

EFFECT OF SHIRODHARA IN THE MANAGEMENT OF ESSENTIAL HYPERTENSION-A REVIEW ARTICLE

Dr. Vikash Gajraj^{*1}, Dr. Richa Parmar², Dr. Brahmanand Sharma³ and Dr. Pramod Kumar Mishra⁴

¹MD Scholar, PG Department of *Kayachikitsa*, University college of Ayurveda, DSRRAU, Jodhpur (Rajasthan).

²MD Scholar, PG Department of *Panchakarma*, University college of Ayurveda, DSRRAU, Jodhpur (Rajasthan).

³M.D. (*Kayachikitsa*), Ph.D. (*Ayu.*), Assistant Professor, PG Department of *Kayachikitsa*, University college of Ayurveda, DSRRAU, Jodhpur (Rajasthan).

⁴M.D. (*Kayachikitsa*), Ph.D. (*Ayu.*), PGD in Yoga, Associate Professor & HOD, PG Department of *Kayachikitsa* & PG Department of *Swasthavritta*, University college of Ayurveda, DSRRAU, Jodhpur (Rajasthan).

Article Received on
27 July 2020,

Revised on 17 August 2020,
Accepted on 09 Sept. 2020,

DOI: 10.20959/wjpr202011-18677

*Corresponding Author

Dr. Vikash Gajraj

MD Scholar, PG

Department of *Kayachikitsa*,

University college of

Ayurveda, DSRRAU,

Jodhpur (Rajasthan).

ABSTRACT

Hypertension is a major risk factor for the advancement of cardiovascular disease and cerebrovascular disease-causing high rate of mortality and morbidity. It mainly causes stroke and end stage renal failure. It is also liable for the improvement of coronary artery disease. It is asymptomatic in nature yet delivers dreadful effects on the body. And it is called 'Silent or Hidden killer'. Because of its high prevalence in the nation, India is known as Nation of Hypertension.^[1] In India overall prevalence have been discovered 29.8% (27.6% in rural part & 33.8% in urban parts).^[2] 40-45 million Indians are accepted to be suffering from the disease that is a key risk factor for coronary artery disease, diabetes and renal failure. In future, the

number is expected to rise to 54 million. Before the finish of 2025, approximately 1 in 3 adults aged over 20 year, 1.56 billion people, will have Hypertension. According to *Ayurveda* two type of *Chikitsopakramas*; *Shodhana* and *Shamana* as described by *Acharyas*. *Sodhana Upakramas* are done through *Panchakarma* procedures. One of the allied procedures of *Panchakarma* is the *Shirodhara*. *Shirodhara* is prescribed for the patients suffering from

mental disease, *Shiroroga* and various psychosomatic as well as metabolic disorders. As essential hypertension is a psychosomatic disease.

KEYWORDS: Essential Hypertension, *Shirodhara*. Stress, Insomnia.

INTRODUCTION

Ayurveda is formed of two words. *Ayu* and *Veda*. *Ayu* implies life and *Veda* implies knowledge of science. In this way, *Ayurveda* is totality means science of life. It consolidates all part of life whether physical, psychological, spiritual or social. Main objective of *Ayurveda* is to keep up the health of healthy person and to cure the diseases of ill person.

Health is a condition of balance of typical elements of *Doshas*, *Dhatus*, *Malas* and *Agni* with delighted body, mind and soul. This means that the wellbeing is sustained at the stage when *Dosha-Dhatus-Malas* and *Agni* are continually in a state of functional equilibrium, at the point the health is maintained. Otherwise, distortion of the equilibrium results into diseases.

With the entry of the person in 21th century, nearby modernization in each and each walk of life. He has also paid for it by living in many stressful psychological conditions. These anxieties certainly play role within the development, progression, prognosis still as management of some psychological and psychosomatic diseases. This stressful life style affects one's mind alongside homeostasis of body be several psychosomatic mechanisms and causes several psychosomatic disorders, including hypertension which is one in all such disease.

Essential Hypertension is known as the 'Silent or Hidden Killer'. It is a major medical issue, especially because it has no symptoms. Many people have hypertension without knowing it.

Essential hypertension is high blood pressure without a clear cause of disease, in which underlying renal or adrenal causes is not present. It is a psychosomatic hereditary disease and occurs as a result of aging. Out of total hypertensive patients, 95% patients are having essential hypertension. It is detected on routine medical check-up or when patients suffer from its dangerous complications like stroke, myocardial infarction, angina etc.

Hypertension increase the risk of cardiovascular disorders, including coronary heart diseases (CHD), ischemic and haemorrhagic stroke, congestive heart failure (CHF), peripheral arterial diseases and renal failure. Along these lines, hypertension is gaining more and more attention

globally. Indian Council of Medical Research (ICMR) & All India Institute of Medical Science (AIIMS) study pronounced that 'India as nation of hypertension'.

The prevalence of hypertension ranges from 20-40% in urban grown persons and 12-17% among rural grown persons. The number of people with hypertension is anticipated to increment from 118 million in 2000 to 214 million in 2025, with approximately equal of men and women.^[3] Recent reports show that almost 1 billion adults (More than a quarter of the world's population) had hypertension in 2000, and this is anticipated to increase to 1.56 billion by 2025⁴. According to Directorate General of Health Services, Ministry of Health and Family Welfare, Gov. of India, the general prevalence of hypertension by 2020 will be 159.46/1000 population.^[5] As the reference of annual report of WHO, 2004 India is declared four time high prevalent in all age group in as compared to other developed countries.^[6]

8th JNC & WHO criteria for Diagnosis Hypertension.^[7]

Category of HTN	Systolic BP (mmHg)	Diastolic BP (mmHg)
Normal	<120	And <80
Pre-Hypertension	120-139	Or 80-90
Stage 1 Hypertension	140-159	Or 90-99
Stage 2 Hypertension	≥160	Or ≥100
Isolated Systolic Hypertension	≥140	And <90

This is the classification of blood pressure for adults aged 18 years and older not taking antihypertensive medication and not intensely ill. At the point when systolic and diastolic pressure fall into various classification, the higher category should be chosen to classify the individuals blood pressure status. When one of the components of BP either systolic or diastolic is raised and other is normal, then it is named as isolated systolic or isolated diastolic hypertension.

Essential Hypertension is the recent diagnostic invention of modern science. Hence in *Ayurvedic* classics, no specific term is found for Essential hypertension.

Different scholars adopted different views. But all agrees with the opinion that in hypertension, main pathogenesis in *Rakta Dhatu* (flowing through) and blood vessels. Essential hypertension is a *Tridoshaj Vyadhi* having predominance of *Vata Dosha*. It is also a psychosomatic disorder as affected greatly by morbid state of *Mana*. Different factors like *Dosha*, *Dushya*, *Agni*, *Strotasa* are also involved in its pathogenesis.

SHIRODHARA

Shirodhara or *Shiro Dhara* is made by two words, *Shiro* meaning head, *Dhara* sense pouring in stream or sprinkling. Hence, *Shirodhara* means pouring the liquid medicines in to stream over the patient's (or healthy person's) head for a particular period of time.

In *Ayurveda* *Shirodhara* is a reminiscent technique for the *Murdhni Taila* class (Various methods of applying oil over the head). It is kind of *Bahya Snehana*. It can also be specifically acquired as treatment option for many *Vata* related disorders and disorders affecting the head & sense organs and for control and prevention of many psychosomatic disorders.

Shirodhara treatment is advised for prevention of numerous Psychosomatic disorders. Prevention of diseases pertaining to body, mind and sense organs is the primary sign.

Based on the Prakriti of the patient and dominance of the *Dosha* in that particular disease; *Dravya* can be selected as follows:

<i>Vata Dosha</i>	-	<i>Tila Taila, Vataghana Liquid</i>
<i>Pitta Dosha</i>	-	<i>Kshira, Ghrita, Cold Water</i>
<i>Kapha Dosha</i>	-	<i>Takra</i>
<i>Rakta Dosha</i>	-	<i>Ghrita with cold water</i>

Probable Mode of Action of *Shirodhara*

The *Shirodhara* therapy is extensively used for the alleviation of many ailments, especially in psychic ailments but used in some of the somatic ailments too.

The *Shirodhara* is effective in following two ways

1. Therapeutic effect of medicaments
2. Procedural effect of the process

The therapeutic impact is partially attributed to the medicaments viz. the medicated oil, *Ghrita*, Butter milk, *Kwath* etc. which exchange through the fine pores present over the scalp and forehead. As it is said that the effect and potencies of articles of *Abhyanga*, *Snana*, *Udvartana* etc. the form of anointing, pouring liquids on the body and applications of pastes, get cooked (processed by heat) in the skin, enter into the interior of the body.^[8]

In *Shirodhara*, patients feel unwinding both- Physically just as Mentally. Relaxation of the frontalis muscles tends to normalized the entire body and accomplish a reduction in action of sympathetic nervous system with bringing down of heart rate, respiration, oxygen consumption, blood pressure, the brain cortisone and adrenaline level, muscles tension and probably a rise in a α -brain waves. It strengthens the psyche and soul and this continues even after the relaxation.

As indicated by *Ayurveda*, the forehead and head are territories of many vital spots- *Marma* which have got very significant spot in the body. Now and again, even slight stimulation of such *Marma* may have beneficial effect on the body, due to their connection with higher centres. *Shirodhara* makes the patient to concentrate on this area, by which the stability arrives in the mind function and this leads to locate the Mana in '*Nirindriya Pradesha*' and patient may get sleep. In this way, *Shirodhara* can be considered as an adjunct aid among the method of relaxation through its procedural effect as well as its medicinal attributes.

Shirodhara as it comes under *Bahya Snehana*, which produce consistency, softness, solubility and *Kleda* in the body. Nonstop pouring of oil on fore-head for a particular period has sedative impact and induces sleep. According modern science, local application as ointment may go through the stratum corneum into blood vessel and delivering desirable impact by arriving the target organ. The continues pouring of oil in relaxed and comfortable position has an additional impact which can be comparing to cradling of mother to a child. This function acts as sedative soothing effect for the brain and produces sleep. Oil poured on fore head may be absorbed; creating tranquilizing impact by arriving at the brain cortex.

Shirodhara starts its action from tactical stimulation of the skin innervated by 1st branch of trigeminal nerve (Ophthalmic branch). These impulses may be transmitted to the thalamus through the principle nucleus and forwarded to cerebral cortex. The impulses from the forehead causes a somatic-autonomic reflex and changes in level of different neurotransmitters including serotonin, TRH, Catecholamine resulting in sympathetic suppression and physio immunologic changes of peripheral circulation and NK cell activity. *Shirodhara* is done on forehead region so it affects the CNS.^[9]

Shirodhara stimulates *Marmas* (*Shankha*, *Utkshepa*, *Adhipati*, *Shringataka*) and improves circulation which in turn improve circulation of brain. *Shirodhara* additionally improves circulation to hypothalamus and thereby improves functions of Autonomic Nervous System.

According to the philosophy of *Yoga*, it is presumed that there are 10 main *Chetana Kendra* (Site of consciousness) or *Nadichakras* situated at various sites in our body. These *Nadichakras* are connected to each other and work in collaboration of each other. Two *Chakras* viz- the *Agya Chakra* (situated between eyebrow) and the *Bhramaraguha Chakra* (situated at upper part of forehead) are supposed to be stimulated by *Shirodhara* which in turn produce their desired effect.

Effecting on autonomic nervous system- *Shirodhara* may block certain actions of adrenaline and nor-adrenaline by Alpha adrenergic blocking effect. It may also act on adrenergic neuron most probably by modifying the synthesis storage and uptake mechanism of noradrenaline.

Effect on endocrine system- Mainly hypothalamus controls endocrine secretions. Hormone secretory effects of *Shirodhara* can be postulated by its effect on the hypothalamus which controls various mid-brain nuclei responsive to stress and emotional disturbance.

CONCLUSION

Shirodhara is a form of stress control and of preventing many mental disorders. It is the constant flux of medicated liquid through the head. the medicated liquid in to stream over the patient's (or healthy person's) forehead. The medicated liquid will warm comfortably, and the process will continue for 45 minutes. The person experiences unexplainable relaxation helping one to resolve stress related condition such as hypertension, anxiety, insomnia and headache, giving full rest to mind. *Shirodhara* provides many benefits to the brain including increase blood circulation, providing hair and scalp nourishment, reducing nervous stress and assisting in sound sleep. It improves the functioning of sensory organs and central nervous system, improves your mood as well as fight depression.

Finally, it can be concluded that *Shirodhara* may simply be a particular way of adjusting the excitability in dysfunctional circuits of the brain so to create the individual to perform normally. Thus, it's effective in the management of hypertension

REFERENCES

1. A *Bhansali et. al.* Prevalence and risk factor for HTN in urban and rural India: The ICMR- INDIA study, journal of human hypertension, 2015; 29: 204-209.
<http://dx.doi.org/10.1038/jhh2014.57>

2. *Raghupathy Anchala, Nanda Kumari, Hira Pant et.al.* Hypertension in India: a systemic review & metanalysis of prevalence, awareness & control of hypertension, journal of hypertension, 2014; 32(6): 1170-1171.
<http://dx.doi.org/10.1097/HJH.0000000000000146>
3. Reddy KS Regional case studies- India Nestle Nutr. Workshop ser pediater program, 2009; 69: 15-24. discussion 41-16,259-268.
4. World health statistics 2016, Monitoring for the SDGs (sustainable development goal), 60.
5. Bansal SK, Saxena V, Kandpal SD, et.al. the prevention of hypertension and risk factors for hypertension in a rural Indian community: Prospective door to door study. J Cardiovasc Dis Res., 2012; 3: 117-123.
6. WHO, Annual Report, Technical Report Series, 2004; 854.
7. Harrison's Principles of Internal Medicine, 19th Edition, 1616.
8. *Su. Sha.9/9*, Translated by Prof. *K.R. Murthy*.
9. Stress Management through *Shirodhara* By Leslie Flynn.