



Epidemiological Alert:

Confirmed Cases of Saint Louis Encephalitis in Buenos Aires, Argentina, Risk of Viral Circulation

(24 March 2010)

On 19 March 2010, the Ministry of Health of Argentina reported the occurrence of two confirmed cases of Saint Louis Encephalitis (SLE) infection in the nation's capital city of Buenos Aires. The SLE virus has caused outbreaks in the central part of the country (mainly in the provinces of Córdoba and Entre Ríos), and this is the first time that it has been detected in Buenos Aires. This virus has epidemic potential, as has been shown by what occurred in 1975 in the United States in the Ohio and Mississippi River basins, where some 2,000 people developed the neuro-invasive form of the disease.

Faced with this situation and with the verification of cases having occurred in Argentina, it has become necessary to strengthen surveillance of febrile syndrome as well as febrile syndrome with neurological manifestations, in order to provide guidance on what strategy to follow in the area of vector control.

Current Situation

From 1 March 2010 to date, the Ministry of Health of Argentina has reported 40 cases throughout the country: 2 of them confirmed, 16 probable, and 22 suspected cases under investigation. The 2 confirmed cases involve residents of the city of Buenos Aires.

Saint Louis Encephalitis (SLE)

The virus corresponds to a group of acute viral diseases of brief duration that affect the central nervous system (CNS).

Infectious Agent: The SLE virus belongs to the family *Flaviviridae*, genus *Flavivirus*.

Transmission: The SLE virus presents a mosquito-bird-mosquito cycle involving domestic and wild birds and mosquitoes of the *Culex sp.* species. Humans and domestic mammals can acquire the infection through the bite of an infected mosquito, but they do not act effectively as hosts to perpetuate transmission.

Epidemiology and Geographical Distribution: All inhabitants of and visitors to areas with SLE circulation are at risk of contracting the disease. The virus is distributed throughout the American continent, with the last update being reported in Argentina in 2005–2006.

Incubation Period: Varies from 5 to 15 days.

Symptomology: Less than 1% of SLE cases develop clinical manifestations. Severe infections display an abrupt onset characterized by headache, high fever, dizziness, nausea, and malaise. The majority of cases recover spontaneously; however, some develop signs of infection of the CNS, including stiff neck, confusion, disorientation, tremors, and stupor, progressing even to coma. Almost 90% of older adults who acquire the disease develop encephalitis. Case fatality ranges from 5 to 15%, increasing with age.

Treatment: There is no vaccine or specific antiviral treatment. In those cases that present clinical manifestations, appropriate treatment therapy should be administered.

Laboratory Diagnosis: Diagnostic methods include serology, viral isolation, and PCR, which is only carried out in specialized laboratories.

Prevention: Preventive measures focus on individual protection by applying mosquito repellent, destroying breeding sites, and protecting living spaces with mosquito netting. In areas with a high density of *Culex sp.*, chemical vector control should be considered.

**Confirmed, Probable, and Suspected Cases of Saint Louis Encephalitis
by province and place of residence.
Argentina, 1 January –16 March 2010**

Province	Confirmed Cases	Probable Cases	Suspected Cases under Study	Total
Buenos Aires (Bs As), greater metropolitan area		1	7	8
Buenos Aires (Bs As), city proper	2	4	3	9
Entre Ríos			5	5
Santa Fe			2	2
Chaco			2	2
Catamarca			1	1
Córdoba		*11	2	13
Total	2	16	22	40

Source: Report from the National Focal Point of Argentina, 19 March 2010.

*Reported as positive pending confirmation by the national reference laboratory of the National Institute for Human Viral Diseases (*Instituto Nacional de Enfermedades Virales Humanas "Dr Julio I. Maiztegui"*).

According to the available information, 13 cases were reported as suspected for dengue febrile syndrome, and 6 cases have presented neurological involvement (meningoencephalitis).

The average age of the cases is 34 years (range: 12–72 years), and 79% of the cases occur among males.

Regarding the geographical location of the cases in the city of Buenos Aires, the confirmed and probable cases are located in five communes in the southern and southeastern parts of the city.

Prevention and control activities undertaken by the country include the following: vector control activities with isolation of suspected cases, taking samples from persons living with anyone reported as being a case, field case-finding of febrile cases by community agents and technical personnel, and issuing epidemiological alerts to intensity surveillance.

Recommendations

a. Intensify epidemiological surveillance and investigation activities

Strengthen surveillance of febrile syndrome and febrile syndrome with neurological manifestations, and conduct epidemiological investigation of detected cases in order to provide guidance on what strategies to follow for vector control.

b. Take preventive and control measures and evaluate impact

Ensure widespread use of personal protection to reduce the risk of exposure to the vector and take the necessary vector control measures.

Bibliographical References

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