

Coexistence of acute miliary pulmonary tuberculosis and metastatic lung adenocarcinoma: a case report

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Abstract: A 36-year-old man complained of cough, expectoration and progressive anhelation for more than 3 months. Thoracic computed tomography (CT) showed miliary nodules diffusely distributed throughout both lungs. Acute miliary pulmonary tuberculosis (AMPT) was confirmed by sputum culture; meanwhile lung adenocarcinoma was found by sputum cytology. Subsequently, adenocarcinoma of colon was diagnosed according to PET/CT images and histopathology. Herein we report this case of coexistence of AMPT and metastatic lung adenocarcinoma, and suggest that diagnosis of pulmonary tuberculosis should be made cautiously for patients with diffusely miliary nodules, especially for those without symptoms alleviated after anti-tuberculous treatment.

Key Words: Acute miliary pulmonary tuberculosis (AMPT); lung adenocarcinoma; coexistence; diagnosis



Submitted May 01, 2013. Accepted for publication May 20, 2013.

doi: 10.3978/j.issn.2223-4292.2013.06.06

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A 36-year-old man complained of cough, expectoration and progressive anhelation for more than three months. He was diagnosed with acute miliary pulmonary tuberculosis (AMPT) according to sputum culture of tubercle bacilli and CT scans (*Figure 1A,B*). However, symptoms didn't alleviate after anti-tuberculous treatment for nearly one month. Subsequently, sputum cytology found a few lung adenocarcinoma cells and immunohistochemistry revealed it mostly came from intestinal duct. Moreover, glucose metabolism was increased at the whole lung field shown by PET/CT (*Figure 1C*). Furthermore, he described a history of mucus stool, without hematochezia, abdominalgia, diarrhea and abdominal distension. A large ulcerous neoplasm was found in the ascending colon by fibrocolonoscope. Adenocarcinoma of colon was finally confirmed by histopathology and PET/CT images (*Figure 2*).

To our best knowledge, the case described in this report

is rare and valuable for its difficulty to diagnosis. Karnak *et al.* (1) reported 73 patients had coexistence of pulmonary tuberculosis (TB) and malignancy, in which lung cancer had the highest probability. It mainly exists in elderly people due to the relatively high incidence rate of both TB and malignancy. Karasawa *et al.* (2) reported the coexistence rate in elderly patients ranged from 1% to 2%. However, in our case, it was a young man who suffered it. Rybacka *et al.* (3) reported that tuberculous patients with little improvement of symptoms by anti-tuberculous therapy were not always caused by bactericidal resistance. In these cases, TB should be diagnosed cautiously, and lung cancer should be paid more attention. Conclusively, our initial diagnosis of AMPT was inaccurate because of cancer nodules masked by tuberculous lesions. We suggest that once miliary nodular shadows of lungs are observed, it is common to suspect TB at the outset, but the differential diagnosis of lung cancer also should be kept in mind.



Figure 1 Evenly distributed diffuse miliary nodules involve the whole lung fields. A. CT scan (lung window); B. CT scan (mediastinal window); C. PET/CT image (maximum SUV value is 5.37)

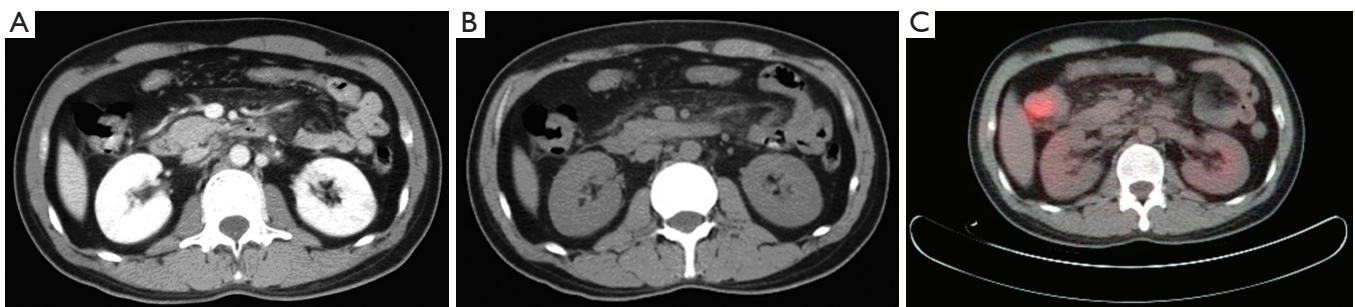


Figure 2 A large neoplasm is found in the ascending colon. A. CT enhancement scan; B. CT plain scan; C. PET/CT image (maximum SUV value is 8.09)

Acknowledgements

Disclosure: The authors declare no conflict of interest.

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Cite this article as: Wang Y, Tu L, Li Z, Wang X, Luo Y, Huang C, Sun L. Coexistence of acute miliary pulmonary tuberculosis and metastatic lung adenocarcinoma: a case report. *Quant Imaging Med Surg* 2013;3(3):178-179. doi: 10.3978/j.issn.2223-4292.2013.06.06