



Case Study

EFFECT OF AN AYURVEDIC COMPOUND AND HYPNOTHERAPY ON SLEEP BRUXISM: A CASE REPORT

Anjumol M^{1*}, Satheesh K², Jithesh M³

*1PG Scholar, Manovigyana Evam Manasaroga, ²Associate Professor, ³Professor and HOD, Department of Kayachikitsa, VPSV Ayurveda College, Kottakkal, Kerala, India.

Article info

Article History:

Received: 18-05-2023

Revised: 07-06-2023

Accepted: 24-06-2023

KEYWORDS:

Ayurveda, Sleep
Bruxism, Stress,
Hypnotherapy.

ABSTRACT

Bruxism is defined as “diurnal or nocturnal parafunctional activity including clenching, bracing, gnashing, and grinding of the teeth.” The etiology of bruxism is unclear, but the condition has been associated with stress, occlusal disorders, allergies, and sleep positioning. The aetio-pathophysiology is still unclear. SB (Sleep Bruxism) has been associated with tooth interference, psychosocial and environmental factors, brain transmitters, and basal ganglia dysfunction. It is been reported that Sleep bruxism during all sleep stages, others observed the majority of bruxis episodes during light sleep and REM and are often associated with arousal transients. There is no specific treatment for sleep bruxism but each subject has to be individually evaluated and treated. Three management alternatives are used: dental, pharmacological, and psycho behavioural. A 69-year-old man came to OPD of VPSV Ayurveda College Hospital, complaining that he has been grinding his teeth and making sounds while sleeping for the last 15 years. The noise he created caused his wife's sleep to be disturbed as well. So she constantly gave him the blame. They noted that the patient's tendency to grind his teeth worsened whenever he became upset or overworked. The patient had been given *Aswagandha Churna* (3gm), *Jatamansi Churna* (2gm), *Aparajita churna* (2gm) 2 times after food with warm water and *Mahapaishacika ghrta* 10ml at night for 3 weeks and also by considering the stress factor hypnotherapy was given 4 sittings on every 3rd day. The patient had good improvement in the Perceived Stress Scale, it reduced from 20 to 11. After three weeks of treatment, sleep bruxism was completely cured and the patient was asymptomatic during the follow-up period also.

INTRODUCTION

Sleep is an integral part of our life plays an important role in promoting health and preventing diseases. The three supports of life are intake of food, sleep, and non-observance of *Brahmacharya* (celibacy).^[1] Being supported by these three well-regulated factors of life, the body is endowed with strength, complexion, and growth, and continues until the full span of life, provided a person does not indulge in such regimens as are detrimental to health.^[2] There are many sleep-related disorders that have been explained and one of them is Sleep Bruxism.

Stress and poor sleep quality can cause some sleep disorders. Bruxism can be observed during wake and/or sleep. It is characterized by involuntary grinding and clenching of the teeth.^[3] The wake-time habit of clenching, grinding, or gnashing the teeth can overlap in a substantial number of subjects with bruxism occurring during sleep.

The prevalence of bruxism, in general, is estimated to be 17% in children and 8% in middle-aged adults, whereas it drops down to 3% in elderly individuals.^[4,5] The consequences may include damage to the teeth, jaw discomfort, fatigue or pain, or temporal headaches on wakening.^[6] It is advised to utilize comprehensive polysomnography with masticatory muscle electromyography to score and quantify the repeated movements when associated with sleep-breathing disorders.^[7]

Access this article online	
Quick Response Code	https://doi.org/10.47070/ijapr.v11i6.2843
	Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial- ShareAlike 4.0 International (CC BY-NC-SA 4.0)

There is still much to learn about the pathophysiology and etiology of SB (Sleep Bruxism), which is not based on a single explanatory mechanism. There are two main types of bruxism: one occurs during sleep (nocturnal bruxism) and one during wakefulness (awake bruxism). Dental damage may be similar in both types, but the symptoms of sleep bruxism tend to be worse on waking and improve during the course of the day, and the symptoms of awake bruxism may not be present at all on waking, and then worsen over the day. The causes of bruxism are not completely understood but probably involve multiple factors^[8]. Recently it is derived that disturbances in the central neurotransmitter system may be involved in the etiology of bruxism.^{[9][10]}

Awake bruxism is more common in women, whereas men and women are affected in equal proportions by sleep bruxism.^[11] Awake bruxism is thought to have different causes from sleep bruxism. Several treatments are in use, although there is little evidence of robust efficacy for any particular treatment.^[12] In Ayurveda, there is no exact reference for bruxism. But it has been said as a symptom of different diseases. Bruxism (*Danta sabda*) is seen in a child who takes a non-unctuous diet the vitiated *Vayu*

moves the *Siraas* of the *Hanu* or the mandible and so, that child bites the teeth during sleep and thus makes noise.^[13] Such a condition is called bruxism. The other causes of bruxism include minor psychic disturbances and worm infestation.^[14]

Patient Information

A 69-year-old man came to the institute's OPD complaining that he had been grinding his teeth and making sounds while sleeping for the last 15 years. He is a k/c/o Diabetes mellitus for eight years and on regular Allopathy medicine. For the current problem, the patient had not received any treatment as the severity was less. He started grinding his teeth while sleeping 15 years ago. The noise caused his wife's sleep to be disturbed as well. So she constantly gave him the blame. They noted that the patient's tendency to grind his teeth worsened whenever he became upset or overworked. He spent 12 years working abroad. His younger son was a psychiatric patient, and He was also under stress because of the problems his son created. Now the tendency to grind teeth has increased for the last 1 year and caused sleep disturbances to the wife. So they came to the OPD of VPSV Ayurveda College Hospital for further management.

Table 1: Mental Status Examination

General Appearance	Lean, well dressed
Psychomotor behavior	Intact
Attitude towards Examiner Co-operative	Co-operative
Mood	Euthymic
Affect	Euthymic
Speech	Normal
Thought	Form/process - continuous, Goal oriented
Insight	Grade 6
Judgment	Intact

Pulse rate- 74/min and regular

Blood Pressure- 120/70 mmHg

Temperature- 97.6°F

Respiratory rate- 16/min.

BMI- 19.4 with a height of 180cm and a weight of 70kg.

Respiratory system- Normal vesicular breathing, no added sounds. No abnormality was detected.

Cardio vascular system- No murmurs, S1 and S2 clearly heard.

Integumentary system- No abnormalities were detected.

Digestive system was found to be unaffected.

Nervous system - Alert and aroused, oriented to time, place, and person.

Prakrti of the patient was *Kapha vata*. *Dosha's* vitiation was *Vata dosha*. *Satwa* (psyche), *Sara* (excellence of tissues), *Samhanana* (compactness of organs), *Aharasakthi* (digestive power), *Vyayamasakthi*

(capacity of exercise), *Satmya* (suitability), and *Pramana* (body proportion) of the patient were of *Madhyama* level.

Diagnostic Assessment

ICD 11 - 7A83 Sleep-related bruxism under sleep-related movement disorders^[15]

Diagnostic criteria as per ICD 11

Sleep-related bruxism is characterized by repetitive, rhythmic jaw muscle contractions that occur during sleep. These contractions can take the form of repetitive phasic muscle contractions or isolated sustained jaw clenching (tonic contractions). These contractions during sleep produce tooth-grinding sounds. The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational, or other important areas of functioning (e.g., due to frequent disruptions in sleep) or significant damage to the teeth. ^[15]

Table 2: Therapeutic interventions

Medicine	Dose	Anupana	Oushada kala	Duration
<i>Aswagandha Churna (Withania somnifera (L.))</i> (3gm) ^[16] <i>Jatamansi churna (Nardostachys Jatamansi)</i> (2gm) ^[17] <i>Aparajita churna (Clitoria ternatea L.)</i> (2gm) ^[18]	6 gm (3+2+2)	Warm water	2 times a day after food	3 weeks
<i>Mahapaishacika ghrta</i> ^[19]	10 ml		Night after food	3 weeks
Hypnotherapy ^[20]				
Steps			Duration	
Deep breathing techniques	4 sittings every 3 days (Heterohypnosis). Given in recorded form		40 minutes every day for 1 month	
Progressive muscular relaxation				
Induction				
Giving positive suggestions and emerging out				

Assessments Scale

Perceived Stress Scale (PSS) – 20 (Moderate stress) on admission

RESULTS

- After three week of therapy and internal medications, PSS (Perceived Stress Scale) score reduced from 20 to 11.
- There was a complete cure for sleep bruxism after 3 weeks of treatment and after two weeks of follow-up. He was able to cope with the stressful situations.

DISCUSSION**Discussion on Management**

Bruxism can be caused by biological, psychological, and external variables. Numerous studies have examined the relationship between bruxism, stress, and psychoemotional problems.^[21] There are many scientific reports indicating a connection between sleep bruxism and stress^[22] and also proved its association with the quality of sleep.^[23] Although there isn't a direct association between sleep bruxism and Ayurveda, it can be interpreted as a *Vata dosha lakshana* on the basis of *Dosha* evaluation since, as *Dantakhadi* noted in *Vata prakriti lakshana*, *Chinta soka* all are a contributory factor for *Vata kopa*. Here the patient had been given a combination of *Aswagandha churna*, *Jatamansi churna*, and *Aparajita churna*, to reduce stress *Aswagandha (Withania somnifera)* root and leaf extracts proven for their anti-stress and anti-anxiety activity in animal and human studies. *Withania somnifera* may alleviate these conditions predominantly through modulation of the hypothalamic-pituitary-adrenal and sympathetic-adrenal medullary axes, as well as through GABAergic and serotonergic pathways.^[24] *Jatamansi* ^[25] (*Nardostachys jatamansi* DC) is having a good tranquilizing activity so as to improve the quality of sleep.

Aparajitha churna (Clitoria ternatea Linn) is a medicine that is classified under the four *Medhya Rasayana* by *Acharya Charaka*.^[26] It is proven that the significant antioxidant effect of scavenging the free radicals of stressed-induced conditions may be due to the presence of flavonoids, alkaloids, and glycosides ^[27]. *Mahapaishacika ghrta* promotes *Buddhi*, *Medha*, *Smrti*. It contains drugs that have the properties of *Medhya*, *Balya*, and *Anulomana*.^[28] The drugs containing it mainly is having *Vatapittahara* quality. Most of the drugs are *Katu Rasa* (pungent), and *Ushna Virya* (hot in potency), and at the cell membrane the lipid-soluble drugs reach into the brain^[29] and also it is having a tranquilizing properties as it is having *Jatamansi* to help patients with poor sleep quality.

Table 3: Ayurveda Pharmacology

	<i>Aswagandha</i>	<i>Jatamansi</i>	<i>Aparajita</i>
Rasa	<i>Tikta, Kashaya</i>	<i>Tikta, Kashaya</i>	<i>Katu, Tikta, Kashaya</i>
Guna	<i>Guru</i>	<i>Laghu, Ruksha, Theeksha</i>	<i>Snigdha</i>
Veerya	<i>Ushna</i>	<i>Seeta</i>	<i>Seeta</i>
Vipaaka	<i>Madhura</i>	<i>Katu</i>	<i>Katu</i>
Karma	<i>Rasayana, Vatakaphahara, Vajeekarana</i>	<i>Nidrajanana, Medhya</i>	<i>Kantya, Kaphahara, Pittahara, Medhya, Vishahara,</i>

Discussion on Hypnotherapy

There are often several stages to a hypnotherapy session.^[30] The stage of preparation comes first. This could last for a while and involve building rapport between the hypnotist and subject, outlining what hypnosis is and is not, allaying any fears, and clearing up any misconceptions on the subject's part, among other things, depending on the goal of the hypnotic session and whether it is the subject's first experience with hypnosis.

The second stage is the relaxation technique. Many relaxation techniques have been described but the most commonly employed typically involve a series of instructions and suggestions by the hypnotist that encourages the subject to narrow their focus of attention on just one stimulus, image, or idea, and to become increasingly relaxed. Later stages of the induction are known as 'deepening procedures, where the patient is made to relax by counting from ten to one deepening procedures usually have an internal focus of attention, and as a result of a successful induction the subject enters an altered state of consciousness or trance.

The third phase of the session is when the hypnotist gives the subject directives and recommendations that are specifically related to the goal of the hypnosis session. Verbal communication by the hypnotist instructs the subject's imagination in order to elicit desired changes in feelings, perceptions, thoughts, and conduct. The subject or patient is thought to be especially open to these ideas or therapeutic methods while under the influence of hypnosis.

The fourth stage happens as the hypnosis session comes to an end and the subject is awakened from the trance. One frequent technique is for the hypnotist to count down from one to three while implying that the subject is growing more alert and energized so that when the subject opens their eyes at the count of one, they are fully alert and oriented once more.^[30]

CONCLUSION

Stress is one of the causes of sleep bruxism. So addressing stress is an important factor along with the management of it. Hypnotherapy along with Ayurvedic management can be used in conditions dominating stress. It helped to reduce stress and improve the quality of sleep. These techniques and methods may result in better management for the treatment of Sleep bruxism, however conceptual and clinical research has to be done to explore this area.

Acknowledgment

I would like to express my deepest appreciation to all those who provided me with the possibility to complete this case report.

REFERENCES

1. K.R Srikantha Murthy (Translator), Ashtanga hridaya, Vol 1 Sutra sthana, Annaraksha adhyaya, Chapter 7, Verse 52. Varanasi: Chowkamba krishnadas academy 2010; P119
2. Trikamji Yadavaji, Caraka Samhita, (chakrapannidata) Varanasi, Caukhamba Surbharati Prakashana, 1992, Ch-11/35.
3. Lobbezoo F, Ahlberg J, Glaros AG, et al. Bruxism defined and graded: an international consensus. J Oral Rehabil 2013; 40: 2-4.
4. Carra MC, Huynh N, Lavigne G. Sleep bruxism: a comprehensive overview for the dental clinician interested in sleep medicine. Dent Clin North Am 2012; 56: 387-413.
5. Lobbezoo F, Ahlberg J, Glaros AG, et al. Bruxism defined and graded: an international consensus. J Oral Rehabil 2013; 40: 2-4.
6. World Health Organization. (2022). ICD-10: International classification of diseases (10th revision) 2007.
7. Lavigne GJ, Khoury S, Abe S, Yamaguchi T, Raphael K. Bruxism physiology and pathology: an overview for clinicians. Journal of oral rehabilitation. 2008 Jul; 35(7): 476-94.
8. Shetty S, Pitti V, Satish Babu CL, Surendra Kumar GP, Deepthi BC (September 2010). "Bruxism: a literature review". Journal of Indian Prosthodontic Society. 10 (3): 141-8.
9. Lobbezoo F, Lavigne GJ, Tanguay R, Montplaiier JY. The effect of the catecholamine precursor l-dopa on sleep bruxism: a controlled clinical trial. Mov Disord. 1997; 12: 73. doi: 10.1002/mds.870120113.
10. Lobbezoo F, Soucy JP, Montplaster JY, Lavigne GJ. Striatal D2 receptor binding in sleep bruxism: a controlled study with iodine-123-iodobenzamide, single photon emission computed tomography. J Dent Res. 1996; 75: 1804. doi: 10.1177/00220345960750101401.
11. Cawson RA, Odell EW, Porter S (2002). Cawson's essentials of oral pathology and oral medicine (7th ed.). Edinburgh: Churchill Livingstone. pp. 6, 566, 364, 366
12. Lobbezoo F, van der Zaag J, van Selms MK, Hamburger HL, Naeije M (July 2008). "Principles for the management of bruxism". Journal of Oral Rehabilitation. 35 (7): 509-23.
13. Kumar G, Khajuria D, Raskar SC, Meti R. AN Ayurvedic Approach Towards Dentition and Dental Care: Critical Review.

14. Kumar G, Khajuria D, Raskar SC, Meti R. AN Ayurvedic Approach Towards Dentition and Dental Care: Critical Review.
15. World Health Organization. (2022). ICD-11: International classification of diseases (11th revision).
16. Kaur P, Mathur S, Sharma M, Tiwari M, Srivastava KK, Chandra R. A biologically active constituent of *Withania somnifera* (ashwagandha) with antistress activity. *Indian Journal of Clinical Biochemistry*. 2001 Jul; 16(2): 195-8 13.
17. Rucker G, Tautges J, Sieck A, Wenzl H, Graf E. Isolation and pharmacodynamic activity of the sesquiterpene valeranone from *Nardostachys jatamansi* DC. *Arzneimittelforschung*. 1978. 28 (1) 7-13
18. Jain NN, Ohal CC, Shroff SK, Bhutada RH, Somani RS, Kasture VS, Kasture SB. *Clitoria ternatea* and the CNS. *Pharmacology Biochemistry and Behavior*. 2003 Jun 1; 75(3): 529-36.
19. K.R Srikantha Murthy (Translator), *Ashtanga hridaya*, Vol 3 Uttara sthana, Unmada chikitsa adhyaya, Chapter 6, Verse 34b-38a. Varanasi: Chowkamba krishnadas academy 2010; P62
20. Heap M. EBOOK: *Hypnotherapy: A Handbook*. McGraw-Hill Education (UK); 2012 Jul
21. Smardz J, Martynowicz H, Wojakowska A, Michalek-Zrabkowska M, Mazur G, Wieckiewicz M. Correlation between sleep bruxism, stress, and depression—a polysomnographic study. *Journal of clinical medicine*. 2019 Aug 29; 8(9): 1344.
22. Winocur, E.; Uziel, N.; Lisha, T.; Goldsmith, C.; Eli, I. Self-reported bruxism—Associations with perceived stress, motivation for control, dental anxiety and gagging. *J. Oral Rehabil*. 2011, 38, 3–11
23. Ohlmann B, Bömicke W, Habibi Y, Rammelsberg P, Schmitter M. Are there associations between sleep bruxism, chronic stress, and sleep quality?. *Journal of Dentistry*. 2018 Jul 1; 74: 101-6.
24. Speers AB, Cabey KA, Soumyanath A, Wright KM. Effects of *withania somnifera* (ashwagandha) on stress and the stress-related neuropsychiatric disorders anxiety, depression, and insomnia. *Current Neuropharmacology*. 2021 Sep 9; 19(9): 1468.
25. Rucker G, Tautges J, Sieck A, Wenzl H, Graf E. Isolation and pharmacodynamic activity of the sesquiterpene valeranone from *Nardostachys jatamansi* DC. *Arzneimittelforschung*. 1978. 28 (1) 7-13
26. Ram karan sharma, Vaidya Bhagavan dash, (Translator) (1st ed.). *Caraka Samhita, Chikitsa sthana*. Vol 3. 1st Pada. Chapter 3. Varanasi: Chowkhambha Sanskrit series office. 2007, 30-31
27. Yuvraj KB, Saraswathi P, Vijayraghavan R, Karthik MG, Priya VV. Effect of *Convolvulus Pluricaulis* aqueous extract on behavioral changes and antioxidants in stress-induced rats. *International of Journal of Pharmaceutical Sciences*. 2018; 9(2): 353-57
28. K.R Srikantha Murthy (Translator), *Ashtanga hridaya*, Vol 3 Uttara sthana, Unmada chikitsa adhyaya, Chapter 6, Verse 34b-38a. Varanasi: Chowkamba krishnadas academy 2010; P62
29. Dr. Umakant N. Rabb. *Drugs and their pharmacological actions of Mahapaishachika ghrita- a formulation review*. 2021 September Edition |www.jbino.com | Innovative Association
30. Heap M. EBOOK: *Hypnotherapy: A Handbook*. McGraw-Hill Education (UK); 2012 Jul 16.

Cite this article as:

Anjumol M, Satheesh K, Jithesh. M. Effect of an Ayurvedic Compound and Hypnotherapy on Sleep Bruxism: A Case Report. *International Journal of Ayurveda and Pharma Research*. 2023;11(6):82-86.

<https://doi.org/10.47070/ijapr.v11i6.2843>

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**

Dr. Anjumol M

PG Scholar,
Manovigyana Evam Manasaroga,
Department of Kayachikitsa,
VPSV Ayurveda College,
Kottakkal

Email:

dranjumohan159@gmail.com

Mobile: 9745814486

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.