

# *Post-chikungunya chronic arthralgia: a first retrospective follow-up study of 39 cases in Colombia*

**Alfonso J. Rodriguez-Morales, Wilmer Villamil-Gomez, Mara Merlano-Espinosa & Laure Simone-Kleber**

## **Clinical Rheumatology**

Journal of the International League of  
Associations for Rheumatology

ISSN 0770-3198

Volume 35

Number 3

Clin Rheumatol (2016) 35:831-832

DOI 10.1007/s10067-015-3041-8



**Your article is protected by copyright and all rights are held exclusively by International League of Associations for Rheumatology (ILAR). This e-offprint is for personal use only and shall not be self-archived in electronic repositories. If you wish to self-archive your article, please use the accepted manuscript version for posting on your own website. You may further deposit the accepted manuscript version in any repository, provided it is only made publicly available 12 months after official publication or later and provided acknowledgement is given to the original source of publication and a link is inserted to the published article on Springer's website. The link must be accompanied by the following text: "The final publication is available at [link.springer.com](http://link.springer.com)".**

# Post-chikungunya chronic arthralgia: a first retrospective follow-up study of 39 cases in Colombia

Alfonso J. Rodriguez-Morales<sup>1,2</sup> · Wilmer Villamil-Gomez<sup>3,4,5</sup> ·  
Mara Merlano-Espinosa<sup>6</sup> · Laure Simone-Kleber<sup>6</sup>

Received: 10 July 2015 / Revised: 19 July 2015 / Accepted: 23 July 2015 / Published online: 5 August 2015  
© International League of Associations for Rheumatology (ILAR) 2015

## Dear Editor

As has been previously described [1], chikungunya virus disease (CHIK) has emerged in Latin America as a significant acute infectious disease condition, but also with multiple implications during its chronic phase, including the post-chikungunya chronic inflammatory rheumatism (pCHIK-CIR). Until today, no observational studies in the region have described its prevalence, but recent estimations indicated that probably about 48 % of infected people in Latin America in a median of 20 months would develop it [2]. In this scenario, where over one million cases of CHIK were reported in the Americas during 2014, observational studies describing this rheumatologic consequence are urgently needed. Then, here, we detailed the prevalence of pCHIK chronic polyarthralgia

(pCHIK-CPA) in patients that suffered from confirmed CHIK at least 6 weeks before current assessment with a maximum follow-up of 65 weeks (15 months) (median time of 35 weeks).

From 39 patients that suffered CHIK (diagnosed by PCR during acute phase) between April 2014 and May 2015 who attended in Since, Sucre (one of the newly endemic departments), Colombia, 30 (76.9 %) corresponded to female patients, with a median age of 61 years old (range 17–88). Of them, 89.7 % developed persistent polyarthralgia (pCHIK-CPA) that met the American College of Rheumatology/European League Against Rheumatism 2010 criteria for (seronegative) RA-presented persistent polyarthralgia [3], during the last week when all of them were reassessed after CHIK infection (June 2015), 92.3 % during the last month. A cumulated prevalence of pCHIK-CPA curve was drawn using the Kaplan-Meier method to describe the pCHIK-CPA persistence time (Fig. 1). After the follow-up, only 10.3 % patients remain free of polyarthralgia. The median time for pCHIK-CPA in this cohort was 37 weeks (95 %CI 31.4–42.6).

Among the studies assessing pCHIK-CIR, its relative frequency is highly variable, ranging from 14.4 to 87.2 % (including variable number of patients and follow-up times) [2, 4, 5]. Unfortunately, only studies assessing acute polyarthralgia (96 %) and arthritis (47 %) have been published in Latin America during the current CHIK epidemics [6], even without laboratory serological or molecular confirmation, which is highly relevant [7]. The current cohort, the first in Latin America of pCHIK chronic polyarthralgia, shows a higher prevalence. These findings will require more detailed prospective studies, but despite its limitations, it

✉ Alfonso J. Rodriguez-Morales  
arodriguezm@utp.edu.co

<sup>1</sup> Research Group Public Health and Infection, Faculty of Health Sciences, Universidad Tecnológica de Pereira, Pereira 660001, Risaralda, Colombia

<sup>2</sup> Organización Latinoamericana para el Fomento de la Investigación en Salud (OLFIS), Bucaramanga, Santander, Colombia

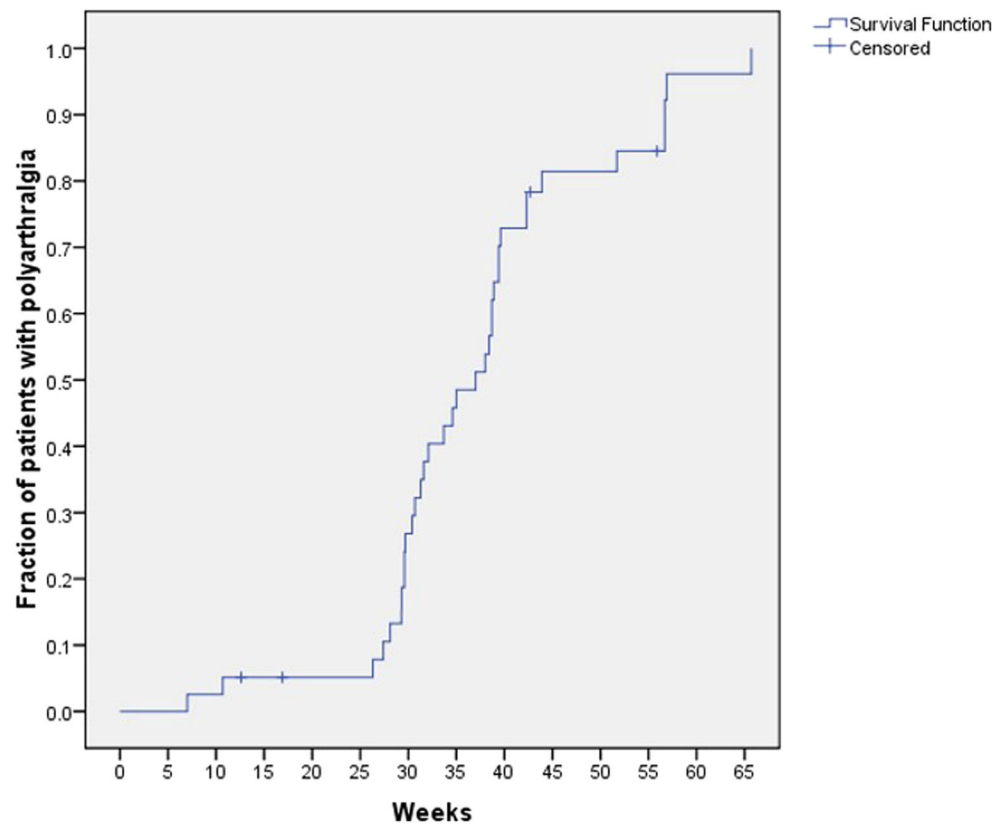
<sup>3</sup> Infectious Diseases and Infection Control Research Group, Hospital Universitario de Sincelejo, Sincelejo, Sucre, Colombia

<sup>4</sup> Programa del Doctorado de Medicina Tropical, Universidad de Cartagena, Cartagena, Colombia

<sup>5</sup> Universidad del Atlántico, Barranquilla, Colombia

<sup>6</sup> Alcaldía de Since, Secretaría de Salud, Since, Sucre, Colombia

**Fig. 1** Kaplan-Meier curve of the cumulated prevalence of pCHIK-CPA by follow-up time



shows the long and frequent persistence of chronic consequences and their implications in disability and costs of the ongoing epidemics in Colombia and probably in Latin America [8].

**Disclosures** None.

## References

1. Alfaro-Tolosa P, Clouet-Huerta DE, Rodríguez-Morales AJ (2015) Chikungunya, the emerging migratory rheumatism. *Lancet Infect Dis* 15(5):510–512. doi:10.1016/S1473-3099(15)70160-X
2. Rodríguez-Morales AJ, Cardona-Ospina JA, Villamil-Gómez W, Paniz-Mondolfi AE (2015) How many patients with post-chikungunya chronic inflammatory rheumatism can we expect in the new endemic areas of Latin America? *Rheumatol Int*. doi:10.1007/S00296-015-3302-5
3. Aletaha D, Neogi T, Silman A, Funovits J, Felson D, Bingham CO III, Birnbaum N, Burmester G, Bykerk V, Cohen M, Combe B, Costenbader K, Dougados M, Emery P, Ferraccioli G, Haze J, Hobbs K, Huizinga T, Kavanaugh A, Kay J, Kvien T, Laing T, Mease P, Menard H, Moreland L, Naden R, Pincus T, Smolen J, Stanislawski-Biernat E, Symmons D, Tak P, Upchurch K, Vencovsky J, Wolfe F, Hawker G (2010) Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Arthritis Rheumatism* 62(9):2569–2581. doi:10.1002/Art.27584
4. Chopra A, Venugopalan A (2011) Persistent rheumatic musculoskeletal pain and disorders at one year post-chikungunya epidemic in South Maharashtra—a rural community based observational study with special focus on naive persistent rheumatic musculoskeletal cases and selected cytokine expression. *Indian J Rheumatology* 6(1, Supplement):5–11. doi:10.1016/S0973-3698(11)60023-X
5. Thiberville SD, Boisson V, Gaudart J, Simon F, Flahault A, de Lamballerie X (2013) Chikungunya fever: a clinical and virological investigation of outpatients on Reunion Island, South-West Indian Ocean. *Plos Neglected Tropical Dis* 7(1), E2004. doi:10.1371/Journal.Pntd.0002004
6. Rosario V, Munoz-Louis R, Valdez T, Adames S, Medrano J, Paulino I, Paula J, Alba-Feriz R (2015) Chikungunya infection in the general population and in patients with rheumatoid arthritis on biological therapy. *Clin Rheumatol* 34(7):1285–1287. doi:10.1007/S10067-015-2979-X
7. Cardona-Ospina JA, Vera-Polania F, Rodríguez-Morales AJ (2015) Chikungunya or not, differential diagnosis and the importance of laboratory confirmation for clinical and epidemiological research: comment on the article by Rosario et al. *Clin Rheumatol*. doi:10.1007/S10067-015-2995-X
8. Cardona-Ospina JA, Rodríguez-Morales AJ, Villamil-Gómez WE (2015) The burden of chikungunya in one coastal department of Colombia (Sucre): estimates of the disability adjusted life years (DALY) lost in the 2014 epidemic. *J Infection Pub Health*. doi:10.1016/J.Jiph.2015.06.001