

**“A CASE STUDY TO EVALUATE THE PHYSIOLOGICAL EFFECT OF
JYOTISHMATI SIDHHA GOGHRIT PRATIMARSH NASYA ON
SMRITI(MEMORY) ENHANCEMENT”**

Dr. Randhir Vishwakarma^{*1}, Dr. Shubha Kaushal² and Dr. Himanshi³

^{1,3}MD Scholar, Department of Kriya Sharir, Institute for Ayurved Studies and Research, Shri Krishna Ayush University, Kurukshetra.

²MD, Assistant Professor, Department of Kriya Sharir, Institute for Ayurved Studies and Research, Shri Krishna Ayush University, Kurukshetra.

Article Received on
13 Jan. 2025,

Revised on 02 Feb. 2025,
Accepted on 22 Feb. 2025

DOI: 10.20959/wjpr20255-35770



***Corresponding Author**
Dr. Randhir Vishwakarma
MD Scholar, Department of
Kriya Sharir, Institute for
Ayurved Studies and
Research, Shri Krishna
Ayush University,
Kurukshetra.

ABSTRACT

Ayurveda represents an ancient system of traditional medicine prevalent in India about 5000 years old. Medhya is an Ayurvedic concept that implies intellect. Budhi (intellectual power of brain) is a powerful entity which retains the specific knowledge or the essence of the texts gained by reading, listening or repeating it. Ayurveda focuses on Medhya drugs that motivate the nervous system & these stimulant drugs in turn release norepinephrine & dopamine in the brain & thus the transmission power gets activated. Unfortunately, modern medicine based psychoactive drugs have met with limited success in treatment of various neurological problems. Ayurvedic herbal medicines engender & summon intelligence, memory & mental perception. These drugs promote the Intellect (Dhi), Retention power (Dhriti), Memory (Smriti). Out of which Jyotishmati (*Celastrus panniculatus* Wild) plant is one of the cognition enhancers. This case discusses about the effect of Jyotishmati Ghrit on memory enhancement in Healthy individual

and also how the nasal route of drug administration is giving the better results in psychological aspects. At the end of 60 Days Improvement in memory was observed.

KEYWORDS: Smriti, Jyotishmati, Goghrut, Pratimarshya Nasya.

INTRODUCTION

“समदोषः समाग्निश्च समधातुमलक्रियःप्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते।” (Su.su.15)

Sushruta has defined health as "a state of equilibrium of Tridosha (fundamental physiological governing principles of the body, Agni (metabolic and digestive processes) and Dhātu (principles that uphold the formation of body tissues). Waste products are excreted well. The sense organs, mind and the soul are in a state of bliss.^[1] Ayurveda has its own identity as most ancient and Traditional System of Medicine in India. It deals with the whole life of human beings starting from birth till the end of life because Ayurveda describes the art of living as it is a science of life that reveals what is appropriate as well as auspicious for a happy and long life. The term Ayurveda is formed by the combination of two words- "Ayu" meaning life, and "Veda" meaning knowledge. Ayurveda is regarded as "The Science of Life" and the practices involve the complete care of physical, mental and spiritual health of human beings. Thus, Ayurveda is a qualitative, holistic science of health and longevity, a philosophy and system of healing the whole person-body and mind.

Smriti: –दृष्टश्रुतानुभूतानां स्मरणात् स्मृतिरुच्यते (Ch.Sh.1/149)

❖ **Smriti** plays an important role in perception of knowledge. It is the recalling capacity of the knowledge perceived and generated by brain from the past experiences. Smriti depends upon various factors like Prakriti, age, Ahara-vihara, repetition of events etc. The consideration of all the factors can provide better knowledge to improve smriti. If the person is not able to grasp or retain the events or experiences, it is known as **Smritivibhransha**.^[2]

Memory (Smriti): Modern science considers various components of memory which includes short term & long term- recalling, retention and recognition. Memory is the ability of an individual to record sensory stimuli, events, information, etc., retain them over short or long periods of time and recall the same at a later date when needed. Poor memory, lower retention and slow recall are common problems in today's stressful life. Age, wrong diet combinations, stress, emotions and other factors may lead to mild cognitive impairment to memory loss.

Jyotishmati: Jyotishmati by its ushna, Tikсна gunas, Usna Virya and Katu Vipaka increases pitta. Increased pitta stimulates sadhakagni which in turn stimulates Medha. Likewise due to its usna. Tikсна guna and Katu rasa it breaks the 'Avarana' of Kapha and Tama in abnormal state; due to which again functions of Buddhi, Medha and Smriti, are enhanced.^[3]

Modern aspect

- ❖ **Balances neurotransmitters level:** Jyotishmati acts on the acetylcholine level of the brain and improves cognitive function. It mainly balances the neurotransmitters like serotonin, epinephrine and dopamine to improve various aspects of cognitive functions of the brain.^[4]
- ❖ **Antioxidant and neuroprotective:** The antioxidants in Jyotishmati decrease the brain levels of malondialdehyde and reduces its negative impact on neurons, with simultaneous significant increase in levels of glutathione and catalase.^[5]

Ghrit

स्मृतिबुद्ध्यग्निशुक्रौजःकफमेदोविवर्धनम् । वातपित्तविषोन्मादशोषालक्ष्मीज्वरापहम् । (Ch.Su. 27).

As described by Acharya, charak ghrit has the property of increasing buddhi (intelligence), smriti (memory), Agni (digestive fire), virya, and oja. It also balances vitiated vata and pitta dosha.^[6]

सर्पिर्मज्जा वसा तैलं स्नेहेषु प्रवरं मतम् । तत्रापि चोत्तमं सर्पिः संस्कारस्यानुवर्तनात् । (Ah.Su.16)

Acharya vagbhatt explains four types of Sneha i.e. sarpi (ghrit), majja (bone marrow), vasa (fat), tel (oil) among them ghrit is sarvottam (Ultimate) since only ghrit has property of Sanskar anuvartan that is it can possess the property of any drug which has been processed with ghrit.^[7]

Nasya

ऊर्ध्वजत्रुविकारेषु विशेषान्नस्यमिष्यते । नासा हि शिरसो द्वारं तेन तद्व्याप्य हन्ति तान् । (Ah.Su.20)

Acharya Vagbhatt says Nasa is the door for Head (Shir) so the drugs which are to be given by nasal route will be going directly to the brain.^[8]

CASE STUDY

AIM AND OBJECTIVE

A case study to evaluate the physiological effect of jyotishmati sidhha goghrit pratimarsh nasya on smriti (memory) enhancement in single healthy individual.

Case History: A male healthy individual of age 29 years from Institute for Ayurved Studies and Research, SKAU Kurukshetra is taken into study to see the effect of Jyotishmati Goghrit Pratimarsh Nasya was reviewed. Pratimarsh nasya was given daily for 2 months. All the changes were Followed-up after 30 days and 60 days.

Family History: Nothing Particular

Personal History

Diet	Mixed
Appetite	Good
Sleep	Disturbed Sleep
Micturition	Normal
Bowel	Normal
Addiction	Nil

General Examination

Built	Thin
Nourishment	Moderate
Pallor	Absent
Cynosis	Absent
Clubbing	Absent
Edema	Absent
Tongue	Uncoated
Consciousness	Moderate
Pulse	78 bpm
Blood Pressure	130/80 mm of Hg
Temperature	98.5 F
Respiratory Rate	17/ min
Heart sound	S1 S2 clear
Per Abdomen	Soft And non-tender

Ashtavidha Pariksha

Nadi	Vata-Pittaj
Mutram	Prakruta, 6-7 times
Malam	Prakrut, once in a day
Jihva	Nirama
Shabdha	Spasta
Sparsha	Anushna-sheeta
Drik	Prakrut
Akriti	Krush

Dashvidha Pariksha

Prakriti	Pitta-Vataj
Vikriti	Dosha- Pitta Dushya- Rasa
Sara	Asthi sara
Samhanan	Madhyama
Pramana	Madhyama
Satmya	Madhyama
Satva	Madhyama
Ahar shakti	Abhyavaharan shakti- pravara Jarana Shakti- Pravara
Vyayama Shakti	Pravar
Vaya	Madhyama

Assesment Criteria: PGI memory scale grading.

Subset PR ↓ →	0-20	20-40	40-60	60-80	80-100
I.	1-4	5	6	-	-
II.	1-3	4	5	-	-
III.	1-6	7	8	9	-
IV.	1-8	9	10	11	12-15
V.	1-7	8	9	10	-
VI.	1-6	7-8	9	10	11-12
VII.	1-3	4	5	-	-
VIII.	1-9	10-11	12-13	14	15
IX.	1-7	8-9	10-11	12	13
X.	1-7	8	9	10	-
Total	75	76-81	82-86	87-91	92+
Grade	Very Low	Low	Good	Very Good	Excellent

INTERVENTION

Drug: Jyotishmati sidhha Goghrit

Dose: 2 drops in each nostril OD

Route of Administration: Nasal

Duration- 60 days

Procedure: Nasya Karma: Pradhana Karma: Subject was made to lie down in supine position. The head of the patient was lowered (Pravilambita). Patient is asked to close his eyes. The tip of patient's nose was drawn upward by the left thumb. At the same time with the right hand 2 drop of Jyotishmati sidhha ghrit in both nostrils were instilled alternately and asked the patient to inhale deeply.

Paschatkarma: Patient in lying position was asked to count up to 100 matra i.e. approximately 2 minutes. The patient was asked to expel out the drug which comes in oropharynx.

Duration	Intervention	Observation
After 30 days	Jyotishmati sidhha Goghrit Pratimarsh Nasya	Sleep cycle has improved.
After 60 days	Jyotishmati sidhha Goghrit Pratimarsh Nasya	No any upper respiratory issues. Concentration has improved.

Diet

- 1. Pathya:** Intake of leafy green vegetables, fruits, whole grains, berries, nuts, low fat dairy products, Drink luke warm water.

2. **Apathya:** Avoid heavy food, sweet, milk made products, curd cheese, red meat, fermented food, stale food.

OBSERVATION AND RESULT

PGI Memory Subsets	PGI Memory Score	
	Before intervention	After intervention
Remote Memory	5/6	6/6
Mental balance	4/5	5/5
Recent Memory	8/9	7/9
Attention and Concentration	6/15	9/15
Delayed Recall	8/10	10/10
Immediate Recall	11/12	10/12
Retention for Dissimilar parts	5/5	5/5
Retention for Similar parts	12/15	15/15
Visual retention	8/13	10/13
Recogniton	9/10	10/10
TOTAL	76/100	87/100
GRADE	LOW	VERY GOOD

DISCUSSION

The ancient scholars of Ayurveda have considered 'Nasa' as the passage to the head i.e. cranial organs. The drug given through the nose as Nasya, reaches the brain and eliminates only the morbid Doshas responsible for producing the diseases (Ch. Si. 2/22)^[9] Vagbhatta, further clarifying the mode of action of Nasya Karma mentions that the drug administered in the nose, reaches Murdha (Brain) through Shringataka Marma and eliminates the morbid Doshas quickly through the Shriomukhani (Veins) of eye, ear, throat etc.^[10] (As. S. Su. 29/2). Sushruta has clarified Shringataka Marma as a Sira Marma formed by the union of Siras (blood vessels) which supplies the nose, ear and tongue. Further, he has pointed out that injury to this Marma will be fatal immediately. (Su. Sha. 6/27).^[11] Commenting on Ashtanga Activate Windows Samgraha, Indu has said Shringataka as the inner side of the middle part of the head. (Shiraso Antarmadhyam).

The action of Nasya Karma can be understood in the following manner.

- (1) Through the lymphatic channels including C.S.F.
- (2) Through the neuro-vascular stimulation.

(1) Through the lymphatic channels including the C.S.F.: The lipid soluble substances can easily and rapidly be transported across the epithelial membrane e.g. Taila, Kshara, Ghrita, etc. These lipid soluble substances can also gain an access into the lymphoid tissue. Thus, a rapid circulation through the lymphatic channels denotes a positive phenomenon. On

the other hand, the extended arachnoid sheath from the brain to the submucosal area of the nose is the other path for the absorption of drugs directly through the nose.^[12]

(2) Through the neuro-vascular stimulation: Vascular path transportation is possible through the pooling of nasal venous blood to the facial vein, which naturally occurs. Just at the opposite entrance, the inferior ophthalmic veins also pool into the facial vein. Interestingly, both facial & ophthalmic veins have no valves in between. So that, blood may drain on either side, that is to say the blood from facial vein can enter cavernous venous sinus of the brain in reverse direction. Thus, such a pooling of blood from nasal veins to venous sinuses of the brain, is more likely in the head lowered position due to gravity. On these lines, the absorption of drug material into meninges & related parts of intracranial organs, is of worth considering point.^[13]

From these evidences it can be stated that the modus operandi of Nasya Karma has a definite impact on central neurovascular system & likely to decrease the blood brain barrier to enable certain drug absorption in the brain tissues.

REFERENCE

1. Tripathi Ravidatt Charak Samhita by Agnivesh Part 1. Varansi: Chaukhamba Subharati Prakashan; Reprint, 2015; Sharir sthan Chapter 1 verse 101.
2. Tripathi Ravidatt Charak Samhita by Agnivesh Part 1. Varansi: Chaukhamba Subharati Prakashan; Reprint, 2015; Sharir sthan Chapter 1 verse 101.
3. Srikumar BN, Raju TR, Shankaranarayana Rao BS. The involvement of cholinergic and noradrenergic systems in behavioral recovery following oxotremorine treatment to chronically stressed rats. *Neuroscience*, 2006; 143: 679–88. [PubMed] [Google Scholar].
4. Srikumar BN, Raju TR, Shankaranarayana Rao BS. The involvement of cholinergic and noradrenergic systems in behavioral recovery following oxotremorine treatment to chronically stressed rats. *Neuroscience*, 2006; 143: 679–88. [PubMed] [Google Scholar].
5. Tripathi Ravidatt Charak Samhita by Agnivesh Part 1. Varansi: Chaukhamba Subharati Prakashan; Reprint, 2015; Sutra sthan Chapter 27 verse 231.
6. Tripathi Ravidatt Ashtang Hridayam. Varansi: Chaukhamba Subharati Prakashan; Reprint, 2015; Sutrasthan Chapter 16 verse 2.
7. Tripathi Ravidatt Ashtang Hridayam. Varansi: Chaukhamba Subharati Prakashan; Reprint, 2015; Sutrasthan Chapter 20 verse 1.

8. Tripathi Ravidatt Charak Samhita by Agnivesh Part 2. Varansi: Chaukhamba Subharati Prakashan; Reprint. 2015; Sutra Sidhhi sthan Chapter 2 verse 22. Rajvaidya Pandit shri Nand.
9. Kishor sharma Chaukhamba Krishnadas academy Varanasi Ashtang Sangrah Sutrasthan chapter 29 verse 2.
10. Shastri Ambikadutt Sushrut Samhita Hindi vyakhyan vol1. Varansi: Chaukhamba Sanskrit Sansthan; Reprint, 2019; Sharir sthan Chapter 6 verse 27.
11. Medical physiology by Guyton & Hall 10th ed page no. 616 published by Harcourt publishers.
12. Medical physiology by Guyton & Hall 10th ed page no. 616 published by Harcourt publishers.
13. <https://www.medicalnewstoday.com/articles/255511> Google Scholar.