

## Case Report

## A case of multiple organ tuberculosis

Yunfei Zhan <sup>a,1</sup>, Baopeng Li <sup>b,1</sup>, Yongjun Huo <sup>b</sup>, Aiqing Lin <sup>a</sup>, Hongyun Wu <sup>c,\*</sup><sup>a</sup> Department of Tuberculous Internal Medicine, Shandong Provincial Chest Hospital, Jinan 250013, China<sup>b</sup> Department of Radiology, The Affiliated Hospital of Shandong University of Traditional Chinese Medicine, Jinan, 250014, China<sup>c</sup> Department of Encephalopathy, The Affiliated Hospital of Shandong University of Traditional Chinese Medicine, Jinan, 250014, China

Received 13 December 2017; revised 29 January 2018; accepted 11 February 2018

Available online ■ ■ ■

## Abstract

The hematogenous disseminated pulmonary tuberculosis (TB) is usually accompanied with multiple organ tuberculosis. We reported a case, which was a middle-aged female patient, HIV-negative, who presented to hospital with 2-month history of fever and headache, subsequently was diagnosed with hematogenous disseminated tuberculosis. After 2-month HRZE anti-TB treatment, she had persistent fever and headache and found to have intracranial tuberculoma on brain enhanced MRI with liver tuberculous abscess on abdominal CT. She was effectively treated with levofloxacin. Through this case, we found it is important to detect tuberculosis in other organs in any patient with hematogenous disseminated pulmonary tuberculosis, which could be crucial for successful tuberculosis treatment.

© 2018 Beijing You'an Hospital affiliated to Capital Medical University. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Keywords:** Intracranial tuberculosis; Pulmonary tuberculosis; Tuberculosis abscess of liver; MRI; CT

The patient is a healthy 39-year-old female farmer without TB contact history. She presented to hospital because of intermittent fever and headache for 2 months. She suffered irregular fever (the highest body temperature was 38.6 °C), chills without shaking, and headache whenever there was fever. She had no cough or sputum, no night sweats, fatigue, no chest tightness or difficulty in breathing, but had 1.5 kg weight loss.

On physical exam, she appeared as well developed well nourished middle-aged women, normal consciousness but slightly decreased alertness. No palpable superficial lymph nodes throughout the body. No stiff neck. Clear lung auscultation. Heart rate 108 bpm with regular rhythm without pathological murmur at the valve area. Abdomen was soft without tenderness or rebound tenderness. Liver and spleen were not felt. No lower extremity edema. Muscle tone and strength were normal. Normal physiological reflexes, no pathologic reflex induced.

Chest CT showed scattered hyperdense miliary opacities in both lung fields with small right sided pleural effusion at the costophrenic angle. Serological exams: WBC  $6.1 \times 10^9/L$ , monocyte 13.6%, ESR 46 mm/h, normal serum tumor markers CEA, neuron specific enolase 34.22 ng/mL (0–25 ng/mL), PPD test negative, blood T-SPOT. TB positive ESAT6 220, CFP10 300 SFCs, tuberculosis antibody positive, HIV-negative. CT-guide percutaneous lung biopsy performed with pathology showed: lung tissue with chronic inflammation (lymphocytes predominantly), and hyperplasia of alveolar epithelial cell and fibrous tissue. *Mycobacterium tuberculosis* DNA 1770 copies/mL (<500 copies/mL). *Mycobacterium tuberculosis* culture identified mycobacterium tuberculosis complex. The Mycobacterium was sensitive to isoniazid, rifampicin, ethambutol, amikacin, kanamycin, capreomycin, paracetamol, levofloxacin and ofloxacin, but resistant to streptomycin.

\* Corresponding author.

E-mail address: [whyhzhongonly@126.com](mailto:whyhzhongonly@126.com) (H. Wu).

Peer review under responsibility of Beijing You'an Hospital affiliated to Capital Medical University.

<sup>1</sup> Zhan Yunfei and Li Baopeng contributed equally as first authors.

## 1. Treatment

After 2-month anti-TB treatment with HRZE, the patient still had intermittent fever with high up to 39 °C, headache

<https://doi.org/10.1016/j.jrid.2018.02.003>

2352-6211/© 2018 Beijing You'an Hospital affiliated to Capital Medical University. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: Zhan Y, et al., A case of multiple organ tuberculosis, Radiology of Infectious Diseases (2018), <https://doi.org/10.1016/j.jrid.2018.02.003>

while fever, but which alleviated when the temperature decreased, no other symptoms. Chest CT: nodular lesion in both pulmonary fields, and soft tissue lesions increased at right lower lobe. Brain contrast enhanced MRI showed multiple miliary parenchymal nodules of varying sizes in bilateral telencephalon, cerebellum, brainstem, bilateral thalamus, and bilateral ependyma in ventricular system, with the largest node measuring 3 mm. Signals were uniform in nodules, but the signal intensity differed among nodules with perilesional brain edema. Meninges are thickened with linear enhancement. Abdominal contrast enhanced CT showed multiple subcapsular tuberculosis abscess of liver. Lumbar puncture: cerebrospinal fluid (CSF) total protein 280.5 mg/L, chlorine 121 mmol/L, lactate 1.68 mmol/L, WBC  $8 \times 10^6/L$ , monocyte 98%, apocyte 2%, glucose 3.0 mmol/L. Based on those findings, a diagnosis of multiorgan tuberculosis was made including: hematogenous disseminated tuberculosis, brain tuberculoma, and subcapsular tuberculosis abscess of liver. We

added levofloxacin and amikacin in anti-TB treatment, after using amikacin for 3 months (anti-TB treatment for 5 months), took HRZE with levofloxacin continually. At the after treatment 5 month, 9 month and 11 month, we reviewed her follow up chest CT, abdominal CT and brain enhanced MRI which showed that the pulmonary nodules gradually reduced in size, liver abscess gradually shrank, and the enhancing brain nodules gradually disappeared. Chest CT at baseline and chest CT, abdominal CT, brain enhanced MRI images after 2 months, 5 months, 9 months and 11 months of treatment are shown in Figs. 1–3.

## 2. Discussion

Tuberculosis is a common chronic infectious disease caused by *Mycobacterium tuberculosis*. At present, China is still one of the 30 countries with high burden of tuberculosis in the world, has about 900,000 new cases of tuberculosis each

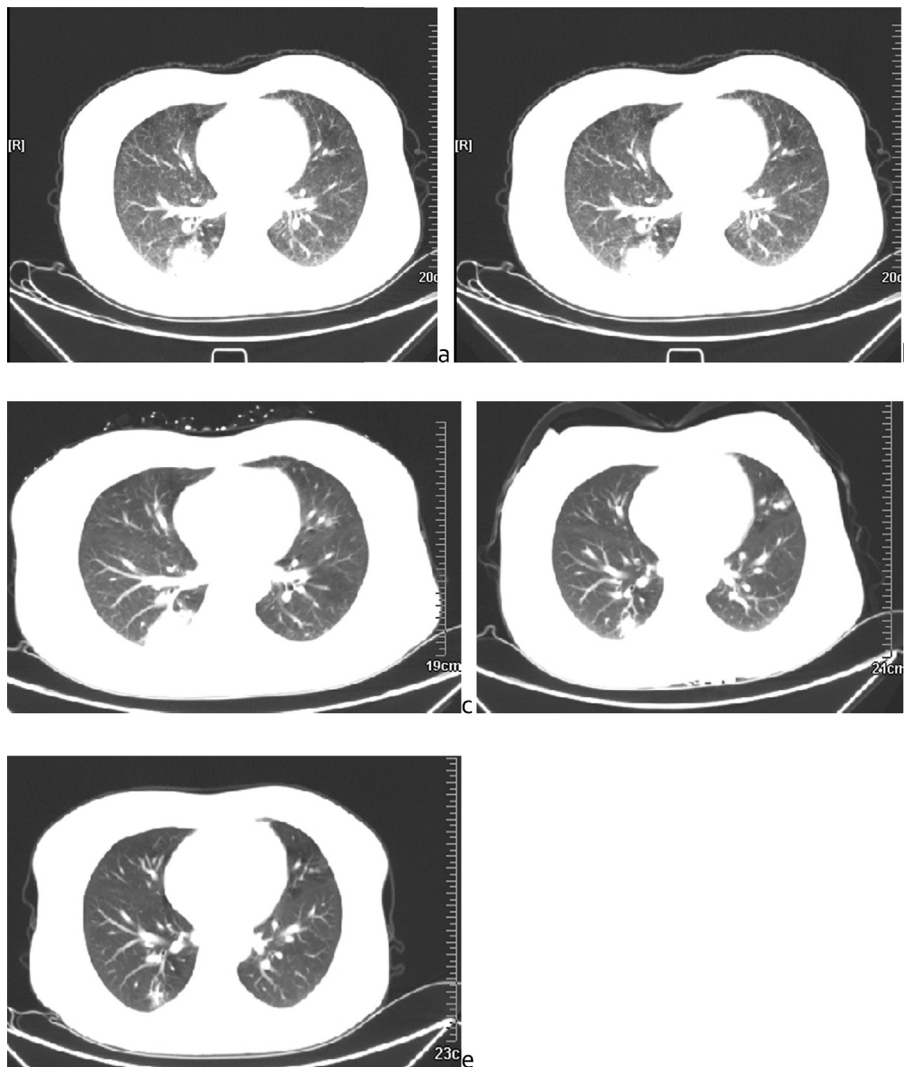


Fig. 1. a. Chest CT showed scattered hyperdense miliary shadow in both lung fields, plateau hyperdense shadow at right lower base, and adhered to the adjacent pleur. b. After 2-month anti-TB treatment with HRZE, nodular lesion in both pulmonary field, and soft tissue lesions increased at right lower lobe. c–e. After 5 months, 9 months and 11 months anti-TB treatment, the pulmonary nodules gradually reduced (We added levofloxacin and amikacin in anti-TB treatment, after using amikacin for 3 months, then took HRZE with levofloxacin continually).

Download English Version:

<https://daneshyari.com/en/article/7239163>

Download Persian Version:

<https://daneshyari.com/article/7239163>

[Daneshyari.com](https://daneshyari.com)