# Endemic Dengue Hemorrhagic Fever Surfaces

BY JOHN R. BELL
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SAN ANTONIO — What is likely the first-ever case of dengue hemorrhagic fever to originate within Texas occurred last year among residents of the border area of South Texas, as did three endemic cases of classic dengue fever.

Physicians should consider dengue when diagnosing any resident of that region who presents with fever, an epidemiologist from the Texas Department of State Health Services reported.

Allison Abell, Ph.D., reported 18 dengue cases—three in the absence of recent international travel—in residents of greater Brownsville, Tex., found in 2005 by the Border Infectious Disease Surveillance project, a joint surveillance program of the United States and Mexico.

Her team had identified the patients via blood samples taken during home visits to 20 persons identified as at risk based on reports of undifferentiated fever, at least one IgM-positive test result, and patient questionnaires.

The team also conducted interviews and environmental assessments during those visits; notably, 3 of the 18 dengue cases were in people who denied having traveled to any foreign country in the last 3 months. Even more worrisome was that one of those three patients developed dengue hemorrhagic fever, rather than the less-severe classic dengue fever seen in the other 17.

That case apparently "represents the first classically presented case of [dengue hemorrhagic fever] with transmission within Texas," Dr. Abell said at a meeting of the Southwest Conference on Diseases in Nature Transmissible to Man. A prior case of dengue hemorrhagic fever appeared with unusual symptoms several years ago, she noted. Untreated dengue hemorrhagic fever has a mortality of around 50%, but treatment reduces the rate to roughly 5%, she added.

Moreover, three asymptomatic household contacts of the 18 patients tested IgM-positive for dengue, and one denied any recent foreign travel, Dr. Abell reported. Of the 18 cases, 14 were in residents of the Brownsville area, directly across the border from Matamoros, Mexico.

Although dengue fever is not rare in persons returning to the United States from dengue-endemic regions abroad, endemic cases with the United States have been rare since the end of World War II, according to the Centers for Disease Control and Prevention. Only a few indigenous dengue cases have occurred here in the last few years, most of them in Texas. (Hawaii reported 15 cases in 2001-2002.) However, dengue infection is not nationally notifiable, and reporting is passive; thus, incidence might be underreported, the CDC noted.

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Dr. Abell and her colleagues identified environmental risk factors for 15 of the 18 dengue patients by visiting their homes. Dengue is transmitted by the *Aedes aegypti* mosquito and occurs in four serotypes. Objects that collect rainwater, such as pet dishes and toys, were present outside the homes of 9 of the 15 patients (60%). Unmounted tires were present on the property of six patients (40%). And five patients (33%) had windows without screens at their homes. About half the patients reported rarely or never using insect repellent, and two-thirds reported never wearing protective clothing during outdoor activities, Dr. Abell said.

Clinical symptoms reported were sudden onset of fever and headache, often with retroorbital pain, as well as muscle and joint pain, rash, and bleeding in some cases. Almost all patients were Hispanic, and slightly more than half were female. "The most common risk factor really was travel," with 15 of the 18 reporting recent travel to Mexico, Dr. Abell noted at the meeting, held in conjunction with the International Conference on Diseases in Nature Communicable to Man.

Overall, Texas has reported fewer than 10 cases per year of dengue in the last decade, Dr. Abell reported, with the exception of 1999, when an outbreak of 66 cases, including 2 probably indigenous cases, hit the border town of Laredo. ■



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