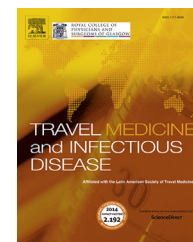


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CORRESPONDENCE

Usutu virus infection in Latin America: A new emerging threat

KEYWORDS

Usutu;
Epidemiology;
Travelers;
Vectors;
Latin America

Dear Editor

We have read with interest the paper of Valerio et al. [1], on the exportation of arboviral infections into European areas with susceptible vectors. In this context, we would like to add that over the last years Latin America has also witnessed the emergence of different arboviral diseases, such as chikungunya and Zika [2]. Such infections are associated with a high morbimortality related to multiple clinical and epidemiological factors, which have been highlighted by co-circulation and occurrence of coinfections and complications such as chronic inflammatory rheumatism [2], ophthalmopathy, Guillain-Barré syndrome and congenital birth defects, amongst others, such as has been described in the recent Zika virus epidemic [2].

The predictable emergence of chikungunya during 2013 in the Caribbean and South America was favored in part by numerous advantageous ecological and epidemiological conditions in the region that provided both the settling and subsequent propagation of the virus, principally due to the wide presence of vectors such as *Aedes aegypti* and *Ae. albopictus* (not only in rural but also in urban settings), along with a high number of susceptible human hosts, with significant attack rates in multiple countries, such as Colombia and Venezuela [2,3].

Soon after its emergence and epidemic peak in the region back in 2015, Zika followed a stereotypical emergence and spread pattern in multiple countries [2]. For example, in Colombia, chikungunya and Zika arrived through the Department of Bolívar, an area which holds not only one of the highest vectorial density areas in the country, as well as highly dense populated regions under dismal socioeconomic conditions; but also, one of the main touristic destinations

in the country (Cartagena) with an estimated ~25,000 international travelers arriving monthly.

Estimates indicate that along with dengue, these arboviruses have affected over 3.6 million patients in the Americas throughout 2015 (and more than 1.6 up to May 2016) [2]. Such numbers in context of ongoing concurrent arboviral epidemics throughout the region is of concern. Also, the unprecedented burst of two different pathogens in such a short time frame, lead clearly to conclude that the table is served for the possible advent and transmission of other vector borne viruses.

Mayaro and Oropouche have been causing small outbreaks in Venezuela signaling clearly the establishment of new endoepidemic cycles; similar to what has been described in Brazil and Peru with reports on a number of dengue-like negative cases, mostly in rural settings [3]. As for Usutu (USUV), and given the significant range of potential hosts (aviary and equine) as well as the multiple vector species of *Aedes* and *Culex* [4] involved in its transmission, the question to raise would be, will USUV infection follow the path of chikungunya and Zika? Will 2016 or 2017 harbor the time for a new epidemic and the emergence of Usutu in Latin America?

Similarly, to what occurred with chikungunya and Zika, even in southern Europe with the first [1], all suitable conditions are set especially in Latin America. Given the significant traveling trends between Europe and Latin America (growing 8% annually [2003–2013]) (Fig. 1), not only for European tourists but also for returning Latin American migrants living in Europe or visiting family and relatives (VFR), the possibility of Usutu making its entrance to the Latin America should be highly considered [5,6].

USUV has already been reported in Europe, namely in Austria, Hungary, Switzerland, Italy and Spain. Additionally, serological evidence of USUV circulation has been reported in Germany, the United Kingdom (UK), Czech Republic, and Poland, as well as several African countries [1,4].

Recent statistics reveal a high number of travelers flying to Latin American from those countries. For example, just during the first semester of 2015, 53,488 travelers from Spain arrived to Colombia, 26,623 from Germany, 19,388 from UK, 18,700 from Italy and 7249 from Switzerland, among other areas where Usutu has been detected.

In addition, the upcoming Olympic Games could increase even more the chances, with an upsurge number of

<http://dx.doi.org/10.1016/j.tmaid.2016.08.004>

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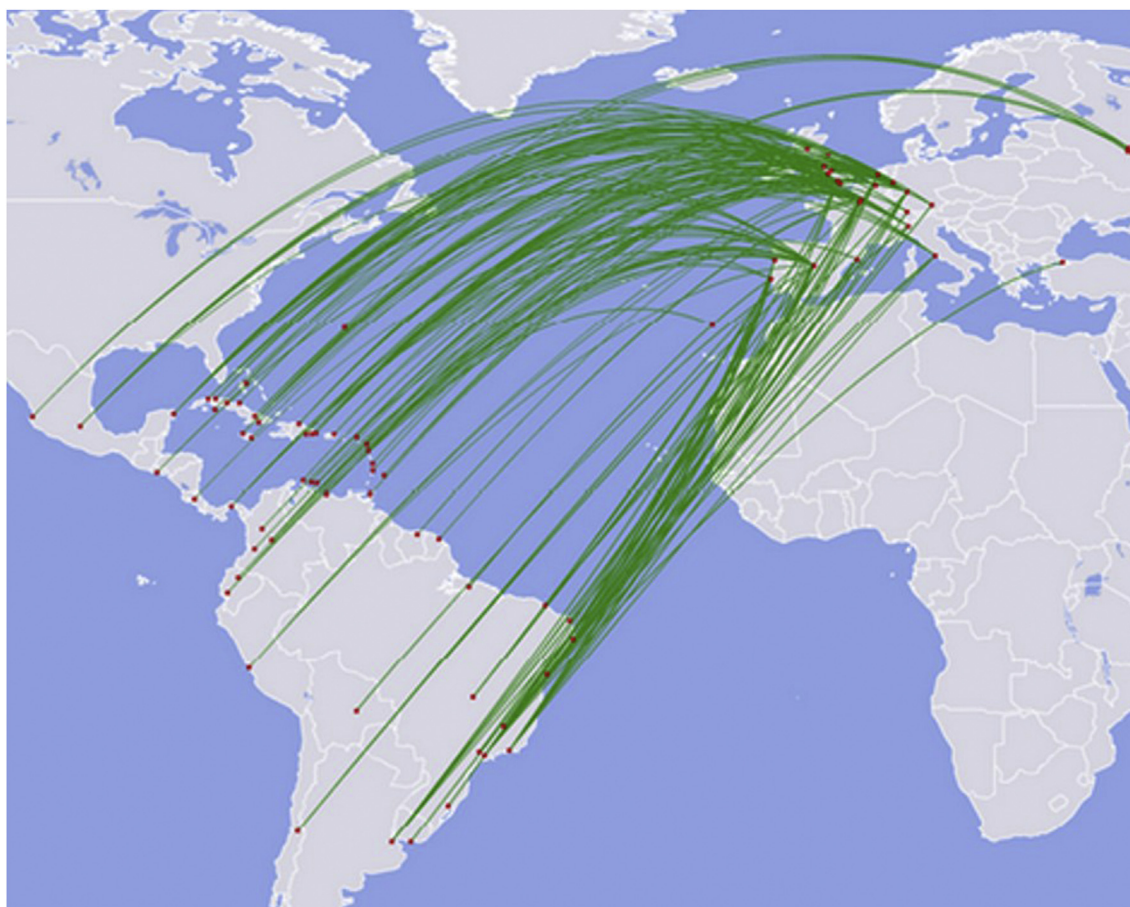


Fig. 1 Europe-Latin America airlines traffic. As Latin America's economic growth surge occurred, traffic between Europe and South America, as measured by RPKs, grew at an average rate of 7.9% annually between 2003 and 2013, compared with a world average rate of 6.2% (<http://www.airlineleader.com/categories/regions/europe-latin-america-traffic-has-grown-well-above-world-averages-187145>).

European travelers arriving in Brazil from the Old World [5,6]. Despite occurring in winter time, when a lower density of *Aedes* is usually the rule, other potential vectors such as *Culex pipiens* (considered to be the most common vector for USUV) among other species (*Cx. neavei*, *Cx. perexiguus* and *Cx. quinquefasciatus*), could play an important role in transmission as reported in Rio de Janeiro since many decades ago.

In this context, recommendations for preparedness amongst healthcare workers and authorities in order to develop guidelines, surveillance and diagnostic capabilities in the region is a mandatory task, in order to contain and mitigate the early implications of outbreaks in different countries through the region.

Funding

None.

Conflict of interest

None of the authors report conflict of interests.

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16 June 2016