



## Pituitary tumor simulating cluster headache

Amauri Pereira da Silva Filho, Taianara Sampaio Reis<sup>1</sup>, Danielle Cortellazzi Colonna Romano<sup>2</sup>,  
Melissa Fernandes Vilela de Freitas<sup>2</sup>, Gabriela Yumi Nakamura<sup>2</sup>, Natália Rebeca Alves de Araújo Karpejany<sup>1</sup>,  
Sabrina Borges Batista<sup>2</sup>

<sup>1</sup>University Hospital of the Federal University of Piauí, Teresina, Piauí, Brazil

<sup>2</sup>Nove de Julho University, São Paulo, São Paulo, Brazil

### Introduction

Pituitary tumors are neoplasms that arise in the pituitary gland, a critical structure for the regulation of the body's hormonal functions. Headache is a frequently reported symptom in patients with pituitary tumors.

### Objective

Highlighting the importance of considering alternative diagnoses in patients presenting atypical with cluster headaches.

### Case Report

Patient, male, 42 years old, with periorbital pain radiating to the right temporal region, associated with malaise and vomiting. He had intermittent headaches lasting a few minutes several times a day. These headaches always occur at similar times and partial drooping of the right eyelid and tearing, which have occurred in several previous episodes. After the emergency room (ER), he had partial relief with intravenous dipyrone and nasal oxygen (O<sub>2</sub>), and a probable diagnosis of cluster headache was made. Due to the high frequency of headaches (7 days per month), a decision was made to initiate prophylactic treatment with verapamil in addition to abortive treatment. Additionally, he presented with a visual field defect (bitemporal hemianopsia). The MRI with and without contrast showed an expansive sellar and suprasellar process with slight extension into the cavernous sinus. The diagnosis was revised to a pituitary macroadenoma, and the patient was referred for surgical treatment.

### Discussion

Pituitary tumors account for approximately 17% of all intracranial neoplasms with the majority being pituitary adenomas. Often, these are found incidentally during a workup for headache, in special the trigeminal autonomic cephalalgias (TACs). The TACs include cluster headache, paroxysmal hemicrania, short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing, and hemicrania continua, and can be mimicked by symptomatic causes in a small minority of patients, for example tumors, dissections and infections, but a causal relationship between the underlying lesion and the headache is difficult to determine in many cases.

### Conclusion

A pituitary tumor presenting with cluster headache is challenging to diagnose due to the variability of symptoms and the need to accurately identify the headache type. The main challenge is to create a treatment plan that effectively addresses both conditions, minimizes side effects, and improves the patient's quality of life through multidisciplinary care.