Techapp.pdf), *E. vittiventris* cockroaches are considered to be harmless and have not been associated with human disease or transmission of pathogens. We did not observe any allergic reactions or an increase in colonization or infection rates of multidrug-resistant organisms. *B. germanica* cockroaches are nocturnal, cannot fly, are always encountered within human habitations, and require specialized measures for eradication (*10*).

E. vittiventris cockroaches live in outdoor areas, do not avoid light, and are active during daytime. Buildings are not a natural habitat. In summer, adult insects can fly inside at night, but because these cockroaches are unable to reproduce inside buildings (*1*), stopping entry from outside halts the infestation. Entry can be stopped by closing windows or using mosquito nets. There is no existing insecticide for eradication of *E. vittiventris* cockroaches (*10*), and even if there were, it would not be effective because insects from untreated areas outside would enter continuously (*1*).

E. vittiventris cockroaches have been recently discovered in Geneva (*10*) and have become the most frequently encountered cockroaches in urban areas of Switzerland for several years (*1*). The reason for this finding remains unknown. The summer of 2003 was remarkably hot and dry in central Europe, thus representing a subtropical climate that usually favors the growth and development of cockroach populations (*1*,*7*). If this warming trend persists, populations of *E. vittiventris* cockroaches may continue to expand, and similar infestations may occur.

In conclusion, effective control strategies for cockroach infestations depend on identification of cockroach species. In this report, permanent closure of all windows was sufficient to stop the infestation. However, to ensure compliance, it was critical to discuss the purposes of the intervention with HCWs.

Acknowledgments

We thank Rosemary Sudan for editorial assistance, the ICU team of the University of Geneva Hospitals for collaboration, and Manadou Diallo for expert advice.

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DOI: 10.3201/eid1503.071484

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Cutaneous Anthrax, West Bengal, India, 2007

To the Editor: In most of India, anthrax is not common, probably because a large proportion of the population is Hindu and does not eat beef. However, sporadic cases and outbreaks have been reported (*1*–*6*).

On June 8, 2007, a healthcare facility reported 12 cases of cutaneous anthrax in the Muslim village of Sarkarpara (population 361). On August 4, 2007, another facility 50 km away reported 8 cases from the Muslim village of Charbinpara (population 835). These 2 outbreaks, both in Murshidabad district, West Bengal, were associated with the slaughtering of 4 cows. We investigated each outbreak to confirm diagnosis, estimate magnitude (incidence and severity), and identify risk factors. We conducted house-to-house searches to identify case-patients and collected smears from skin lesions.

From Sarkarpara, we identified 45 cases of cutaneous anthrax and 2

deaths (attack rate 12%, case-fatality rate 4%); from Charbinpara, we identified 44 cases and no deaths (attack rate 5%). In Sarkarpara, villagers had slaughtered a cow on June 2, 2007. The outbreak started on June 3, peaked on June 6 (1 cluster), and ended on June 10. In Charbinpara, villagers had slaughtered 3 cattle, 1 each day, on July 16, July 23, and August 1. The first case occurred on July 17 and was followed by 3 peaks (3 clusters) (Figure). In each village, attack rates were highest among persons 15–44 years of age. Microscopic examination at the district public health laboratory showed gram-positive, spore-bearing bacilli that were characteristic of *Bacillus anthracis* on 7 of 20 smears (5/10 from Sarkarpara and 2/10 from Charbinpara).

To test the hypothesis that exposure to meat of a slaughtered cow was associated with illness, we conducted a retrospective cohort study among families who had handled or eaten beef from cows slaughtered during the week before the outbreak. Through interviews, we collected information about possible exposures, including slaughtering, handling meat or skin, and eating beef.

In Sarkarpara, we enrolled 296 persons from 59 families in the cohort study. Persons who had slaughtered cows and handled meat and skins had a significantly higher risk for illness than those who had not. In Sarkarpara, risk associated with slaughtering cattle was 9.1 (95% confidence interval [CI] 6.0–13.7) and with handling meat 2.6 (95% CI 1.5–4.4) (online Appendix Table, available from www.cdc.gov/EID/content/15/3/497-appT.htm). Slaughtering cows or handling meat accounted for the largest proportion of cases; 8% and 33% of the population was engaged in these practices, respectively (population-attributable fraction [PAF] 39% [95% CI 37.0–41.2] and 34% [95% CI 18.5–42.9], respectively). PAF associated with handling skins was 2% (95% CI 1.8–2.0).

In Charbinpara, we included 687 persons from 118 families in the cohort study. Slaughtering cattle and distributing beef were strongly associated with illness (online Appendix Table). Slaughtering cows and handling meat were common practices and accounted for the largest proportion of cases (PAF 47% [95% CI 46.0–48.0] and 19% [95% CI 17.5–19.4], respectively). In Charbinpara, risk associated with slaughtering was 19.0 (95% CI 11.0–30.0) and with distributing was 11.0 (95% CI 6.8–19.0) (online Appendix Table). Of the persons who ate beef, anthrax developed in 17% in Sarkarpara and 7% in Charbinpara. However, when we restricted the analysis to those who did not handle meat or skin, eating beef was not associated with illness. No person whose sole exposure was eating beef became ill. Persons who slaughtered cattle were not in the butchering profession; they did not wear gloves or other protective equipment. Their helpers distributed the beef in the village without any protection. Persons involved in skin trading carried the skins to nearby villages to sell. Women in the villages boiled the beef for 30 minutes before serving.

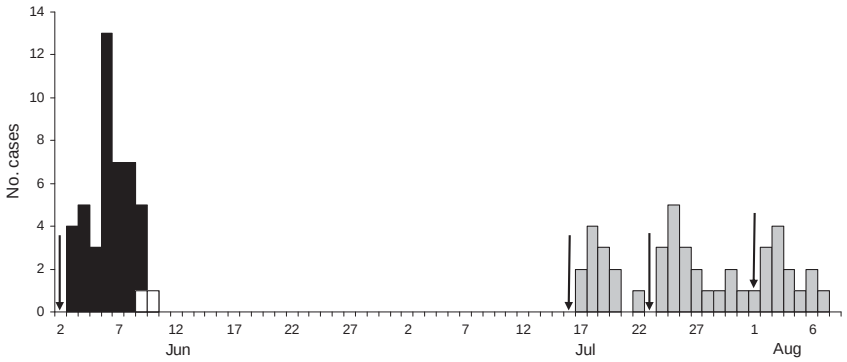

Figure. Cases of cutaneous anthrax, Mushidabad district, West Bengal, India, 2007. Dates indicate onset of skin lesion. Arrows indicate dates cattle were slaughtered. Black bars, cases in Sarkarpara village; gray bars, cases in Charbinpara village; white bars, deaths.

In Sarkarpara, healthcare workers knew the symptoms suggestive of anthrax and that this disease needed to be reported. As a result, this outbreak was reported early. In Charbinpara, healthcare workers knew nothing about the disease and did not report it. As a result, reporting was delayed until the third cluster. Late reporting prevented effective public health action. Because the source of infection in the 2 villages differed (different cattle), we were unable to formally establish a causal link between these 4 clusters.

Because the anthrax outbreak in Murshidabad was associated with slaughtering of ill cows and handling raw meat without taking any protective measures, we propose several recommendations. First, healthcare workers in anthrax-endemic areas need to be educated about promptly recognizing and reporting the disease. Second, persons in the community must be educated about using personal protective equipment during slaughtering of animals and handling of meat and skins. Community education should focus on those at risk, including Muslim communities who eat beef. Because anthrax occurs in only a few districts, India does not have a nationally organized control program (*7*). However, a focal prevention plan based on these recommendations would ultimately help reduce illness and death in anthrax-endemic districts.

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DOI: 10.3201/eid1503.080972

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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.

Cat-to-Human Orthopoxvirus Transmission, Northeastern Italy

To the Editor: Kurth et al (*1*) recently described a cowpoxvirus chain of transmission from rat to human through an elephant in Germany. Zoonotic cowpoxvirus infections are well known in Europe (*2*,*3*). This virus can infect many animal species; serologic evidence of infection may approach 10% in cats in western Europe (*4*,*5*). Zoonotic orthopoxvirus (OPV) infection has been reported in several European countries, but it is rare south of the Alps, and no extensive description of cases is available for Italy. We describe 2 cases of zoonotic OPV in Friuli, northeastern Italy, in veterinary personnel scratched by cats.

In December 2005, a male veterinary student (patient A) who had been scratched by a cat with multiple cutaneous ulcerated lesions sought care at a local hospital; he had a lesion on his right hand, moderate fever, and malaise. Histopathologic findings from the cat indicated feline poxvirus infection. In July 2007, a female veterinarian (patient B) who lived in a different area of the same region and also had been scratched by a cat, sought care at the same hospital; she had a lesion close to the right sternoclavicular joint.

On the basis of patients' history of exposure and clinical presentation of the animals' disease, zoonotic transmission of OPV infection was suspected. Vesicle fluid and, subsequently, crusts from the patients' lesions, were sent to the virology laboratory of the reference center for poxvirus infections at National Institute for Infectious Diseases in Rome, where OPV diagnosis was based on electron microscopy, virus isolation, and detection of viral nucleic acid. In addition, serial blood samples were sent to the same laboratory for analysis of specific antibodies and cellular immune response.

The viruses were almost identical, according to the partial sequence of the *crmB* gene (EF612710 and FJ445748) and on the complete sequence of the hemagglutinin gene (EF612709 and FJ445747). The hemagglutinin (Figure) and the partial *crmB* (not shown) sequences from each isolate formed a distinct cluster within the OPV genus; similar results were obtained from concatenated analysis of both genes (not shown). The identity/similarity scores of the complete nucleotide sequences of *crmB* and hemagglutinin genes from patient A, in relation to other OPVs, were, respectively, Ectromelia (AF012825), 0.598 and 0.841; cowpox (X94355), 0.933 and 0.927; vaccinia (AY678276), 0.844 and 0.934; camelpox (AY009086), 0.941 and 0.940; monkeypox (DQ011153), 0.909 and 0.914; and variola (DQ437588), 0.922 and 0.906. On the basis of these results, species assignment of the isolated OPVs was not possible. Preliminary sequence data on additional genes (ATI, A27L, and CBP) from patient A's isolate supported the segregation of these OPVs in Italy from the other known OPV species. However, the available information is still not enough to infer whether the isolates from Italy belong to a novel or known OPV species. More extensive biologic and molecular characterization is in progress.

The 2 cases reported here, occurring >1 year apart, indicate that OPV is circulating in domestic, and possibly wild, local fauna; they underscore the need for physicians and veterinarians to become aware of the risk for OPV zoonoses. A surveillance program has been launched among local veterinary clinics to identify nonvaccinated veterinarians who have been exposed to OPV. A surveillance plan for cats at these clinics has also been started.

Appendix Table. Risk for cutaneous anthrax according to selected exposures, 2 villages, Murshidabad district, West Bengal, India, 2007*

	Sarkarpara village						Charbinpara village					
	Risk among exposed		Risk among unexposed		Association		Risk among exposed		Risk among unexposed		Association	
Characteristics of persons	Total no.	No. (%) cases	Total no.	No. (%) cases	RR	95% CI	Total no.	No. (%) cases	Total no.	No. (%) cases	RR	95% CI
Age >median†	163	30 (18)	133	15 (11)	1.6	0.9–2.9	351	26 (7)	336	18 (5)	1.4	0.8–2.5
Female sex	142	24 (17)	154	21 (14)	1.2	0.7–2.1	189	21 (11)	498	23 (5)	2.4	1.4–4.2
Slaughtered cattle‡	24	20 (83)	272	25 (9)	9.1	6.0–13.7	35	22 (63)	652	22 (3)	19	11–30
Distributed beef‡	–	–	–	–	–	–	15	9 (60)	672	35 (5)	11	6.8–19
Cleaned beef‡	–	–	–	–	–	–	174	12 (7)	513	32 (6)	1.1	0.6–2.1
Handled raw beef‡	97	25 (20)	199	26 (10)	2.6	1.5–4.4	–	–	–	–	–	–
Carried animal skins‡	1	1 (100)	295	44 (15)	6.7	5.1–8.8	2	1 (50)	685	43 (6)	8.0	1.9–32.8
Ate beef‡	260	45 (17)	36	0	–	–	654	44 (7)	33	0	–	–
Ate but did not handle beef	142	0	33	0	0	0	445	0	16	0	0	0

*RR, relative risk; CI, confidence interval; –, data not collected.
†Median age 20 years.
‡Involved sick cattle.