the next month, gradually remove the chest drain. Two months later, lung CT showed that the left upper lung returned to normal.

**Results:** Pulmonary segmental occlusion with autogenous blood and intrathoracic hyperglucose injection is an interventional method in the treatment of alveolar pleural fistula, which can avoid surgical operation due to nonhealing of alveolar pleural fistula.

Conclusion: Bronchoscopic airway interventional surgery for alveolar pleural fistula is a feasible method, which is less invasive than surgical thoracotomy and can be promoted.



Fig 1 Blue secretions appear in the airway after intraperitoneal injection of methylene blue.

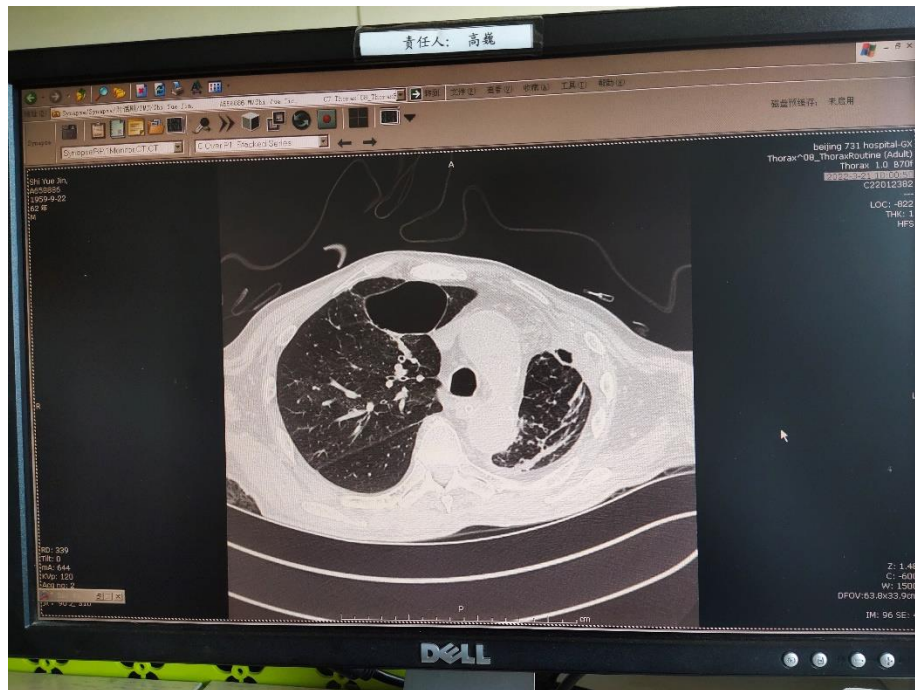


Figure 3 after interventional treatment of airway

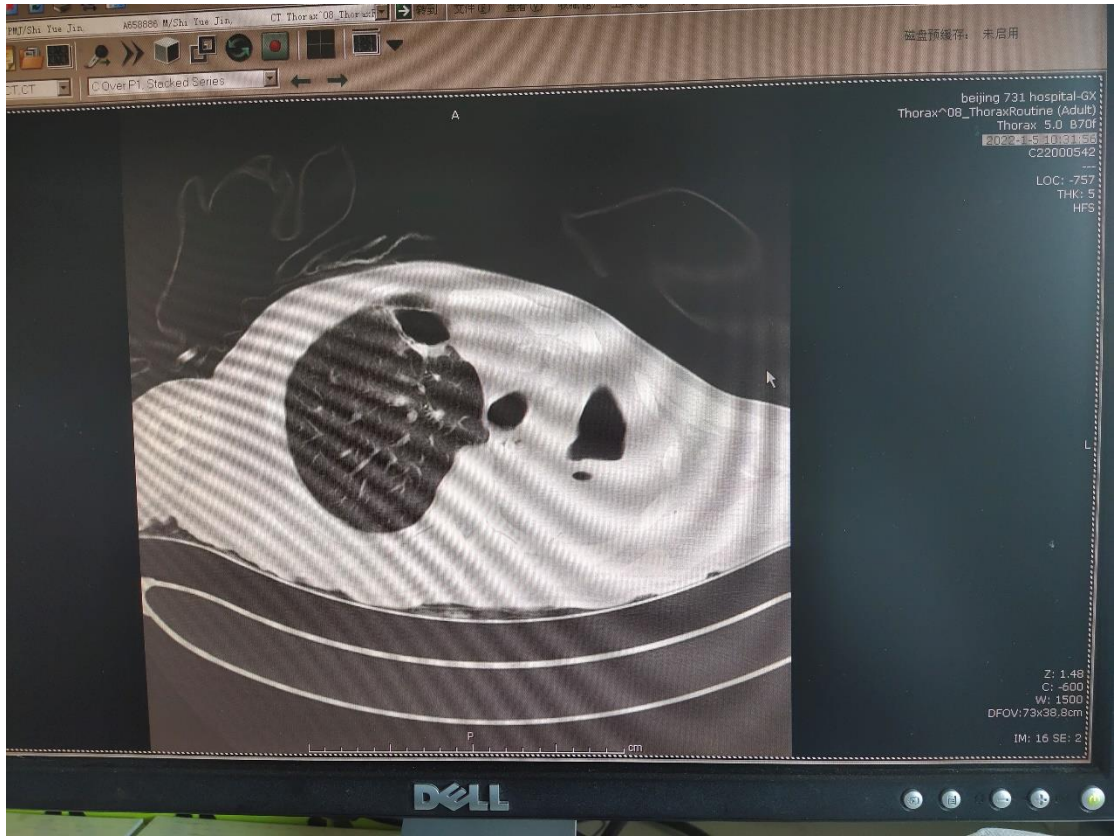


Figure 2 before interventional treatment of airway