



Temporomandibular dysfunction is correlated with central sensitization in individuals with headache

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Introduction

Temporomandibular dysfunction (TMD) is associated with chronic pain such as headaches, a condition correlated with cutaneous allodynia (CA) and central sensitization. However, it is not yet well established in the literature whether individuals with TMD and headaches have a correlation with CA and central sensitization.

Objectives

To correlate the severity of CA and central sensitization with TMD.

Materials and Methods

The study included young adults aged 18 to 40 years, of both genders, excluding those with other chronic diseases such as fibromyalgia and those undergoing treatment for TMD. The diagnosis and severity of TMD were evaluated using the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD), CA using the 12-item Allodynia Symptom Checklist/Brazil (ASC-12/Brazil), central sensitization using the Central Sensitization Inventory (CSI), and headaches using the Headache Screening Questionnaire. The Shapiro-Wilk test was used for normality, Pearson's correlation for correlation analysis, and the ROC curve to establish a cutoff point for the CA score, with a significance level of $p \leq 0.05$.

Results

A total of 163 individuals were evaluated, with 113 having TMD and headaches (GCDTM) and 50 without TMD but with headaches (control group, GC), homogeneous in terms of age, height, body mass index, and sex ($p > 0.05$), except for weight ($p = 0.023$). A significant positive correlation was observed for GCDTM with CA ($r = 0.875$) and central sensitization ($r = 0.911$, $p < 0.001$) compared to GC. In the ROC curve analysis, the cutoff point for CA was determined to be 1 point.

Conclusion

Individuals with TMD and headaches have a significant positive correlation with CA and central sensitization compared to individuals with headaches but without TMD, highlighting the importance of evaluating TMD in individuals with headaches to establish better treatment strategies and prognosis.