

Yellow Fever: still of concern for travelers of Colombia?

Fiebre Amarilla: ¿aún una preocupación para viajeros de Colombia?

Alfonso J. Rodríguez-Morales,^{1,2*} Wilmer E. Villamil-Gómez.^{2,3}

Keywords: yellow fever, re-urbanization, virus transmission, travelers, vaccination

Palabras clave: Fiebre amarilla, reurbanización, transmisión, viajeros, vacunación

During the last years, the world has witnessed significant yellow fever (YF) epidemics.¹ The one that occurred in Africa, particularly in Angola,² during 2016, is a clear example of that. This outbreak included not only locally-transmitted cases in this country, but also 11 imported cases, unprecedentedly in Asia, specifically in China.^{3,4} By the way, between Angola and Brazil, there is an increasing number of international travelers arriving to Latin America proceeding from Africa.

In addition to that, during the last three years (2015-2018) multiple epidemic outbreaks, causing concern, have been occurring in Brazil.^{5,6} These have highlighted the risk of reurbanization of YF in this country.⁷ This is strongly linked with the existing problems in the vector control of *Aedes aegypti* and *Aedes albopictus*, that allow the emergence and reemergence of other arboviral diseases, such as the case of dengue, and more recently chikungunya and Zika.^{8,9} In this context, that risk suggest a great concern, demanding important actions in order to control and mitigate its impact, not only in Brazil, but also in other countries in the region, such as is the case of Colombia.⁴

During the current epidemics, there have been reported not just 1,127 cases with 394 deaths in Brazil (1 July 2017-11 May 2018),⁵ but also, travelers of Argentina and Chile have been affected and confirmed with YF.¹⁰ Even more, travelers to Europe, including France, Switzerland, Romania and Germany, have returned with YF.^{10,11}

Travelers and healthcare workers of Colombia should be aware about the current situation in Brazil,^{10,11} in order to be able to offer advice and proper and on-time vaccination, when necessary¹², but unfortunately there is a global shortage of this vaccine to cover the international number required. This situation highlights the importance not just of the tropical medicine, but particularly of the travel medicine. In that way, the former Committee of Zoonoses and Hemorrhagic Fevers of the Colombian Association of Infectious Diseases (*Asociación Colombiana de Infectología*, ACIN), updated its name to Committee of Tropical Medicine, Zoonoses and Travel Medicine. Beyond Colombia, in the region of the Americas, the Latin American Society for Travel Medicine (*Sociedad Latinoamericana de Medicina del Viajero*, SLAMVI), as well as the Committee on Travel of the Pan-American Association of Infectious Diseases (*Asociación Panamericana de Infectología*, API) and of the Latin American Society of Pediatric Infectious Diseases (*Sociedad Latinoamericana de Infectología Pediátrica*, SLIPE),^{13,14} play a significant role in the education of travelers and healthcare workers. This can be very useful especially in the prevention of YF.¹²⁻¹⁴ As an example, returning travelers should be assessed (post-travel consultation), where YF should be considered specially regard its different clinical stages: asymptomatic subclinical, undifferentiated febrile and the classic one. In the first clinical stage, is the moment where diagnosis should be suspected in order to reach a good intervention, given the fact that in YF during classic stage, hepatic dysfunction, acute renal failure, hemorrhage and shock will be observed.¹⁵

1 Public Health and Infection Research Group, Faculty of Health Sciences, Universidad Tecnológica de Pereira, Pereira, Risaralda, Colombia. Editor Asociado, Infectio.

2 Committee on Tropical Medicine, Zoonoses and Travel Medicine, Asociación Colombiana de Infectología, Bogotá, DC, Colombia.

3 Infectious Diseases and Infection Control Research Group, Hospital Universitario de Sincelejo, Sincelejo, Sucre, Colombia.

* Autor para correspondencia.

Correo electrónico: arodriguez@utp.edu.co

Recibido: 17/04/2018 Aceptado: 25/04/ 2018

Cómo citar este artículo: A.J. Rodríguez-Morales. Yellow Fever: still of concern for travelers of Colombia? Infectio 2018; 22(4):171-172

This situation is the right moment to remember the importance of the improvement of global response for vector control, recently revised by the World Health Organization (WHO) (October 2017).¹⁶ In this review, different approach strategies are highlighted and these should be multisectorial in order to be more effective, including the fact that these also impact on the Sustainable Development Goals, an aspect that have been also considered in the Colombian Plan of Public Health 2010-2021.¹⁷

Unfortunately, YF is still a matter of concern, due to multiple discussed factors, including the fact that there is no specific treatment. Ribavirin in high concentrations would be a specific treatment, but there is still a need of more clinical trials, then currently the management should include an appropriate support at intensive care units, strengthening the air and land transportation of patients, as well also the active surveillance, where travelers proceed from areas where YF virus is circulating. Albeit, this has significant implications not only in travelers, but also for the national public health, in Colombia and in other countries of the region, which should be matter of warning, education and prevention.

References

- Rodríguez-Morales AJ, Villamil-Gómez WE. Fiebre Amarilla: De nuevo, una preocupación global. *Hechos Microbiol* 2014;5:1-3.
- Bagcchi S. Looking back at yellow fever in Angola. *The Lancet Infectious diseases* 2017;17:269-70.
- Wang L, Zhou P, Fu X, et al. Yellow fever virus: Increasing imported cases in China. *The Journal of infection* 2016;73:377-80.
- Ortiz-Martínez Y, Patino-Barbosa AM, Rodríguez-Morales AJ. Yellow fever in the Americas: the growing concern about new epidemics. *F1000Research* 2017;6:398.
- Yellow fever - Americas (27): Brazil. 2018. at <http://www.promedmail.org>.
- Hamer DH, Angelo K, Caumes E, et al. Fatal Yellow Fever in Travelers to Brazil, 2018. *MMWR Morbidity and mortality weekly report* 2018;67:340-1.
- Zahouli JBZ, Koudou BG, Muller P, Malone D, Tano Y, Utzinger J. Urbanization is a main driver for the larval ecology of *Aedes* mosquitoes in arbovirus-endemic settings in south-eastern Cote d'Ivoire. *PLoS neglected tropical diseases* 2017;11:e0005751.
- Torres-Roman JS, Bazalar-Palacios J, Ruiz EF, Avilez JL, Rodríguez-Morales AJ. [New strategies for the eradication of *Aedes aegypti*: what challenges do we face in Latin America?]. *Le infezioni in medicina : rivista periodica di eziologia, epidemiologia, diagnostica, clinica e terapia delle patologie infettive* 2017;25:193-4.
- Rodríguez-Morales AJ, Willamil-Gómez WE. El reto de Zika en Colombia y América Latina: Una urgencia sanitaria internacional. *Infectio* 2016;20:59-61.
- Yellow fever - Americas (17): Europe, Argentina ex Brazil. 2018. at <http://www.promedmail.org>.
- Yellow fever - Americas (18): WHO Brazil, Europe ex Brazil. 2018. at <http://www.promedmail.org>.
- Gallego V, Berberian G, Lloveras S, et al. The 2014 FIFA World Cup: communicable disease risks and advice for visitors to Brazil--a review from the Latin American Society for Travel Medicine (SLAMVI). *Travel medicine and infectious disease* 2014;12:208-18.
- Rodríguez-Morales AJ, Orduna T, Lloveras S, Jones ME. Research in travel medicine and emerging regions: the need for teaching how to publish. *Travel medicine and infectious disease* 2013;11:201-2.
- Rodríguez-Morales AJ, Zuckerman JN. Extending across continents: Travel medicine and Latin America. *Travel medicine and infectious disease* 2012;10:55-6.
- Febre Amarela 2018. 2018. at www.saude.mg.gov.br/febreamarela.
- World Health Organization. Global vector control response 2017-2030. Geneva, Switzerland 2017.
- Castañeda-Hernández DM, Rodríguez-Morales AJ. Panorama de las enfermedades transmisibles en Colombia desde la perspectiva del Plan Decenal de Salud Pública 2012-2021. *Infectio* 2015;19:141-3.