infected with non-GII.4 norovirus genotypes. However, AGE among unvaccinated rotavirus case-patients was more severe than among norovirus case-patients, and was characterized by higher fever and more frequent and severe diarrhea. This finding confirms findings in a study of children in Finland (7), although our study found no difference in frequency or severity of vomiting between patients with rotavirus disease and those with norovirus disease.

In addition, vaccination against rotavirus did not provide protection against norovirus and had no effect on the clinical course of norovirus disease, which is consistent with other findings (8). Although an earlier rotavirus vaccine, which has subsequently been withdrawn, may have provided some nonspecific protection by reducing intensity and duration of diarrhea associated with adenovirus and sapovirus (9,10), our study did not demonstrate a similar effect on norovirus-associated diarrhea after vaccination with RV5. This study reinforces the hypothesis that norovirus can cause severe AGE among young children and should be considered as a specific target for vaccine development.

## Mary E. Wikswo, Rishi Desai, Kathryn M. Edwards, Mary Allen Staat, Peter G. Szilagyi, Geoffrey A. Weinberg, Aaron T. Curns, Benjamin Lopman, Jan Vinjé, Umesh D. Parashar, Daniel C. Payne, and Aron J. Hall

Author affiliations: Centers for Disease Control and Prevention, Atlanta, Georgia, USA (M.E. Wikswo, R. Desai, A.T. Curns, B. Lopman, J. Vinjé, U.D. Parashar, D.C. Payne, A.J. Hall); Vanderbilt University Medical Center, Nashville, Tennessee, USA (K.M. Edwards); Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA (M.A. Staat); and University of Rochester School of Medicine and Dentistry, Rochester, New York, USA (P.G. Szilagyi, G.A. Weinberg)

DOI: http://dx.doi.org/10.3201/eid1910.130448

### References

- Tate JE, Cortese MM, Payne DC, Curns AT, Yen C, Esposito DH, et al. Uptake, impact, and effectiveness of rotavirus vaccination in the United States: review of the first 3 years of postlicensure data. Pediatr Infect Dis J. 2011;30(Suppl):S56–60. http://dx.doi. org/10.1097/INF.0b013e3181fefdc0
- Payne DC, Vinje J, Szilagyi PG, Edwards KM, Staat MA, Weinberg GA, et al. Norovirus and medically attended gastroenteritis in U.S. children. N Engl J Med. 2013;368:1121–30. http://dx.doi. org/10.1056/NEJMsa1206589
- Trujillo AA, McCaustland KA, Zheng DP, Hadley LA, Vaughn G, Adams SM, et al. Use of TaqMan real-time reverse transcription–PCR for rapid detection, quantification, and typing of norovirus. J Clin Microbiol. 2006;44:1405–12. http://dx.doi.org/10.1128/JCM.44.4.1405-1412.2006
- Vega E, Barclay L, Gregoricus N, Williams K, Lee D, Vinje J. Novel surveillance network for norovirus gastroenteritis outbreaks, United States. Emerg Infect Dis. 2011;17:1389–95.
- Ruuska T, Vesikari T. Rotavirus disease in Finnish children: use of numerical scores for clinical severity of diarrhoeal episodes. Scand J Infect Dis. 1990;22:259–67. http:// dx.doi.org/10.3109/00365549009027046
- Staat MA, Payne DC, Donauer S, Weinberg GA, Edwards KM, Szilagyi PG, et al. Effectiveness of pentavalent rotavirus vaccine against severe disease. Pediatrics. 2011;128:e267–75. http:// dx.doi.org/10.1542/peds.2010-3722
- Pang XL, Joensuu J, Vesikari T. Human calicivirus-associated sporadic gastroenteritis in Finnish children less than two years of age followed prospectively during a rotavirus vaccine trial. Pediatr Infect Dis J. 1999;18:420–6. http://dx.doi. org/10.1097/00006454-199905000-00005
- Zeng SQ, Halkosalo A, Salminen M, Szakal ED, Karvonen A, Vesikari T. Norovirus gastroenteritis in young children receiving human rotavirus vaccine. Scand J Infect Dis. 2010;42:540–4. http://dx.doi. org/10.3109/00365541003652556
- Pang XL, Zeng SQ, Honma S, Nakata S, Vesikari T. Effect of rotavirus vaccine on Sapporo virus gastroenteritis in Finnish infants. Pediatr Infect Dis J. 2001;20:295– 300. http://dx.doi.org/10.1097/00006454-200103000-00015

 Pang XL, Koskenniemi E, Joensuu J, Vesikari T. Effect of rhesus rotavirus vaccine on enteric adenovirus–associated diarrhea in children. J Pediatr Gastroenterol Nutr. 1999;29:366–9. http://dx.doi. org/10.1097/00005176-199909000-00026

Address for correspondence: Mary E. Wikswo, Centers for Disease Control and Prevention, 1600 Clifton Rd NE, Mailstop A34, Atlanta, GA 30333, USA; email: ezq1@ccdc.gov

# Leprosy in Pregnant Woman, United States

To the Editor: Hansen disease, or leprosy, in pregnancy is a rarely reported event in the United States. In 2009, a total of 213,036 new cases of leprosy were detected througout the world (1). Nine countries in Africa, Asia, and Latin America consider it a public health problem, accounting for  $\approx$ 75% of the global disease prevalence (1).

We describe a case of leprosy in a 27-year-old woman with 1 previous pregnancy and 1 live-born infant who had onset of subcutaneous nodules before she became pregnant. She appeared at her initial prenatal visit at 24.1 weeks of gestation after recently emigrating from Mexico. The patient reported that subcutaneous nodules had developed on her arms, legs, back, and abdomen  $\approx 5$  months before the visit, 2 weeks before her last menstrual period. A skin biopsy revealed acute and chronic panniculitis with acid-fast bacilli, and the condition was confirmed by PCR to be lepratamatous leprosy. Treatment included rifampin, Dapsone, clofazimine, and prednisone.

The patient's condition was monitored closely with ultrasounds at serial intervals; these showed consistent fetal growth at the 50th percentile. At 37 weeks and 1 day, her membranes

## LETTERS

ruptured. She underwent a repeat cesarean delivery because the method of leprosy transmission is not yet proven and to prevent possible vertical transmission to the infant. The patient delivered a female infant weighing 6 lb, 8 oz, with Apgar scores of 8 and 9. On postoperative day 1, Dapsone treatment was restarted; she was given Dapsone, 50 mg daily, and prednisone, 40 mg daily. She was discharged with the baby on postoperative day 3.

Leprosy is a chronic disease caused by Mycobacterium leprae. The disease mainly affects the skin and nerves and, if untreated, can cause permanent damage. It is curable, however, and disability can be avoided. The World Health Organization recommends multidrug therapy consisting of Dapsone, rifampin, and clofazimine (1). This combination has proven highly effective, and patients are no longer infectious after the first dose (1). Virtually no relapses occur and antimicrobial drug resistance does not develop (1). Pregnancy causes a relative decrease in cellular immunity, which allows M. leprae to proliferate (2). Careful management can prevent permanent nerve damage. Leporatamatous leprosy and relapse after treatment are more commonly seen throughout pregnancy because of the pregnant woman's immunodeficient state (2,3). Infants are usually less affected than mothers; nevertheless, selection of the mother's antimicrobial drug regimen must ensure adequate control of the bacteria while avoiding teratogenicity and in utero adverse effects, such as low birthweight (3,4). The infant has a potentially high risk of contracting leprosy from the mother by skin-to-skin contact or droplet transmission, particularly if she has not received treatment.

#### Alexis C. Gimovsky and Charles J. Macri

Author affiliation: George Washington University Hospital, Washington, DC, USA

DOI: http://dx.doi.org/10.3201/eid1907.130463

#### References

- World Health Organization. Leprosy. Fact sheet, September 2012 [cited 2013 Mar 28]. http://www.who.int/mediacentre/factsheets/fs101/en/
- Lockwood DN, Sinha HH. Pregnancy and leprosy: a comprehensive literature review. Int J Lepr Other Mycobact Dis. 1999;67:6–12.
- Duncan ME, Pearson JM, Rees RJ. The association of pregnancy and leprosy, I. Lepr Rev. 1981;52:245–62.
- Duncan ME. Babies of mothers with leprosy have small placentae, low birth weights and grow slowly. Br J Obstet Gynaecol. 1980;87:471–9. http://dx.doi. org/10.1111/j.1471-0528.1980.tb04581.x

Address for correspondence: Alexis C. Gimovsky, Department of Obstetrics and Gynecology, George Washington University Hospital, Medical Facility Associates, 2150 Pennsylvania Ave NW, #6A429, Washington, DC 30037, USA; email: agimovsky@gmail.com

# Haemophilus parahaemolyticus Septic Shock after Aspiration Pneumonia, France

To the Editor: Members of the genus Haemophilus are commensal bacteria of the upper respiratory tract, and *H. influenzae* is the main pathogen in this genus that can cause a wide range of human infections (1). The species most closely related to H. influenzae is H. haemolyticus, usually considered a commensal of the nasopharynx in humans; it can be pathogenic, although rarely (2,3). H. parahaemolyticus was distinguished from H. haemolyticus in 1953 when it was determined that H. parahaemolyticus required only factor V, but not factor X, for growth (4). This species could be responsible for pharyngitis and, rarely, for subacute endocarditis (4), but it has seldom been reported to cause invasive disease (5). Invasive disease has been reported in a patient who had an empyema in the gallbladder (6) and in a patient who had a cryptogenic brain abscess (7). We report a case of acute respiratory distress syndrome (ARDS) and septic shock caused by *H. parahaemolyticus*.

A 50-year-old woman, who was receiving artificial ventilation, was transferred to the Hôpital Nord in Marseille, France, in November 2012. She was in a coma because she had taken an overdose of benzodiazepine and clomipramine in a suicide attempt. She had no relevant medical history except addiction to tobacco, chronic alcoholism, and depression. The patient's family owned 3 cats and 1 dog but had no other pets. She had not traveled outside France.

Notable findings on initial examination (before intubation) were shock (arterial blood pressure 80/50 mm Hg, despite adequate fluid resuscitation), tachycardia (pulse rate 110 beats/min), tachypnea (respiratory rate 34 respirations/min), low peripheral oxygen saturation (S<sub>0</sub>, 80%), and a temperature of 39°C. On intensive care unit (ICU) admission, her partial pressure of arterial oxygen/fraction of inspired oxygen ratio was 101 under mechanical ventilation, with a positive end-expiratory pressure level of 10 cm H<sub>2</sub>O, consistent with ARDS. Chest examination revealed bilateral crackles on lower lung lobes, consistent with chest radiograph findings. Routine laboratory evaluation showed a hemoglobin level of 11.7 g/dL (reference 12.5-15.5 g/dL for women); leukocytosis, indicated by a leukocyte count of 23 cells  $\times$  10<sup>9</sup>/L (reference 4–10 ×10<sup>9</sup>/L); and elevated C-reactive protein level (298 mg/L [reference <5 mg/L]).

On the second day, a bronchoalveolar lavage (BAL) specimen (obtained before initiation of antimicrobial drug therapy) was positive for *H. parahaemolyticus* (10<sup>7</sup> CFU/mL) on a chocolate polyvitex agar plate, and the strain showed susceptibility to ampicillin/clavulanate, ceftriaxone,