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***Rickettsia aeschlimannii*: A New Pathogenic Spotted Fever Group *Rickettsia*, South Africa**

To the Editor: Spotted fever group rickettsiae are increasingly recognized as agents of disease in residents of and tourists to South Africa (1). To date, two species, *Rickettsia conorii* and *R. africae*, which cause Mediterranean spotted fever (MSF) and African tick-bite fever (ATBF), respectively, have been associated with human disease in the region; ATBF is more frequently associated with travel (1). As different antibiotic regimens are recommended for the two syndromes, differentiating MSF from ATBF is important. Increasing evidence shows that the syndromes can usually be differentiated through clinical manifestations and epidemiologic characteristics (1).

We recently encountered a South African patient who, on returning from a hunting and fishing trip, discovered a *Rhipicephalus appendiculatus* tick attached to his right thigh and

an eschar around the attachment site. The patient was aware of the risk of tick-transmitted disease; after removing the tick, immediately self-prescribed doxycycline. No further symptoms developed. However, as a precaution, the patient went to a local clinic, where a skin biopsy was taken from the eschar. This sample, together with the removed tick, was submitted to our laboratory. DNA extracts, prepared from an eschar biopsy and the tick, were incorporated into a polymerase chain reaction (PCR) assay specifically targeting a fragment of the rickettsial *ompA* (2). Sequence analysis of the amplification products showed both to be identical and to share >99% similarity with the *ompA* of *R. aeschlimannii*, a species not previously associated with human disease. Unfortunately, blood samples could not be collected at the time the patients first had symptoms; thus, investigation of a disseminated infection by PCR and serologic testing was not possible.

Although genotypically indistinguishable organisms had previously been detected in *Hyalomma marginatum* collected in Portugal and Zimbabwe, *R. aeschlimannii* was first characterized following its isolation from *H. marginatum* ticks in Morocco (3) and recently in Niger (4). This encounter was the first demonstration of its presence in South Africa and in *Rhipicephalus* ticks.

A lack of suitable clinical material prevented full evaluation of the pathogenic potential of *R. aeschlimannii* in this patient and prompt antibiotic intervention may have prevented evolution of the syndrome. Nonetheless, that *R. aeschlimannii* was transmitted to the patient and established a local infection leading to eschar formation provides clear, albeit preliminary, evidence of its virulence. Until further cases are encountered, allowing better characterization of the clinical manifestations associated with *R. aeschlimannii* infection and considering the agent capable of inducing either MSF or ATBF-like manifestations is cru-

cial; neither of these syndromes can be associated with a specific causative agent without microbiologic identification. Our findings demonstrate that *Rickettsia* species first encountered in tick surveys are associated with human disease, and we should not assume that some *Rickettsia* species not have a pathogenic potential.

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Age as a Risk Factor for Cutaneous Human Anthrax: Evidence from Haiti, 1973–1974

To the Editor: Few cases of anthrax have been reported in children, in part because most exposures to *Bacillus anthracis* occur in workplace settings. Questions about the susceptibility of children to *B. anthracis* infection were raised when cutaneous anthrax developed in a 7-month-

old child in New York City in 2001 after he was taken to visit his mother's workplace (1). No cases of anthrax were reported in persons <24 years of age in the 1979 inhalational anthrax outbreak in the Soviet city of Sverdlovsk, despite a presumed general population exposure (2). Such reports have led some investigators to postulate that young persons may be less susceptible to anthrax than older persons.

In 1974, the Center for Disease Control reviewed records on the occurrence of human anthrax in District Sanitaire des Cayes, Haiti, as part of an investigation of cutaneous anthrax in a Florida woman exposed to spore-contaminated goatskin drums she purchased in Haiti (3). In 1973, a total of 387 cases (7.6 per 10,000 population) were clinically diagnosed in District Sanitaire des Cayes; another 59 cases occurred in the first 4 months of 1974. All cases were the cutaneous form; gastrointestinal and inhalational anthrax are rarely, if ever, diagnosed in Haiti. The source of infection in these 446 patients could not be deter-

mined. Although cases of animal anthrax were rarely reported in Haiti because of a weak surveillance system, 96 (26%) of 368 Haitian goatskin handicraft items were found to be contaminated with *B. anthracis* during the 1974 investigation, suggesting that animal infections were not uncommon (4). Therefore, the source of the infection may have been meat and other products of value salvaged by local residents from anthrax-infected animals.

Age was reported for 366 of the 446 patients in District Sanitaire des Cayes (Table). The distribution of anthrax cases by age group was generally similar to that of the general population, except the proportion of cases in the 15- to 44-year age group was lower than the proportion of persons in that age group in the general population ($p < 0.03$; chi square). In 124 patients for whom information was available, the cutaneous lesion was located on the head or neck (60 patients [48%]), the arm (31 [25%]), the trunk (23 [19%]), and the leg (12 [10%]); this anatomic distribution,

reflecting the primary skin contact point of the organism, was similar in all age groups. However, determining whether the various age groups had differences in skin contact exposure leading to infection is difficult. The affected rural population lived in extreme poverty, typically in small huts with dirt floors and no safe water supply or latrine. Malnutrition was epidemic, and nothing edible was discarded. The crowded living conditions limited opportunities to maintain basic personal hygiene and made it likely that exposure to *B. anthracis*-contaminated materials was similar across all age groups. These previously unpublished age-specific anthrax attack rates from Haiti suggest that adults and children have similar susceptibility to cutaneous anthrax.

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Table. Reported ages of persons with cutaneous anthrax, District Sanitaire des Cayes, Haiti, 1973-74

Age group (yrs)	Anthrax patients No. (%)	General population No. (%)	Cases per 10,000 persons
<1	15 (4.1)	16,361 (3.2)	9.2
1-4	49 (13.4)	59,291 (11.6)	8.3
5-14	96 (26.2)	120,532 (23.5)	8.0
15-44	135 (36.9)	235,164 (45.8)	5.7
45-64	58 (15.8)	64,882 (12.7)	8.9
≥65	13 (3.6)	16,669 (3.2)	7.8
All ages	366	512,899	7.1

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