

A Review on Different Mode of Action of Takradhara - As a Novel Panchakarma Therapy

Dr. Anju K V¹, Dr. Kavitha C K²

¹Assitant professor, Department of Panchakarma, VPSV Ayurveda College, Kottakkal, India

²Assistant Professor, Department of Kayachikitsa, MVR Ayurveda Medical College, Parassinikkadavu, India

Abstract: *Shirodhara is the process of pouring the liquid over the head. It can be of three types Taila, Kshira and Takra. If medicated or plain Takra is poured on the forehead & scalp, it is called as Takradhara. Takra means buttermilk and Dhara is a stream. The physiological benefits of Takradharain Ayurvedic Treatment are very similar to that of Shirodhara. However the major difference being use of medicated buttermilk. Takradhara procedure is found very effective in the management of many disorders like Anidra, Diabetic neuropathy, Headache, Psoriasis etc as per many studies. It had Vata Pitta Shamaka property which not only reduces stress and tension but also enhances the circulation of brain, improves memory, nourishes the hair on scalp, calms the mind and body.*

Keywords: Panchakarma, Sirodhara, Takradhara.

1. Introduction

Panchakarma facilitates in detoxification and restoring the natural equilibrium of the body. One well liked Panchakarma therapy is dhara. Takradhara is the name for the procedure in which "Takra" is continuously poured over the forehead and scalp. Takra possesses Pancharasa with the exception of Lavana Rasa. Takra has the Amla Vipaka, Ushna Virya, and VataKaphaghna properties¹. It can be applied to the entire body or only the head. Takradhara is effective in treating illnesses like klama, Apachi, Sirodaha, Siroruk, Unmada, Prameha, and those by a predominance of Kapha and Pitha². Numerous research on Takradhara have demonstrated its scientific value in treating conditions like insomnia, hypertension, psoriasis, and psychosomatic illnesses etc.

Contents of Takradhara³

- 1) AmalakiChurna-200gms
- 2) Milk- 1.5 ltr
- 3) MustaChurna-100gms
- 4) Oil(for Talam) -10 ml
- 5) RasnaChurna- 5gms

Purva karma

To prepare Takra, take 1.5 litres of milk and dilute it four times with water and add 100 g of crushed *Mustha* and boil until it is reduced to 1/4 of its original volume. Once it has cooled, *Mustha* is next sieved out; the ready milk needs to be soured for the night. The following morning, the curd is churned with *Amalakikwatha* to make the *takra* for *Dhara*. To prepare *Amalakikwatha* the dried *Amalaki* fruit should be boiled with 16 times water and then reduced to 1/8th of its original volume. After the procedure some of that is used to wash the head. *Amalaki*, is a fruit that has been dried for at least an year in sunlight and air. *Amalaki* should be taken in the form of a coarse powder, and quality fruits that are free of contamination should be chosen with care. In advance, seeds ought to be thrown away. Depending on the condition, milk used to make *Takra* can be medicated with *Argwadhadi Churna*, *Useera*, *Hreebera*, *Chandana*, *Yashti*, or *Panchagandha Churna*.

Pradhana karma

Balathaila, *Khseer Balathaila*, or any other specialised oil according to disease state may be applied over the head as a practise. *Abhyanga* over the body was recommended by some practitioners. The patient's ear should be filled with cotton, and the eyes should be covered with cotton gauze. Every aspect of the operation, as well as the benefits and restrictions of the therapy, should be explained to the patient and their family members. The tip of the *dharavarti* should be 6-7 cms (four angula) above the patient's forehead. The overall length of the *varti* should be three times 18–21 cm. The *takra* needs to be collected and poured back into the container. The attendant keeps swinging the vessel across the patient's head to ensure that the entire forehead will receive the *takra*. For better results, the head and body are gently rubbed simultaneously. *Dhara* should never be poured from a lower height or higher height than recommended since this could make the condition worse. In short, all the steps are the same as for *Sirodhara*, however the *Takra* should not be heated or used more than once. Buttermilk used in *Dhara* should be freshly prepared daily. For seven to fourteen days, *takradhara* is practised usually and the procedure lasts 60 to 120 minutes.

Paschat karma

It is recommended for the patient to rest for the same amount of time as the treatment, then take a bath. After *Dharathe* head is cleansed with *Amalakikwatha*. Following towel drying of the wet head, *Tala Dharana* may be performed. *Rasnadi Choorna* is very common in practice for *thaladharana*. It is to be rubbed on the scalp's crown for few seconds. By doing so, it will combat the cold induced by the treatment. Patient should consume *Pathyaahara* and should not directly expose to wind, dust, sunlight and rain. A proper diet plan and life style should be prescribed to patient and adhere to this strictly during and after treatment.

Research Updates

Dr. Mohod Poonamet (2015)⁴-The study done on the topic *takradhara* the divine procedure for improving quality of the sleep. It was simple, random, systematic, and focused group study with sample size 30. Apart from patients of insomnia

with mild hypertension, mild depression and anxiety disorders without complications and illness of any other diseases were also consider for the study. In all patients *Takradhara* done with mixture of *Dasamoolakwatha* and *Nirgundiswarasa* on daily basis approximately for 30 minutes in every sitting. Established volunteers of Insomnia were observed before and after the treatment of *Takradhara* and application of internal medicine. It was seen that after completion of the course 73% of the patient's relieved from drowsiness, 72% relieved from headache, 67% of patients relieved from malaise, 60% of the patients got relieved from yawning and 58% of patients got relieved from fatigue. 39% of the patients improved their concentration, 27% improved their memory, and 37% of the patients improved their level of perception. 41% of the patients relieved from indigestion problem while 42% got relieved from constipation. 23% of the patients show improvement in their weight and lastly 43% of the patients show improvement in the luster. *Takradhara* procedure with mixture of *Dashmoola Kwatha* and *Nirgundi Swaras* is found very effective in the management of *Anidra*. It had *Vata Pitta Shamaka* property which not only reduces stress and tension but also enhances the circulation of brain, improves memory, nourishes the hair on scalp, calms the mind and body and helps to beat insomnia as well.

Bhavya B.M (2016)⁵.-The study done to evaluate the efficacy of *Takradhara* and *Vaasakaadi Kwathapana* in the management of Diabetic Retinopathy and to evaluate the efficacy of *tuvarakadi Anjana*. Selected 45 patients were randomly divided into three groups as Group 'A', Group 'B' & Group 'C' with *takradhara*, *Vaasakadikwathapana*, *tuvarakadi Anjana* respectively. Group 'A' & 'B' were trial groups, Group 'C' was taken as an established study. The overall success rate of improvement by the treatments in the individual groups is 17.25%, 27.84% & 14.24% in Group A, B & C respectively. Overall assessment of the results showed that its regression success rate being highest in patients of Group B treated with *Vaasakaadikwathapana* (60%), followed by in Group *ATakradhara* (55%) and Group C *Tuvarakadi Anjana* (26%). The process of *Takradhara* might accelerate the function of *tarpakakapha*, and may also bring in the specific action as demanded by the disease condition like blockage of channels by *Kapha* which can be taken as micro vascular occlusion which is the basic pathological process seen in Diabetic Retinopathy. It also helps in the proper nourishment of retina, thereby preventing further vascular leakage and the *Chakshusya* property of drugs helps in the improvement of vision.

Ragamala K C (2017)⁶-40 children aged between 7-12years were randomly selected and *Takra* processed with *medhya* drugs like *Brahmi*, *Jatamamsi*, *Vacha*, *Aswagandhachurnas* for about 30 - 45 minutes for 14 days and then again repeated after every two months for 3 consecutive sittings with counselling. All the cases are followed up with an interval of two months between each sitting for the progress or changes during treatment. Follow up will be for one month after completion of treatment also. Out of the 40 patients 14 patients (35%) showed moderate improvement and 26 patients (65%) showed mild improvement in their symptoms. The ADHD can be compared and treated similar to that of *Manasa Vikaras*. Among the Ayurvedic

treatments, *Takradhara* stands as an important therapeutic procedure which can be very beneficial in reducing the core symptoms of ADHD. Overall picture of the results obtained in the study shows that *Takradhara* helps to reduce the symptoms of Attention Deficient Hyperactivity Disorder.

Dr. Mahesh D. Kalled (2020)⁷-A case study on *Shirobhitapa* w. s. r to Essential Hypertension - A male patient at the age of 42 years k/c/o hypertension since 1 year (not under regular medication) was said to be healthy before 10 years. Gradually he started to get pain in temporal region on/off through day pain was in dull ache in nature aggravated by stress and exposed to cold and relived by taking rest and tablets. He was also having complaint of pain in calf region it was not radiating type and dull pain aggravated by doing work and relived by taking rest and oil massage. 1 year back he felt severe weakness, heaviness in head and giddiness on/off and consulted Columbia Hospital, Bengaluru, where he underwent vitals monitoring, ECG and blood investigations and blood pressure found to be 150/90mmhg and thereby physician prescribed antihypertensive and antihyperlipidemic drugs for 3months (patient took only antihyperlipidemic for 3 months) and since 3 months patient feeling of heaviness in body and it increased generalized weakness since 15 days and his blood pressure also not under control, with all these complaints patient visited SKAMCH & RC, Bengaluru and got admitted. *Sarvangatakradhara* with *Musta*, *Amalaki* and *Takra* for 8 days and the blood pressure became under control.

Dr Akhil Shine SS (2020)⁸ -A clinical study on the effect of *takradhara* in subclinical hypothyroidism. Study design was Interventional before after trial without control Inclusion criteria, Subject who were having a change in serum TSH level in between 4.5mIU/L to 10mIU/L, with normal free T3 and free T4. Both subjective and objective parameter, Assessment will be done by appropriate test before treatment and during follow up periods (0th, 37th, 67th and 97th days) Follow up: Follow up will be done 30th, 60th and 90th days (After treatment 37th, 67th, 97th days). In this study before treatment, patient in the range of 4.5 to 6.5 was 16, 6.5 to 8.5 was 10 and 8.5 to 10 was 4 First follow up- 2 patients from the range 4.5 to 6.5 had slight increase in TSH, there was 2 person was gone to next range 6.5 to 8.5, The highest range group 8.5 to 10 (2 had slight decrease in their TSH values and had come under range 6.5 to 8.5) Second follow up- Comparatively better result were seen, that 18 Of the total patient had come under the group 4.5 to 6.5, there was a mass change in TSH of the range of 6.5 to 8.5 Third follow up- The group of 4.5 to 6.5, 2 of them had slight increase in TSH and had gone to the range 6.5 to 8.5 Over all the treatment could bring about considerable change in the TSH value and was effective in bringing down the raised TSH values. *Takradhara* can stimulate hypothalamus and there by normalizing the action of pituitary and thyroid gland. It will be highly beneficial to patients who suffering from subclinical hypothyroidism. HPA axis (hypothalamic pituitary adrenal axis) is our central stress response system. Control stress and regulate many body processes, including digestion, immune system, mood emotions, sexuality and energy storage. While doing *Takradhara* HPA axis may stimulate and control cortisol level.

2. Discussion

Takradhara may be able to interact with the deepest recesses of the brain by soothing the *Marmas*. *Takradhara* is highly effective in reducing stress. When stress is removed the psychosomatic problems like Thyroid dysfunction, psoriasis etc. are susceptible to an excellent healing. On the endocrine system, it has a calming impact. *Takradhara* helps to improve blood and nourishment. The pressure the medicaments cannot be ruled out. Irrespective of the medication used, the *Shirodhara* procedure itself seems to induce a relaxation response. *Shirodhara* induces a state of physical and mental calm in its patients. The frontal muscle can be relaxed to restore the body to normal function and to reduce sympathetic nervous system activity. These changes include reductions in blood pressure, heart rate, respiration, oxygen consumption, and brain cortisone and adrenaline levels, as well as reduced muscle tension and heart rate. *Takradhara* is the unique procedure for all types of *Manasa Doshas*. It induces the relaxation and natural sleep by increasing the intensity of alpha brain waves and decreases the brain cortisone and adrenaline level. During the procedure prolonged *Dhara* of the drugs mixed with *Takra* over forehead generate a conduction which not only acts as tranquilizer but also induces sleep. This procedure not only normalizes serotonin and nor-epinephrine but also keep the hypothalamus in normal function. On Emotional and Behavioural Patterns - *Chittanasha* (psychological abnormality) and *Bhayais* said to cause due to injury of *seemantarma*. Thus *dhara* can heal the *marma* and it may reverse the *chittanasha* and *bhaya* also.

In Diabetic retinopathy *Takradhara* may accelerate the activity of *tarpakakapha* and may also bring about the specific response required by the illness situation, such as *kapha* blocking channels, which can be interpreted as microvascular occlusion, which is the primary pathogenic process seen in diabetic retinopathy. In addition, it aids in the correct nourishing of the retina, halting additional vascular leakage, and the *chakshusya* feature of medications aids in the enhancement of eye sight. *Takradhara's* actions in diabetic retinopathy can be stated in two different ways: as a pharmacological action of substances absorbed through the skin (therapeutic effect), and as a procedural effect of *Takradhara* induced by the somato-autonomic reflex through thermo-sensors or pressure sensors in the skin or hair follicles via the trigeminal cranial nerve. *Takradhara* also slows down sympathetic nerve activation, which in turn slows down metabolic activity and glucose release into the blood. These actions manage diabetes and may even repair the pathology of diabetic retinopathy.

Since the disease ADHD is being considered as *Manasa Vikara* with involvement of *Vata Dosha* and *Manas*, hence *chikitsa* alleviating *tridoshas* particularly *Vata* and having effects on the *Manas* should be preferred. *Shirodhara* will be more beneficial to pacify the *Vata Dosha* and supports the *Manas* to regulate the mental activities, and thus in this study an effort was made to reduce the symptoms of ADHD through *Shirodhara* especially *Takra* processed with *Medhya* drugs. The important areas of the brain, centre for judgment, centre for intellect, centre for speech etc are situated in frontal area, with *Takradhara* relaxation of the

frontalis muscle occurs, tends to normalize the activities of the entire body, improve cerebral functions through increased cerebral blood flow, enhances concentration abilities and decrease in activity of sympathetic nervous system thus lowering the hyperactivity and impulsive behavior found in ADHD children. Thus relaxing mind and body. *Shirodhara* may help to stimulate many *vita 1* areas like *Sthapani Marma* and *Agna Chakra*, which are seated in *Bhrumadhya* and are *sthana of Manas*. Slight stimulation of these spots may have beneficial effect on the mind and body, due to their connection with higher centers of brain. External stimulus through *Shirodhara* calms the mind and relaxes entire body by pacifying vitiated *Vatadosha*, alleviating *Chintadi Manasika Bhavas* and it also helps to increase cerebral functions thus decreasing hyperactivity and impulsive behavior in ADHD (Attention Deficit Hyperactive disorder).

Takradhara alleviates dyspnea, sleeplessness, *shiroruk*, *bhrama*, and hypertension *Sthapanimarma* between the eyebrows has been mentioned by *Sushruta*. It is a *siramarma* of the *vishalyaghana* variety. This *sthanior Kurchamarma* appears to be a mediator of the *takradhara* hypothesis effect. Because it is a *siramarma*, it may have a reflex effect on baroreceptors, which are disrupted in essential hypertension and may be held accountable for the constriction of arterioles that results in an increase in blood pressure.

In cases of hypothyroidism, the combination of *Amalaki*, *Musta*, and *Takra* has a cooling impact on the brain and the entire nervous system, thereby releasing stress and anxiety that have built up in the main control centre of our bodies. Drugs called *Sitha Virya* may stimulate the hypothalamus. Cold nature had a calming impact on the hypothalamus, which controls numerous bodily and mental processes, and the pituitary gland. The body functions including the heart functions take place in a relaxed manner. Blood and nutrients are properly circulated throughout the body. Reduced are the peripheral resistance. The body's passageways open. As the cells begin to eliminate the toxins, the body's metabolism as a whole improves. The *avarana* natural disease is hypothyroidism. Hypothyroidism is the *avarana* nature disease. *Takradhara* is *vatakaphasamana* therapy which brings *rookshana* nature.

In Diseases of the skin, this *Dhara* enhances the functionality of all sensory organs and reduces the three *doshas'* imbalance. Psoriasis can be classified as a psychosomatic condition due to the presence of somatic symptoms like *kandu* (itching), *ghana* (thickness), *parusha* (dryness), as well as psychological symptoms like anxiety, tension, depression, and others, in which both the mind and body are affected. Lactic acid is present in significant quantities in *Takra*⁹. Lactic acid is used to moisturise the skin and minimise the appearance of thicker scales, as has been scientifically demonstrated. Lactic acid is an effective drug delivery system for transdermal absorption. Additionally, it has consistent anti-oxidant and anti-inflammatory actions. The ability of lactic acid-containing products to transport the substance to particular skin strata is correlated with their effectiveness. Using flow through diffusion cells, the *in vitro* penetration of lactic acid to various skin layers of porous skin from various emulsions was assessed. *Amalaki*

functions as a regulator of the immune system and contains anti-inflammatory, antioxidant, and other effects. Studies on Amalaki extract proved that apoptosis was induced, reactive oxygen species generation was raised, and cell growth was prevented. This makes it useful for scaling control in psoriasis treatment. The anti-inflammatory, antioxidant, and glycation-inhibiting properties of musta where glycation has role in production of inflammatory cytokines. Musta has a kushthaghna properties also¹⁰.

3. Conclusion

Takradhara is a special Ayurvedic treatment that uses medicated buttermilk. Takradhara procedure is found very effective in the management of many disorders like Anidra, diabetic neuropathy, headache, psoriasis etc as per many studies. It had Vata Pitta Shamaka property which not only reduces stress and tension but also enhances the circulation of brain, improves memory, nourishes the hair on scalp, calms the mind and body. Probable Mode of Action of Takradhara can be understood in following two ways;

- 1) Medicaments used and its therapeutic effect
- 2) Effect of the procedure due to the Guna, Karma and Prabhava of drugs used.

It reaches to the brain through fine pores of forehead and scalp. It helps to produce its therapeutic effect. Effect of the procedure can be understood in three ways. Through neurological, Bio chemical and Biophysical action. In neurological action the continues pressure and vibrational effect of Dhara helps in transmission of nerve impulses by which it increases the cerebral blood flow and decreases activity of sympathetic nervous system. In Biochemical action Dhara accelerates neuro transmitters and by which it increases neurocognitive abilities. In Biophysical action it stimulates brain waves.

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