



Electromyographic changes in patients with chikungunya fever and its relation to joint symptoms: results of a cohort study.

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BACKGROUND

Chikungunya fever (CF) is an arbovirolosis related to osteoarticular manifestations. Some patients with CF may present neuropathic pain (NP)

with nervous disturbances detected in electromyography (EMG). These changes have been previously described and were related to a more aggressive clinical scenario of the disease.

The objective of this study was to describe the alterations in the ENMG of patients with CF and the association of these findings with clinical characteristics of the patients.

MATERIALS AND METHODS

A longitudinal cohort study that evaluated, for 3 years, 78 patients affected by CF. DN4 questionnaire was applied and patients with scores ≥ 4 had the diagnosis of NP. Patients with NP underwent ENMG. Clinical and laboratory data were collected every 3 months. Statistical analysis was performed using Graphpad prism 6.01 software.

RESULTS

A total of 78 patients were evaluated, with a mean age of 50.47 years of which 66 (84,6%) were female. Twenty-seven patients had persistent NP and were submitted to EMG and 21 presented alterations in the EMG (Table 1). Except at the first appointment after CF, in all the evaluations patients with alterations in EMG presented greater severity in CF symptoms. In the second appointment, patients with altered ENMG (n=20), had a higher visual analogue scale (VAS) score of morning stiffness [6.1 (IQR: 2.2-9.6) vs 2.9 (IQR: 0.1-7.0) $p = 0.0286$], of physician VAS score [4.75 (IQR: 2.025 -7.90) vs 2.30 (IQR: 0.275-5.650) $p = 0.0275$] when compared to patients without NP or with normal ENMG (n=36). In the fifth evaluation patients with altered ENMG (n=15) had significantly more fatigue [7.0 (IQR: 0.7-8.7) vs 0.8 (IQR: 0-3.2) $p = 0.0297$] when compared with patients with normal ENMG and no NP (n=16). In the ninth visit, patients with altered ENMG examination (n=13) had more articular pain [14 (IQR: 8.5-42.25) vs 1 (IQR: 0-14) $p = 0.0235$], higher VAS score for morning stiffness [4.25 (IQR: 1.125-7.525) vs 0 (IQR:0-1,175) $p = 0,0118$], higher patient VAS score [5 (IQR: 3.3-7.6) vs 0.75 (IQR: 0-6) $p = 0.0316$] and higher physician VAS score [3 (IQR:2-5,6) vs 0,65 (IQR:0-2,625) $p = 0,0172$].

CONCLUSION

Bilateral mononeuropathy and distal polyneuropathy were the most common neurologic disorders in patients with CF. Patients with neuropathy had more severe CF symptoms.