

A Descriptive study on DantaDhautiof Shatkarmas:Its ImpactUpon Human Physiology

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Abstract: Yoga is an invaluable heritage of the Indian culture. Yoga is a group of physical, mental, social and spiritual practices and disciplines that originated from ancient India. The aim of yoga is to achieve the highest potentiality of human life. To achieve the highest stage, the body is the base of all paths. Yogic science emphasizes on such cleansing processes to make the body clean and to achieve higher practices such as asana, pranayama and meditation. Among the cleansing processes, Dhauti is a jewel. It is classified into four categories, Anatar dhauti (Digestive Track), Danta (Mouth), Hrid (Chest) and Moolashodhana (Rectum). In which Danta Dhauti is prominent. It is further classified into four categories, Dantmooladhauti (cleansing of teeth), Jihvamooladhauti (cleansing of the tongue), Karnarandhra (cleansing of both the ears) and Kapalarandhra (cleansing of forehead). So, this dhauti refers to clean the organ of the teeth, tongue ears and forehead. So, it helps to clean mouth and entire face healthy and clean and it is also very easy to perform among all the cleansing techniques. Now it is essential to study these yogic techniques from physiological perspectives. This study has been conducted to explore the physiological effect of Danta Dhauti in human life.

Keywords: Danta Dhauti, Dantamoola Dhauti, Human Physiology, Jihvamoola Dhauti, Karnarandhra Dhauti, Kapalarandhra Dhauti.

I. Introduction

“Dantamulam jihvamulam randhre cha karnayugmayoh

Kapalarandhrampancaitedantadhautirvidhiyate”^[1]G.S.(2\25)

There are five kinds of dantadhauti: dantamoola (cleaning the teeth), jihvamoola (cleaning the tongue) karnrandhra (cleaning the two ears) and kapalarandhra (cleaning the upper region of the head). Thus there are five in all.^[2] Through the five kinds of dantadhauti are not related to danta the teeth, they are so called because the group of this five dhautis starts with dantadhauti.^[3] Dantamooladhauti – It is the process for cleansing the root of the teeth and gum with khadira rasa or clean earth. Prevents from dental disorders. The second practice is Jihvamooladhauti – It is the process for cleaning the tongue with the index, middle and ring finger by applying butter and rubbing it. It removes extra phlegm. Karnrandhradhauti – It is the third and fourth practice by cleansing both the ears with the index and ring finger. Through which nada is produced. Kapalarandhra Dhauti – In this practice by massaging the forehead with right hand thumb. This practice helps to prevent from sinusitis.^[4] So, the cleaning of five the root of the teeth, the root of the tongue, opening of the two ears and the frontal sinus is called Dantadhauti.^[5]

II. Significance Of the study

Shatkarmas are cleansing techniques (shuddhikriyas). They are recommended to be done to prepare the body for yoga practices. They are named shatkarmas because they are six (shat in Sanskrit) in number. These techniques are done to clean ingestion, digestion and excretory system of the body. These systems mean eyes, respiratory system, digestive system & excretory system. In the yogic view, the process of shatkarma is done to remove unnecessary particulates from the body and make it light & energetic. Moreover, when the body is light it helps to practice asana and pranayama in a better way, making them more effective. Shatkarmas are discussed both in Gheranda Samhita & Hatha Pradipika. The prominently mentioned in Gheranda Samhita as the first step. In Gheranda Samhita, the human body (including the mind) is mentioned as Ghata. And thus the process of cleansing the body and mind is mentioned as ghatashuddhi. The purpose of Shatkarma is to bring balance between tri doshas Vata, Pitta & Kapha, bring balance to mind & body processes, balance prana flow in Ida and Pingala Nadi. From there to stimulate the flow through Sushumna Nadi, to remove toxins from our body, to cleanse our body from inside & keep our body healthy. Provides strength to our internal systems like blood

circulation, digestion, respiratory system & increases immunity. This involved the six practices dhauti, basi, neti, nauli, trataka and kapalbhati.^[6]

In all the shatkarmas dhauti is very powerful and necessary practice. Dhauti is made up 'Dho' root word which means 'Washing' or 'Cleansing'. Dhauti is preparatory action before involving in any physical practice of yoga. It cleans all the system of the body, removes impurities and make the body light and calm. There are mainly four types of dhauti. Antardhauti, Dantadhauti, Hridhdhauti and Moolshodhan. Among them Dantadhauti is very easy and simplest practice.^[7] So, here five types of cleansing process including in dantadhauti. Dantadhauti comprises of method of cleansing the teeth, mouth, forehead and ears. Dantamooladhauti is for cleansing the root of the teeth, gums teeth, jihvamooladhauti is for cleansing the root of the tongue and karnarandhra in there are two types of KarnaAndhra the cleansing process for both the ears, right and left ears. The last fifth dhauti is the cleansing process of kapalarandhras for the forehead and near the nasal bridge region.^[8]

So, here, Dantamoola and JihvaMoola are the cleaning of the teeth and the tongue, respectively. In India a neem stick is traditional, but a toothbrush and paste may be employed instead. Kapalarandhra is the cleaning of the back of the soft palate, while KarnaDhauti means cleaning the ears. So, dantadhauti is cleansing of teeth, tongue as well as the ears and frontal sinuses.^[9]

III. DantamoolaDhauti

"Khadirenarasenathasuddhamrittikayatatha

Marjayeddantamulam cha yavatkilbisamaharet

Dantamulamparadhautiryoginamyogasadhane

Nityamkuryaprabhate cha dantaraksam chayogavit

Dantamulamdhavanadikarseyoginammata "^[10]*G.S.(1\26,27)*

Rub or massage the roots of the teeth with the juice of the khadira plant or with clean earth until the impurities are removed. Yogis must adopt this method every morning to protect their teeth. Those who know yoga consider dantamooladhauti to be a significant part of the purification process.^[11]

The Sanskrit word danta means 'teeth', dhauti means 'wash' and moola means 'root'. Therefore this practice is concerned with cleaning the teeth and gums.^[12] It means massaging the teeth, gum and root of the teeth. It is the massaging of teeth with powdered earth or water till the impurities are removed and also gives strength.^[12]

In ancient India, the ancient yogis always made their own tooth powder out of catechu, alum, myrobalan and the ash of burnt coconut shells in proportion 1:6:1:2. All the astringent herbs that are used as toothbrushes among them khadira are the best.^[13] When khadirais applied to teeth it strengthens the blood vessels and nerves of the teeth of the pulp chamber increase blood flow to it and makes the pulp and dentine strong.^[14] Faulty diets such as sugary foods are harmful as sugar is quickly converted into acid, which attacks the tooth enamel and makes it yellowish. The white enamel on their teeth becomes worn. When this happens, the calcified tissue underneath starts to show through. This tissue is called dentin, and it has a yellowish color.^[15] Acacia catechu commonly known as khadira has many therapeutic properties and is also known as catechu, cachou and black cutch. In addition, the heartwood extract is found to be an effective antibacterial agent, antimycotic, anti-oxidant and antidiarrhoeal activity. It prevents tooth to become yellowish.^[16] It prevents dental decay and gum diseases. Gum illness occurs when tartar and plaque are permitted to develop at the gum line. Tartar and Plaque are filled with bacteria, which leads to a gum infection. If this infection is permitted to grow, it leads to swelling of bone, gum, and eventually tooth loss. This is called periodontitis, gingivitis or pyorrhea. The inflammation on the tissue surrounding the teeth is due to the accumulation of bacteria.^[17]

In the human body, the mouth is the gateway to the body and a favorite breeding ground for bacteria. Some of these germs proceed further into the body while many remain in food particles trapped in the teeth cavities. The

vulnerable time for tooth decay and the build-up of bacteria in the teeth and cause pyorrhea. In dantamooladhauti applying khadira rasa it prevents bacteria to accumulate surrounding the teeth tissue, hence it prevents from pyorrhea also.^[18] Pure mud dilutes and absorbs the toxic substance giving coolness and antibacterial also.^[19] The food particles collect between teeth and gum which are harmful not only for teeth but also for the health of the body. It also prevents from pyorrhea, blisters, ulcers in the mouth, blood or pus entering the body from the mouth digestive system and other systems of the body as well. Dental decay can officially affect the heart.^[20] Gum disease (periodontitis) is associated with an increased risk of developing heart disease. Poor dental health increases the risk of a bacterial infection in the bloodstream, which can affect the heart valves. So, clean earth and khadira also prevent from heart diseases.^[21]

The importance of cleaning the teeth and gums and teeth is not appreciated by many people and gums are in the first half an hour or so after meals. It is for this reason that ideally the teeth and gums should be cleaned immediately after each meal.^[22] DantaDhauti cleans teeth nicely and thus prevents and cures all those negative consequences of the cavity and bacteria in the mouth. And also prevents teeth from aching or falling out. Halitosis prevented and bad breath also prevented, regular DantmoolaDhauti, especially is a good solution.^[23] So, in this dhauti, the root of the tooth is rubbed using acacia resin or clean earth. It cleanses the teeth and removes any impurities.

IV. JihvamoolaDhauti

“Athaatahsampravakshyaamijihvaashodhanakaarana

Jaraamaranarogadeennaashayeddeerghalambikaa.

Tarjaneemadhyamaanaamaangulitrayayogatah

Veshayedgalamadhyetumaarjayellambikaamoolam;

Shanaihshanaihmaarjayitvaakaphdoshamnivaarayet.

Maarjayennavaneetenadohayechchapunahpunah;

Tadagramlohayantrenakarshayitvaashanaihshanaih

Nityamkuryaatprayanenaraverudake'sstak

Evamkrite cha nityamsaalambikaadeerghataavrajat”

^[24]G.S.(1\28-31)

Here, Maharshi Gherand said to king Chandkapali that now, I will tell you the method for cleaning the tongue. Lengthening of the tongue destroys old age, death and disease. The root of the tongue should be cleaned by inserting the index finger, middle finger and ring finger in the throat. Kaphad disorders (phlegm) are removed by slowly and gently rubbing the tongue. Once this cleaning and rubbing are over, apply a little butter on the tongue. Again act like that milking a cow. Thereafter stretch the tongue out with the help of small tongs. The length of the tongue increases by doing this practice daily at the time of sunrise and sunset.^[26]

The Sanskrit word jihva means ‘tongue’ and moola means ‘root’. This practice is therefore concerned with cleaning the tongue and its root.^[2] According to yoga, if the tongue is diseased, the thinking process becomes dull and the breathing process becomes taxed. By massaging the tongue with a milking motion, the mucus that collects in the throat and windpipe is cleared. This massage is the best for cleaning the tongue.^[27] When the index finger, middle finger and ring finger are rubbed with at the tongue the lingual artery is stimulated and it increases the blood flow to the tongue.^[28] It also triggers vagus nerve stimulation to the chemoreceptor trigger zone for vomiting located in the area postrema center that is located in the dorsal surface of the medulla oblongata and lateral walls of the fourth ventricle. It helps for vomiting helps in dada, vaman and vastradhauti, by stimulation of vagus nerve.^[29]

Sometimes the thick layer of yellow coated on the upper surface of the tongue. It indicates that there is some inner disorder or accumulation of toxins that the body is desperately trying to expel. Failure to remove the impurities on the tongue can aggravate ailments within the body, particularly digestive problems. The yellow tongue tends to occur when dead skin cells, bacteria, or discoloring particles become trapped or buildup on the tongue's surface due to poor dietary habits. So, these impurities can act as breeding grounds for bacteria which in turn can contaminate the food being eaten. So regular cleaning of the tongue is very important in maintaining a healthy body. The practice is a very simple task for removes impurities and cleaning the tongue naturally. Phlegm is produced more at sunrise and sunset time. So, that time it should be practiced.^[30]

It cleans the tongue and root of the tongue. Helps in removing the accumulated dirt and kapha at the root of the tongue. It also keeps the mouth and tongue fresh. Helps in proper identification of all the testes by stimulating the facial nerve (cranial nerve VII), the glossopharyngeal nerve (cranial nerve IX), which provides fibers to the posterior third of the tongue, and the vagus nerve (cranial nerve X), and differentiate them. It also cures restlessness and anorexia.^[31] The four pairs of extrinsic tongue muscles that help the tongue move: the genioglossus (Depresses and extends the tongue), hyoglossus (Depresses the tongue), palatoglossus (Elevates posterior tongue and constricts the pharynx), and styloglossus (Draws the sides of the tongue upward and draws the tongue back). These muscles lengthen the tongue and are responsible for speech.^[32]

A long tongue is considered more useful for speech. Speech disorders can occur because of the short tongue. Daily practice of jihvamooladhauti lengthens the tongues and makes the muscles flexible. In hatha yoga, it is said that the tongue of the yoga practitioner should be so long that it touches bhrumadhya, the eyebrow center or at least the end of the nose.^[27] The practice of khechari mudra requires a supple and elongated tongue to drink the nectar oozing from the moon situated in the interior of two eyebrows.^[33] Stimulation of the vagus and other nerves sends a message to the medulla oblongata region of the brain. The medulla oblongata senses a massage down the phrenic nerve telling the diaphragm to contract. Glottis in the throat snaps out and hiccups occurred.^[33] By stimulating the end of the tongue by applying the butter and massaging will stimulate the vagus nerve and ease the diaphragm spasm. So, this technique also removes hiccups.^[34] This practice also activates the three major salivary glands such as parotid glands, submandibular glands, and sublingual glands.^[35] This Dhauti Kriya helps in the elongation of the tongue which is said to destroy old age and any bodily diseases.^[36] So, Jihvamooladhauti is practiced by milking the tongue with the thumb and index finger of both hands every day before brushing, which helps the tongue to produce quality voice and proper mastication.^[37]

V. Karnarandhra

“Tarjanyanaamikayogaanmaarjayetkarnarandhrayoh

Nityamabhyasayogenanaadantaramprakaashye”^[38] G.S(1\32)

Clean the orifices of both ears with the index and ring fingers. By practicing daily, nada or inner sound may be heard.^[27]

Wax collects continuously inside the ear tubes. If the ears are not cleaned regularly, pieces of dirt accumulate and block the ears. According to yogis, when the ring or index finger is put inside the ear and moved briskly, dirt and wax stick to the finger and are removed. By briskly rotating the finger the blood flow within the ear is enhanced. This increased blood flow may help prevent ear diseases. Part of the skin is connected to the parasympathetic vagus nerve, the stimulation of which relaxes certain internal organs. With this process is achieved in the autonomic nervous system. When the ears remain clean, the hearing capacity is enhanced and slowly, with regular practice, the practitioner becomes capable of listening to the internal nada or sound. With daily practice, nada is heard.^[39] The massage given to the auditory canal stimulates some mystical sounds. This is suggested by the word “Nadantaram”.^[3]

The word karna means ‘ear’, and this practice is concerned with cleaning the ears.^[2] The outer portion of the ear consists of a short tube or canal about four centimeters in length, running from the outside to the inside of the head. Inside the tube, there are a few hairs that prevent insects and other foreign bodies from entering the inner regions of the head and the eardrum at the end of the canal. This outer canal also contains various glands, which

secrete wax to protect the deeper structures of the ear. For perfect hearing, this outer canal must be unimpeded so that the sound vibrations in the air can cause the ear to vibrate. Sometimes the glands produce too much wax which blocks the canal; or sometimes wax accumulates, even though it is produced in correct amounts, and is not removed in the way that it should be. There is always mucus production and accumulation when there is an infection in the middle ear and mastoid mucosal system. This excessive mucous production interferes with mucosal function and plays a negative role in the recovery of middle ear function and therefore, contributes to the development of chronic otitis media.^[40] This can easily reduce one's hearing capabilities. A varied assortment of methods and utensils are used to clean the ears. The best method is to gently place the index or ring finger in the ear canal and rotate the finger cyclically many times. Slight pressure should be applied against the ear walls to dislodge any unnecessary wax. Remove the finger and direct the head and ear canal downwards to allow any dry wax to drop out. There should be a layer of wax on fingers after completing the practice. It should be repeated with the other ear. It makes the auditory canal clean, prevents from infection and also otitis media.^[41] It also cleanses the ear apertures.^[42]

When there is dirt in the ears, external sound becomes faint. It is an external physical symptom, but yogis feel that it also reduces the power of the sense of the hearing. Nada yoga is an independent branch of yoga. Nada yoga means hearing internal sound a state of dharna and dhyana.^[39] According to nada yoga, the hearing sense not only catches external sounds but also subtle sounds that cannot be heard. But when a person progresses in sadhana and attains the state of dharana or dhyana, one enters into new depths of consciousness by catching hold of that subtle internal sound with the awareness. This is one technique of nada yoga. Karnadhauti for the health of the ears, but this technique is also to help improve the hearing capacity. This is practical aid in making consciousness subtle so that nada is heard.^[43] So, it helps in keeping the ear clean and healthy and on constant practice one can hear the mystic sound of the nada.^[44]

VI. Kapalrandhradhauti

*“Vridhangushthenadakhshenamaarjayedbhaalarandhrakam
Evamahyaasayogenakaphdoshamnivaarayet\|.*

Nadeenirmalataamyatidivyaadrishtihprajayate

Nidraantebhोजनाante cha divaante cha dine dine”\|^[45] G.S.(1\33,34)

Massage the forehead with the right hand thumb. With this type of practice, one is relieved of Kaphadosha. The nadis are purified and divine vision is attained. Practice daily at the end of sleep, after a sleep and before a sleep.^[43]

Kapalrandhra is the upper hollowed region of the head, which can be clearly seen on a newly born baby. Therefore, this practice is concerned with washing the upper part of the head. It is a very simple process and requires little description. One must merely wash the head vigorously and thoroughly with cold water. This brings about a soothing influence on the whole brain. It is very useful when you feel tired or sluggish, as it instantly brings wakefulness and vitality.^[46] It also stimulates the 12 pairs of cranial nerves like the olfactory nerve, optic nerve, oculomotor nerve, trochlear nerve, trigeminal nerve, abducens nerve, facial nerve, vestibulocochlear nerve, glossopharyngeal nerve, vagus nerve, spinal accessory nerve, and hypoglossal nerve. This again brings relaxation to the brain and is especially useful in headaches.^[47] Kapalrandhra is practiced by cleansing the upper back portion of the palate and this particular practice is exclusively good for sinusitis.^[37] It reduces stress, insomnia, and increases vision.^[48] And also bestows extraordinary vision.^[49]

The light pressure and stimulation help to release mucus blockage from the nasal cavity and related sinuses, balancing kapha. It also helps one to center, to relax further and to be aware of one's subtle nature, awakening divyadrishti. According to sage Gheranda this practice cools the brain and is also useful for forehead cataracts and other eye disorders. It is said to lower high blood pressure and protect against colds and coughs.^[50] The nadis are purified and divine vision is attained. Practice daily at the end of sleep, after a sleep and before a sleep because the secretion of phlegm is more during these states. So, it also prevents from extra phlegm.^[3] Kapalrandhradhauti provides coolness and calmness to the brain, so that freshness and creativity are experienced. This practice is most helpful in the summer season. This dhautikriya aims to provide coolness in

brahmarandhra, not only cleansing because if this part of the body remains cool, there is an experience of alertness, mental agility and freshness. Washing the head makes one feel good. Even just pouring water over the head makes one feel fresh.^[51] Also prevents from migraine and bipolar disorder. This technique also helps go into meditation easily and it stimulates the Sahastrasar Chakra.^[52]

VII. Conclusions

So, dantadhauti, one of the shatkarmas, consists of a series of simple practices which clean various organs and regions of the head. These practices are dantamooladhauti (cleaning of the teeth and gums), jihvamooladhauti (cleaning of the tongue), kapalrandhradhauti (washing the skull) and karnarandhradhauti (cleaning the ears). These practices are concerned either directly or indirectly with the main senses of the body. Helps to maintain the works of sense organs for hearing, seeing, smelling and tasting.^[53]

It cleans the main facial region and senses. Prevents from teeth disorder, speech disorder, ear disorder and sinusitis. By mouth cleansing prevents from unhygienic bacteria and prevents from digestive disorders. So, this dantadhauti the part of shatkarmas works on cleaning inside of the body. The processes of shatkarmas are done to remove unnecessary particulates from the body and make it light & energetic. Moreover, when body is light it helps to practice asana and pranayama in a better way, makes them more effective and free from diseases.^[54] So, in Hatha pradipika, Maharshi Svamiam said,

*“vapuḥkṣatvaṁvadaneprasannata
nadasphuṭatvamnayanesunirmale
arogatabindujayoagnidipanam
naḍiviśuddhirhathasiddhilakṣanam”*^[55] H.P.(2\78)

Perfection of hatha yoga is achieved when there is leanness of the body, tranquil countenance, manifestation of inner sound, clear eyes, diseases free, control of bindu, active digestive fire and purification of nadis.^[56] So, in yoga the cleansing techniques dantadhauti helps to achieve the higher stage and ultimate goal of yoga in human life.

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