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Letter to the Editor

Chikungunya in Bolivia: Domestic imported case series in Cochabamba

To the Editor,

We have read the original article of Chen et al. about susceptibility of *Aedes albopictus* and *Aedes aegypti* to three imported Chikungunya virus (CHIKV) strains, including the E1/226V variant in Taiwan.[1] Although, autochthonous transmission by *A. aegypti* and *A. albopictus* can occur and is high due to vector susceptibility on those zones, is also important to discuss on the implications of imported cases even in northern areas of Taiwan, where is not distributed the first, for clinicians. This also happens in endemic countries of Latin America, such as Bolivia, and we would like to discuss our experience on that, a country that lacks on published studies on this arboviral disease.

Chikungunya in Latin America have affected multiple countries.[2] In some of them, no information regards its clinical impact have yet reported. Bolivia, is one of them, where in 2017, 3367 cases were reported across the country. Here we report epidemiological and clinical findings of 11 cases of RT-PCR confirmed cases of CHIKV attended in three hospitals of Cochabamba (non-endemic area) during 2015–2016, Hospital Clinico Viedma, Hospital Materno Infantil German Urquidi and Hospital Benigno Sanchez.

Cochabamba (Quchapampa) is a city (632,013 pop) in central Bolivia, located in a valley bearing the same name in the Andes mountain range at 2571 masl (no *Aedes* spp. were reported at this altitude before 2017).

Table 1 Characteristics of imported cases of CHIKV attended in three hospitals of Cochabamba, Bolivia, 2015–2016.

Case	Month	Sex	Age (y-old)	Days of Symptoms before consulting	Clinical symptoms								Blood sampling day[a]	RT-PCR for DENV	RT-PCR for CHIKV
					Fever	Poliartralgia	Cephalea	Myalgia	Lumbalgia	Rash	Nausea	Vomiting			
1	February	F	33	2	Yes	Yes	Yes	Yes	*No*	*No*	*No*	*No*	2	–	+
2	March	F	3	0	Yes	Yes	Yes	Yes	*No*	*No*	*No*	*No*	3	–	+
3	April	M	16	4	Yes	Yes	Yes	Yes	Yes	Yes	*No*	*No*	2	–	+
4	April	M	10	3	Yes	*No*	Yes	Yes	*No*	Yes	*No*	Yes	1	–	+
5	April	M	16	3	Yes	Yes	Yes	Yes	Yes	Yes	*No*	*No*	1	–	+
6	April	F	50	1	*No*	Yes	Yes	*No*	Yes	*No*	Yes	*No*	1	–	+
7	April	F	19	1	Yes	Yes	Yes	Yes	Yes	*No*	Yes	*No*	1	–	+
8	April	M	32	4	Yes	Yes	Yes	Yes	*No*	*No*	*No*	*No*	2	–	+
9	May	F	31	4	Yes	Yes	Yes	*No*	*No*	*No*	*No*	*No*	4	–	+
10	May	M	56	2	Yes	Yes	Yes	Yes	*No*	*No*	*No*	*No*	1	–	+
11	June	F	28	7	Yes	Yes	Yes	Yes	*No*	*No*	*No*	Yes	4	–	+

F = Female; M = Male; y-old = years-old; RT-PCR = reverse transcriptase-polymerase chain reaction; – = negative; + = positive. Italic signifies negative response.

[a] Post-beginning of symptoms.

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Six cases corresponded to females, with a median age of 28 y-old (range 3—56) (Table 1), all of them visited Santa Cruz (416 masl, endemic for CHIKV, 476 km to Cochabamba) two weeks before consultation (which occurred in a median of 3 days after symptoms begun). Six of the cases consulted during April (Table 1), which is part of the rainy season (summer), generally running from November to April in Bolivia.

All the patients presented cephalea, ten of them fever and polyarthralgia and nine myalgia, among other symptoms (Table 1). Blood samples for dengue and CHIKV RT-PCR were took in a median of 2 days after consulted (Table 1). All were negative for dengue and positive for CHIKV (Table 1). Only one patient was hospitalized (case 1), by 48 h. No complications or deaths were recorded in this series. This group is planned to be follow-up after one year of acute phase in order to assess the possible occurrence of chronic inflammatory rheumatism post-CHIKV. For the time these cases were attended, no circulation of Zika in Bolivia was reported yet.

After the epidemic peak and thousands of confirmed cases of CHIKV infection, long follow-up of these patients is required, as multiple cohort studies and a meta-analysis have evidenced significant proportions of patients presenting chronic inflammatory rheumatism post-CHIKV.[3,4] Besides the limitations of this report, is the first of Bolivia, showing confirmed cases of CHIKV by RT-PCR in the country. Even more, outside non-endemic areas, such as Cochabamba city, more research in large groups of patients is necessary also to understand the long-standing burden and economic impact of disease, as has been reported in Colombia[4] as well now the implications in severity and possible coinfection between dengue, chikungunya and Zika.[5]

Conflict of interest

None for all authors.

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