



## Phonatory characteristics in primary headaches: a systematic review

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### Introduction

Primary headaches may be associated with phonatory manifestations, probably due to shared pathophysiological aspects with the vagus nerve, also responsible for innervating the larynx, the phonatory organ. Understanding these manifestations in such disorders is a growing and recent research area.

### Objective

this study aims to discuss the phonatory characteristics in patients with primary headaches

### Method

This is a systematic review (PROSPERO - CRD42024528242), covering research in the last 5 years, involving patients aged 18 and up, published in English and Portuguese, indexed in MEDLINE/Pubmed, Lilacs/Bireme, CINAHL/Ebsco, Web of Science e Scopus/Elsevier. Studies with simultaneous interventions, reviews, pilots and case reports were excluded, aiming for a homogeneous sample of patients with primary headaches (migraine, tension type headache and cluster headache).

### Results

Of the initial 5340 articles found, only 2 met the criteria: one studying episodic migraine, and another, episodic cluster headache, and no publications studying phonatory characteristics in tension type headache patients were found. In the included articles, all participants were exposed to high frequency pain (at least 6 pain episodes per month) and had specific phonatory characteristics when compared to healthy controls. During the interictal phase, migraineurs exhibited lower speaking and articulation rates and higher average pitch. Cluster headache patients in cluster bout period showed a significantly lower difference between the amplitude of the first harmonic and the amplitude of the second harmonic, and laryngostroboscopic examinations showed a significantly higher prevalence of chordal edema in the headache group.

### Conclusion

The selected studies provided insights on the intricate relationship between primary headache disorders and phonation, emphasizing the importance of objective assessment methods to comprehensively understand the phonatory characteristics in these patients, while highlighting the need of further research with larger sample sizes and more robust methodologies.