

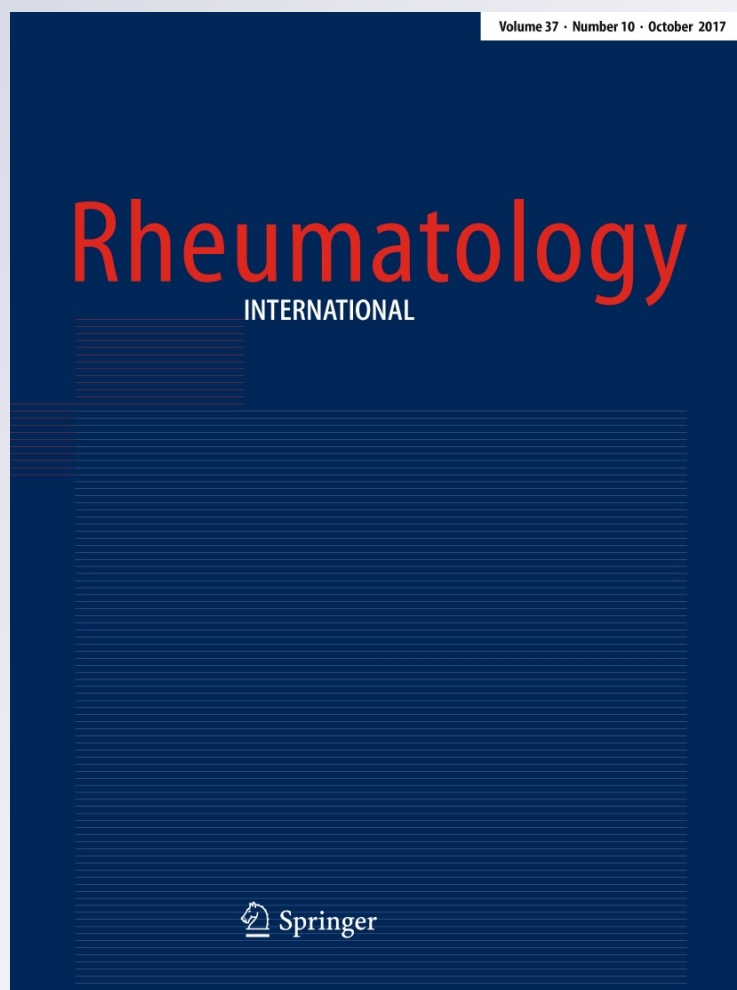
Impaired quality of life after chikungunya virus infection: a 12-month follow-up study of its chronic inflammatory rheumatism in La Virginia, Risaralda, Colombia

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Impaired quality of life after chikungunya virus infection: a 12-month follow-up study of its chronic inflammatory rheumatism in La Virginia, Risaralda, Colombia

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Sir,

As has been previously described, chikungunya (CHIK) virus infection has impacted significantly not only with its acute disease [1], but also with the progression to its chronic phase, particularly as the post-CHIK chronic inflammatory rheumatism (pCHIK-CIR) [2]. Different studies estimated and measured its frequency around 50% after 3 months [2–6]. Then, chronic disease has been associated with high costs and disability [7], but also with impairment in the quality of life of patients with pCHIK-CIR [8]. Although that, epidemics of CHIK in Latin America occurred since 2014, with more than two million cases, there is a lack of studies about quality of life in patients with pCHIK-CIR. This has been reported just in France and India [8, 9].

For these reasons, we measured the frequency of post-chikungunya (CHIK) chronic inflammatory rheumatism (pCHIK-CIR) and assess its impact on quality of life in a cohort of Colombia after 1 year of infection. In a cohort study among 111 cases diagnosed in La Virginia, Risaralda, Colombia, demographic and clinical characteristics were collected at baseline, and quality of life status by the 36-item short-form health survey (SF-36) was assessed. Cases (pCHIK-CIR) were identified according to validated criteria

by WHO [10]. Those with other arboviral infections (dengue and Zika) during follow-up were excluded (also if rheumatological disease was reported before CHIK infection).

Of the total CHIK-infected subjects under follow-up, 108 (63.2%) were women and 63 (36.8%) men, with a median age of 39 years (interquartile range 26–47 years). Of them, 78 (45.6%) presented persistent rheumatological symptoms (pCHIK-CIR). These patients reported joint pain (chronic polyarthralgia, pCHIK-CPA), 43.9% morning stiffness, 38.6% joint edema, and 19.9% joint redness. All dimensions of SF-36 (100% optimal quality of life and 0% the poorest) as well as physical and mental component summaries were impaired in pCHIK-CIR+ compared to pCHIK-CIR– subjects. Differences in median scores between both groups were statistically significant ($p < 0.0001$), being 81.62% in those without pCHIK-CIR– and 54.16% in patients with pCHIK-CIR+. In addition, there were also specific significant differences in five dimensions ($p < 0.05$): physical functioning (85.53% in pCHIK-CIR– versus 53.89% in pCHIK-CIR+), role physical (85.53 versus 41.20%, respectively), bodily pain (81.62 versus 51.62%, respectively), vitality (76.25 versus 56.42%, respectively) and role emotional (85.96 versus 54.94%, respectively) (Fig. 1).

Despite possible cohort attrition bias, the comparability of pCHIK-CIR+/- subjects allows the assumption of a long-term impact of CHIK infection with less chance of returning to a previous health status and significant impairment of quality of life as has been reported in other cohort studies [8, 9]. We observed sharp reductions in quality of life not only during active pCHIK-CIR+ associated illness, but also for several months (>1 year) after clinical recovery compared to healthy normal subjects. Chikungunya leads to long-term sequelae in a considerable proportion of patients, impacting significantly on quality of life. Long-term chikungunya sequelae must be considered when dealing with this

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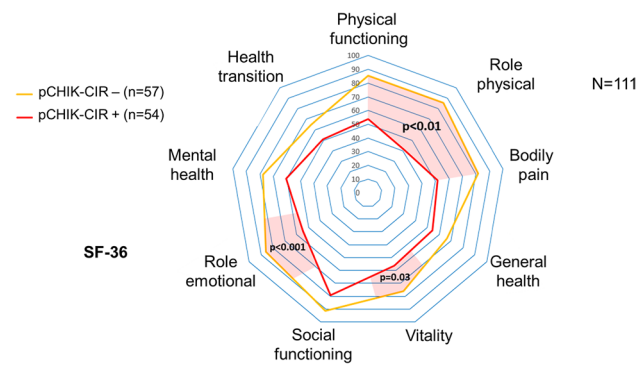


Fig. 1 Quality of life aspects (SF-36 scale) according to pCHIK-CIR status at 1-year follow-up, La Virginia, Risaralda, Colombia

disease because of its important effect on public and individual health [11]. Prospective large-scale, long-term studies with objective assessment of signs and symptoms attributable to the disease are needed to optimally quantify and qualify these problems too [11, 12]. As mentioned, given the large epidemics of CHIK in Latin America, countries such as Colombia, Brazil, Mexico, significantly affected, require exploring the status of pCHIK-CIR among their patients as well as their quality of life status, considering all the implications for public health, for rheumatological care in the region, and their associated costs and disability [7]. Finally, these findings should be considered in the developing intervention programs in countries with high risk of CHIK outbreaks.

Compliance with ethical standards

Conflict of interest No conflict of interest to declare.

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