▪ Headache Medicine 2025, 16(2): 120-122 ▪ p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

▪ DOI: 10.48208/HeadacheMed.2025.18

Case Report

Intermittent tactile nummular allodynia: expanding the spectrum of nummular headache?

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Introduction
Nummular headache (NH) is a rare primary headache characterized by pain in a well-defined, small, round, or oval area of the scalp, often associated with abnormal local sensations such as paresthesia or allodynia. However, sensory scalp disturbances without pain, such as intermittent tactile nummular allodynia (ITNA), remain poorly understood. This report aims to describe a case of ITNA and discuss its clinical significance in the spectrum of nummular syndromes.

Case Report
A 53-year-old woman presented with a 9-year history of intermittent tactile allodynia in the right parietal region, affecting a round area of approximately 6 cm in diameter. The episodes occurred 6–7 times per year, each lasting about four days. The patient experienced significant discomfort upon touching or combing the area but denied spontaneous pain or headache. Neurological examination was unremarkable. Brain MRI showed no abnormalities. The patient also had a history of fibromyalgia. No other systemic or dermatological conditions were identified. The clinical picture was consistent with localized, episodic tactile hypersensitivity without persistent symptoms or headache.

Conclusion
This case expands the clinical spectrum of focal scalp sensory disturbances and suggests that ITNA may represent a distinct entity or a non-painful variant of nummular headache. The absence of spontaneous pain, the circumscribed location, and the touch-evoked dysesthesia support a localized sensory dysfunction, possibly involving cutaneous nerve branches. Greater awareness of ITNA is essential to prevent misdiagnosis and unnecessary treatment; further studies are needed to define its pathophysiology and diagnostic boundaries better.

Keywords:
Headache
Scalp
Touch
Pain
Parietal lobe

Submitted: June 1, 2025
Accepted: June 30, 2025
Published online: June 30, 2025

Introduction

Nummular headache (NH) is a rare and distinctive primary headache disorder characterized by pain localized to a small, well-circumscribed area of the scalp (1-5). Typically described as pressure-like, burning, or tingling, the pain may be continuous or episodic and is usually not associated with other neurological symptoms. Variants of NH or similar focal scalp disturbances may present atypically, raising questions regarding their classification and underlying mechanisms.

One such presentation is intermittent tactile nummular allodynia (ITNA), a poorly understood sensory phenomenon in which localized discomfort is triggered by touch in the absence of spontaneous pain or headache.

We report a case of intermittent tactile nummular allodynia to illustrate its clinical features and discuss whether it represents a distinct sensory disorder or a variant within the spectrum of nummular headache.

Case Report

We evaluated a 53-year-old female with a 9-year history of intermittent tactile allodynia in the right parietal region. The affected area was round-shaped, approximately 6 cm in diameter. Episodes occurred around 6-7 times per year, each lasting four days. The patient reported significant discomfort when touching the area or combing her hair but did not experience any headache or spontaneous pain. The patient has a history of fibromyalgia. Magnetic resonance imaging of the brain was performed and revealed findings within normal limits for the patient's age. Written informed consent was obtained from the patient for publication of her clinical case.

Figure 1. Location indicated by the patient as the site of the intermittent dysesthesia phenomenon. Illustrative image generated by AI to demonstrate the reported sensory distribution.

Discussion

This clinical presentation is consistent with intermittent tactile nummular allodynia, characterized by focal scalp sensitivity without associated headache. While this condition shares certain features with nummular headache such as circumscribed location and possible involvement of peripheral nerves, it lacks the pain component that defines NH. The episodic, touch-evoked discomfort without spontaneous symptoms suggests a pure sensory dysfunction. Accordingly, increased mechanic sensitivity in a clearly demarcated area of the scalp may play a role in the pathophysiology of nummular headache (6).

Nummular headache is an uncommon primary headache disorder marked by pain confined to a small, well-defined area of the scalp, typically with a round or oval shape and a consistent location, most often in the parietal region (7). It predominantly affects women in midlife and can present with episodic or chronic patterns, with some patients experiencing continuous discomfort from onset (7). Although the baseline pain is often mild to moderate, it may intensify in transient flare-ups lasting from seconds to several days. Notably, patients frequently report abnormal sensory symptoms within the affected zone, including dysesthesia, paresthesia, and pronounced tactile allodynia, suggesting a prominent role for local sensory dysfunction in the clinical presentation (7).

A comparative study evaluated pericranial tenderness in patients with nummular headache (NH), chronic tension-type headache (CTTH), and healthy controls using objective and blinded assessments (8). The results showed no significant increase in tenderness in NH patients compared to healthy subjects, while CTTH patients exhibited significantly higher tenderness scores. In NH, sensitivity was symmetrical between symptomatic and asymptomatic sides (8). These findings support the notion that NH is a localized condition without generalized pericranial muscle involvement, and the absence of increased tenderness may be clinically useful in differentiating NH from CTTH.The anatomical overlap with nummular headache, particularly in the parietal region, supports the hypothesis of shared pathophysiological pathways, potentially involving terminal branches of the cutaneous nerves or localized central sensitization. However, the absence of spontaneous pain, the limited frequency of episodes, and the exclusively tactile nature of the symptoms distinguish this condition from classical NH.Five patients with features consistent with nummular headache presented with localized head pain and sensory disturbances, accompanied by focal skin changes within the painful area (9). These changes included small, round or oval skin depressions, and in some cases, hair loss, redness, and increased local temperature (9). Skin biopsies did not reveal any specific dermatological diagnosis (9). These findings suggest that local trophic alterations may be part of the clinical spectrum of NH

and could indicate a localized form of complex regional pain syndrome, potentially reflecting progression of the underlying condition (9).

In recent years, some cases of nummular headache have been identified as secondary to neoplastic processes or have developed after head trauma(10), thereby underscoring the importance of neuroimaging as part of the diagnostic workup. It was reported an unusual case of nummular headache developed following stenting of the middle cerebral artery, suggesting a possible secondary form related to vascular intervention (11).

Curiosity, a recently recognized condition, linear headache, is characterized by unilateral pain confined to a fixed linear path on the scalp, sharing some clinical features with epicrania fugax and nummular headache (12). An observational study analyzed 16 patients who presented with sharply defined, non-migratory, linear scalp pain not restricted to a single nerve territory. Most patients were women, with a mean age of onset of 40 years. Pain descriptions varied, including pressing, burning, stabbing, or electric sensations. The alodinia pattern described in the article and the linear headache may be part of a continuum.

Conclusion

Given the limited literature on intermittent tactile nummular allodynia (ITNA), further clinical and neurophysiological studies are warranted to elucidate its underlying mechanisms and to determine whether it should be classified as a distinct sensory disorder or a non-painful variant of nummular headache. The absence of spontaneous pain, the well-demarcated scalp location, and the exclusive tactile trigger suggest a unique pathophysiological profile that may expand the clinical spectrum of nummular headache. Increased awareness and recognition of this entity may help avoid misdiagnosis, reduce unnecessary interventions, and improve diagnostic accuracy in patients presenting with atypical focal scalp dysesthesias.

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Authors contribution: MMV, conceptualization; writing – original draft; CCLS, LLBMM, LGR, FJMVJr, JRA, writing – review

Conflict of interest: We declare no conflicts of interest.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.