

# **RIGHT HAEMOPNEUMOTHORAX COMPLICATED WITH THORACIS EMPYEMA IN YOUNG HEALTHY ADULT: A CASE REPORT**

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## **INTRODUCTION**

Thoracis empyema denotes the accumulation of pus within the pleural space, posing a significant mortality risk and affecting individuals across various demographics. We presented a case involving a young patient with a right hemopneumothorax complicated by thoracis empyema.

## **CASE DESCRIPTION**

A 22-year-old presented with sudden onset shortness of breath and right-sided chest pain, accompanied by a chesty cough and low-grade fever for two weeks. Initial assessment revealed stable vitals and reduced air entry over the right lung. A chest X-ray confirmed right-sided pneumothorax with a blunted right costophrenic angle. A thoracostomy tube was inserted, draining 50cc of hemoserous fluid. However, the patient experienced a drop in haemoglobin levels, and subsequent chest X-rays indicated persistent chest expansion reduction and increased chest tube drainage. Pleural fluid analysis showed an exudative pattern. A CT thorax revealed right hemopneumothorax with right lower lobe subsegmental collapse, without evidence of active bleeding. The patient underwent right VATS, clot evacuation, haemostasis, decortication, and bullectomy by the cardiothoracic team. ESBL *Klebsiella pneumoniae* was isolated from tissue cultures, prompting antibiotic initiation. Pleural samples tested negative for malignancy and *Mycobacterium tuberculosis*. The patient is now on the path to full recovery.

## **DISCUSSION**

The scenario of retained hemopneumothorax leading to empyema caused by ESBL *Klebsiella pneumoniae* presents a complex clinical challenge. Retained hemopneumothorax occurs when blood and air remain trapped in the pleural space, providing a fertile environment for bacterial growth. When ESBL *Klebsiella pneumoniae* is involved, treatment complexities escalate due to its multidrug-resistant nature. This case underscores the critical importance of thorough drainage and continuous monitoring in patients with hemopneumothorax to prevent secondary infections such as empyema. Additionally, the presence of ESBL *Klebsiella pneumoniae* highlights the urgent need for stringent infection control measures and judicious antibiotic use to combat multidrug-resistant pathogens effectively.

## **CONCLUSION**

Prompt diagnosis is crucial for effective treatment and survival. Involving an interprofessional team is advisable due to the severity of the disease. Careful attention is needed during thoracostomy tube insertion to recognize and manage complications effectively.

## **KEYWORDS**

Hemopneumothorax, Empyema