INTRODUCTION

Chikungunya is a viral illness characterized by an acute viral syndrome, typically lasting a few days to a week, followed by a chronic and extremely painful involvement of the joints. This present epidemic in Puerto Rico has been reported by the Puerto Rico Department of Health, with 18,109 suspected cases and 109 reported by November. All patients were asked about their pain using the numerical rating scale (0-10) immediately before and after treatment. The mean Pain Score before and after treatment was 8 and 2 respectively (60%) (p < 0.001); and 5 patients (9%) had a Pain Score of 0. The use of intravenous ascorbic acid and hydrogen peroxide resulted in a statistically significant reduction of pain in patients with moderate to severe pain from the Chikungunya virus immediately after treatment.

Intravenous Ascorbic Acid and Hydrogen Peroxide in the Management of Patients with Chikungunya

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ABSTRACT

Chikungunya is a viral illness characterized by severe joint pains, which may persist for months to years. There is no effective treatment for this disease. We treated 56 patients with moderate to severe persistent pains with a single infusion of ascorbic acid ranging from 25-50 grams and hydrogen peroxide (3 cc of a 3% solution) from July to October 2014. All patients were instructed to eat before and after the treatment for a reduction on the Pain Score for the group was 8 and 2 respectively (60%) (p < 0.001); and 5 patients (9%) had a Pain Score of 0. The use of intravenous ascorbic acid and hydrogen peroxide resulted in a statistically significant reduction of pain in patients with moderate to severe pain from the Chikungunya virus immediately after treatment.

Index words: intravenous, ascorbic acid, hydrogen peroxide, chikungunya

INTRODUCTION

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No patients discontinued their participation in the study because of adverse reactions to the treatment. No adverse side effects were observed in any patient. The scores of pain showed significant improvement ($p < 0.001$) after the treatment (see Figure 1). The results of the Wilcoxon Signed Rank test show that this treatment improves quality of life in patients with Chikungunya (see Figure 2).

**DISCUSSION**

Our protocol has shown that the use of intravenous hydrogen peroxide and ascorbic acid is safe and strongly associated with a more than 61% post-infusion reduction of pain in patients affected with Chikungunya virus related arthralgias.

These results are consistent with previous in-vitro research which has shown that ascorbic acid activates the polio [21], herpes [22], vaccinia [24], tobacco mosaic [25], bacteriophage [26-29], enterotoxin [30], influenza [31] and rabies [32] viruses.

They are also consistent with previous clinical research showing ascorbic acid can resolve polio [9-11,33,34], its associated flaccid paralysis [10], acute hepatitis [35-38], viral encephalitis [39-42], meningoencephalitis [43], mumps (simple and complicated) [44], chickenpox [45], influenza [46] and rabies in guinea pigs.

Since there is no effective treatment for severe debilitating Chikungunya related pains [47], and because there is an epidemic in Puerto Rico at the present moment, intravenous vitamin C and hydrogen peroxide may be considered as a safe and viable alternative to manage these patients effectively. Randomized controlled studies need to be done to further explore this question. We are in the process of reviewing our clinical data to determine the longer range apparent effect of this modality on Pain Scores.

**REFERENCES**

RESUMEN
Chikungunya es una enfermedad viral caracterizada por dolor severo en el área de las coyunturas que puede persistir por meses o años. Manejamos 56 pacientes con dolor moderado-severo persistente con una ANSWER: 1. ...