



## Lifestyle factors in the evolution of cluster headache to fibromyalgia: a case report

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### Introduction

Cluster headache is considered a male-dominated disorder, but female patients may display a more severe phenotype, with a greater extent diagnosed with the chronic cluster headache subtype and longer bouts compared with male participants.

The comorbidity of cluster headache, migraine and fibromyalgia does not seem to be infrequent and substantially increases the psychosocial burden and decreases overall quality of life of patients.

### Objective

To promote reflections on possible lifestyle factors involved in the chronification of pain, specifically chronic headache and fibromyalgia.

### Case Report

E.C.U.M, 58 years old, female, from Castro, Paraná, Brazil, former housekeeper, catholic, married. In April 2015, started severe, incapacitating headache located in the left supraorbital and temporal region, lasting four to five days, associated with conjunctival injection, ptosis, and ipsilateral eyelid edema. Comorbidities included systemic arterial hypertension and migraine without aura for 20 years, which had been controlled for the last 5 years. Former smoker since 35, denied alcohol consumption, sedentary, had non-restorative sleep, insomnia and regular diet. Complementary exams showed no significant alterations. Was diagnosed with probable cluster headache.

Patient remained under outpatient follow-up without pain remission despite several therapeutic attempts. Lifestyle modifications were advised but not adhered to. Continued non-restorative sleep and depressive/anxious symptoms. Progressed to chronic cluster headache and was diagnosed with fibromyalgia in September 2021, with Widespread Pain Index of 19 and Severity Symptoms Scale of 11.

The central sensitization process in these nociplastic pain syndromes explain part of evolving and generalization of pain, but lifestyle choices and systemic chronic inflammation (SCI) may offer additional explanations. SCI is a state of low-grade, persistent, non-infective inflammation and it has been associated with many chronic non-communicable diseases including chronic pain. Recent research has revealed that certain social, environmental and lifestyle factors can promote SCI.

### Conclusion

Unhealthy lifestyle factors like smoking, alcohol overuse, sleep disturbances, psychological stress and high BMI seems to be more prevalent among patients with chronic pain. As these factors may contribute to SCI and central sensitization, it is key to inform patients early about the possible risks of their lifestyle choices.