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Case Report

Effects of *Panchakarma* followed by *Medhya Rasayana* in overcoming PTSD – A Case Report

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Abstract

A mental health condition known as post-traumatic stress disorder (PTSD) is brought on by stressful experiences like abuse, violence, pandemics, wars, and more. Even while there are allopathic medicines including antidepressants, anxiety reducers, and antipsychotics, they frequently have adverse effects. Ayurveda, specially *Panchakarma* (detoxification therapy) along with *Medhya Rasayana* (brain tonic), aims at restoring balance within the body and mind. A 30 years old woman presented with stress induced insomnia and cognitive impairment, was diagnosed with PTSD and treated using Ayurvedic principles. The Athens Insomnia Scale (AIS) was used to measure insomnia, and the Cognitive Failures Questionnaire (CFQ) for cognitive deterioration. *Virechana* (bowel purge), *Basti* (bowel lavage) for eight days, *Pratimarsha nasya* (nasal therapy) for twenty-one days, *Brahmi ghan vati* for sixty days, and *Mahakalyanak ghee* for one month were part of the treatment plan. Within two months, the patient's AIS score jumped from 13 to 1, and their CFQ score decreased from 62 to 17. Neither side effects nor recurrence were noted during or following therapy. This case highlights Ayurveda's effectiveness in managing PTSD symptoms.

Keywords: Case report, Cognitive impairment, *Medhya rasayana,* Post-traumatic stress disorder, *Panchakarma*

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Introduction

Post-Traumatic Stress Disorder (PTSD) is a mental condition arises when someone has gone through or witnessed a terrible event. Insomnia, depression, anxiety, overthinking, intrusive memories, and general cognitive decline are among the debilitating symptoms. In extreme situations, people may struggle to handle daily life and have suicide thoughts. (1)

Only 5.6% of people worldwide acquire PTSD, while 70% of people have experienced trauma, with women being more vulnerable *(2). Early life stress and poor diet can further impair brain function and memory.* Insomnia, a key symptom of PTSD, affects 63% of those with the PTSD condition, compared to 30% in the general population (3). Trauma induced cognitive decline impacts memory, attention, and executive function, with prevalence rate of 25-30% in India (4). A high-fat, high-sugar diet combined with early life stress can impair memory and negatively affect brain function (5).

Ayurveda offers *Medhya Rasayana* (brain tonic) to enhance cognitive function, reduce anxiety, and restore sleep by balancing "*Buddhi*" (intellect) and "*Manas*" (mind) and resolving imbalances in "*Rajas"* (represents hyperactivity) and "*Tamas*" (represents lethargy) (6). *Shodhana* (Detoxification) through *Virechana* (bowel purge) and *Basti* (bowel lavage), followed by *Medhya Rasayana* (brain tonic) and *Nasya* (nasal therapy) as *Shamana chikitsa* (palliative treatment), forms an effective Ayurvedic approach for managing PTSD related insomnia and cognitive impairment.

PTSD is a growing global concern with limited holistic treatments. This article provides scientific insight into Ayurvedic interventions, bridging the gap between Ayurveda and modern neuroscience. By exploring the neuroprotective, detoxifying, and rejuvenating effects of "*Medhya Rasayana*" and "*Panchakarma*", it presents a non-invasive, sustainable alternative to conventional

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PTSD therapies. Publishing this research would advance holistic psychiatry, promote Ayurveda globally, and encourage integrative studies in mental health.

Patient information

A 30-year-old female visited the *Panchakarma* OPD at Ayurvedic hospital, on 07-06-2024, with primary complaints of irregular sleep patterns, cognitive decline (notably impaired concentration, sporadic anxiety, and decreased information retention), sleeping only 3-4 hours despite having an 8–10-hour bedtime. The patient endured mental abuse for five years during marriage. Patient symptoms worsened post-divorce in 2023. After 1.5 months of antidepressants and therapy in May 2024, side effects such as day drowsiness, menstrual irregularities, mood swings, led patient to discontinue allopathy and chose Ayurvedic management for healing. Patient mother has hypertension for 3 years and father has no major history of past illness. Patient diet mainly contains dairy products, sugar, junk food. Patient was on Tablet Escitalopram 10mg od for one and half month.

Clinical findings

General examination was conducted; patient overall health was satisfactory as well as Vitals were stable. Whereas patient *Ashtavidh Pariksha* (Eight-fold clinical examination in Ayurveda) reveals *Vata Pittaj Nadi* (pulse), clear stool, normal urine, coated tongue, clear speech, normal touch & vision, and moderate mental strength. All systematic examinations findings were within normal limits.

Table 1: Mental examination (7)

General appearance & Behaviour	Speech	Thought abnormality
-Well groomed, good hygiene & normal posture.	-Slow & low toned but clear.	-Loud internal noise.
-Normal facial expressions, made eye to eye contact.		-Excessive worry and feeling worthless.
- Anxious but cooperative.		-Overthinking and self-harm thoughts.

Diagnostic assessment

Athens Insomnia Scale (AIS) for assessment on basis of eight components of the AIS, each item rated 0-3 (Total score range 0-24). Score ≥6 indicated insomnia severity (8).

Table 2: Athens Insomnia Scale (AIS)

Sr.No.	Clinical Features	Before treatment Score	1st Follow-up Score (11-07-24)	2nd Follow-up Score(12-08-24)
1	Sleep induction (how long it takes to fall asleep after going to bed)	2	0	0
2	Awakenings during the night	2	0	0
3	Final awakening earlier than desired	0	0	0
4	Total sleep duration	2	0	0
5	Overall quality of sleep	2	0	0
6	Sense of well-being during the day	3	1	1
7	Functioning capacity during the day	1	0	0
8	Sleepiness during the day	1	0	0
	Total Scores	13	1	1

Cognitive failures questionnaire for assessment of cognitive decline. 25 items scale assessing attention, memory, and action control lapses. Each item asks about a specific cognitive error, and respondents rate how often they experience the error on a 5-point Likert scale, ranging from 0 to 4. Higher scores indicate greater cognitive decline (9).

Table 3: Cognitive failures questionnaire

Sr. No.	Questions	Domain	Usage/Reference	Before Treatment Score	After Treatment Score
1	Do you read something and find you haven't been thinking about it, so you have to read it again?	Attention	Assesses attentional lapses, where the person may become distracted and realize they didn't retain the information they just read.	3	0
2	Do you find you forget why you went from one part of the house to another?	Memory/ Attention	Captures a lapse in working memory where the person forgets the purpose of an action.	2	0
3	Do you fail to notice signposts on the road?	Attention	Measures attentional focus, particularly in the context of navigation or driving, where important cues are missed.	3	1

4	Do you find you confuse left and right when giving directions?	Executive Function	Reflects difficulties with spatial awareness or direction, which can indicate a lapse in processing spatial or motor planning information.	3	1
5	Do you bump into people?	Attention/ Action	Lapses in physical coordination or awareness of surroundings, often due to inattentiveness or distraction.	0	0
6	Do you find you forget whether you've turned off a light or a stove or locked a door?	Memory/ Attention	Relates to prospective memory and action control, where the person forgets whether they have completed a routine task.	3	0
7	Do you fail to listen to people's names when you are meeting them?	Attention	Measures difficulties in attentional focus during social interactions, particularly when people are introduced.	2	0
8	Do you say something and realize it might be insulting?	Social Cognition/ Executive Function	Addresses social slips, where the individual might say something impulsively without fully considering the impact.	2	1
9	Do you fail to hear people speaking to you because you are doing something else?	Attention/ Action	Relates to divided attention, where a person is too focused on one task and misses auditory information from their surroundings.	3	1
10	Do you lose your temper and regret it?	Emotional Regulation/ Executive Function	Addresses impulsivity and emotional control, where lapses can lead to emotional outbursts.	3	0
11	Do you leave important letters unanswered for days?	Attention/ Memory	Measures prospective memory failures or attentional lapses related to managing everyday tasks and responsibilities.	3	0
12	Do you find you forget which way to turn on a road you know well but rarely use?	Memory	Assesses memory lapses related to infrequently used but familiar information, such as spatial or procedural memory.	2	0
13	Do you fail to see what you want in a supermarket (although it's there)?	Attention	Measures inattentiveness to one's surroundings, where an individual might overlook objects that are in plain sight.	2	0
14	Do you find you forget appointments?	Memory/ Attention	Focuses on prospective memory failures, where the individual forgets about scheduled tasks or events.	3	1
15	Do you forget where you put something like a newspaper or a book?	Memory	Relates to everyday memory slips, where the individual forgets the location of personal items.	2	1
16	Do you find you accidentally throw away the thing you want and keep what you meant to throw away?	Action/ Executive Function	Measures action slips, where a task is completed incorrectly or without conscious awareness.	2	0
17	Do you daydream when you ought to be listening to something?	Attention	Reflects attentional lapses, where the individual's mind wanders during important tasks or conversations.	3	1
18	Do you start doing one thing at home and get distracted into doing something else (unintentionally)?	Attention/ Action	Measures lapse in goal-directed behavior, where attention shifts unintentionally, leading to incomplete tasks.	3	1
19	Do you find you can't quite remember something although it's "on the tip of your tongue"?	Memory	Reflects temporary memory retrieval failures, such as difficulty recalling specific information when needed.	3	2
20	Do you forget what you came to the shops to buy?	Memory/ Prospective Memory	Where the individual forgets their intended shopping items.	1	0
21	Do you drop things?	Action/ Coordination	Measures motor control slips, where inattentiveness or clumsiness leads to physical mishaps like dropping objects.	1	0

22	Do you find you can't think of anything to say in a conversation?	Social Cognition/ Memory	Reflects conversational slips, where cognitive processing fails in social interactions, leading to awkward silences or memory lapses.	3	1
23	Do you forget people's names?	Memory	Measures difficulties with memory for names, a common and noticeable form of memory lapse in social situations.	4	3
24	Do you forget what you were going to say?	Memory/ Attention	addresses temporary memory failures, such as losing track of one's thoughts mid-conversation.	3	2
25	Do you find yourself suddenly wondering whether you've used a word correctly?	Language/ Memory	Captures uncertainty in language use, reflecting lapses in language processing or confidence in word usage.	3	1
	Total Scores			62	17

Diagnosis was based on clinical symptoms, also on AIS score which was 13 that indicates severe insomnia and her CFQ score was 62 that indicates significant cognitive impairment.

Therapeutic intervention

Table 4: Treatment Plan

Sr. No.	Procedure Name	Date	Dosage	Medication Used	Duration
1	*Snehapana* (Ghee ingestion)	15-06-24 to 19-06-24	Starting from 30ml, increase by 30ml daily.	With *Brahmi* ghee	05 Days
2	*Sarwanga Abhyanga* (Full body massage)	19-06-24 to 21-06-24	As per requirement	With *Tila* oil	03 Days
3	*Sarwanga Swedana* (Full body fomentation)	19-06-24 to 21-06-24	For Adequate duration	With *Dashmoola* decoction	03 Days
4	*Virechan*	22-06-24	*Trivrit avleha* 50gm & *Triphala* decoction 250ml	*Trivrit avleha* & *Triphala* decoction	01 Day
5	*Sthanika Abhyanga & Swedana* (Local massage and fomentation)	02-07-24 to 10-07-24	As per requirement	With *Nirgundi* oil & *Dashmoola* decoction	09 Days
6	*Anuwasana basti (*bowel lavage)	02-07-24, 04-07-24, 06-07-24, 08-07-24, 10-07-24	60ml daily	With *Nirgundi* oil	05 Days
7	*Niruha basti*	03-07-24, 05-07-24, 07-07-24, 09-07-24	480 ml	With *Erandmooladi* decoction	04 Days
8	*Pratimarsha nasya*	11-07-24 to 26-07-24	2 drops in each nostril	with *Anu tailam*	21 days
9	*Brahmi ghana vati*	11-07-24 to 11-09-24	250mg at bedtime	With lukewarm water	2 months
10	*Mahakalyanaka ghee*	11-07-24 to 12-08-24	10 ml on empty stomach	With lukewarm water	1 month
Patient was asked to come for follow-up after detoxification on 11-07-24, then after one month on 12-08-24, and on 11-09-24.					

Follow ups and outcomes

Patient enrolled on 07/06/2024. Parameter were assessed at each follow up and improvement was observed. Post detoxification, AIS score improved from 13 to 1 by 11/07/2024. However, cognitive decline persisted leading to *Rasayana* (rejuvenation) therapy. CFQ score improved from 62 to 23 on 12/08/2024, and then to 17 on 11-09-24 indicating enhanced memory, attention, and action control. No side effects; patient opted for Ayurveda over allopathy.

Discussion

Unless *Shodana* (detoxification) is followed by *Rasayana* (rejuvenation treatment) the benefits of rejuvenation treatment become similar to that of colourings the dirty cloth probably indirectly stating towards the *Ashudha Shareera* (diseased body) cannot keep the *Manas* (mind) to act as time demands (10),(6). In this case study, Rejuvenation treatment along with detoxification helps balance the psychic components *Rajo* (agitation), *Tamo* (inertia) and enhance *Satwa* (clarity and balance). These three psychic qualities are deeply influential in mental health. The

dominance of *Rajas* and *Tamas* is often linked to emotional disturbances, psychological stress, and disorders such as PTSD. Ayurvedic *Satvavajaya* aligns with modern psychotherapy, redirects the mind from harmful impressions, integrating *Manaso Jnana* (intelligence), *Vijnana* (discrimination), *Dhairya* (retaining power), *Smriti* (Memory), *and Samadhibhi* (peace)"(11) for mental well-being and supporting psychological healing.

Among all therapeutic agents, *Brahmi* ghee which is also considered as *Medhya Rasayana,* enhances cognitive function and memory by nourishing the *Majja Dhatu* (nervous tissue) and brain, balancing neurotransmitters, and providing neuroprotection through the synergistic effects of *Brahmi*. It is especially beneficial in managing anxiety, insomnia, and stress related disorders by improving functioning of *Sadhaka Pitta* (subtype of pitta which controls emotions and mental processing) (12) (13).

Bowel purge detoxifies, balances *Pitta*, reduces inflammation, clearing toxins from GI tract which enhances metabolism which in turn supports a balanced mind. Scientific literature increasingly recognizes the gut-brain axis, where a healthy gut environment is directly related to improved mood, cognition, mental clarity and neurological function (14).

Bowel lavage detoxifies, balances *Vata* (controller of nervous functions), nourishing colon improves nutrient absorption, supports gut-brain axis and promotes better mental equilibrium, *Acharya Charaka* mentioned bowel lavage as whole as treatment of any disease due to its widespread impact on body and mind (15).

Nasya involving instillation of medicated oils or herbal decoctions through nose directly nourishing the brain and nasal passages because nose is way to head ("*Nasa hi shirso dwaram*"), oil instilled reaches to the vital part of head via infusion method, enhances oxygenation, clear sinus passages, sensory and neurological functions, regular use improves immunity, mental clarity, and overall well-being (16).

Brahmighan Vati also comes under category of *Medhya Rasayana* that enhances cognition, memory and stress resilience with neuroprotective and nootropic effects (17) (18). *Mahakalyanaka Ghrita also considered* as *Medhya Rasayan* as it has *Medhya* properties that promotes cognition, emotional balance, neuroprotection and supporting individuals suffering from mental fatigue, depression, or neurodegenerative disorders by nourishing the manovaha srotas (mental channels) and calming the nervous system (19) (13).

While conventional treatments for PTSD like SSRIs (Selective serotonin reuptake inhibitors) and CBT (Cognitive Behavioural Therapy) have their own benefits and side effects, but they don't address the root imbalance. Ayurvedic therapies like *Medhya drugs* along with *Panchakarma* offer side-effects free alternative that not only manages symptoms but promotes deep healing. Their neuro-regenerative, *sattva vardhaka* (satva promoting) and adaptogenic benefits, promoting holistic healing and make it a necessary alternative.

Conclusion

Successful treatment of this case suggests that *Rasayana* (rejuvenation) along with *Panchakarma* (detoxification) therapies are effective in managing psychological aspects of PTSD including stress-induced insomnia and cognitive decline.

Patient Perspective (10-10-2024): "I turned to Ayurveda after allopathy caused side dependency. With my doctor's guidance, I now feel relieved, more confident and grateful for choosing Ayurveda at the right time."

Informed Consent: Informed Consent has been taken for clinical information to be uploaded for the journal. The Patient agreed to not publish her name and identity and efforts will be made to conceal her identity.

Conflict of interest: none

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