



Oxytocin, vasopressin and nitric oxide levels in cerebrospinal fluid in women with migraine and fibromyalgia (Abstract)

Níveis de ocitocina, vasopressina e óxido nítrico no líquido cefalorraquidiano em mulheres com enxaqueca e fibromialgia (Resumo)

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Introduction

Migraine and fibromyalgia share similar pathophysiological mechanisms. Alterations in the nervous system indicate the involvement of brain function in fibromyalgia. Significant changes in the plasma concentrations of oxytocin, vasopressin, and nitric oxide in migraineurs have been reported.

Objective

To analyze the concentrations of oxytocin, vasopressin, and nitric oxide in the cerebrospinal fluid (CSF) of women with migraine and fibromyalgia and correlate the levels with headache intensity, headache impact, symptoms of depression and anxiety, stress levels, sleep quality, and fatigue.

Method

This is an observational cross-sectional study performed at the Hospital das Clínicas of the Federal University of Pernambuco. For this, 246 women were interviewed. Headache characteristics in the last three months were reported and classified according to ICHD-3 β . American College of Rheumatology criteria (2010) were used to classify fibromyalgia. All women respond to questionnaires regarding depressive and anxious symptomatology, fatigue severity, perception of stress, quality of sleep, and headache impact. CSF sample was collected from 33 women and analyzed by the radioimmunoassay technique.

Results

There was no relationship between oxytocin, vasopressin, and nitric oxide levels in the CSF in migraine and fibromyalgia patients. Relationships with headache intensity, headache impact test, depressive and anxious symptoms, fatigue, stress, and sleep quality were not established. In women with migraine, the presence of fibromyalgia syndrome increases the pain intensity of headache (migraine 7.95 ± 0.12 vs. migraine + fibromyalgia 8.78 ± 0.21 , $p < 0.05$), the impact of headache (migraine 63.88 ± 0.67 vs. migraine + fibromyalgia 67.73 ± 1.25 , $p < 0.05$), depressive symptomatology (migraine 6.45 ± 0.38 vs. migraine + fibromyalgia 8.9 ± 0.38 , $p < 0.05$) and the perceived stress (migraine 26.6 ± 0.63 vs. migraine + fibromyalgia 30.73 ± 0.99 , $p < 0.05$).

Conclusion

No correlation was found between oxytocin, vasopressin, and nitric oxide levels in women with migraine and fibromyalgia.

Keywords:

Migraine disorders,
Fibromyalgia
Cerebrospinal fluid
Nitric oxide
Oxytocin
Vasopressins
Depression, Anxiety
Stress
Psychological