Lung Abscess Caused by *Aeromonas hydrophila*

To the editor:

Aeromonas hydrophila is a gram-negative bacillus rarely identified as a human pathogen except in immunologically compromised patients or in patients who have aspirated contaminated water in a drowning episode. We report a case of a lung abscess caused by *A hydrophila* isolated in sputum and bronchial aspirate in an immunocompetent patient who had not aspirated water.

The patient was an 81-year-old woman who came to the emergency department with blood-stained sputum, dyspnea, and 10-days' temperature. Medical history included chronic underweight and gastroesophageal reflux. Physical examination showed the patient was conscious and orientated. She had a dental prosthesis, weighed 34 kg, and had a temperature of 38ºC, a breathing rate of 32 breaths per minute, and oxygen saturation of 94%. Lung auscultation revealed crackles in the middle of the upper left lung Results of blood analysis taken on hospital admission showed hemoglobin to be 9.4 mg/dL; hematocrit, 28.8%; white blood cells, 6 10/L (76.3% neutrophils, 16.1% lymphocytes, 5.5% monocytes, and 1.2% eosinophils); platelets, 726 10^9/L; sedimentation rate, 121 mm/h, and albumin, 2.1 g/dL. The Mantoux test was negative. Chest x-ray revealed cavitation in the upper right lobe. A computed tomography scan of the chest confirmed the presence of the cavitation, which had a maximum diameter of 10 cm, an irregular internal wall, and an air-fluid level (Figure). Two blood cultures were negative. Fiberoptic bronchoscopy gave no evidence of endobronchial lesions but a very small amount of blood was observed coming from the bronchus of the upper left lobe. The bronchial aspirate showed *A hydrophila* growth responsive to ciprofloxacin and cefuroxime and resistant to ampicillin. Sputum culture was also positive for *A hydrophila,* with the same antibiogram as the bronchial aspirate and both samples had negative auramine stains. Microbacterial and fungal cultures were both negative. Cytology was negative for cancer cells. Bronchial lavage and transbronchial biopsy were not performed because of poor tolerance of the procedure, during which severe oxygen desaturation developed. Antituberculosis treatment was initially started but replaced with ciprofloxacin and cefuroxime when the microbiological results were known. Clinical improvement was apparent with normalization of temperature and a chest x-ray taken 3 weeks later showed a 50% reduction in the lesion.

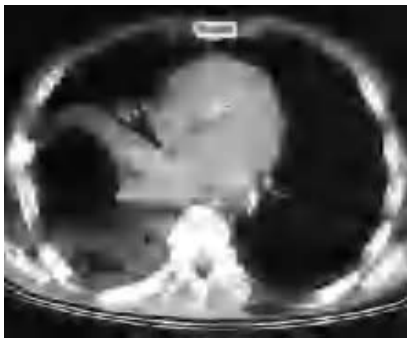

Figure. Computed tomography scan of the thorax showing cavitation with an air-fluid level in the upper right lobe.

The genus *Aeromonas,* formerly included in the *Vibrionaceae* family, constitutes mainly gram-negative, oxidase-positive, facultatively anaerobic bacteria. Molecular genetics has reclassified the genus into the *Aeromonadacea* family. Aeromonads are ubiquitous bacteria whose natural habitat is fresh or brackish water.[1] Most infections described correspond to lesions incurred in water, acute gastroenteritis, and septicemia in immunocompromised patients.[2] The role of aeromonads as causal agents of hepatobiliary and pancreatic infections has recently been recognized.[3] Very occasionally *A hydrophila* has been described as a causal agent of respiratory tract diseases, usually when there has been aspiration or signs of bilateral diffuse disease, leading to adult respiratory distress syndrome and high mortality (40%).[4] To date, only 2 cases of lung abscess without prior immunocompromise have been described (1 after a near drowning incident).[5,6] As in our patient, these cases involved resistance to ampicillin and treatment with cefuroxime was successful. We must add this bacillus to the long list of causes of pulmonary cavitation.

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1. Steinberg JP, del Río C. Other gram-negative bacilli. In: Mandell G, Bennet J, Dolin R, editors. Principles and practice of infectious diseases. Vol. 2. Philadelphia: Churchill Livingstone; 2000. p. 2461-2.
2. Ko WC, Chuang YC. Aeromonas bacteremia: review of 59 episodes. Clin Infect Dis. 1995;20:1298-304.
3. Clark NM, Chenoweth CE. Aeromonas infection of the hepatobiliary system: report of 15 cases and review of the literature. Clin Infect Dis. 2003;37:506-13.
4. Reines HD, Cook FV. Pneumonia and bacteremia due to Aeromonas hydrophila. Chest. 1981;80:264-7.
5. Hur T, Cheng KC, Hsieh JM. Aeromonas hydrophila lung abscess in a previously healthy man. Scand J Infect Dis. 1995; 27:295.
6. Gaussorgues P, Bachmann P, Tigaud S, Piperno D, Jaboulay JM, Salord F, et al. Pulmonary abscess: Aeromonas hydrophila caused by a complication of drowning in fresh water. Ann Med Interne (Paris). 1987;138:666-7.