

the list of emerging bacterial zoonotic agents in wild rodents that could be pathogenic for humans. Further studies are warranted to evaluate the prevalence of this bacterium in rodents in other countries and to demonstrate that rodents may be a source of transmission of this bacterium to humans, especially immunocompromised patients.

### Acknowledgments

We thank Annick Bernard and Linda Hadjadj for technical assistance.

This study was supported by the French National Research Agency; CERoPath (Community Ecology of Rodents and their Pathogens in Southeast Asia Project ANR 07 BDIV 012); Infectiôpôle Sud; Center for Excellence on Agricultural Biotechnology; the Science and Technology Postgraduate Education and Research Development Office; the Office of Higher Education Commission, Ministry of Education (AG-BIO/PERDO-CHE); and the Center of Advanced Studies for Agriculture and Food, Institute for Advanced Studies, Kasetsart University.

### Tawisa Jiyipong, Serge Morand, Sathaporn Jittapalpong, Didier Raoult, and Jean-Marc Rolain

Author affiliations: Aix-Marseille Université, Marseille, France (T. Jiyipong, D. Raoult, J.-M. Rolain); Université Montpellier 2, Montpellier (S. Morand); Kasetsart University, Bangkok, Thailand (T. Jiyipong, S. Jittapalpong); Kasetsart University, Nakhon Pathom, Thailand (T. Jiyipong); Center of Excellence on Agricultural Biotechnology, Bangkok (T. Jiyipong)

DOI: <http://dx.doi.org/10.3201/eid1903.120987>

### References

1. Vandamme P, Hommez J, Vancanneyt M, Monsieurs M, Hoste B, Cookson B, et al. *Bordetella hinzii* sp. nov., isolated from poultry and humans. *Int J Syst Bacteriol*. 1995;45:37–45. <http://dx.doi.org/10.1099/00207713-45-1-37>

2. Kattar MM, Chavez JF, Limaye AP, Rassouljian-Barrett SL, Yarfitz SL, Carlson LC, et al. Application of 16S rRNA gene sequencing to identify *Bordetella hinzii* as the causative agent of fatal septicemia. *J Clin Microbiol*. 2000;38:789–94.
3. Arvand M, Feldhues R, Mieth M, Kraus T, Vandamme P. Chronic cholangitis caused by *Bordetella hinzii* in a liver transplant recipient. *J Clin Microbiol*. 2004;42:2335–7. <http://dx.doi.org/10.1128/JCM.42.5.2335-2337.2004>
4. Fry NK, Duncan J, Edwards MT, Tilley RE, Chitnavis D, Harman R, et al. A UK clinical isolate of *Bordetella hinzii* from a patient with myelodysplastic syndrome. *J Med Microbiol*. 2007;56:1700–3. <http://dx.doi.org/10.1099/jmm.0.47482-0>
5. Funke G, Hess T, von Graevenitz A, Vandamme P. Characteristics of *Bordetella hinzii* strains isolated from a cystic fibrosis patient over a 3-year period. *J Clin Microbiol*. 1996;34:966–9.
6. Seng P, Drancourt M, Gouriet F, La Scola B, Fournier PE, Rolain JM, et al. Ongoing revolution in bacteriology: routine identification of bacteria by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. *Clin Infect Dis*. 2009;49:543–51. <http://dx.doi.org/10.1086/600885>
7. Weisburg WG, Barns SM, Pelletier DA, Lane DJ. 16S ribosomal DNA amplification for phylogenetic study. *J Bacteriol*. 1991;173:697–703.
8. Register KB, Sacco RE, Nordholm GE. Comparison of ribotyping and restriction enzyme analysis for inter- and intraspecies discrimination of *Bordetella avium* and *Bordetella hinzii*. *J Clin Microbiol*. 2003;41:1512–9. <http://dx.doi.org/10.1128/JCM.41.4.1512-1519.2003>
9. Hayashimoto N, Morita H, Yasuda M, Ishida T, Kameda S, Takakura A, et al. Prevalence of *Bordetella hinzii* in mice in experimental facilities in Japan. *Res Vet Sci*. 2012. 93:624–6. PubMed
10. Hayashimoto N, Yasuda M, Goto K, Takakura A, Itoh T. Study of a *Bordetella hinzii* isolate from a laboratory mouse. *Comp Med*. 2008;58:440–6.

Address for correspondence: Jean-Marc Rolain, Unité des Rickettsies, Unité de Recherche sur les Maladies Infectieuses et Tropicales Émergentes, Centre National de la Recherche Scientifique–Institut de Recherche pour le Développement, Unités Mixtes de Recherche 6236, Faculté de Médecine et de Pharmacie, Aix-Marseille Université, 27 Bd Jean Moulin 13385 Marseille, France; email: jean-marc.rolain@univmed.fr

## Melioidosis and Hairy Cell Leukemia in 2 Travelers Returning from Thailand

**To the Editor:** Patients with underlying medical conditions travel more than ever (1), and such travelers may be exposed to uncommon infections (2). We report 2 cases of melioidosis and hairy cell leukemia in travelers returning from Thailand.

Case-patient 1 was a 48-year-old man hospitalized in Paris with fever, asthenia, chills, and pancytopenia after returning from a 1-week visit to Thailand where he had been in flooded regions (Koh Samui and Koh Samet). Clinical examination showed a temperature of 40°C and mucocutaneous pallor. Laboratory tests showed a hemoglobin level of 7.9 g/dL, a platelet count of  $33 \times 10^9/L$ , a leukocyte count of  $1.3 \times 10^9$  cells/L, a polymorphonuclear cell count of  $0.77 \times 10^9$  cells/L, a monocyte count of 0, and a C-reactive protein level of 158 mg/L. Results of tests for HIV, dengue, and malaria were negative.

Presumptive antimicrobial drug treatment with piperacillin/tazobactam (12 g/1.5 g/d) was initiated at admission. A blood smear showed 10% hairy cells, and a bone marrow biopsy confirmed a diagnosis of hairy cell leukemia and interstitial infiltration of CD20-positive, monoclonal antibody DBA.44-positive, and tartrate-resistant acid phosphatase-positive cells.

Because of persistent unexplained fever, full-body computed tomography (CT) was performed and showed multiple liver, spleen, and lung abscesses (Figure, panels A and B). Culture of a CT scan-guided liver abscess puncture specimen was positive for *Bukholderia pseudomallei* after 12 days of antimicrobial drug treatment. Treatment was changed to ceftazidime (120 mg/kg/d) trimethoprim/sulfamethoxazole

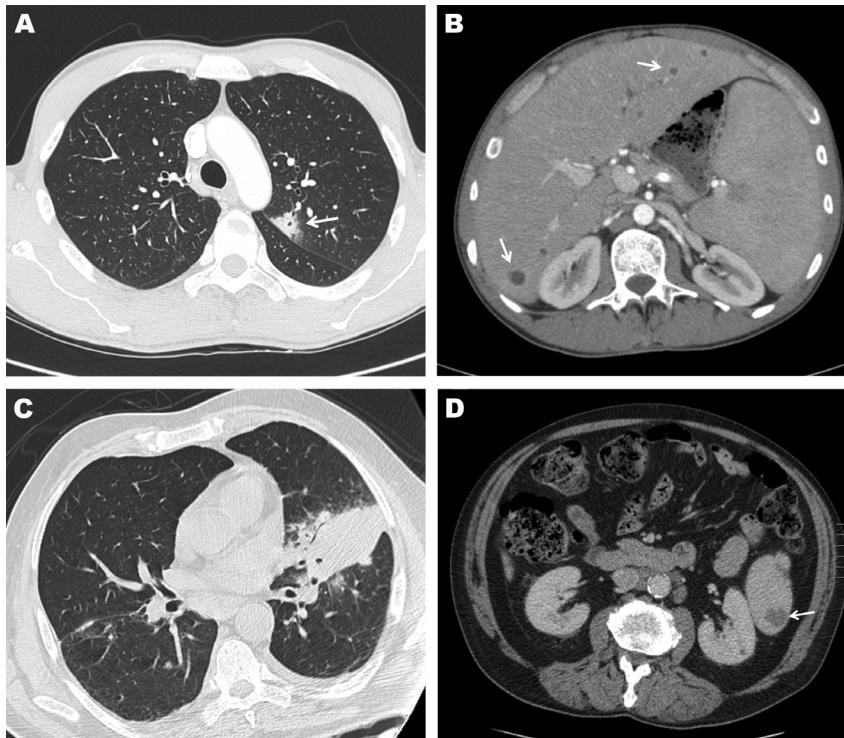


Figure. Computed tomography (CT) images of the chest and abdomen of case-patient 1 showing A) a subpleural nodular and cavitary lesion (arrow) in the left upper lobe of the lung and B) multiple small round liver abscesses, seen as multiple foci of ill-defined areas of hypoattenuation (arrows), and enlargement of the spleen. CT images of the chest and abdomen of case-patient 2 showing C) a focal area of parenchymal consolidation in the left lung associated with an ipsilateral mild pleural effusion and D) and a spleen abscess (arrow).

(TMP/SMX) (10/50 mg/kg/d) and oral doxycycline (200 mg/d) for 3 weeks. The outcome was good.

Oral treatment with TMP/SMX and doxycycline (200 mg/d) was continued for 20 weeks. Treatment for hairy cell leukemia with cladribine was initiated after 10 weeks of antimicrobial drug treatment. Two years later, the patient showed complete remission of hairy cell leukemia and melioidosis.

Case-patient 2 was a 64-year-old man hospitalized in Paris for persistent fever 16 days after his return from Thailand. Two months earlier in Thailand, he had received treatment for hepatosplenic melioidosis with ceftazidime (120 mg/kg/d), TMP/SMX (10/50 mg/kg/d), and doxycycline (200 mg/d) for 15 days, and then oral amoxicillin/clavulanic acid (3 g/d) for 3 months. At admission, he had fever, chills, abdominal pain,

and cough. Clinical examination showed a temperature of 40°C and left lung crackles. Chest and abdomen CT images showed a focus of lung consolidations (Figure, panels C and D), left pleural effusion, pericarditis, and spleen abscesses. Laboratory tests showed a leukocyte count of  $1.05 \times 10^9$  cells/L, a monocyte count of  $0.04 \times 10^9$  cells/L, a hemoglobin level of 7.9 g/dL, a platelet count of  $62 \times 10^9$ /L, and a serum ferritin level of 8,530 IU/L.

Blood cultures were positive for *B. pseudomallei*. The strain was sensitive to amoxicillin/clavulanic acid. Bone marrow aspiration and biopsy showed hemophagocytosis and interstitial infiltration of CD20-positive, monoclonal antibody DBA.44-positive, CD 103-positive, CD25-positive, CD11c-positive, and CD123-positive cells, leading to a diagnosis of hairy cell leukemia. The patient was given a 2-week course

of intravenous TMP/SMX (50 mg/10 mg/kg/d), oral doxycycline (4 mg/kg/d), and intravenous ceftazidime (120 mg/kg/d), followed by a 6-month course of oral TMP/SMX (10 mg/50 mg/kg/d) and doxycycline (200 mg/d). The condition of the patient improved and pancytopenia resolved. Thus, he did not require any treatment for hairy cell leukemia. No relapse of melioidosis occurred.

Melioidosis is endemic to the Pacific region and Southeast Asia (3,4). Most cases reported in other regions are imported (5). In Thailand, where both patients had traveled, the number of cases increased from 11.5/100,000 inhabitants in 1997 to 21.3/100,000 in 2006 (6). The 2 main routes of transmission are transcutaneous and aerosols. Natural disasters, such as flooding, are a risk factor for melioidosis, as for case-patient 1.

This disease has an overall mortality rate of 50%. The clinical spectrum ranges from acute septicemia (mortality rate 80%) to the subacute form. *B. pseudomallei* is difficult to detect by culture of biologic samples, and serologic analysis or PCR for this bacteria are not routinely available. Therefore, a diagnosis of melioidosis can be easily missed.

Melioidosis occurs mainly in patients with underlying diseases such as diabetes (37%–60% of cases), chronic alcoholism (12%–39%), thalassemia, and chronic nephropathy, and in persons receiving long-term corticosteroid treatment (7). Reports of patients with melioidosis and hematologic malignancies or solid cancers are scarce (4,5,7). Hairy cell leukemia could now be included in this group of diseases.

Hairy cell leukemia is a rare chronic B-cell lymphoproliferative disorder characterized by pancytopenia; splenomegaly; and infiltration of the bone marrow, spleen, and liver by malignant B cells that have hair-like cytoplasmic projections (8,9). The incidence of hairy cell leukemia is

<1 case/100,000 population/year, and the disease accounts for ≈2%–3% of all leukemias in adults in the United States (8). Infections are a common complication for patients with this disease (10).

These 2 cases of imported melioidosis show that travelers with hematologic malignancies are at risk for such infections (1). Immuno-compromised travelers might be first sentinels for ongoing endemic diseases. When travelers return with uncommon diseases, physicians should check for underlying diseases. Physicians providing care for patients with hairy cell leukemia should be aware of the risk for contracting melioidosis.

#### Acknowledgment

We thank Laurent Meyer for reviewing the manuscript.

**Benjamin Rossi,<sup>1</sup>  
Loïc Epelboin,<sup>1</sup>  
Stéphane Jauréguiberry,  
Maryline Lecso,  
Damien Roos-Weil,  
Jean Gabarre,  
Philippe A. Grenier,  
François Bricaire,  
and Eric Caumes**

Author affiliations: Groupe Hospitalier Pitié-Salpêtrière, Paris, France (B. Rossi, L. Epelboin, S. Jauréguiberry, M. Lecso, D. Roos-Weil, J. Gabarre, P.A. Grenier, F. Bricaire, E. Caumes); and Université Pierre et Marie Curie–Paris VI, Paris (L. Epelboin, S. Jauréguiberry, D. Roos-Weil, P.A. Grenier, F. Bricaire, E. Caumes)

<sup>1</sup>These authors contributed equally to this article.

DOI: <http://dx.doi.org/10.3201/eid1903.121329>

#### References

1. Wieten RW, Leenstra T, Goorhuis A, van Vugt M, Grobusch MP. Health risks of travelers with medical conditions: a retrospective analysis. *J Travel Med.* 2012;19:104–10. <http://dx.doi.org/10.1111/j.1708-8305.2011.00594.x>
2. McCarthy AE, Mileno MD. Prevention and treatment of travel-related infections

- in compromised hosts. *Curr Opin Infect Dis.* 2006;19:450–5. <http://dx.doi.org/10.1097/01.qco.0000244050.15888.6f>
3. Cheng AC, Currie BJ. Melioidosis: epidemiology, pathophysiology, and management. *Clin Microbiol Rev.* 2005;18:383–416. <http://dx.doi.org/10.1128/CMR.18.2.383-416.2005>
  4. White NJ. Melioidosis. *Lancet.* 2003;361:1715–22. [http://dx.doi.org/10.1016/S0140-6736\(03\)13374-0](http://dx.doi.org/10.1016/S0140-6736(03)13374-0)
  5. Cahn A, Koslowsky B, Nir-Paz R, Temper V, Hiller N, Karlinsky A, et al. Imported melioidosis, Israel, 2008. *Emerg Infect Dis.* 2009;15:1809–11. <http://dx.doi.org/10.3201/eid1511.090038>
  6. Limmathurotsakul D, Wongratanacheewin S, Teerawattanasook N, Wongsuvan G, Chaisuksant S, Chetchotisakd P, et al. Increasing incidence of human melioidosis in northeast Thailand. *Am J Trop Med Hyg.* 2010;82:1113–7. <http://dx.doi.org/10.4269/ajtmh.2010.10-0038>
  7. Salam AP, Khan N, Malnick H, Kenna DT, Dance DA, Klein JL. Melioidosis acquired by traveler to Nigeria. *Emerg Infect Dis.* 2011;17:1296–8. <http://dx.doi.org/10.3201/eid1707.110502>
  8. Goodman GR, Bethel KJ, Saven A. Hairy cell leukemia: an update. *Curr Opin Hematol.* 2003;10:258–66. <http://dx.doi.org/10.1097/00062752-200307000-00002>
  9. Bouroncle BA, Wiseman BK, Doan CA. Leukemic reticuloendotheliosis. *Blood.* 1958;13:609–30.
  10. Kraut E. Infectious complications in hairy cell leukemia. *Leuk Lymphoma.* 2011;52(Suppl 2):50–2. <http://dx.doi.org/10.3109/10428194.2011.570819>

Address for correspondence: Loïc Epelboin, Service des Maladies Infectieuses et Tropicales, Groupe Hospitalier Pitié-Salpêtrière, 47–83 Blvd de l'Hôpital, 75013 Paris, France; e-mail: [epelboinrh@hotmail.fr](mailto:epelboinrh@hotmail.fr)

#### Letters

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article's publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have 1 Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.

## Plague Epidemics and Lice, Democratic Republic of the Congo

**To the Editor:** Plague, a zoonotic disease caused by the gram-negative bacterium *Yersinia pestis*, is transmitted to humans by the bites of infected fleas (such as *Xenopsylla cheopis*), scratches from infected animals, and inhalation of aerosols or consumption of food contaminated with *Y. pestis* (1). Decades ago, Blanc and Baltazard proposed that human-to-human transmission of *Y. pestis* could be mediated by human ectoparasites, such as the human body louse (2). This hypothesis was further supported by experimental data from animal models (3).

To further test this hypothesis among humans, we conducted a field assessment in April 2010, in which we collected body and head lice from persons living in a highly plague-endemic area near the Rethy Health District, Province Orientale, Democratic Republic of the Congo. This health district has 157,000 inhabitants, and during 2004–2009 it had more suspected plague cases (1,624 cases of suspected plague, 39 deaths) than any other health district in the Democratic Republic of the Congo. In April 2010, we visited the dwellings of 10 patients for whom suspected cases of plague had been diagnosed during January–April 2010. All patients had symptoms typical of bubonic plague, and their illnesses were reported as suspected bubonic plague. However, because of the lack of laboratory facilities in Rethy, none of these diagnoses could be microbiologically confirmed.

A total of 154 body lice and 35 head lice were collected from clothes and hair of persons living in or near the patients' dwellings. Body lice were preserved in ethanol before