Case Report

Ayurvedic management of Generalised Anxiety Disorder (GAD) induced insomnia- A case report

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Abstract

This case report is the description of Ayurvedic management of Generalised Anxiety Disorder (GAD) induced insomnia of a 22 years old male. Apart from insomnia, the patient suffered from both physical and psychological symptoms of GAD for about 7 months. Diagnosis was made as per Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria. Without approaching conventional medicine, patient came directly to the Out Patient Department (OPD) of Regional Ayurveda Research Institute, Thiruvananthapuram, Kerala for management. In Ayurveda, insomnia can be considered as *Nidranasha*; while exact neck to neck correlation cannot be made for GAD. Internal medications and external procedures with *nidrajanak*, *rasayana*, *Ojaskara*, *medhya*, *unmadahar* properties were applied. Assessments were conducted through Hamilton Anxiety Rating Scale (HARS), GAD 7 scale, Pittsburgh Sleep Quality Index (PSQI), WHO Quality of Life- BREF, and Clinical Global Improvement scale (CGI) on Day 1, Day 20 and Day 34 of intervention.The case is unique in the sense that complete relief from all symptoms was obtained after 20 days with cost effective measures and nil side effects. Ayurvedic intervention was found to be a good alternative therapy in the management of GAD induced insomnia.

Keywords: Case report; Chittodvega; Nidranasha; Sleep

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Introduction

One of the most prevalent mental diseases is generalised anxiety disorder. Adults who are afflicted by it make up around 20%. Excessive concern is the main symptom, which is frequently accompanied by a wide range of vague psychological and physical symptoms, including sleeplessness. Suicide occurs often among these patients.[1]The term "insomnia" refers to problems getting to sleep or remaining asleep despite having a sufficient chance to sleep and are linked with severeimpairment of daily function. According to DSM-5, symptoms must be present for minimum of three days each week foratleast three months. Allopathic medicine recommends sedatives and cognitive behavioural therapy for treating it. [2]

Although a precise term to describe GAD is not present in Ayurvedis science, *Chittodvega* is a more appropriate phrase to describe it.[3]*Acharya Charaka* lists *nidranasha as* one of the vata diseases.[4] The basic management of *Nidranasha* and *Chithodveg* are complementary and *Sattvavajaya*, *Daivavyapasraya Chikitsa*, *Yuktivyapasraya Chikitsa* are the useful therapies.[5]The case is unique in the sense that complete relief from all symptoms was obtained after 20 days with cost effective measures and nil side effects.

Patient Information

A 22 years aged Indian male, presented to the Out Patient Department (OPD) of RARI (Regional Ayurveda Research Institute), Thiruvananthapuram on 20.01.2022

Primary concerns and symptoms

Patient complained of decreased sleep and whole-body

ache. Excessive anxiety, worry, decreased appetite, loss of concentration and interest in day-to-day activities. Fatigue, headache, irritability were associated complaints experienced by the patient.

History of presenting complaints: The condition started 7 months back with decreased sleep,whole body ache associated with excessive anxiety and worry as the patient lost his job during the time of COVID 19 pandemic. The condition worsened gradually and other symptoms started to appear after 1 month.

Personal history

The patient had history of smoking, alcohol addictions 1 year ago. No member of the family was affected with similar condition. Psychosocial history revealedloss of job during COVID pandemic wasthe main reason for anxiety. Andas a result, social interaction got reduced.

Past intervention with outcomes: The patient did not consult any other medical practitioner for his condition and came directly to the OPD of RARI, Thiruvananthapuram, Kerala for the management.

Clinical Findings

General examination

General condition and appearance were that patient was found good, ambulatory. No pallor, lymphadenopathy was seen, Temperature: 97.8^0 Fahrenheit, Pulse Rate: 72/ minute, regular, Weight: 59kilogram, Height: 164centimetre, Blood Pressure: 124/82 millimetre of Mercury.

Dasavidha Pareeksha

Dosham: *vata* predominant *tridosha*, Dooshyam: Rasa, Asthi, Balam: Madhyamam, Kalam: Sisira, Anala: Heenam, Prakriti: Vata, Vaya: Madhyamam, Satwam: Heenam, Satmyam: Madhyamam, Ahara: Madhyamam

Physical examination: No significant abnormality was found during inspection and palpation of body, suggestive of psychological nature of the condition.

In systemic examinations: Complaints associated with GAD like decreased appetite, headache, body ache was present.

Table 1: Timeline of the case

Dates	Relevant medical history and interventions
20.06.2021	The condition started as decreased sleep and whole body ache associated with excess anxiety and worry.
20.07.2021	Associated symptoms gradually appeared.
20.01.2022	He was admitted in RARI Thiruvananthapuram. Internal medications and external procedures were prescribed.
08.02.2022	The patient reported complete relief from all symptoms and was discharged. Discharge medicines were prescribed for two weeks
21.02.2022	Patient came for follow up and no relapse of symptoms was reported.

Diagnostic assessment (28.11.2020)

Diagnosis was made as GAD induced Insomina based on DSM-V and was graded as severe (score 35 in HAM-A, score 18 in GAD 7).[6]Regarding diagnostic challenges, detailed history taking led to arrive in the diagnosis of GAD induced insomnia. Regarding Haematologic investigations, Blood Routine Examination, CRP, Fasting Blood Sugar, Post Prandial Blood Sugar, Lipid profile, Liver Function Test, Renal Function Test, RA factor, ASO titre investigations, Thyroid Function Test were done. All values were normal and conditions like Hyperthyroidism, Rheumatiod Arthritis, Rheumatic fever were ruled out.

Prognosis: Good, as the patient came for treatment in the early stage of the condition.

Therapeutic Intervention:

Pharmacologic Intervention: Detailed Pharmacological intervention is described in Table 2.

Table 2: Pharmacologic intervention

Duration	Medicine/Procedure	Dose	Frequency and route of administration
20.01.2022-08.02.2022	*Saraswatharishtam –(gold)*	0.2ml with milk	Twice a day after food orally
	Kalyanaka ghrita	10g	After food at night time orally
	Tab. *Manasamitra vatakam*	2 no: (125 mg each) with milk	Twice a day before food orally
20.01.2022-08.02.2022	*Ashwagandha churna*	5g with milk	At night time orally
20.01.2022-26.01.2022	*Shiropichu*(applying cotton swab with oil in scalp) with *Balashwagandhadi taila*	q.s	Once a day for 45 minutes, External application on head
27.01.2022	*Virechana*(purgation)-anulomana with *Gandharvahasteranda taila*	25ml	Early morning empty stomach orally
28.01.2022-03.02.2022	*Shirodhara(*technique of pouring medicine on the forehead*)*with *Brihat chandanadi taila*	q.s	Once a day with 45 minutes, External application on forehead
04.02.2022-08.02.2022	*Nasya*(nasal instillation) with *Panchagavya ghrita*	0.4ml each nostril	Once a day-Evening, nasal route
09.02.2022-22.02.2022	*Brahmi ghrita*	5g	At night time orally
	Himasagara taila for head application	q.s	Once a day, External application on head

Pathya and ApathyaPatient was adviced to do *Pranayama* throughout the days of intervention After discharge, the patient was adviced to do *pranayama* and not to resume addictions like alcohol, smoking.

Results

Follow up and outcomes

The patient was hospitalised in RARI Thiruvananthapuram's In-Patient Department (IPD) for 20 days. Follow up was done on Day 14 and after discharge on Day 20. Assessments were done using the GAD 7 scale, the Clinical Global Improvement scale(CGI), the WHO Quality of Life- -BREF, the Pittsburgh Sleep Quality Index (PSQI), and the Hamilton Anxiety Rating Scale (HARS) on Day 1, Day 20 and Day 34 of intervention and scores are summarised in Table 3.[7,8,9,10,11]

Table 3. Scores in Assessment scales

Assessment scales and Scores	Day 1	Day 20	Day 34
HARS	35	00	00
GAD 7	18	00	00
PSQI	20	02	02
WHO Quality of Life- BREF			
Physical health	19%	94%	100%
Psychological health	6%	75%	94%
Social relationships	31%	69%	94%
Environmental health	31%	88%	94%
CGI	6	1	1

- Intervention adherence and tolerability were good as informed by the patient, bystander, sister in charge, Panchakarma therapists.

- Adverse effects/unanticipated events: nil

Discussion

This case report is the description of almost complete cure of GAD induced insomnia case developed for 7 months, of a 22 years old married unemployed Indian male admitted at RARI, Thiruvananthapuram, using Ayurvedic modalities. The loss of job of the patient during the time of COVID 19 pandemic was the triggering factor for the starting of the condition. A year ago, he was dependent on drink and cigarettes.

The patient was diagnosed as having severe GAD-induced insomnia. The Patient had *raja* and *vata* predominant *tridosha* vitiationas per Ayurveda. Vata prakriti and heena satwa of the patient might have also contributed to the precipitation of the condition. During the patient's hospital stay of 20 days, oral drugs, external procedures, and pranayama weregiven. All these regulated mind through *medhya rasayana* (nootropic) effect. They alleviated the vitiated *vata, raja*,and moreover, induced sleep. The patient's clinical condition improved quickly and consistently.

Probable mechanism of action

The interventions utilised in the study show that many mental illnesses may be managed and seem to have both neurotropic and psychotropic effects. A study revealed that managing depression with virechana was successful. [12] "*Anulomana*" type of *Virechana* was done. As the disease is a *vata* predominant psychiatric condition, *Sneha samyukta mridu shodhana* is indicated as a part of management. So *Anulomana* with *Gandharvahasteranda taila* was done. [13]

Patients with generalised anxiety disorder (GAD) responded favourably to *Shirodhara,* and sleeplessness was improved.[14] *Shirodhara, Nasya* and *shiropichu* are examples of transcranial route of drug delivery. A study has proved that when scalp is rubbed with an oil-solubilized form, central nervous system medications have the potential to be delivered through this route. [15]Anxiety relieving and antidepressant properties are seen in *Ashwagandha*.[16]*Manasamitravataka* helped GAD sufferers sleep better and feel less anxious.[15]It has been scientifically shown that *Saraswatarishta, Kalyanaka ghrita*, and *Brahmi ghrita* have sleep-inducing effect. [17,18, 19] Interventions gave relief to all symptoms of the patient, although insomnia was the major complaint. Improvement was observed in all the assessment criteria.

No adverse drug reactions/events were reported. The liver function tests and serum creatinine were within the normal limits both before and after the intervention, showing the nontoxicity of interventions. Even though a full symptom cure was documented at release, he was told to continue taking his medications for another two weeks.

Strengths and limitations of case report

The major strengths of this case reporting are it is novel in the sense, complete symptomatic relief of GAD, specifically insomnia was obtained so that same modalities may be adopted in similar cases. The study's standout elements include a thorough evaluation of anxiety, depression, sleep, disease severity, clinical global improvements and quality of life. Because the study was conducted on just one case, the case report's main drawback is the inability to generalize the findings. The study would have been better if it had been conducted using a selective serotonin reuptake inhibitor as a control.

Conclusion and its rationale: The presented combination of Ayurvedic internal medications and external procedures is found to be a good alternative therapy in the management of GAD induced insomnia. As no adverse effects were reported and normal haematological values were obtained in LFT and RFT, safety of the internal medicines and external procedures can be assumed. To support the evidence, long-term prospective studies are necessary.

Patient perspective: Both the patient and his bystander (father) were very much satisfied as he got complete symptomatic relief. Before treatment, the condition had affected the entire family badly.

Informed Consent. Patient provided informed consent for the publication of this case report.

Conflict of interest: Nil

Ethics: The study was conducted adhering to all ethical principles in clinical study.

References

1. S. Munir, V.Takov. Generalized Anxiety Disorder. [Updated 2022 Jan 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK441870/

2. A.D Krystal, A.A Prather, L.H Ashbrook. The assessment and management of insomnia: an update. World Psychiatry. 2019 Oct;18(3):337-352. doi: 10.1002/wps.20674. PMID: 31496087; PMCID: PMC6732697.

3. K. Roshni. Tele-counselling for management of *Chittodvega* (anxiety disorder) in *Ayurveda*—composing ancillary methods during the Covid 19 pandemic. *CSIT* 8, 395–401 (2020). https://doi.org/10.1007/s40012-020-00317-0

4. G.N. Chaturvedi, S. Kashinath (Ed.), Charaka Samhita of Agnivesha (reprint ed.), Vol 1, *Sutrasthana*; *Tisraishaniya*: Chapter 11, Verse 3. Varanasi: Chaukhambha Bharti Academy, 2011; 332

5. G.N. Chaturvedi, S. Kashinath (Ed.), Charaka Samhita of Agnivesha (reprint ed.), Vol 1, *Sutrasthana*; *Ashtodariya*: Chapter 19, Verse 3. Varanasi: Chaukhambha Bharti Academy, 2011; 522

6. D.A Regier, E.A Kuhl, D.J Kupfer. The DSM-5: Classification and criteria changes. World Psychiatry. 2013 Jun;12(2):92-8. doi: 10.1002/wps.20050. PMID: 23737408; PMCID: PMC3683251.

7. Z. Yang. (2021). Hamilton Anxiety Rating Scale. In: Gu, D., Dupre, M.E. (eds) Encyclopedia of Gerontology and Population Aging. Springer, Cham. https://doi.org/10.1007/978-3-030-22009-9_825

8. S.U Johnson, P.G Ulvenes, T. Øktedalen, A. Hoffart. Psychometric Properties of the General Anxiety Disorder 7-Item (GAD-7) Scale in a Heterogeneous Psychiatric Sample. Front Psychol. 2019 Aug 6;10:1713. doi: 10.3389/fpsyg.2019.01713. PMID: 31447721; PMCID: PMC6691128.

9. D.J Buysse, C.F Reynolds, T.H Monk, S.R Berman, D.J Kupfer. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. Psychiatry Res. 1989 May;28(2):193-213. doi: 10.1016/0165-1781(89)90047-4. PMID: 2748771.

10. M. T. Peros-Golubiciæ, B. Radoseviæ-Vidacek, A. Koscec, J. Tekavec-Trkanjec, M. Solak, A. Heæimoviæ, S. Smojver-Jezek. WHOQOL-bREF questionnaire as a measure of quality of life in sarcoidosis. Coll Antropol. 2013 Sep;37(3):701-6. PMID: 24308206.

11. J. Busner, S.D. Targum. The clinical global impressions scale: applying a research tool in clinical practice. Psychiatry (Edgmont). 2007 Jul;4(7):28-37. PMID: 20526405; PMCID: PMC2880930.

12. R.T.Basavaraj, C. Soujanya, S. Amit, Ayurveda management of Major Depressive Disorder: A case study, J Ayurveda Integr Med, Volume 12, Issue 2, 2021, Pages 378-383, ISSN 0975-9476, https://doi.org/10.1016/j.jaim.2021.03.012

13. G.N. Chaturvedi, S. Kashinath (Ed.), Charaka Samhita of Agnivesha (reprint ed.), Vol 4, *Chikitsasthana*; *Unmadachikitsa*: Chapter 9, Verse 25. Varanasi: Chaukhambha Bharti Academy, 2011; 205

14. B.R. Tubaki, C.R. Chandrashekar, D. Sudhakar, T.N. Prabha, G.S. Lavekar, B.M. Kutty. Clinical efficacy of *Manasamitra Vataka* (an Ayurveda medication) on generalized anxiety disorder with comorbid generalized social phobia: a randomized controlled study. J Alternative Compl Med, 18 (6) (2012 Jun), pp. 612-621, DOI: 10.1089/acm.2010.0778, PMID: 22784349

15. W. Pathirana, P. Abhayawardhana, P.H. Kariyawasam, W.D. Ratnasooriya, Transcranial route of brain targeted delivery of methadone in oil, Indian J Pharm Sci, 71 (3) (2009), pp. 264-269, DOI: 10.4103/0250-474X.56024

16. S.K. Bhattacharya, A. Bhattacharya, K. Sairam, S. Ghosal, Anxiolytic-antidepressant activity of Withania somnifera glycowithanolides: an experimental study, Phytomedicine, 7 (6) (2000), pp. 463-469, DOI: 10.1016/S0944-7113(00)80030-6

17. R.R Parekar, K.S Jadhav, P.A. Marathe, N.N Rege. Effect of *Saraswatarishta* in animal models of behavior despair. J Ayurveda Integr Med. 2014 Jul;5(3):141-7. doi: 10.4103/0975-9476.140469. PMID: 25336844; PMCID: PMC4204283.

18. D. Snehalatha, S. A Lohidasan, K.R Mahadik. Standardization and Ameliorative effect of *Kalyanaka ghrita* in â-amyloid induced memory impairment in wistar rats. J Ethnopharmacol. 2022 Aug 30:115671. doi: 10.1016/j.jep.2022.115671. Epub ahead of print. PMID: 36055476.

19. S.Bhalerao, R. Munshi, T. Nesari, H. Shah. Evaluation of *Brâhmî gh[tam* in children suffering from attention deficit hyperactivity disorder. Anc Sci Life. 2013 Oct; 33(2):123-30. doi: 10.4103/0257-7941.139057. PMID: 25284947; PMCID: PMC4171854.