Clinical picture

**Strongyloides stercoralis** in sputum

A 68-year-old man had the initial presentation of poor appetite, productive cough for 1 month and body weight loss for 10 kg in half a year. His medical history included bladder cancer and diabetes mellitus. Laboratory testing demonstrated a white blood count of 15,800 cells/μl with a neutrophil count of 11,060 (70%) cells/μl and eosinophil count of 1,896 (12%) cells/μl. Chest radiography displayed left lower lobe consolidation (Figure 1A). He was treated with moxifloxacin for the impression of community-acquired infection. Sputum was collected and sent for smear and culture. One tract formed by migration of a larva moving the bacteria away from the original planting lines was noted in surface of agar plate (Figure 1B, arrow), and *Strongyloides stercoralis* was further detected from the sputum specimen (Figure 1C, arrow). Moreover, *S. stercoralis* was also identified in the specimen of stool. Therefore, he received ivermectin, and the clinical condition gradually improved. Finally, he was discharged uneventfully 19 days later. After extensively checking the possible immunocompromised condition of the patient, only human T-cell lymphotropic virus type 1 (HTLV-1) infection was identified.

Strongyloidiasis is an endemic disease in tropical and subtropic region, and this infectious disease is caused by *S. stercoralis*, which can transmit through the skin, migrate to lung and finally reach the intestines. Its associated infection always developed in immunocompromised patients, such as HIV-infected patients, patients receiving corticosteroid or...
The possible risk factor of present case included HTLV-1 infection, malignancy and diabetes mellitus. The diagnosis of strongyloidiasis is always established based on the visualization of larvae in the stool specimens or in the respiratory secretions. In this case, the creeping tract on the surface of agar plate provided the initial hint for diagnosis, and the further findings of larvae in specimen of the sputum and stool confirmed the diagnosis of strongyloidiasis.

In conclusion, the case emphasizes the importance of sputum examination, including the abnormal findings on the agar plate. In addition, it suggests that strongyloidiasis may presented as pneumonia, especially in immunocompromised patients.

References