



Review Article

AN EVIDENCE-BASED REVIEW ON SHIRODHARA: A UNIQUE PANCHAKARMA THERAPY

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ABSTRACT

Shirodhara is a procedure consisting of continuous pouring of a stream of medicated oil, milk, buttermilk, etc. on the forehead of the patient from a specific height for a specified period. *Acharya Vagbhatta* has described four types of *Murdha Tail* i.e., *Abhyanga, Parishek, Pichu,* and *Shirobasti*, which is successively more beneficial than the previous one. *Shirodhara* or *Shiroparishechan* is one of them. Indication of *Shirodhara* was found in our ancient textbooks in various diseases like *Ardhavabhedaka, Suryavarta, Ardita, Pakshaghata, Hanugraha, Akshishula, Nidranasha, Shirogata Vata* and *Shirahkampa*.

In the modern era, it is a very widely used *Panchakarma* therapy and in this review article, an evidence-based approach is used to define the type, procedure, indication, contraindication, mode of action, complications and management and evidence of efficacy etc. of *Shirodhara*. Based on evidence *Shirodhara* has been found effective in various disorders like Insomnia, Psoriasis, ADHD in children, *Shirah Shoola*, essential hypertension, cerebral ischemic stroke and premature ejaculation when accompanied with other treatment modalities. *Shirodhara* was found effective on subjective as well as scientific parameters or modern biochemical markers parameters in various studies.

INTRODUCTION

The pouring of a liquid on the forehead or scalp is known as the *Shirodhara*. It is an ancient *Panchkarma* procedure and it is a well-established Ayurvedic therapy, it can be done by different medicaments like *Taila, Takra, Kshira, Kwatha*, etc. if we use medicated tail or ghee it would be called as *TailaDhara*. This *Taila Dhara* is included in the varieties of *Murdha Taila*, which are *Abhyanga, Seka, Pichu* and *Basti*. They are told '*Uttarottar Gunaprada*'. So, *Shirodhara* is a type of *Murdhataila* where suitable medicated oil is poured on the forehead and then allowed to flow over the scalp from a specific height.

MATERIALS AND METHODS

Synonyms of Dhara

It means a continuous flow of liquid from the hole of the pot.

<i>Dhara</i>	<i>Seka</i>	<i>Parisheka</i>
<i>Avasheka</i>	<i>Sechana - Sinchana</i>	<i>Prasechana</i>

Indications

Indication of *Shirodhara* was found in our ancient textbooks in various diseases like *Shiroroga, Anidra, Chittaudvega, Manoavasad, Unmad, Twakroga, Vepathu* and *Manasroga* like *Apasmar* etc.

Shirodhara is advisable in conditions like migraine, facial paralysis, paralysis, stiffness of the jaw, ocular pain, anxiety neurosis, insomnia, neuropsychological and psychosomatic disorders.

Nowadays, it is widely used for stress, psychosomatic disorders, and various types of neurological disorders such as epilepsy, chronic headache, and various kinds of mental disorders such as insomnia, psychosis and eczema and psoriasis, etc.

Contraindications

Kaphaja Vikaras- Shirodhara further increases *Kapha*, which makes the disease difficult to cure. It is also contraindicated in those who have just undergone *Sudhikarma*; (purification through *Panchkarma*) and those who are suffering from *Ajeerna/indigestion*.

Method of Pouring of a Liquid (Shiro-Dhara)

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The procedure of *Shiro Dhara* may be divided into 3 parts

- *Purva Karma*
- *Pradhana Karma*
- *Pashchat Karma*

Purvakarma: Pre-operative Procedure

Purva Karma is related to the preparation of the patient. First, it should be confirmed whether the patient is fit for *Shirodhara* or not. The following equipment should be required.

Droni- (*Dhara* table)

Dhara Patra- (*Shirodhara* pot)

Dharavarti- a wick of loose cotton thread

Suitable oil- 1.5 liters.

Other requirements like cloth piece, cotton, pot, *Rasanadichurna* etc.

The hair of the patient on the scalp should be removed if the patient permits. The patient should pass stool and urine. Then patient's pulse, temperature and blood pressure should be recorded.

Position of the Patient

The Proper posture of the patient for *Shirodhara* is supine position and *Dhara Patra* should be brought 4 inches above his head. The eyes and ears should be covered with cotton so that liquid may not enter in eyes. His head rests in a slightly elevated position, preferably on a wooden piece. A small quantity of oil (10ml) should be kept over the head of the patient and *Abhyanga* (oil massage) should be done over the face, neck, shoulder and chest.

Droni (Dhara Table)

For *Shirodhara*, a special type of table is used and it is known as *Droni* (vessel). The table is made up of wood with raised edges on all four sides so that the oil may not flow out. In this table, arrangements are made at the head end so that the oil poured may be collected in another vessel and may be reused.

Dimension of Droni (Dhara Table)

The construction of *Droni* is explained here by converting the ancient measurements into contemporary ones. The length of the *Droni* can be 7 feet, width 2½ feet, height can be 2½ feet. A 3-inch high border is formed on all sides of the table towards the edge of the head, forming a horizontal midline strip of 2½ feet of wood, dividing the table into 2 parts. This small part of the table towards the tip of the head is used for *Shirodhara*. In the middle 3 inches from the horizontal line, a circular metallic plate having 6 inches diameter with a central hole may be fixed. This arrangement may be made to collect the oil in a vessel for its reuse.

Above the *Shirodhara* portion of the table, the *Dhara Patra* should be suspended with the help of a

strong wire to enable liquid to fall from the proper distance.

Dharapatra (Shirodhara Pot)

Dhara Patra is a vessel in which liquids used for *Shirodhara* are put. It is prepared from brass, steel, clay etc. The mouth of the vessel should be wide and the sides are tapering gradually to a central point at the bottom. At this point, a hole may be made approximately of little finger size. The depth of the vessel may be 5 to 6 inches. The capacity of the vessel may be 2 liters. Inside the vessel, a small wooden bowl having a central hole should be put inversely to both holes of the vessel coming in the medial line. In this small vessel, a wick should be entered passing through both holes and hanging down from the big vessel to maintain a continuous flow of liquid. The length of the wick outside the vessel should be 4 inches. The upper end of the wick should have a knot to prevent slipping from the vessel. The *Dharapatra* should be hanged just above the forehead of the patient. The lower end of the cotton wick should be 3 inches above the patient's forehead. The vessel is kept filled with re-collected liquid. On the upper edge of the vessel, 3 holes should be made to hang it in a horizontal plane to avoid spillage.

Aushadha (Drug)

The medicine (*Aushadha*) should be selected according to the disease. The quantity required is above 1 to 2kg.

Sneha mentioned according to the condition of *Doshas*^[1].

Vata Dosh: *Tila Taila*, *Vataghna* liquid

Pitta Dosh: *Ghrita*, cold water

Kapha dosha: *Tila -Taila*, not too hot, not too cold water

Rakta Dosh: *Ghrita* with cold water

Vata + Pitta + RaktaDosh: *Ghrita + Taila* in equal proportion

Vata + Kapha + RaktaDosh: ½ part *Ghrita* + 1 part *TilaTaila*

Pradhana karma: Procedure

The selected liquid should be kept in the vessel and should be poured continuously and slowly on the forehead of the patient. A mild oscillation should be given to maintain the flow all over the forehead. This liquid gets collected in the vessel, which is kept below the table, when the liquid in the vessel gets emptied, then it is replaced by the lower vessel. Oil should be heated up to 40°C and poured into the *Dharapatra*.

Dharakala: Timing

The patient has dryness and *Pittayukta Vata*, the period is 2½ *Prahara* or 2 *Prahara* and in *Snigdha Kaphayukta Vata* it is one *Prahara*, or it should be up to perspiration initiate.^[2] But nowadays generally it is to

be done for 45-60 minutes depending on the condition of the patients.^[3]

The patient has to remain in a lying posture on his back. Depending on the nature of the disease and the physical condition of the patient, the treatment can be done daily for 7 to 14 days. Generally, treatment is done in the morning hours preferably between 7 to 10 a.m.

Period for Changing the Liquid

When milk is used for *Parisechana* it should be changed every day. When *Dhanyamla* is used, it can be used for up to 3 days. Oil should also be changed in 3 days. In the first 3 days; half of the oil is used, for the next 3 days later half of its used and on the 7th day all the first and second half are mixed, then it should be discarded.^[4]

Shirodhara can be performed daily or on alternate days in a person of strong strength (*Uttam Bala Purush*), with an interval of two days in a person of medium strength (*Madhya Bala Purush*) and an interval of four days in a person of very weak strength (*Heena Bala Purush*)^[5].

The temperature of The *Drava* is approximately 40°C or it should be *Sukhoshna* near about to body temperature.

Pashchata karma: Post-Operative Procedures

After completing *Shirodhara* the oil from the head should be removed by a piece of cloth. *Rasnadichoorna* should be applied over the head His eyes should be washed with cold water, and he should remove his cough. He should take the mild wind. He should rest for some time. Then remaining oil of the *Dhara* should be massaged on the body. Then he should take bath with hot water. Then he should take perfume and a light diet and he should drink water, which is *Siddha* with *Vatanashaka Aushadhi*. He should take the hot meal. He should take *Pathya* for up to 7 days.

For drinking purposes, warm water boiled with *Dhanyajiraka*, ginger and cumin seeds may be used. Only hot water should be used for washing purposes.

Dietary and Lifestyle Guidelines after Treatment

The patient should avoid physical exertions, and mental excitement such as anger, grief etc. and exposure to cold, sun, dew, wind, smoke, or dust should also be avoided. Riding a high-speed vehicle, walking, speaking too long or too loud and other actions that may give any strain on the body and mind must be avoided. Sleeping during the daytime and standing continuously for long period must also be avoided. It is also advisable to use a pillow that is neither very high nor very low, during sleep at night. It is advised to take *Takra* or *Yusha* prepared by adding black piper and ghee etc and used *Hitakarak laghu ahara* i.e., easily digestible food.

Pariharakala: Abstention Period

He should take *Pathya* and remain as *Jitendriya* up to the period which is taken for the completion of *Dharakarma*.

Dhara Dosh: Complications and Management

If *Dhara* is done from more height, very early or very slowly then it may produce burning in the body, pain in all joints, bleeding tendency, *Jwara*, *Kotha* etc.^[6]

For the treatment of *Dhara Dosh*, the following measures may be adopted.

- 1) *Gandusha*
- 2) *Nasya*
- 3) *Kashaya Pana* with *Sunthi*
- 4) Light diet in the evening, *Yusha* with black pepper.
- 5) On the third day *Basti* should be given in which *Saindhava* is mixed.

Possible Mode of Action of Shiro-Dhara

Shirodhara is a body purification process that removes anxiety, stress, and any unwanted effects on the central nervous system along with eliminating the body's toxins.

Shirodhara works on the cerebral system helps in relaxing the nervous system and balancing the *Prana Vayu* around the head.

It improves the function of the five senses, helps in insomnia, stress, anxiety, depression, hair loss, fatigue, and imbalance of *Vata*, and makes one calm and fresh accompanied by distress or impairment in daytime functioning.

In *Shirodhara*, patients feel relaxed both physically as well as mentally. Relaxation of the frontalis muscle tends to normalize the entire body and achieve a decreased activity of CNS with lowering of brain cortisone and adrenaline level; it accompanies brain waves, especially alpha waves, and nourishes the mind and this continues even after relaxation.

Whether *Shirodhara* directly influences the release of melatonin- a hormone responsible to induce sleep requires further studies. Moreover, the supine position also helps in relaxation.

The imbalance of *Prana*, *Vyan Vayu*, and *Sadhaka Pitta* can produce stress and tension. *Shirodhara* establishes the functional integrity between these three subtypes of *Doshas* through their mechanical effects.

We know the pituitary gland is the master gland of the endocrine system that responds to stress, anxiety, etc. Moreover, *Shirodhara* regulates the functions of the neuro-endocrine system by its penetrating effects and causes relaxation at all levels.

Benefits of Shirodhara

Shirodhara is very effective in chronic daily headache, insomnia, senile dementia, motor neuron disease, Residual Schizophrenia, anxiety disorder, depressive illness, parkinson's diseases, psycho somatic disorders (like- IBS, peptic ulcer syndrome, ulcerative colitis), fibromyalgia syndrome, skin disorders, and generalized cerebral atrophy.^[7]

RESULTS AND DISCUSSION

Shirodhara is a very effective therapy and in this section, we have discussed the results of various studies with their evidence

Clinical research work on *Shirodhara* and their outcomes

1. *Shirodhara* showed significant improvement in serum biomarkers of stress. It provided significant relief in the grading of the POMS Score also.^[8]
2. *Shirodhara* with *Brahmi* oil is very effective in moderate to severe insomnia.^[9]
3. It is evidence that *Shirodhara*, can produce a very significant reduction in the respiratory rate, mean diastolic blood pressure, and heart rate and also an increase in the alpha rhythm and decrease in beta activity (confirmed by EEG).^[10]
4. *Shirodhara* is found effective in the management of a condition like pediatric attention deficit hyperactivity disorder, cerebellar ataxia, essential hypertension, psychological symptoms of menopause, premature ejaculation, generalized anxiety disorder and insomnia, this procedure has a demonstrable anxiolytic effect evidenced by the decrease in Plasma noradrenaline and urinary serotonin excretion.^[11]
5. *Dhara* therapy, specifically, *Takradhara* has shown a significant role in relieving stress-induced disorders.^[12]
6. In a study, *Shirodhara* was found very effective in alleviating the symptoms of ADHD.^[13]
7. *Shirodhara* is very effective in the management of *Vatika Shirah Shoola* w.s.r. to tension headache^[14]
8. In a clinical study *Shirodhara* is found effective in the management of attention-deficit/hyperactivity disorder (AD/HD) affected children.^[15]
9. It is evidence that *Shirodhara* is very effective in essential hypertension even compared to *Sarpagandha Vati*.^[16]
10. In a study *Shirodhara* is found very effective in the management of *Anidra* (insomnia) and developing the feeling of well-being in the patient without having any side/toxic effects.^[17]
11. *Shirodhara* was found effective in psycho-somatic management of *Shukraavrita Vata* (premature ejaculation) like intra-vaginal ejaculatory latency time, voluntary control over ejaculation, patient

satisfaction, performance anxiety, and the number of penile thrusts etc.^[18]

12. *Shirodhara* found very effective in *Pakshaghat* with special reference to cerebral ischemic stroke and this procedure produced significant results in gradation score of MPG and power of upper limb and lower limb in *Pakshaghat*.^[19]
13. In a clinical study, it was found that *Shirodhara* was very effective in the management of stress-induced insomnia (*Anidra*).^[20]
14. In a study, *Ksheerdhara* found effective in reducing systolic and diastolic blood pressure and also alleviating the symptoms of essential.^[21]

CONCLUSION

Shirodhara is a type of *Murdha Tail* and it is widely used in *Panchkarma* therapy. Synonyms of *Shirodhara* are *Dhara*, *Parisek*, *Paricsechan*. It is indicated in chronic headache, insomnia, senile dementia, motor neuron disease, Residual Schizophrenia, anxiety disorder, depressive illness, Parkinson's disease, psycho somatic disorders (like- IBS, peptic ulcer syndrome, ulcerative colitis), fibromyalgia syndrome, skin disorders, and generalized cerebral atrophy.

In this article, we have discussed fourteen studies conducted by various field experts in a scientific manner all over India. On review of various studies it is found to be very effective in insomnia, psoriasis, ADHD in children, *Shirah Shoola*, Essential hypertension, cerebral ischemic stroke and premature ejaculation when accompanied with other treatment modalities.

If we used this therapy under the guidance of an expert in indicated disorders with other medication it can very useful in alleviating different diseases as shown by various studies.

Conflict of Interest- None

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