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# Chikungunya or not, differential diagnosis and the importance of laboratory confirmation for clinical and epidemiological research: comment on the article by Rosario et al.

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Dear Editor:

Along with the spread of Chikungunya virus disease (CHIK) in Latin America and its set in new endemic areas in the western hemisphere [1], a post-Chikungunya chronic rheumatism (pCHIK-CIR) epidemic is anticipated. About 48 % of infected people in Latin America in a median of 20 months is expected to develop it, according to recent estimations [2]. We have read with interest the article of Rosario et al. [3] given the fact that there is a lack of good evidence with respect to the proper management of these sequelae, and that with the increasing disease spreading, an increase of the coexistence with other rheumatologic conditions is also expectable. As evidenced, there is still a lack of research in general in chikungunya in Latin America [4], including that. However, although they showed data of two groups of patients assumed to be exposed to CHIK, the study has important limitations to be commented.

The lack of laboratory confirmation poses the possibility of confusion especially in the rheumatoid arthritis (RA) group. Although CHIK diagnosis is fundamentally clinical in endemoepidemic regions [5, 6], patients with RA and suspected CHIK should have laboratory confirmation since they can present such symptoms in different situations, e.g., infectious and non-infectious conditions. Those on disease-modifying antirheumatic drugs and steroids may not develop a typical clinical picture, and joint pain might be the most significant infection sign even in other situations [7].

Although authors mentioned that their population of patients did not showed thrombocytopenia (uncommon in CHIK), other variables of the studied subjects were important to include to evaluate differential diagnoses. Authors did not sufficiently explained the demographic healthcare setting in which the study was conducted, including unbalanced groups to be compared, which precludes to raise conclusions about clinical differences between both, and impair external validity of data.

Hence, although RA patients and patients without previous arthropathy did not show clinical differences (which would be also due to lack of statistical power, beta error), and treatment of RA with CHIK infection remained unchanged, the poor internal and external validity of data exposed limits the possibility to be confident on conclusions. The lack of enough data about pCHIK-CIR course in patients with previous rheumatologic conditions and the absence of studies for proper management of pCHIK-CIR in those populations remain still a concern in the light of the ongoing pCHIK-CIR epidemics.

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