Orange Sputum in a Patient with
*Legionella pneumophila* Pneumonia

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A 56-year-old man with multiple myeloma and neurilemmoma of the neck was transported to our hospital due to cough, fever, diarrhea, and anorexia. A chest x-ray showed massive consolidation of the right lower lobe, and chest computed tomography revealed consolidation with an air bronchogram accompanied by ground-glass infiltrations (Picture 1A, B). He was diagnosed with *Legionella pneumophila* pneumonia based on his positive urinary antigen
test and gradually recovered following treatment with intravenous levofloxacin. *L. pneumophila* serogroup 1 was isolated from his sputum, and the color of which had been orange for several weeks after admission. Orange sputum was also observed in the patient’s trachea (Picture 2A, B).

A previous report described orange sputum in patients with *L. pneumophila* pneumonia (1). *L. pneumophila* changes the color of tyrosine-containing medium to brown-orange, and epithelial lining fluids contain tyrosine; these facts suggest that *L. pneumophila* causes orange sputum by affecting tyrosine in the body (1, 2).

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**References**