

Clinical Quizzes

What is the Diagnosis?

P SONG, MX LI, XY BAI

A 15-year-old boy presented with complaints of recurrent cough for the previous 9 years. The symptom had become more and more recurrent and accompanied with bilateral nasal congestion. Computed tomography (CT) of the lung revealed bronchiectasis and situs inversus. The boy was diagnosed as bronchiectasis and bilateral pneumonia and treated with further antibiotics. One month prior to presentation, the symptoms appeared again and he experienced shortness of breath. He had a paroxysmal productive cough that affected his sleep, and this was accompanied by fever in the afternoons, a stuffy and runny nose, dizziness, and hearing loss. He was a non-smoker and non-drinker. He had no history of surgery or trauma, and his family history was unremarkable.

On examination he was afebrile with a pulse of 76, a respiratory rate of 19 breaths/min, and a blood pressure of 110/75 mmHg. The patient had poor nutritional status, and there were purulent secretions from both nostrils but no tenderness over his sinuses. He had no lip cyanosis or jugular vein engorgement. On auscultation, crackles were heard scattered throughout both lungs. His cardiac impulse was located in the right fifth intercostal space 0.5 cm away from the sternum, and heart sounds were normal. Results for all routine hematological investigations were within normal limits. A T-spot for tuberculosis was normal. Blood gas analysis showed a $P(O_2)$ of 70 mmHg and $P(CO_2)$ of 37 mmHg, and the pH was 7.43. Pulmonary CT showed bronchiectasis with inflammation and situs inversus (Figure 1). A sinus CT scan and multi-planar reformation revealed inflammation of the nasal sinus and deviation of the nasal septum to the right side. High density shadows were observed in both nasal cavities as well as disease of the bilateral middle ear and mastoid (Figure 2). Cardiac colour Doppler ultrasound showed mirror image dextrocardia and a right aortic arch. The ejection fraction was 60%, and the

fractional shortening was 32%. Lung function tests showed mixed ventilation disturbances. The forced expiratory volume in 1 sec (FEV1)/forced vital capacity was 83%, and the FEV1 was 46% of the predicted value. Small airway function was abnormal. Nasopharyngeal endoscopy showed polypoid masses in both nasal passages.



Figure 1 Bronchiectasis with inflammation, and situs inver.

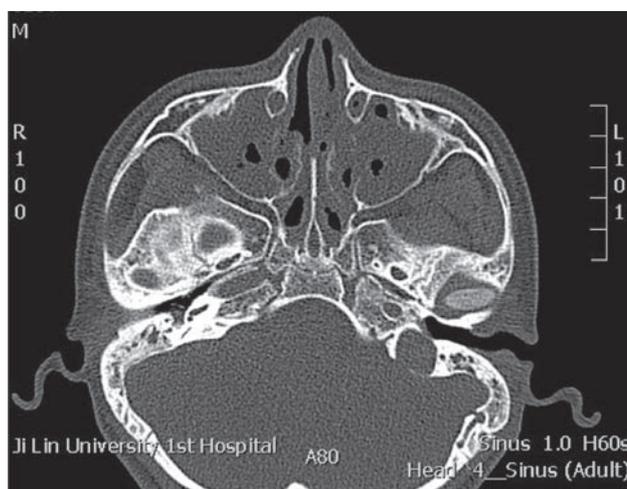


Figure 2 High density shadows in both nasal cavities and disease of bilateral middle ear and mastoid.

The clinical quiz was prepared by:

P SONG
MX LI*
XY BAI

Department of Pneumology, the First Affiliated Hospital of Jilin University, Changchun 130021, China

*Correspondence to: Dr MX LI

Answer to "Clinical Quiz" on Pages 144-145

N.B. The Editors invite contributions of illustrative clinical cases or materials to this section of the journal.