中文題目：以駝峰徵候為初始表現的克雷伯氏肺炎桿菌肺炎

英文題目：Initial presentation of Klebsiella pneumoniae pneumonia mimic Hampton's Hump

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Introduction: Infections of Klebsiella pneumoniae (K.P.) are usually hospital-acquired and occur primarily in comorbid patients. Besides, acute pulmonary embolism (PE) is a common and fatal disease

The most common presenting symptom of PE is dyspnea followed by chest pain, and cough, which is similar as pulmonary infection, so-called The Great Masquerader.

Case presentation: A 75-year-old man was admitted for scheduled hepatic arterial infusion chemotherapy. The patient complained of acute onset pleuritic chest pain on the 7th day of his admission. He had a history of hepatocellular carcinoma and had previously undergone total right lobectomy and cholecystectomy. Moreover, he was treated with trans-arterial chemo-embolization several times and was started on targeted therapy with lenvatinib since last 4 months ago June. The patient was vigorous after a 6-day-course of intra-arterial chemotherapy with cisplatin, mitomycin, and fluorouracil. His heart rate was 100 beats per minute and his oxygen saturation level was 100% while breathing ambient air during the chest pain attack. During the physical examination, he did not display any signs of fever, productive cough, palpitation, diaphoresis, or dyspnea. Chest radiograph demonstrated a well-shaped, pleural-based triangular opacity (Figure 1), mimicking Hampton's hump. His condition rapidly deteriorated, and he developed hemoptysis and intolerable pleuritic pain 3 hours later. The patient's oxygen saturation level also dropped to 88% while he was breathing ambient air. We began oxygen therapy with Venturi mask (15 L/min). Follow up blood gas analysis indicated hypoxia and elevated D-dimer levels (>10000 ng/mL) with normal levels of white blood cell counts and troponin and normal renal function. Chest radiography performed four hours later indicated rapid progression of dome-shaped opacity with emphysematous change and a bulging fissure sign (Figure 2). Computed tomographic pulmonary angiography did not reveal a filling defect in pulmonary arteries but the presence of large areas of airspace consolidations and ground-glass opacities in the right lower lobe and right upper lobe (Figures 3 and 4). A diagnosis of Klebsiella pneumoniae pneumonia was confirmed using sputum culture analysis. The patient started on antibiotic therapy based on the susceptibility report, with a plan of pulmonary rehabilitation therapy, and he was successfully

extubated on the 34th day of admission.

Discussion: Klebsiella pneumoniae is the most common cause of nosocomial pulmonary infections in hospitalized comorbid patients, including those with diabetes mellitus, alcoholism, malignancy, hepatobiliary disease, chronic obstructive pulmonary disease, renal failure, and glucocorticoid therapy. And those risk factors easily reach the criteria of Virchow's triad. The clinical presentation and pictures of pulmonary embolism is variable making the diagnosis challenging.

Pulmonary embolism has a wide variety of presenting features, ranging from no symptoms to shock or sudden death. The most common presenting symptom is dyspnea followed by chest pain (classically pleuritic in nature), cough, hemoptysis and symptoms of deep venous thrombosis, which is similar as initial presentation of Klebsiella pneumoniae pneumonia like this case. With severe Pulmonary embolism, patients can present with shock, arrhythmia, or syncope. Common presenting signs of PE on examination including tachypnea, tachycardia, decrease breath sounds and fever. These nonspecific symptoms and signs may present in any phase of pulmonary infections.

A normal chest radiograph can be seen in up to 37 percent of patients with PE [1], The most common chest radiographic interpretations were cardiac enlargement (27%), normal (24%), pleural effusion (23%), elevated hemidiaphragm (20%), pulmonary artery enlargement (19%), atelectasis (18%), and parenchymal pulmonary infiltrates (17%). A Hampton's hump and Westermark's sign are rare but should raise the suspicion for PE when they are presented. [2]

Therefore, it is critical that a high level of suspicion be maintained such that clinically relevant cases, such as our patient with malignancy undergone the intra-vessel procedure, are not missed.

A diagnosis of PE is made radiographically by Computed tomographic pulmonary angiography or magnetic resonance pulmonary angiography or ventilation perfusion (V/Q) scanning, while pneumonia is made by imaging techniques either by chest radiograph, computed tomography scan or ultrasound and microbiologic testing.

Initial resuscitative therapy for patients with suspected pulmonary embolism or Klebsiella pneumoniae pneumonia should focus upon oxygenating and stabilizing the patient. Once the diagnosis is made, the mainstay of therapy for patients with confirmed PE is anticoagulation, depending upon the risk of bleeding. Otherwise, the therapy for patients with confirmed Klebsiella pneumoniae pneumonia is choosing the

effective antibiotics according to the susceptibility testing.

Conclusion: Initial presentation of KP pneumonia may mimics clinical pictures and presentations of pulmonary embolism. Early and precise diagnosis making is important for these patient. Because the treatment of Klebsiella pneumoniae pulmonary infections is a lot different from pulmonary embolism.

References

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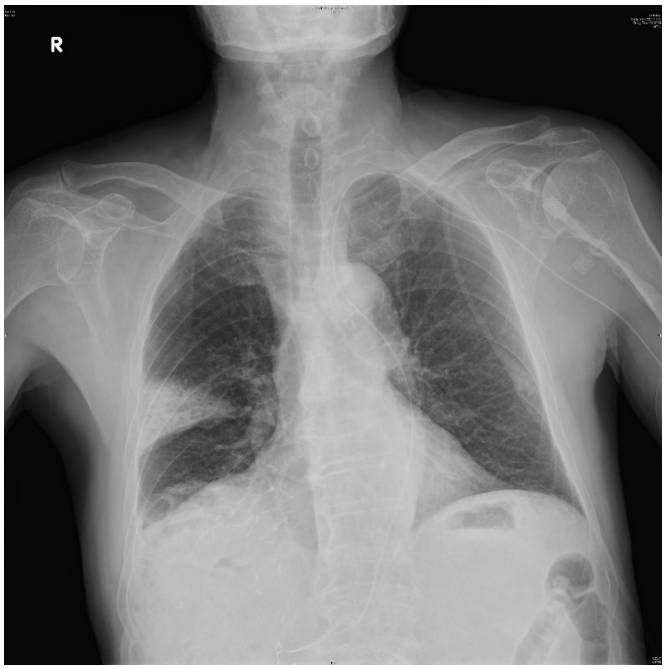

Figure 1

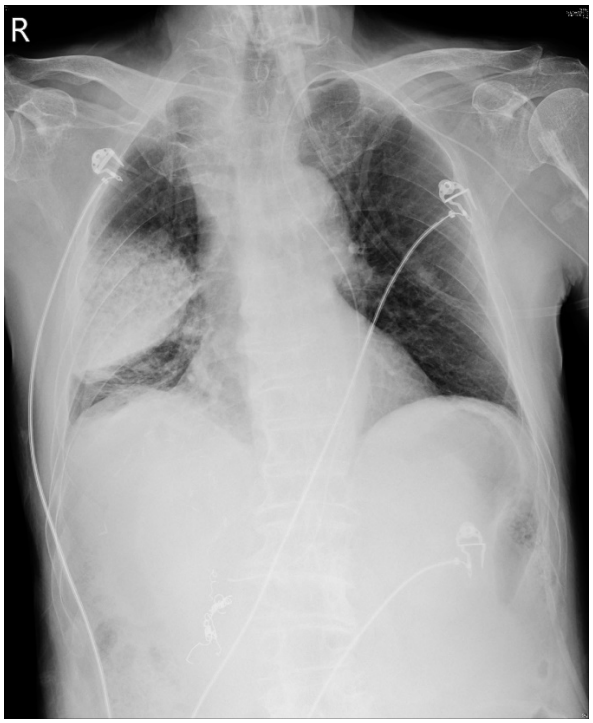

Figure 2

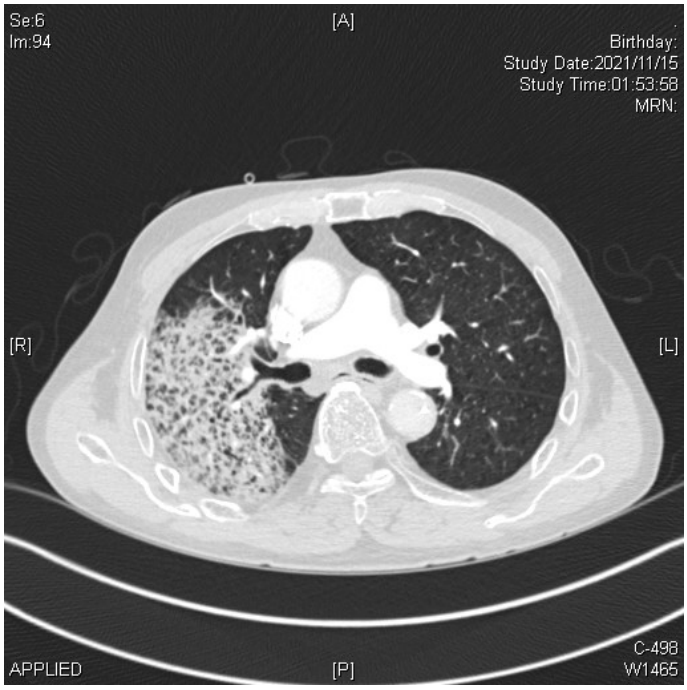

Figure 3

Figure 4