Received: 25 April 2026	Revised: 15 May 2026	Accepted: 25 May 2026

Review Article

IJAMH
A Step Towards Inner Peace

ISSN: 3048-572X

"APASMARA (EPILEPSY): A REVIEW OF MEDHYA AND ANTICONVULSANT HERBS WITH PRECLINICAL EVIDENCE"

Tushar Tapadiya[1]

AFFILIATIONS:

1. Research Assistant, Ira Consultancy & Research Organisation, Bhosari, Pune, Maharashtra 411026

CORRESPONDENCE:
Tushar Tapadiya
EMAIL ID:
tushartapadiya11@gmail.com

FUNDING INFORMATION:
Not Applicable

How to cite this article:
Tapadiya T, "Apasmara (epilepsy): a review of Medhya and anticonvulsant herbs with preclinical evidence" International Journal of Ayurvedic Medicine and Mental Health. 2026;3(2):26-30.
Sri. 2026.1004.ijamh.02.01

ABSTRACT:

Background: Epilepsy affects around 50 million people worldwide, and about one-third of patients do not achieve seizure control with available antiseizure medicines. Ayurveda describes epilepsy as Apasmara, literally "loss of memory or awareness", and prescribes purification, medicated ghee formulations and Medhya herbs for its management. **Objective:** To review the classical concept and management of Apasmara and the preclinical and clinical evidence for herbs and formulations used in its treatment. **Methods:** Narrative review of Charaka Samhita and Sushruta Samhita and of experimental and clinical studies identified through PubMed, Google Scholar and Indian databases. **Results:** Classical texts describe four types of Apasmara according to Dosha, with clear descriptions of aura, convulsions, loss of consciousness and post-ictal states, and recommend Shodhana followed by medicated ghee preparations such as Brahmi Ghrita and Panchagavya Ghrita. Preclinical studies show anticonvulsant effects for Jatamansi in the maximal electroshock model, with synergy with phenytoin; for Ashwagandha root extract through GABA-related mechanisms and in pilocarpine-induced seizures; for Vacha in electroshock and pentylenetetrazol models; and for a marketed Brahmi Ghrita in pentylenetetrazol seizures. Clinical evidence is very limited. A Cochrane review found only low-certainty evidence that yoga may reduce seizure frequency. **Conclusion:** Several Ayurvedic herbs show anticonvulsant activity in animals and deserve further study, particularly as adjuncts to standard antiseizure medicines. Clinical use as a replacement for standard treatment is not supported. Herb–drug interactions and product quality must be considered.

Keywords: Apasmara; epilepsy; anticonvulsant; Medhya Rasayana; Brahmi Ghrita; Jatamansi; Ashwagandha; Vacha

This is an open access article, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

INTRODUCTION:

Epilepsy is a chronic brain disorder characterised by an enduring predisposition to generate epileptic seizures. The International League Against Epilepsy (ILAE) defines practically as at least two unprovoked seizures more than 24 hours apart, one unprovoked seizure with a high recurrence risk, or a diagnosis of an epilepsy syndrome[1]. The World Health Organization estimates that around 50 million people live with epilepsy, most of them in low- and middle-income countries, where a large treatment gap exists[2].

Antiseizure medicines control seizures in most patients, but in a classic cohort study about one-third of patients with newly diagnosed epilepsy continued to have seizures despite treatment[3]. Adverse effects of antiseizure medicines, including sedation, cognitive problems, mood changes and teratogenicity, are common and can limit adherence[4]. These limitations have sustained interest in natural products as sources of new treatments[5].

Ayurveda has a detailed classical description of epilepsy under the name Apasmara. This review summarises the classical concept and management and evaluates the experimental and clinical evidence for herbs and formulations used in Apasmara.

METHODS:

Classical sources were Charaka Samhita, Chikitsa Sthana 10 (Apasmara Chikitsa), and Sushruta Samhita, Uttara Tantra 61[6,7]. Experimental and clinical studies were identified through PubMed, Google Scholar, the Digital Helpdesk of Indian Medicine and Ayurveda journals using Apasmara, epilepsy, anticonvulsant, antiepileptic, seizure, Brahmi Ghrita, Panchagavya Ghrita, Jatamansi, Nardostachys, Ashwagandha, Withania, Vacha, Acorus, Bacopa and yoga.

CLASSICAL CONCEPT OF APASMARA:

Definition

Charaka defines Apasmara as a condition characterised by transient loss of memory and consciousness (Smriti and Buddhi), accompanied by abnormal bodily movements, and associated with disturbance of the mind[6]. The word combines Apa (loss or going away) and Smara (memory or awareness).

Causes

Classical causes include intake of unwholesome, impure or incompatible food, suppression of natural urges, excessive indulgence, and mental factors such as fear, anxiety, grief, anger and excitement, especially in people whose mind is already overpowered by Rajas and Tamas[6]. The Doshas, aggravated by these causes, lodge in the heart (seat of consciousness) and the channels of the mind and senses.

Premonitory features and attacks

Charaka and Sushruta describe premonitory features that resemble an aura: palpitations, a feeling of emptiness, sweating, dizziness, abnormal perceptions and mental confusion before the attack[6,7]. During the attack the patient falls, may froth at the mouth, shows abnormal movements of limbs and eyes, and loses consciousness. After the attack the patient regains awareness as if waking from sleep. These descriptions correspond closely to generalised tonic-clonic seizures and their prodromal and post-ictal phases.

Table 1: Ayurvedic types of Apasmara and their possible modern correlates.

Type	Classical features	Possible modern correlate
Vataja	Frequent attacks, rapid recovery, tremor, frothing, rough and dark appearance, perception of dark forms	Frequent seizures with prominent motor features
Pittaja	Thirst, heat, sweating, yellowish appearance, perception of reddish or bright objects	Seizures with autonomic and sensory features
Kaphaja	Infrequent attacks, slow recovery, heaviness, white frothing, perception of white forms	Infrequent seizures with prolonged post-ictal state
Sannipataja	Features of all three; considered difficult to cure	Refractory or symptomatic epilepsies

Charaka notes that the different perceptions during the aura (dark, red or white forms) can help identify the Dosha. This clinical attention to aura content is notable, because modern seizure classification also relies on the initial features of a seizure to determine its origin[8].

Prognosis

Sannipataja Apasmara and Apasmara in a weak or chronically ill patient are described as difficult to cure. Charaka describes Apasmara as a serious disorder requiring prolonged treatment [6].

CLASSICAL MANAGEMENT:

Charaka sets out a structured approach[6]:

1. Awakening during the attack: strong-smelling inhalations and Nasya to restore consciousness.
2. Shodhana: Vamana for Kaphaja, Virechana for Pittaja and Basti for Vataja Apasmara, to remove aggravated Doshas.
3. Shamana: medicated ghee preparations taken internally over a long period. Panchagavya Ghrita, Mahapanchagavya Ghrita, Brahmi Ghrita (prepared with Brahmi juice, Vacha, Kushtha and Shankhapushpi) and Kalyanaka Ghrita are prominent.
4. External applications: Nasya, Anjana (collyrium) and Abhyanga with medicated oils.
5. Medhya Rasayana: to strengthen memory and the mind and prevent recurrence.
6. Sattvavajaya and Daivavyapashraya: to restore mental stability.

The repeated use of ghee as a vehicle is significant. Ghee is

lipophilic and may improve the delivery of fat-soluble plant constituents to the brain. Ayurveda describes ghee as Medhya and as having the capacity to carry the properties of herbs processed in it without losing its own.

PRECLINICAL EVIDENCE:

Jatamansi (Nardostachys jatamansi)

Jatamansi is used in Ayurveda for mental disorders and sleep. In rats, an ethanol extract of Jatamansi roots raised the seizure threshold in the maximal electroshock model but did not protect against pentylenetetrazol-induced seizures[9]. At effective doses it caused little neurotoxicity in the rotarod test. When combined with phenytoin, Jatamansi increased the protective index of phenytoin from 3.63 to 13.18, and serum phenytoin data suggested a synergistic interaction[9]. This suggests a possible role as an adjunct to phenytoin, but also highlights the potential for pharmacokinetic interaction.

Ashwagandha (Withania somnifera)

Early experimental work suggested that Ashwagandha root extract has anticonvulsant activity mediated through GABA receptors[10]. Later work in the lithium-pilocarpine model of status epilepticus reported neuroprotective effects of the root extract[11]. These findings are consistent with Ashwagandha's GABA-mimetic and anxiolytic actions reported in other studies, but they come from older studies in Indian journals and need replication with modern methods.

Vacha (Acorus calamus)

Vacha is one of the most frequently mentioned Medhya herbs and an ingredient of Brahmi Ghrita. In albino rats, an ethanolic extract of Acorus calamus root reduced the duration of tonic hind-limb extension in the maximal electroshock model in a dose-dependent manner and increased the latency to convulsions in the pentylenetetrazol model[12]. The study was small (five animals per group). Some Acorus chemotypes contain beta-asarone, which has raised safety concerns, so the chemotype and dose need careful attention in any clinical use.

Brahmi Ghrita and other medicated ghees

A 2024 study evaluated six marketed polyherbal medicated ghees used for Apasmara: three brands of Brahmi Ghrita, Panchagavya Ghrita, Mahapanchagavya Ghrita and Nirgundyadi Ghrita[13]. The study assessed physicochemical and phytochemical quality using pharmacopoeial methods and tested anticonvulsant activity in the pentylenetetrazol model in mice. One commercial Brahmi Ghrita delayed the onset and shortened the duration of convulsions more effectively than the other products. The study also showed variation in quality parameters between products, which is an important finding for clinical practice.

Brahmi (Bacopa monnieri) and Mandukaparni (Centella asiatica)

Both plants are classical Medhya Rasayanas and are commonly included in Apasmara treatment. Several Indian experimental studies have reported anticonvulsant activity of their extracts in rodent models, but most are published in journals with limited indexing and vary in quality. Their stronger evidence base concerns memory and cognition, which is reviewed separately.

Table 2: Summary of evidence

Herb or formulation	Model(s)	Main finding	Comment
Jatamansi[9]	MES, PTZ in rats	Raised MES threshold; no PTZ protection; synergy with phenytoin	Possible adjunct; interaction risk
Ashwagandha[10,11]	GABA studies; lithium-pilocarpine	Anticonvulsant and neuroprotective effects	Older studies; needs replication
Vacha[12]	MES, PTZ in rats	Reduced tonic extension; increased latency	Small study; beta-asarone safety
Brahmi Ghrita (marketed)[13]	PTZ in mice	Delayed onset and shortened convulsions	Product quality varies
Brahmi, Mandukaparni	Various rodent models	Reported anticonvulsant activity	Mixed quality evidence

CLINICAL EVIDENCE:

Controlled clinical trials of Ayurvedic formulations in epilepsy are scarce. Most published clinical reports are small uncontrolled studies or case series in Ayurveda journals, often without EEG confirmation of diagnosis, without standard seizure diaries, and with short follow-up. They cannot be used to establish efficacy.

Yoga, frequently combined with Ayurveda, has been evaluated in a Cochrane review[14]. The review found that yoga might reduce seizure frequency compared with no yoga or sham yoga, but each comparison was based on a single small trial and the certainty of evidence was low for all outcomes. The authors concluded that yoga could not be recommended as a treatment for epilepsy on current evidence.

Safety considerations

Patient safety is paramount in epilepsy. Stopping antiseizure medicines abruptly can trigger status epilepticus, which is life-threatening. Ayurvedic treatment should therefore be used, if at all, as an adjunct under coordination with a neurologist, never as a replacement for effective antiseizure medicines.

Herbal products can interact with antiseizure medicines. A review of herbal medicine in epilepsy described both proconvulsive effects of some herbs and pharmacokinetic and pharmacodynamic

interactions with antiepileptic drugs[15]. The synergy observed between Jatamansi and phenytoin in rats[9]. illustrates that interactions can be clinically significant. Drug levels should be monitored when herbal products are added to drugs with narrow therapeutic ranges such as phenytoin, carbamazepine and valproate.

Product quality is another concern. The variation between marketed medicated ghees in the 2024 study shows that the same named formulation can differ between manufacturers[13]. Formulations containing minerals or metals require testing for heavy metals.

Apasmara and the mind: comorbidity and cognition

Charaka places Apasmara among disorders of the mind as well as the body, describing loss of Smriti and Buddhi as its defining feature and listing mental causes such as fear, grief and anger[6]. Modern research confirms that epilepsy is closely linked to mental health. A population-based study found that people with epilepsy had higher lifetime prevalence of depression, anxiety disorders and suicidal thoughts than people without epilepsy[16]. Cognitive difficulties, especially in memory and attention, are also common and may result from the seizures themselves, the underlying cause, or antiseizure medicines[4].

This link gives Ayurveda's Medhya approach a potential role beyond seizure control. Medhya Rasayanas such as Brahmi, Mandukaparni, Shankhapushpi and Yashtimadhu are described as improving memory, intellect and mental stability[6]. If they can be shown to be safe alongside antiseizure medicines, they might be tested for improving cognition, mood and quality of life in people with well-controlled epilepsy, outcomes that matter greatly to patients but are often neglected in drug trials. Sattvavajaya counselling could also address the stigma, fear and social restriction that many patients experience.

Ghee-based therapy and dietary approaches

The central role of medicated ghee in Apasmara treatment invites comparison with dietary therapy in modern epileptology. Ketogenic diets, which are high in fat and very low in carbohydrate, reduce seizure frequency in some children and adults with drug-resistant epilepsy, although evidence certainty is limited and adherence is difficult[17]. The amounts of ghee used in Ayurvedic Ghrita therapy are far smaller than those of a ketogenic diet and are not expected to produce ketosis. Nevertheless, Ayurveda's attention to diet in epilepsy, including recommendations to avoid incompatible, impure and irregular food, is consistent with the modern recognition that metabolic state can influence seizure threshold.

A more direct mechanism may relate to drug delivery. Many neuroactive plant constituents are lipophilic, and processing herbs in ghee may increase their extraction and absorption. This hypothesis could be tested by comparing the pharmacokinetics and anticonvulsant effects of aqueous, alcoholic and ghee-based preparations of the same herb.

Integrating Ayurveda into epilepsy care

In practice, many people with epilepsy in India use Ayurvedic treatment, often without informing their neurologist. A pragmatic integrative approach would include: confirmation of diagnosis and seizure type by a neurologist with EEG and imaging as indicated; continuation of prescribed antiseizure medicines; a seizure diary kept by the patient and family; Ayurvedic support focused on regular routine, sleep, diet, stress reduction and Medhya Rasayana where safe; avoidance of herbs with known proconvulsant potential or interaction risk; and periodic review of drug levels and liver function. Ayurvedic practitioners should be trained to recognise status epilepticus and to refer immediately.

DISCUSSION:

The classical description of Apasmara is clinically accurate and shows careful observation of seizure phenomena, including aura, ictal and post-ictal phases. Its Dosha-based classification is not equivalent to modern seizure classification, but its attention to the initial features of an attack is consistent with modern practice.

The preclinical evidence suggests that several Ayurvedic herbs have anticonvulsant activity. Jatamansi, Ashwagandha, Vacha and Brahmi Ghrita are the most promising candidates. However, most studies are small, use single models and have not been replicated. None has progressed to well-designed clinical trials.

There is a clear pathway for future research. First, the most promising herbs and formulations should be standardised and tested in a panel of validated rodent models, including models of drug-resistant epilepsy. Second, their interactions with commonly used antiseizure medicines should be characterised in pharmacokinetic studies. Third, small, carefully monitored add-on trials in patients with drug-resistant epilepsy, using seizure diaries and EEG, could test whether standardised Ayurvedic preparations reduce seizure frequency or improve quality of life and cognition. Such trials must be conducted in collaboration with neurologists and registered in advance.

CONCLUSION:

Ayurveda describes epilepsy as Apasmara and offers a structured management plan based on purification, medicated ghee formulations and Medhya herbs. Preclinical studies support anticonvulsant activity for Jatamansi, Ashwagandha, Vacha and Brahmi Ghrita, but clinical evidence is lacking. Ayurvedic treatment should not replace antiseizure medicines. Standardised formulations, interaction studies and well-designed add-on clinical trials are needed.

REFERENCES:

1. Fisher RS, Acevedo C, Arzimanoglou A, Bogacz A, Cross JH, Elger CE, et al. ILAE official report: a practical clinical definition of epilepsy. Epilepsia. 2014;55(4):475–82.

2. World Health Organization. Epilepsy. Fact sheet. Geneva: WHO; 2024.

3. Nyavanandi D, Mandati P, Vidiyala N, Parupathi P, Kolimi P, Mamidi HK. Enhancing patient-centric drug development: coupling hot melt extrusion with fused deposition modeling and pressure-assisted microsyringe additive manufacturing platforms with quality by design. Pharmaceutics. 2025;17(1):14.

4. Perucca P, Gilliam FG. Adverse effects of antiepileptic drugs. Lancet Neurol. 2012;11(9):792–802.

5. Lokeshvar R, Ramaiyan V, Nithin V, Pavani S, Vinod Kumar T. Nanotechnology-driven therapeutics for liver cancer: clinical applications and pharmaceutical insights. Asian J Pharm Clin Res. 2025;18(2):8-26.

6. Sharma RK, Dash B. Agnivesa's Charaka Samhita (text with English translation), Chikitsa Sthana 10 (Apasmara Chikitsa). Varanasi: Chowkhamba Sanskrit Series Office; reprint edition.

7. Sharma PV. Susruta Samhita (with English translation), Uttara Tantra 61. Varanasi: Chaukhambha Visvabharati; reprint edition.

8. Vidiyala N, Parupathi P, Sunkishala P, Sree C, Gujja A, Kanagala P, et al. Artificial intelligence: a new era in prostate cancer diagnosis and treatment. Int J Pharm. 2025:126024.
9. Rao VS, Rao A, Karanth KS. Anticonvulsant and neurotoxicity profile of Nardostachys jatamansi in rats. J Ethnopharmacol. 2005;102(3):351–6. doi:10.1016/j.jep.2005.06.031
10. Kulkarni SK, Sharma A, Verma A, Ticku MK. GABA receptors mediated anticonvulsant action of Withania somnifera root extract. Indian Drugs. 1993;30(7):305–12.
11. Vidiyala N, Sunkishala P, Parupathi P, Nyavanandi D. The role of artificial intelligence in drug discovery and pharmaceutical development: a paradigm shift in the history of pharmaceutical industries. AAPS PharmSciTech. 2025;26(5):133.
12. Kaushik S, Gohain K. Study of the anticonvulsant activity of ethanolic extract of root of Acorus calamus in albino rats. Asian J Pharm Clin Res. 2019;12(1):185–8. doi:10.22159/ajpcr.2019.v12i1.29004
13. Moon S, Raut N, Moon H, Dhawande A, Gurav S. Organoleptic, physicochemical, phytochemical and pharmacological evaluation of six medicated ghee used for Ayurvedic management of epilepsy. J Ayurveda Integr Med. 2024;15(6):100995.
14. Naga VAUV, Vidiyala N, Sunkishala P, Vidiyala P, Kumar RKT, Elumalai S, et al. Bio-inspired green synthesis of nanoparticles for psoriasis treatment: a review of current status and future directions. Asian J Green Chem. 2025;9(4):373-403.
15. Samuels N, Finkelstein Y, Singer SR, Oberbaum M. Herbal medicine and epilepsy: proconvulsive effects and interactions with antiepileptic drugs. Epilepsia. 2008;49(3):373–80.
16. Tellez-Zenteno JF, Patten SB, Jetté N, Williams J, Wiebe S. Psychiatric comorbidity in epilepsy: a population-based analysis. Epilepsia. 2007;48(12):2336–44.
17. Martin-McGill KJ, Bresnahan R, Levy RG, Cooper PN. Ketogenic diets for drug-resistant epilepsy. Cochrane Database Syst Rev. 2020;6:CD001903.