





Benefits of acupuncture for migraine: a case report



Benefícios da acupuntura frente à migrânea: um relato de caso

Luciana Larissa Rodrigues dos Santos¹  Ismael Felipe Gonçalves Galvão¹ 
Fernando Augusto Pacífico¹ 

¹ Faculdade de Medicina de Olinda. Olinda, Pernambuco, Brazil.

Abstract

Migraine has the highest incidence among types of primary headaches, affecting approximately 16% of people worldwide, mostly women. This condition originates from multiple factors and significantly impairs quality of life. This case report presents an 81-year-old woman who had headache attacks since the age of 12 years. The patient was diagnosed with migraine in adulthood, with an alteration in the pain pattern after a stressful event. The initial treatment combined acupuncture, supervised by a specialized physician, and compounded medication. Sleep quality improved, and headache attacks reduced within initial sessions. After eight months of treatment, compounded medication was discontinued, acupuncture sessions were maintained, and the patient progressed without further episodes.

Keywords: Acupuncture; Headache; Headache disorders; Migraine disorders.

Corresponding

author: Luciana Larissa Rodrigues dos Santos

E-mail: l.larissasantos@gmail.com

Funding: None

Ethics approval: n° 6.700.702

Received: 03/20/2024

Approved: 11/19/2024

How to cite: Santos LLR, Galvão IFG, Pacífico FA. Benefits of Acupuncture for Migraine: A Case Report. An. Fac. Med. Olinda 2025; 1(13):362. doi: <https://doi.org/10.56102/afmo.2025.362>

Resumo

Entre os vários tipos de cefaleia primária, a migrânea se destaca pela incidência, sendo prevalente entre mulheres; de origem multifatorial, afeta cerca de 16% da população global, causando impacto significativo na qualidade de vida. Este relato aborda o caso de uma paciente de 81 anos, diagnosticada na vida adulta com migrânea, que desde os 12 anos sofre de crises de cefaleia, cujo padrão da dor alterou após evento estressor. O tratamento inicial foi uma associação entre acupuntura supervisionada por médico especializado e utilização de medicação manipulada. Foram observadas melhorias no sono e redução de crises já nas primeiras sessões. Após oito meses de tratamento, foi cessado o uso de medicação manipulada e mantidas as sessões de acupuntura, e a paciente evoluiu sem novas crises.

Palavras-chave: Acupuntura; Cefaleia; Transtornos da cefaleia; Transtornos de enxaqueca.

INTRODUCTION

Primary headaches are a frequent complaint in appointments with physicians¹, mostly among women. Classifications vary from tension and trigeminal-autonomic headaches to migraine. Migraine is a debilitating form of headache and the second cause of disability, affecting around 16% worldwide^{1,2,3}.

Non-steroidal anti-inflammatory drugs, antiepileptics, ergotamines, and triptans are medications indicated in the treatment. However, most options also promote adverse side effects, including fatigue, sleep disturbances, nausea, and vomiting. These effects may explain low medication adherence and, consequently, difficulty in controlling pain crises⁴.

Observational studies indicated that patients suffering from migraine show limitations in daily activities. Thus, non-pharmacological therapies such as acupuncture have proved effective, reinforcing the need for a multidisciplinary approach that values non-drug interventions⁴.

The present study aimed to report the case of an 81-year-old woman who suffered from migraine since the age of 12 years. The treatment involved a combination of supervised acupuncture and compounded medication consisting of nortriptyline, flunarizine, and propranolol.

CASE REPORT

An 81-year-old woman suffered from headaches since the age of 12 years and never sought medical attention; after the worsening of headaches due to the loss of her son in October 2022, the patient sought help. In the outpatient clinic of an educational institution, she was diagnosed with migraine. On a numerical scale from zero to ten of daily pain intensity, her frequency was rated between eight and ten. The pain had an insidious onset and persisted throughout the day, with variable intensity, pulsating, and holocranial distribution. Prodromal symptoms were nausea and dizziness, which persisted during headache attacks associated with photophobia and

phonophobia. The patient was in menopause on diagnosis; however, when asked for worsening factors, she reported increased pain intensity during the menstrual period. Symptomatic pharmacological treatments offered temporary pain relief, such as common analgesics. She had never used prophylactic medication and acupuncture sessions to control the crises. The pain impaired her sleep cycle, with three to four waking episodes.

The background showed systemic arterial hypertension, type 2 diabetes mellitus, hypothyroidism, major depression, and anxiety disorders without medication for underlying illnesses during the diagnosis. Regarding lifestyle, the patient practiced regular physical activity (water aerobics) and manual therapies (crochet). Two first-degree relatives (mother and sister) were diagnosed with migraine and denied other neurological diseases or family comorbidities.

The patient began the follow-up in May 2023 with an acupuncture specialist due to the difficulty of controlling pain intensity and crises, with insidious manifestations that worsened with sound and light stimuli. Acupuncture sessions lasted about an hour and slightly improved the pain, reducing it to six or seven on the intensity scale during May and June 2023. Moreover, the patient improved sleep quality, establishing a regular pattern, sleeping at 10 pm and waking up at 7:30 am, without waking episodes.

In June 2023, together with the weekly acupuncture sessions, compounded medication was added (25 mg of nortriptyline, 5 mg of flunarizine, and 20 mg of propranolol) with one capsule at night for four months. Due to the good response, in the fifth month of follow-up (November 2023), medication was reduced to one capsule on alternate nights. In the sixth month (December 2023), the patient stopped using the medication and maintained acupuncture sessions twice a month. The patient reported no significant adverse effects during or after the use of medication or sessions.

At the end of treatment with medication and acupuncture sessions in 2023, the patient reported pain improvement to one or two on the intensity scale. At a follow-up appointment in November 2023, the patient reported an absence of allergic crises after starting acupuncture sessions, a previous symptom with daily occurrence. Although she did not mention the allergy initially, the patient had not made environmental changes to control allergens or used allergy medication, associating the improvement with acupuncture treatment. Despite the significant improvement reported, the relationship between acupuncture and the reduction of allergic crises still lacks the support of more robust scientific evidence.

After eight months of weekly acupuncture sessions, the patient reported an absence of migraine crisis in the previous two months. This remarkable progress indicated good control of the migraine and an overall improvement in the quality of life.

DISCUSSION

Migraine is one of the most common neurological diseases, characterized by recurrent, unilateral, and throbbing headaches, usually followed by photophobia, phonophobia, or nausea⁴. Acupuncture has become a non-drug treatment option due to the persistent side effects of medications to prevent migraine attacks and the increase in studies for headache treatments^{4,5}.

Although therapeutic mechanisms are not completely understood, studies compared the efficacy of conventional treatments for migraine with acupuncture, highlighting its effectiveness⁶. The positive effects of acupuncture may be related to the regulation of nitric oxide synthase and the expression of 5-hydroxytryptamine (5-HT) 1F gene⁵. Moreover, acupuncture modulates pain regulation via the central nervous system and hormonal balance mechanisms and is suggested to promote clinical improvement, requiring further investigation for a complete understanding⁷. Thus, individualized treatment is crucial to treat chronic headaches since it considers the medical history, comorbidities, and therapeutic preferences of the patient, providing better acceptance⁸, as in this case report.

Traditional Chinese medicine, such as acupuncture, has increased in health systems worldwide in recent decades. In Brazil, traditional and complementary medicine was incorporated into the Unified Health System in the 1980s. An important reason for its growth is the holistic approach, which aligns with the cultural beliefs and values of patients⁹, resulting in better acceptance and adherence to treatment.

Acupuncture sessions provided a significant reduction in migraine pain and improvement in sleep quality, leading to maintenance of treatment and a better quality of life. The present case report highlighted how acupuncture combined with a complementary pharmacological treatment controlled migraine symptoms and may relieve allergic attack symptoms.

The integrative review study by Juanamasta *et al.*¹⁰ evaluated the holistic approach in the treatment of patients with diabetes mellitus. The review showed significant results, providing access to broader health care and a greater support network to patients, promoting increased treatment adherence and a better medical bond¹⁰.

However, the efficacy of alternative treatments requires further scientific validation¹¹. Although the patient showed improvement in migraine and allergic attacks, future studies need to confirm the effectiveness of this intervention in controlling other conditions. Moreover, some treatments proved to be beneficial, while others may not be effective or even harmful when applied incorrectly. Therefore, health professionals must be informed and careful when integrating practices, ensuring the advances and benefits of modern and traditional medicine, respectively¹¹.

Acupuncture points for migraine include Feng Chi (GB-20), Feng Shi (GB-31), and Feng Men (BL-12) sites, among others. The selection of points is based on theories of traditional Chinese

medicine, which focuses on restoring balance to the body and emphasizes the need for a healthy, nutritious, and harmonious lifestyle¹¹. Acupuncture aims to improve the flow of energy and relieve the pain of migraines by stimulating specific points. Studies suggest acupuncture as an effective and safe alternative for the treatment of migraines, providing relief without side effects common in Western medications^{12,13}. These outcomes were present in this case report, which identified significant pain relief and suggested a reduction in allergic attacks without association with side effects during the treatment. However, practice conducted by qualified professionals guarantees the effectiveness and safety of treatment. In addition, high-quality studies should be performed to understand mechanisms and establish standardized treatment protocols. The integration of acupuncture with Western medicine may offer a more comprehensive and personalized approach for patients suffering from migraines, optimizing therapeutic results¹⁴.

Regarding the efficacy of acupuncture, meta-analysis studies evaluated its application on migraine. Li et al. synthesized the findings of several systematic reviews⁴ and showed high-quality evidence of the efficacy of acupuncture surpassing drug therapy. However, larger studies still need to be conducted⁴. In the present case report, the patient showed an initial reduction in headache attacks after acupuncture sessions, with a better response when associated with pharmacological therapy, maintaining initial results. This improvement suggests acupuncture sessions as a protective factor against new crises after initial control. However, robust studies, such as clinical trials, are needed to prove this finding.

The consensus of the Brazilian Headache Society in a multicenter study including 205 patients diagnosed with chronic migraine showed a reduction of days with pain when using simulated acupuncture. Additionally, two studies compared acupuncture to the use of onabotulinum toxin A and topiramate and observed similar or superior efficacy of acupuncture. The frequency and duration of treatment were one per week for 12 weeks¹².

Studies evidenced acupuncture as an effective treatment for controlling the pain of patients, followed by other benefits, such as better adherence to drug therapy, physician-patient relation and control of allergic crises, as observed in this report. However, future robust studies are needed for greater elucidation on the topic.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

FUNDING

Not applicable.

AUTHOR CONTRIBUTIONS

LLRS: Conceptualization, Data curation, Investigation, Writing - original draft, Writing - review and editing; **IFGG:** Data curation, Investigation, Writing - original draft, Writing - review and editing; **FAP:** Conceptualization, Data curation, Investigation, Methodology, Project administration, Supervision, Writing - original draft, Writing - review and editing. All authors read and agreed with the final version of the manuscript.

REFERENCES

1. Ament M, Day K, Stauffer VL, et al. Effect of galcanezumab on severity and symptoms of migraine in phase 3 trials in patients with episodic or chronic migraine [published correction appears in J Headache Pain. 2021 Aug 26;22(1):100]. J Headache Pain. 2021;22(1):6. Published 2021 Feb 6. <https://doi.org/10.1186/s10194-021-01215-9>
2. Rizzoli P, Mullally WJ. Headache. Am J Med. 2018;131(1):17-24. <https://doi.org/10.1016/j.amjmed.2017.09.005>
3. Li XY, Yang CH, Lv JJ, et al. Global, regional, and national epidemiology of migraine and tension-type headache in youths and young adults aged 15-39 years from 1990 to 2019: findings from the global burden of disease study 2019 [published correction appears in J Headache Pain. 2023 Nov 22;24(1):156]. J Headache Pain. 2023;24(1):126. Published 2023 Sep 18. <https://doi.org/10.1186/s10194-023-01659-1>
4. Li YX, Xiao XL, Zhong DL, et al. Effectiveness and Safety of Acupuncture for Migraine: An Overview of Systematic Reviews. Pain Res Manag. 2020;2020:3825617. Published 2020 Mar 23. <https://doi.org/10.1155/2020/3825617>
5. Natbony LR, Zhang N. Acupuncture for Migraine: a Review of the Data and Clinical Insights. Curr Pain Headache Rep. 2020 May 29;24(7):32. <https://doi.org/10.1007/s11916-020-00864-w>. PMID: 32472196.
6. Linde K, Allais G, Brinkhaus B, et al. Acupuncture for the prevention of episodic migraine. Cochrane Database Syst Rev. 2016;6(6):CD001218. <https://doi.org/10.1002/14651858.CD001218.pub3>
7. Zhao L, Chen J, Li Y, et al. The Long-term Effect of Acupuncture for Migraine Prophylaxis: A Randomized Clinical Trial. JAMA Intern Med. 2017;177(4):508-515. <https://doi.org/10.1001/jamainternmed.2016.9378>
8. Zheng H, Chen M, Liu J, Huang Y, Chen Y, Shen W. Meta-analysis of the adjunctive effect of Chinese herbal medicine in treating chronic stable angina. Am J Chin Med. 2012;40(4):685-697.
9. Souza IMC, Tesser CD. Medicina Tradicional e Complementar no Brasil: inserção no Sistema Único de Saúde e integração com a atenção primária. Cadernos de Saúde Pública [online]. 2017, v. 33, n. 1. <https://doi.org/10.1590/0102-311X00150215>

10. Juanamasta IG, Aunguroch Y, Gunawan J, Suniyadewi NW, Nopita Wati NM. Holistic Care Management of Diabetes Mellitus: An Integrative Review. *Int J Prev Med*. 2021 Jun 25;12:69. DOI: 10.4103/ijpvm.ijpvm_402_20. PMID: 34447511; PMCID: PMC8356953. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/34447511/>
11. Yang Y, Que Q, Ye X, Zheng Gh. Verum versus sham manual acupuncture for migraine: a systematic review of randomised controlled trials. *Acupunct Med*. 2016 Apr;34(2):76-83. <https://doi.org/10.1136/acupmed-2015-010903>. Epub 2015 Dec 30. PMID: 26718001.
12. Kowacs F, Roesler CA de P, Piovesan ÉJ, Sarmiento EM, Campos HC de, Maciel JA, et al. Consensus of the Brazilian Headache Society on the treatment of chronic migraine. *Arq Neuro-Psiquiatr [Internet]*. 2019 Jul;77(7):509–20. <https://doi.org/10.1590/0004-282X20190078>
13. Huo X, Liang L, Ding X, Bihazi A, Xu H. Efficacy and Safety of Acupuncture with Western Medicine for Rheumatoid Arthritis: A Systematic Review and Meta-analysis. *Acupuncture & Electro-Therapeutics Research*, 2021. Disponível em: <https://doi.org/10.3727/036012921X16237619666076>
14. Relief Acupuncture PA. Acupuncture vs. Western Medicine: Understanding the Differences and Complementary Approaches to Healthcare. Disponível em: <https://www.reliefacupuncturepa.com/blog/acupuncture-vs-western-medicine-understanding-the-differences-and-complementary-approaches-to-healthcare>