

CASE REPORT

An Analysis of Two Aged Patients with Pulmonary Tuberculosis

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ABSTRACT

What methods would you choose apart from purified protein derivative (PPD) skin test and culture for acid-fast bacilli (AFB) to make a clinical diagnosis of pulmonary tuberculosis (TB) in an aged patient with possible TB? These are two cases of pulmonary TB, that occurred with persistent low-grade fever, fatigue and anorexia due to a mild toxemia of tuberculosis. A final diagnosis of pulmonary tuberculosis was established on the basis of mild toxemia (low-grade fever), debilitation and characteristic pulmonary CT imaging, free of PPD and interferon-gamma release assay (T-spot). The authors realized that the dosage of anti-tuberculosis drugs should be carefully controlled and the improvement of their overall nutritional status to gain better efficacy is much more needed.

Keywords: Pulmonary tuberculosis (TB); The elderly; Mild toxemia; CT-imaging

1. Introduction

These are two cases of pulmonary tuberculosis (TB) that occurred in 92-year-old and 101-year-old males respectively, who complained of persistent low-grade fever and debilitation for over one month, with anorexia over the past two months. On their pulmonary CT scans, a characteristic “encapsulated effusion” was demonstrated clearly; and anti-tuberculosis therapy was designed for their treatment. As an adjuvant, overall nutritional therapy was also ap-

plied to help with the medication for TB. Their total situation also improved steadily since then.

2. Case report

2.1 General material

Case 1 This was a 92-year-old male, retired as a civil servant, who was admitted to the hospital with a chief complaint of chest pain over the past 7 months, associated with long-term low-grade fever,

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and chest tightness. He had not experienced chills, intermittent cough expectoration, phlegm with blood, and loss of appetite. His body weight had decreased by 15 kg before this admission. About one year ago, a space-occupying lesion in the superior lobe of the right lung was found, and TOMO radiotherapy was performed 10 times for his treatment. He had a history of pulmonary tuberculosis 50 years ago. On his physical examination: the patient was conscious mentally with a lean body mass (42 kg), a barrel-shaped chest, and low breath sounds were heard in both lungs. The lung CT showed a mass in the right upper lobe with some previous tuberculous foci bilaterally with pleural thickening, especially on the left side. Some exudative foci were scattered in both lungs, ranging from old to new, with an “encapsulated effusion” on the right (**Figure 1**). Finally, a clinical diagnosis of pulmonary malignancy plus pulmonary tuberculosis was established, and then an anti-tuberculosis therapy, consisting of a Rifampicin capsule (150 mg orally, qd) and isoniazid tablet (100 mg orally, qd), followed as a consequence.

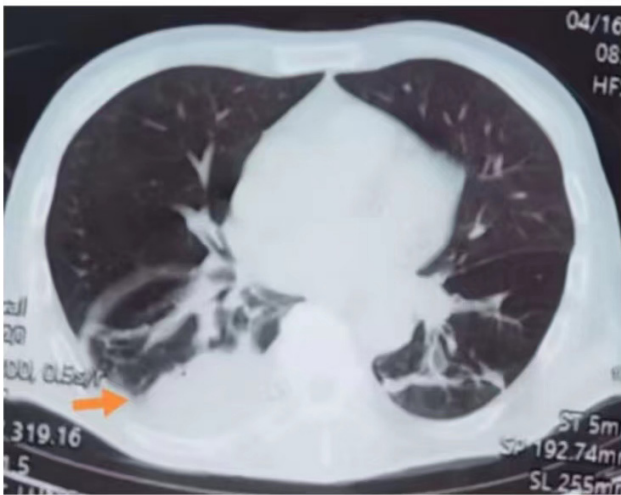


Figure 1. An arrow pointing to “a wrapped effusion” in a 92-year-old patient with pulmonary TB.

Case 2 This was a 101-year-old male, retired as a cadre, who was admitted to our hospital complaining of long-term anorexia, cough, and sputum that appeared after rubbing down 6 days ago, associated with a large amount of mucous phlegm, low-grade fever; but no obvious chest pain. Each attack occurred at night, and the symptoms can be relieved

during the daytime. On the physical, being a depressive spirit, his lung breath sounds seemed to be coarse, and some moist rales scattered on both sides. No obvious pleural friction sounds were heard, and his pulmonary CT scan showed that there were multiple high-density bands in both lungs and bilateral pleural thickening with some tentorial adhesion. In addition, a “wrapped effusion” in the left lower lung was found on his CT scan. As a result, a clinical diagnosis of tuberculous pleuritis was made, and comprehensive therapy for TB (Cap. rifampicin 150 mg, orally, qd; Tab. isoniazid 100 mg, orally, qd) was initiated then.

3. Discussion

As the main means of diagnosis of pulmonary tuberculosis, lung CT scanning can be used not only to determine the location and range of TB foci but evaluate the efficacy as well. The patches and nodules, or cavity formation would be shown on CT imaging in mild cases; and lobar infiltration, caseous pneumonia, or bronchial dissemination would be observed in severe cases. The structure of the adjacent hilar and mediastinum may be moved away and the texture may show a “weeping willow sign”. Careful viewing of the film will also find a small “wrapped effusion”, suggesting that the patients might have suffered from “tuberculous pleuritis” before admission. Theoretically speaking, sputum examination for tubercle bacillus and tuberculin skin test (PPD), along with interferon-gamma release assay (T-spot) can also be used for the diagnosis of this disease; but we realized that the positive rate was not high because of their lower immunity in the elderly; that is, the “positive results” were not positive^[1]. Clinically, if highly suspected of pulmonary tuberculosis, we could bypass the “relevant examinations” mentioned above, and a “diagnostic treatment” for the possibility of tuberculosis infection can be done because of its lower toxicity in anti-tuberculosis drugs.

There were two other cadres of pulmonary tuberculosis in our ward, one of whom was a 92-year-old male with tuberculosis of the liver, who achieved clinical remission with this strategy. Two cases of

senile pulmonary tuberculosis were selected in this paper, both of them were emaciated, weak, anorexia, and so on. Because of comorbidity (suffering from other diseases), pulmonary TB is easy to be “ignored” clinically, resulting in a poor curative effect subsequently. The diagnosis relies mainly on imaging (lung CT), with limited help from microbiological and immunological studies. We thought that the dosage of anti-tuberculosis drugs should be carefully controlled and it is also necessary to improve their overall nutritional status to gain better efficacy^[2].

4. Conclusions

We realized that a key to clinically diagnosing TB in an aged patient is about the characteristic pulmonary CT imaging, instead of PPD or T-spot; and a much better efficacy would be achieved if we apply supplementary nutritional therapy to those elderly

patients, as well as classic anti-tuberculosis medication.

Conflict of Interest

There is no conflict of interest.

References

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