

# Pulmonary Brucellosis In A Patient With Prolonged Dyspnea And Cough

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## 1. Abstract

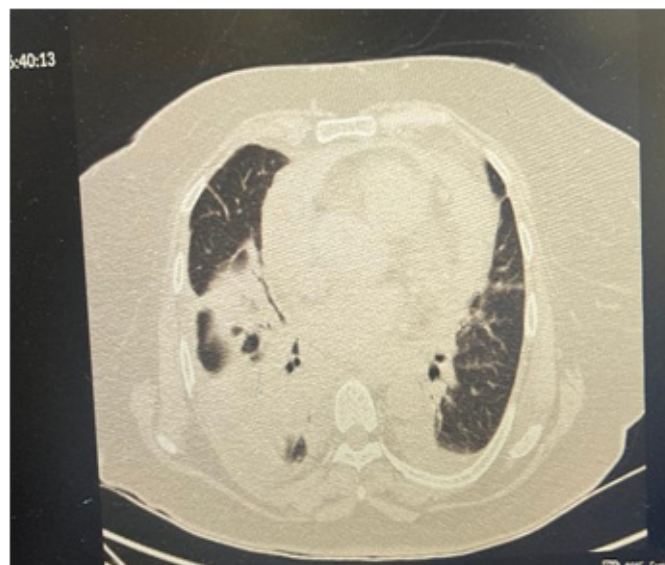
Brucellosis is a bacterial endemic zoonotic disease of global significance with detrimental impacts on public health and food animal production. It is caused by *Brucella* spp., an expanding group of pathogens able to infect various host species. Bovines and small ruminants, which excrete the bacteria in milk and in reproductive discharges, are major sources of infection for humans and other animals. Contact with contaminated animals and consumption of unpasteurized dairy products are the main routes for human infection [1]. Pulmonary symptoms are rare in Brucellosis and pulmonary involvement is uncommon and nonspecific. Dyspnea, cough, sputum, and flu-like syndrome, night sweats and low back pain are the most common symptoms in pulmonary involvement of brucellosis [2].

## 2. Case Report

Our case is a 55 years old women with dyspnea, cough and prolonged fever from 6 months ago. She also mentioned night sweats. At the first time, in cardiac evaluation, she referred to the cardiology hospital because of cardiomegaly and moderate to severe pericardial effusion and received medical treatment with low dose of prednisolone (5mg) and colchicine (1mg/d) but her dyspnea was remained stable. So, after evaluation and exclusion of other cardiac disease, she referred to pulmonary clinician for pulmonary thromboembolism because of dyspnea and at rest desaturation. Pulmonary thromboembolism was excluded by pulmonary CT angiography and then she referred to pulmonary ward for checking

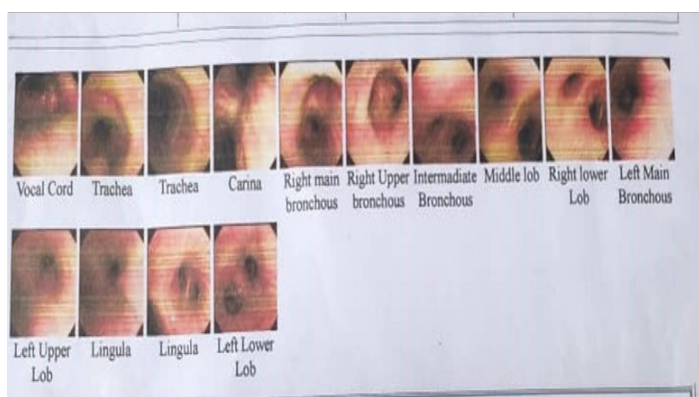
tuberculosis because of CT scan abnormality and consolidation in Right lower lobe.(figure 1) Bronchoscopy was performed for the patient twice.

Figure 1: first pulmonary CT scan



First one performed 6 months ago with negative result for tuberculosis and second one performed about two weeks before admission (figure 2). Bronchoalveolar lavage direct examination, culture and cytology for tuberculosis were negative.

Figure 2: bronchoscopy

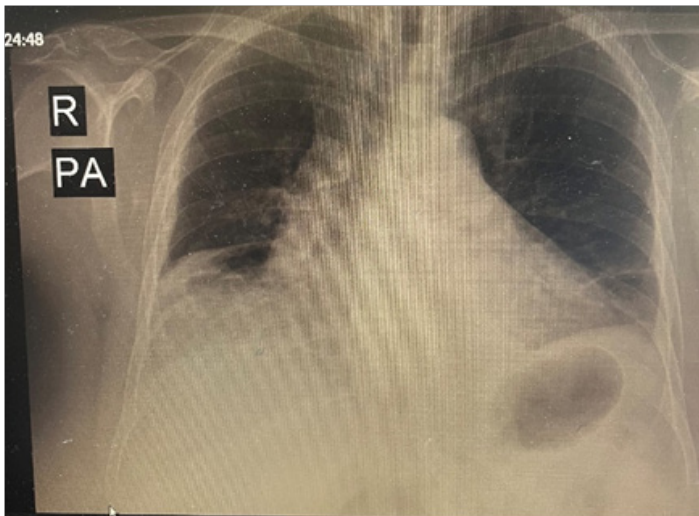


sputum smear and culture was done for bk and fungi and bacterial organism. Acid-fast bacilli(AFB) was not detected on sputum examination and sputum culture was negative. Blood culture was negative for two times. Because of negative results for tuberculosis and history of local dairy products and prolonged night sweats and fever, wright and coombs

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wright and 2ME checked for this patient. Wright;1/320, coombs wright; 1/360 and 2ME 1/160 was found. Also in repeated chest X-ray evidence of pneumonia, Stable consolidation and collapse in right lower lobe was found (figure3), so after these findings, Doxycycline 100 mg every 12 hours and Gentamycin 240 mg single dose Daily was prescribed. After 4 days her dyspnea got significantly better and her fever stopped. Also in follow up Chest X-ray of lung after a week the evidence of pneumonia got better and collapse of right lower lobe had been resolved. (figure 4).

**Figure 3:** C-xraybefor treatment



**Figure 4:** C-xray after treatment



### 3. Discussion

The most common and virulent species of *Brucella* that infect human are *Brucella melitensis* and *Brucella abortus*. Human brucellosis generally occurs through direct exposure to the pathogen [3]. Our patient had direct

contact with dairy products before the onset of the symptoms. Any organ may be affected. The onset of symptoms may be acute or insidious and they are nonspecific. There are few reports of respiratory symptoms and lung disease in patients with brucellosis. The clinical manifestation of our patient were consistent with lower respiratory infection and it was justified by imaging findings. Tuberculosis, tumors and granulomatous disease should be considered in the differential diagnosis.

	admission	discharge
WBC	9200	9100
ESR	84	12
HB	11.4	11.3
CRP	117	25

### 4. Conclusion

Brucellosis is a systemic infection that has nonspecific signs and symptoms. We should keep in the mind that brucellosis is a good diagnosis in any patient with personal history of exposure to a possible source of infection.

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