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Reply to Comments on “The frequency of Chronic Joint Pain Following Chikungunya Virus Infection A Colombian Cohort Study”

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Dear Editor

We thank Sharma et al. and Cardona-Ospina et al. for sharing their experience and discussion. One of the limitations of our evaluation of the cohort was that we have not yet determined the incidence of rheumatoid factor (RF) and anti-cyclic citrullinated peptide (anti-CCP) antibodies in all 485 patients. This will be a valuable assessment to perform. However, RF and anti-CCP antibodies were measured in a subset of chikungunya arthritis patients¹ and no CHIKV arthritis patients had elevated anti-CCP antibodies, 9% had IgM-RF antibodies, and 12% had IgG-RF antibodies. In addition, we agree that rigorous controlled trials of therapeutics including methotrexate for the treatment of chikungunya arthritis are needed to set evidence-based guidelines for treatment. Open label studies in arthritis and pain can be confounded by many issues that make it difficult to interpret the data, including placebo effects.

To clarify the timing of blood collection, 71% (343/485) of the confirmed chikungunya patients had their blood drawn within the first month of their febrile illness with chikungunya. It is unlikely that the patients in this cohort with IgG were previously infected with CHIKV as all of the samples were collected during January of 2015 during a chikungunya epidemic in a region where chikungunya virus has not previously circulated.

We agree that further standardized tools for assessment of the chronic manifestations of chikungunya are needed including patient reported health outcomes. The DAS28 was developed primarily for rheumatoid arthritis but is being used in many other types of arthritis. Even so, a validated customized measure for chikungunya arthritis would be important for clinical trials and regulatory approvals. Patient-Reported Outcomes Measurement Information System (PROMIS^R) is one possibility and collects information on

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patient stiffness, mobility, pain, and mental health. PROMIS^R is a system developed by multiple academic medical centers, private research organizations, and numerous Institutes across the National Institutes of Health (NIH) ². The use of a standardized and validated measure such as PROMIS^R should be encouraged so that we can compare across our studies. However, the use of patient-derived outcomes will probably require additional traditional measures of disease severity for regulatory approval.

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