中文題目：自發性雙側氣胸、氣縱膈、氣腹與皮下氣腫於一位肺阻塞病患

英文題目：Spontaneous Bilateral Pneumothoraces, Pneumomediastinum, Pneumoperitonium, and Massive Subcutaneous Emphysema in a Patient with Chronic Obstructive Pulmonary Disease

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Introduction

Spontaneous pneumothorax is the presence of air in the pleural cavity without history of trauma. Herein, we presented a case with spontaneous bilateral spontaneous pneumothoraces, pneumomediastinum, and subcutaneous emphysema, who recovered without sequelae after surgical intervention.

Case Report

A 64-years-old male heavy smoker with old pulmonary tuberculosis post complete treatment presented to emergency department due to sudden onset of facial swelling occurred during sleep at night after few hours of chest discomfort. He denied recent trauma. On physical examination, decreased bilateral breath sound and subcutaneous emphysema over face, chest wall, upper limbs, and abdominal wall were noted. The computed tomography (CT) disclosed bilateral pneumothoraces, pneumomediastinum, pneumoperitonium, and subcutaneous emphysema extended from bilateral cheeks to upper abdominal wall. Endotracheal intubation with mechanical ventilator support and bilateral tubal thoracostomy were performed for his respiratory distress. Based on his history and clinical presentation, inhaled bronchodilator was given although he was not previously diagnosed with chronic obstructive pulmonary disease (COPD). Four days later, respiratory distress worsened and progression of subcutaneous emphysema was noted. The follow-up CT showed persistent massive pneumoperitoneum and diffuse subcutaneous emphysema in the subcutanoues and fascial layers over the abdomen, pelvis, bilateral thighs and bilateral calf, as well as mildly flattening of the anterior cardiac contour by the pneumomediastinum. Due to the development of tension pneumomediastinum with unstable hemodynamics, thoracoscopic surgery was performed. He had an uneventful recovery after the operation. The follow-up CT taken 3 months later showed complete resolution of the pneumothorax, pneumomediastinum, pneumoperitonium, and subcutaneous emphysema.

Discussion

Because of its lung parenchyma destruction and air trapping from persistent airflow limitation, COPD is a common cause of spontaneous pneumothorax, accounting for 20-60% of cases. COPD patients with histories of long-term smoking or previous pneumothorax are at especially higher risk of the occurrence of spontaneous pneumothorax. Because pneumothorax may be lethal, surgical treatment is usually required for these patients to prevent recurrence. Bilateral spontaneous pneumothorax, pneumomediastinum, and subcutaneous emphysema usually occur individually, but may rarely occur

concomitantly. The early diagnosis with physical examination and image is essential, in order to initiate appropriate management immediately. Our case highlighted the need of early diagnosis and treatment of COPD to decrease the risks of potential complications.