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Case Report

"I feel an irresistible urge to bang my head against the wall": a case series highlighting agitation and severe pain in cluster headache

Marcelo Moraes Valença[1,2], Rita Santana dos Reis[1], Juliana Ramos de Andrade[1]

[1]Federal University of Pernambuco, Recife, Pernambuco, Brazil
[2]Hospital Esperança, Recife, Pernambuco, Brazil

Marcelo Moraes Valença
mmvalenca@yahoo.com.br

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Mário Fernando Pietro Peres

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Introduction
Cluster headache is a primary headache disorder characterized by severe, unilateral pain, typically associated with cranial autonomic symptoms, including conjunstival injection, lacrimation, nasal congestion, rhinorrhea, eyelid oedema, forehead and facial sweating, miosis and ptosis. Beyond these hallmark features, patients often exhibit marked psychomotor agitation, sometimes expressing the wish to engage in head-banging behaviors as an instinctive response to unbearable pain. This case series highlights three such patients.

Cases report
In all cases, appropriate preventive therapies reduced both the frequency of attacks and the desire for self-injurious behavior.

Conclusion
These reports highlight the extreme suffering associated with cluster headache and emphasize the importance of timely recognition and effective management strategies.

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Introduction

Cluster headache is a primary headache disorder characterized by excruciating, unilateral pain, often accompanied by autonomic symptoms such as conjunstival injection, lacrimation, nasal congestion, rhinorrhea, eyelid oedema, forehead and facial sweating, miosis and ptosis (1-3).

One striking behavioral phenomenon frequently observed in these patients is intense psychomotor agitation (4), including an irresistible urge to bang one's head against a hard surface, such as a wall (4, 5).

This case series presents three patients whose extreme reactions to pain included the wish to engage in head-banging behavior, highlighting the profound suffering associated with cluster headache.

Case Report

Case 1

A 34-year-old man presented with a two-year history of severe, unilateral headaches localized to the right orbital and temporal regions. The attacks occurred in clusters lasting 3–4 months, followed by periods of remission. Based on clinical features and periodicity, the diagnosis of episodic cluster headache was established. The attacks occurred twice daily, typically lasting 60 to 90 minutes. During the crisis, the patient would pace the room, scream, and repeatedly want to hit his head against the wall in desperation. He described the pain as a "red-hot iron" being driven through his eye.

His neurological examination was normal. Brain MRI and MR angiography excluded structural or vascular causes. The diagnosis of episodic cluster headache was made according to ICHD-3 criteria. He was started on verapamil (240 mg/day) and high-flow oxygen during attacks. After up-titration to 480 mg/day, the frequency of attacks decreased significantly.

Case 2

A 38-year-old woman reported left-sided periorbital pain attacks with autonomic signs, including lacrimation and rhinorrhea, lasting approximately 45 minutes. The attacks occurred once to three times daily during active periods, with pain so intense she felt compelled to strike her head against a desk or wall. She reported a sense of helplessness and described the behavior not as suicidal, but as an impulsive response to unbearable pain.

The patient had no prior psychiatric history. Imaging studies were unremarkable. She was diagnosed with cluster headache and treated with a transitional corticosteroid course and prophylactic topiramate (100 mg/day). Oxygen therapy provided partial relief during attacks. After three weeks of treatment, the episodes became less frequent, and the need for self-injurious behavior dissipated.

Case 3

A 40-year-old man presented with a 10-year history of chronic cluster headache. His attacks occurred multiple times daily without significant remission periods. He described the pain as "inhuman" and acknowledged having banged his head against the floor or wall on several occasions during attacks. He explained that this behavior gave him a sense of control and was a way to express the unbearable inner torment.

He had previously failed several prophylactic treatments. At the time of evaluation, he was using sumatriptan injections with partial relief. He was started on high-dose verapamil (up to 720 mg/day) with close ECG monitoring. Occipital nerve block was performed as an adjunctive therapy. The patient reported a reduction in attack frequency and intensity, and the behavioral agitation was markedly attenuated.

Discussion

The urge to bang one's head against the wall during a cluster headache attack is a commonly reported behavior and reflects the excruciating intensity of the pain as well as the associated psychomotor agitation experienced during the crisis. This phenomenon can be explained by several neurobiological and psychological mechanisms:

Extreme pain and self-stimulatory behavior

Cluster headache is often described as one of the most severe types of pain known in clinical medicine. In the face of such overwhelming pain, the brain may attempt to redirect or modulate the sensation through external physical stimuli (5, 6). Hitting the head against a hard surface or applying pressure may be an unconscious attempt to: "Replace" the internal pain with an external stimulus that feels more controllable; Activate descending pain inhibitory pathways, such as the release of endorphins or alternative sensory input via spinothalamic circuits (7).

Motor agitation as a hallmark of the disorder

Unlike migraine, where patients typically seek silence, darkness, and rest; cluster headache sufferers often exhibit severe agitation, restlessness, or even self-injurious behavior during attacks (8). This pattern is thought to reflect the desperation and inability to find relief, rather than any intentional desire to harm oneself.

Hypothalamic and limbic system activation

Functional neuroimaging studies have shown activation of the posterior hypothalamus during cluster attacks (9-11). This region plays a key role not only in autonomic regulation but also in primitive emotional and behavioral responses, including aggression, impulsivity, and motor arousal (12-18). Thus, the combination of unbearable pain with hypothalamic-limbic activation may lead to disorganized motor behaviors such as pacing, shouting, or head banging.

Desperate attempt to find relief

Many patients report that no position or environment relieves the pain and describe a sense of utter hopelessness. Striking the head may be a desperate attempt to interrupt or counteract the internal torment, even if momentarily or symbolically (19).

Conclusion

This case series illustrates a dramatic but under-recognized behavioral manifestation of cluster headache: the urge to bang the head during attacks. It reflects both the severity of the pain and the neurobiological activation of structures involved in emotion and motor behavior. Clinicians should be aware of this symptom, as it underscores the importance of early diagnosis, comprehensive treatment, and compassionate care to reduce patient suffering and prevent such extreme responses.

Agitation alone is so strongly associated with cluster headache that its presence is sufficient to fulfill the ICHD-3 diagnostic criteria for cluster headache, even in the absence of any autonomic features (20).

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Marcelo Moraes Valença
https://orcid.org/0000-0003-0678-3782
Rita Santana dos Reis
https://orcid.org/0000-0002-9868-2411
Juliana Ramos de Andrade
https://orcid.org/0000-0002-5445-8872

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