



Case Study

EFFECT OF SHIRODHARA ON ISOLATED SLEEP PARALYSIS- A CASE STUDY

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ABSTRACT

Isolated sleep paralysis (disturbed sleep) is a condition in which a person is in a state of consciousness but is not able to move or speak in the bed even if he wants to. It is a dreadful condition for a person, in which he or she even fears to fall asleep. It can occur with or without being a part of a sleeping disorder named narcolepsy. According to Ayurveda conditions of isolated sleep paralysis occurring during rapid eye movements (REM) phase of sleep can be correlated to *Tandra* and *Manovaha Sroto Dushti* in a stressed individual (*Alpa Satva Purush*). *Ayurveda* has potential to treat sleep related disorders with the help of *Panchkarma* procedures namely *Shirodhara*. In modern medicine treatment of conditions like isolated sleep paralysis mainly depends on use of antidepressant and sedative medicines which has many side effects. In this case an effort has been made to treat a young male of 21 years with symptoms of helplessness or muscle atonia during initiation of his sleep hours with heaviness in chest, difficulty in respiration and choking sensation for past 2 years. Treatment given is *Shirodhara* for a period of 15 days with *Brahmi* oil and tablet *Sarpangdha* as an internal medicine. The result shows positive response by decreased frequency of attacks, time duration and other symptoms along with improvement in quality of life.

KEYWORDS: Sleep paralysis, Ayurveda, *Shirodhara*, *Panchkarma*.

INTRODUCTION

Sleep is a physiological process by which bodily functions are given rest. There is partial or complete suspension of consciousness and reduced activity of bodily functions. Factors favourable for sleep induction are dark room, relaxed body musculature, comfortable warm surroundings and silence while anxiety and emotional stimuli make sleep more difficult.^[1] There are 2 phases of sleep; Rapid eye movement (REM) and non rapid eye movement (NREM). NREM is the condition of deep sleep during which body vitals like heart rate, blood pressure, respiratory rate are decreased. There is release of hormones which help in restoration of metabolism. REM is a phase present during hours of initiation of sleep. During this phase, brain of a person is highly active involved in activities like dreaming, snoring, increased eye movements with decrease in muscle tonicity. It constitutes 20% of total sleep cycle.^[2] Decreased duration of REM on disturbance in sleep of a person repeatedly during REM produces symptoms like tiredness, irritability and impaired judgment. In a study it has been observed that a person deprived of REM phase of sleep loses weight also. Isolated sleep paralysis is a sleep disorder during REM phase of sleep cycle in

which a person is not able to move or speak during initial phases of his sleep despite of being fully aware of his surroundings. It is a state of powerlessness or muscle atonia accompanied by sense of heaviness in chest, difficulty in respiration and choking sensation.^[3] Sleep paralysis is a part of classical tetrad of a sleep disorder narcolepsy (a REM sleep disorder). It involves excessive daytime sleepiness, sleep paralysis, cataplexy (a state of muscle atonia) and hallucinations during REM phase of sleep cycle.^[4] Isolated sleep paralysis is a condition occurring without symptoms of classical tetrad of narcolepsy. It mainly affects males in their second decade. Duration of attacks range from few seconds to upto a time period of several minutes. Risk factors for isolated sleep paralysis include stress or anxiety, irregular lifestyle, wrong dietary habits and diseased state in a person.

Sleep occurs in a person when a person's mind is exhausted, sensory and motor organs are tired and stimuli's are removed to induce sleep in a person.^[5] In Ayurveda which is a holistic science, disorders of REM phase of sleep can be correlated with concept of *Tandra* and *Manovaha Sroto Dushti*. So isolated sleep paralysis which is considered as a

subpart of narcolepsy can also be correlated with *Tandra*.^[6] *Tandra* is a state of drowsiness preceding sleep with features like non perception of senses, heaviness in body, yawning, mental exhaustion, feeling of tiredness without any physical work and difficulty in respiration. It is *Vata Dosha* dominant state along with *Kapha* and *Tamo Guna* in body.^[7] It can be correlated with REM phase of sleep.

Manovaha Sroto Dushti occurs in an *Alpa Satva Purush* due to intake of certain etiological factors like incompatible diet, wrong actions which effect mind by emotions like anger, grief, fear and chronic diseases depleting the body over long term. As a result mind do not perceive objects correctly and is not able to ascertain advantages and disadvantages of any object leading to an imbalanced intellect. As a result a person does not speak or act intelligently. A state of confusion persist.^[8]

Case Report

Chief Complaint

A patient named Santosh, 21 years old male, unmarried, a student by profession, came to

Personal History

Appetite	Normal	Blood pressure	150/90mm Hg
Bowel	Regular	Pulse	74/minute
Bladder	Regular	Respiration rate	24/minute
Addiction	Absent	Temperature	Afebrile

Assessment and Treatment

Assessment criteria and observations of the patient are as following.

1) Frequency of Attacks	Grade
Once in a month	1
Once in fortnight	2
1-2 times per week	3
Daily	4
2) Time Duration of Attack	
5-10 seconds per attack	1
20-25 seconds per attack	2
Upto 1 minute per attack	3
Extending upto several minutes	4
3) Anxiety	
No	0
Occasional	1
Once in a while	2
Daily	3
4) Choking Sensation	
No	0
Mild	1

Kayachikitsa OPD, Tibbia College, Delhi on February 2018 with chief complaint of being unable to move his body parts often after 10 minutes of initiation of his sleep since last 2 years. Duration of attack is around 5-10 seconds. He further states time duration of this state increases upto 20-25 seconds if he does not make an effort to move or speak. Frequency of attacks is 2-3 times per week. Patient blood pressure was noticed significantly high during his visit to our OPD. He was admitted in *Kayachikitsa* ward for further management.

History of Illness

Patient was asymptomatic 2years ago. He was diagnosed with high B.P (blood pressure) accidentally during a routine medical checkup at a nearby health camp. Medication was taken for high B.P for 1 week, after that medication was discontinued. No regular B.P monitoring was taken care by the patient. No significant family history of any such similar complaints was described by patient. Personal history of patient was normal with only raised blood pressure 150/90mm hg.

Moderate	2
Severe	3
5) Heaviness in Chest	
No 0	0
Mild	1
Moderate	2
Severe 3	3

Treatment Plan

Procedure	Shirodhara
Drug used	Til tail with Brahmi oil (Shirodhara) Tab Sarpagandha 1tab twice in a day
Time	30 minutes daily in the morning
Duration	15 days

RESULT

Result of the treatment were analysed after 15 days of treatment.

S.No.	Symptoms	B.T	A.T
1.	Frequency of attacks	3	1
2	Duration of attacks	2	1
3	Anxiety	2	1
4	Choking sensation	2	0
5	Heaviness in chest	2	0
	Total score	11	3

DISCUSSION

Shirodhara is a *Panchkarma* procedure in which a continuous stream of liquid is poured on forehead of patient from a specified height for a specified time period. Patient is asked to concentrate on his breath.^[9] In *Shirodhara* when a medicated oil is poured over certain height, the down pouring liquid gain momentum and proportionately nerve impulses are generated and conducted throughout the brain. With certain pressure, vibrations are generated in brain cortex which helps in stimulation and progression of nerve impulses. Specified temperature play role of a vector, helping in enhancement of speed of the whole procedure, thus enhancing activity of the medicine used.^[10] *Shirodhara* help in regulating disbalance in release of various neurotransmitters in brain. *Shirodhara* also helps in neuro muscular relaxation of brain to relieve stress, anxiety, fatigue, increased blood pressure and mental disorders.

Stress is any change in environment which alters the steady state of body. It leads to disbalance in rate of neurotransmitter and hormones secretions in body like glucocorticoids, catecholamines and acetylcholine. *Alpa Satva Purush* are more prone to stress and anxiety due to slight change in their

environment or any other unpleasant experience. This causes *Manovaha Sroto Dushti* in a person with vitiated *Vata Dosha* in body and mind. This disbalance *Vata Dosha* causes a number of symptoms in a person. One of them is disturbed sleep. Disturbed sleep during REM phase of sleep cycle is responsible for development of isolated sleep paralysis due to disbalance in rate of release of various neurotransmitters in brain. This disbalance can be easily regulated by process of *Shirodhara* in a person as seen in this case.

CONCLUSION

This case has encouraging results, in which frequency of attacks and time duration has markedly reduced in the patient. From this study, it can be stated that Ayurveda has promising results in mind related disorders and illness. Further trials are needed to establish standard management of sleep disorders.

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