



## Research Article

### “KRIYAKALPA” in “PANCHAKARMA”

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#### ABSTRACT

The Panchakarma therapy is essentially design to restore the in integrity of Shrotas system in body in the health and disease. Thus the Panchakarma therapy and allied therapeutic practices are essentially biopurificatory procedures aiming to cleanse the channels of body optimizing the natural body function. As Panchakarma is the main stream treatment same as that Kriyakalpa is backbone and essentially important treatment of Shalakya. All Kriyakalpa upkrama like Snehana, ushnasnana, Anjana, Nasya, Tarpana, Putapaka, etc. are based and derived from Panchakarma. Ability of evacuation, superiority of efficacy and enormity of procedure target of dosha eradication and multitude of action are characteristics of Panchakarma and Kriyakalpa procedures. So we can conclude that Kriyakalpa are including under Panchakarma. The Panchakarma and allied Kriyakalpa are the subject matter of this review article.

## INTRODUCTION

### Snehapana

Snehapana literally means intake of Sneha. Therapeutically Snehana therapy which is given mainly as preoperative procedure for shodhana. It is a major procedure, which produces snigdha (smoothness), vishyandana (liquefaction), mardava (softness), kledana<sup>1</sup> (moistness) in the physique. Snehapana deals with the oral intake of medicated or non-medicated snehas. (Dalahana)

### Snehana Karma facilitates<sup>2</sup>

- Snehano anilam hanti
- Mrudukaroti deham
- Malanam Vihanti Sangam i.e. converts vitiated dosha from their latent state to an explicit sate.
- Emphasizing the role of Snehana as a preparative procedure, Charaka mentions as in a vessel smeared

with oil, water slips down without efforts, similarly Doshas, slip out easily in a body, which has undergone Snehana therapy<sup>3</sup>

From the current point of view Sneha acts as solvent that promotes excretion of lipid soluble metabolites. Increases watery content of body facilitating various undesirable metabolites to be eliminated through water contents. Poly unsaturated fatty acids stimulates oxidation of cholesterol to bile and hence cholesterol excretion though faecal route as bile and increases Bile production.

### Poorvakarma

- Rogi pareeksha deals with arhata and anarhata.
- Deepana pachana: Deepana and Pachana is done prior to Snehapana to relieve ama and agnivaishamya. Deepana and Pachana improve consumption capacity (Abhyaharanashakti) and needed to enhance the engagement and action of sneha in deeper channels.

### Pradhan karma

- Acha sneha is given following jeerna lakshana in monrning without appetite

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- To begin Snehapana Hraseeyasi matra is given initially then Mathra is fixed according to Jatharagni.<sup>4</sup>

#### Paschat karma<sup>5</sup>

- Guru Pravarana and limited Ushna jala pana.<sup>6</sup>
- After having sound appetite intake of yavagu<sup>7</sup> is allowed.
- Patient is not allowed to bathe, but Sampoorana Deh pramarjana is allowed with a towel soaked with warm water after complete digestion.

#### Abhyanga and ushnodakasnanam

Abhyanga and Ushnodaka Snanam are next important Poorvakarma after Snehapana and is carried out as preparative procedure for Virechana.

#### Abhyanga:

External oleation is an important therapeutic procedure in Panchakarma therapy. It has both therapeutic (Dosha, Dhatu, Prakriti) and pharmacological considerations. It facilitates regulation of the Vata. It also promotes eyesight.<sup>8,9</sup>

#### Ushnodakasnana:

Ushnodakasnanam is mild form of Swedana. Swedana relives Stambha, gaurava, sheetwa and results in sweating (Swedana). It is included under Shad upkrama where it is described as independent method of treatment. It is a prime modality of treatment for number of disorders especially predominant with Vata and kapha.<sup>10</sup> Snehana moistens and liquefies the Doshas and Swedana disintegrates them. By the action of Snehana and Swedana, the morbid Doshas, are liquefied and dissolved in Sneha and are brought to blood koshta.<sup>11</sup>

#### Relevance

Three day Abhyanga and Ushnodaka Snanam will soften and loosen the Doshas, and will facilitate them to koshta from Shakha. Once the Doshas attained to koshta, can easily be vaible for shodhana process. According to Vagbhata, the waste products are removed from the body by these two procedures of Snehana and Swedana in the same fashion as dirt of cloth is removed by soap and water.<sup>12</sup>

#### Mode of action of abhyanga<sup>13</sup>

- According to concept of Ayurved, the Sneha diffuses in the body through the minute hair follicles of skin and is assimilated by Bhrajaka Pitta.<sup>12</sup>
- According to concept of modern physiology the continuous skin cannot absorb watery solution. But oily substances can easily be absorbed through skin as skin is lipophilic. Anything warm or hot applied to the skin causes capillary dilatation; which further eases the absorption of the oily substances to a greater extent.
- Abhyanga causes hydrostatic pressure in extra cellular compartment especially in peripheral vascular area. A forceful expulsion from peripheral vessels causes splanchnic pooling of blood. It increases fluid entry in the viscera and tissues and helps in dilution of

accumulated toxins, which in turn taken into general circulation.

- Piezoelectricity<sup>14</sup> – physical pressure develops electrical charges to the body. By such charging the conductivity of nerves is optimized.

#### Mode of action of ushnodakasnanam

- Ushnodaka Snanam is a type of mild Swedana which makes Doshas mruudu and facilitate them to move from Shakha to koshta. Dalahana also supports this view.
- Swedana causes by vasodilatation of vessels, smoothing and easy diffusion of undesirable components in the extracellular partition.
- The Swedana is responsible for "Vilayana of Dosas."<sup>15</sup>
- It dilates the channels to produce extra flow and increases fluidity.
- Accelerates metabolism.

#### Virechana

Virechana is kayashodhana process in which elimination of morbid humors occurs through adbhobhaga.

It is bio- purification procedure indicated in many diseases including Vatika Timira. Virechana is the prime shodhana therapy for pitta and it also purifies rakta. It also helps to pacify vata by doing vatanulomana. There is a role for Virechana in netra rogas because

- Generally, in the pathogenesis of netra rogas, role of pitta and rakta is inevitable considering visheshsthana,
- As vamaana is contraindicated, in Vatika Timira, Virechana is the best suited shodhana procedure to achieve Srotoshuddhi, Indriyasamprasada and Agnideepti.<sup>16</sup>

Refractive error is a condition in which all three Doshas are affected but predominantly vata is vitiated. Therefore during kayashodhana utmost care should be taken that Chikitsa should not further induce vata prokopa in the patient. Virechana clears the channels' and facilitates the absorption of the medicines which are used in procedures followed.

#### Poorvakarma

- Rogi pareeksha dealing with arhata and anarhata.
- Bahya Abhyanga and Sweda
- Ahara before Virechana - Ahara which does not increase 'Kapha' is preferred before Virechana, otherwise Vamana may occur<sup>17</sup>.

#### Pradhanakarma

- Virechana Yoga is given preferably in pitta kala.
- Hot water should be given to the patient to prevent Vibandha but in limited quantity. Due to its Vatanulomana action, it facilitates easy Virechana.
- Observations particularly for Ausadha Jirnata
- If Virechana does not occur then Swedana by massaging with one's own hands can be done over the abdomen.<sup>18</sup>

- Observations of Shuddhi Lakshansa specially aantaki and vegaki.
- Management of Vyapada if occurs.

### Pashatkarma

**Samsarjana Karma:** Peyadi Karma is recommended to increase the Agni, gradually. In the Peyadi Karma Peya, Vilepi, Akritayusa, Kritayusa, Akritmamsarasa, Kritmamsarasa should be given for 3, 2 and 1 Annakala for Pradhan, Madhyama and Avara Shuddhi patient respectively.<sup>19</sup>

### Mode of action of virechana<sup>20</sup>

The Virechana dravyas having the properties like Ushna Tikshna Sukshma and Vavayi Vikashi.

- Due to its vyavayi Vikashi guna they get quickly circulate into big and small srotasas.
- Due to Sukshma Guna quickly spreads all over the body by reaching in micro channels.
- Due to Ushna Guna, and Tikshna guna, Dosha Sanghata (compactness) is liquefied (Vishyandana) i.e. disintegrates endogenous toxins which are then excreted through micro channels (Anupravana Bhava).
- Action of Tikshna Guna is to break the Mala and Dosha in micro form. According to Dalahana it is responsible of quick excretion.
- Due to Prabhava mainly and also due to Prithivi Jala constitution finally Virechana occurs.
- Current explanation of possible action of Virechana karma includes, due to irritant nature of drug medicinally induced mild inflammation is produced at the level of Small and Large intestine. This facilitates quick absorption of active principles of drugs in initial stages. As intestines are the prime sites for excretion. In later stage because of increased permeability of capillaries it facilitates the excretion of morbid matters, which generally are not supposed to excrete out through mucosa of intestines.

### Nasya karma

Nasya is an Ayurvedic therapeutic procedure in which medicaments are administered through nose.<sup>21</sup> Nasya is an important therapy, used for treatment of urdhva jatrugata diseases. But its beneficial effects are not limited to upper part of body; it has systemic benefits also. The word Nasya is derived from 'nasa' Dhatu means 'gati' it is explained as the gati towards internal structures in the head through the nose.<sup>22</sup>

### Procedure of marsa nasya<sup>23</sup>

### Poorvakarma

- Talam is given to patient to avoid the adverse effect of thermal variations.
- Sneha Sweda is performed on uthamamanga
- Patient is made to lie in supine position with slightly elevated legs and head extended backwards. The position will facilitate direct entry of the drug.

### Pradhanakarma

- The prescribed dose of medicine is made lukewarm (body temperature) by placing it over hot water.
- Medicine is instilled as continuous stream into each nostril, keeping the other nostril closed.
- Patient is advised to inhale the medicine with moderate energy and to spit the secretions, turning the head to either side alternatively without rising from table.
- Patient has to lie down in supine position for 100 matra kala.

### Pashatkarma

- After Nasya, soles, shoulder, palms and ears are massaged.
- Dhoomapana

### Probable mode of action of Nasya

- Acharya Charaka and Vagbhata describe NASA as *sirasodwaram*, which is the easiest and adjoining opening for administration of medicines to the cranial cavity. The drugs administered will reach the Shringataka marma and spread through the openings of the siras of the eyes, ears, throat, and so on, to the head<sup>24</sup>.
- Various medicated sneha dravyas (siddha sneha) has mentioned for Nasya karmas. To achieve rapid diffusion through nasal mucosa the lipid soluble drugs are preferred as mucosal cilia are lipophilic in action. Hence, siddha sneha, on their administration, spread along the nasal mucous membrane. The networks of nasal blood and lymph vessels have many communications with those of the subdural and subarachnoid spaces. This fact is one of the important factors contributing to the extension of the mentioned drugs from the nose into the cranial cavity.

**Vascular Path:** Vascular path transportation is possible through the pooling of blood of nasal vein to the facial vein. Just at the opposite entrance, the inferior ophthalmic veins also get pooled as facial vein. Interestingly, both facial & ophthalmic veins have no venous valves in between. So 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 and intracranial organ is more likely in the head lowered position due to gravity. On these lines, the absorption of drug material into intracranial organs especially eyes can be considered. Vagbhata's notation of Shringataka Shrotas (Anterior cranial fossa) seems to relate with above explanation.

**Lymphatic path:** Drug transportation by lymphatic path, can reach direct into the C.S.F. It is known that arachnoid matter sleeve which is extended to the subarachnoid mucosal area of the nose along with olfactory nerve. Experiments have shown that the dye injected to arachnoid matter has caused coloration of nasal mucosa within seconds & vice versa also (Hamilton 1971).

## Anjana karma

Anjana is the major netra kriyakarma in which medicine is applied in the eye using Salaka/finger<sup>25</sup>. It is not only indicated for diseased eye but also as a part of dinacharya to maintain the health of eyes<sup>26</sup>. It is a chief procedure for the management of nethrarogas especially drishtigatha rogas. Snehananjanas are special anjanas indicated for Vata vitiated conditions of the eye and specially mentioned in drishtigata rogas (Vatika timira). It is prepared by muscle fat of animals.<sup>27</sup>

### Time of anjana<sup>28</sup>

After shodhana process if Doshas are exhibiting their symptoms and are residing in the eyes, then Anjana karma is done. This karma can be done in morning and evening according to the dosha involved and clinical conditions. Teekshnanjana can apply in the night. Anjana in kaphaja netra rogas should be done at morning and in vataja netra rogas during evening.

### Procedure of Anjana<sup>29</sup>

#### Poorvakarma

Rogi pareeksha for arhata and anarhata. It is contraindicated if pain, gritting sensation, oedema, lacrimation, redness and presence of itching sensation are there in the eyes.

#### Pradhan Karma

- The patient is made to sit in a comfortable chair. The eyelids are drawn apart using the thumb and index finger of the left hand. The medicine is taken in the Salaka and is applied using the right hand from the kaneenaka to apanga and vice versa along the inner aspect of the lower eyelid below the Krishna mandala.
- After the application, the patient is asked to close his eyes and move the eyeball in all directions for uniform spread spreading of anjana.

#### Pashatkarma

When the irritation subsides watering kshalana is done with appropriate kshalanadravya.

## MODE OF ACTION OF ANJANA KARMA

- Action of anjana is well clarified in Sushruta Samhita. Anjana by its innate quality empties the Doshas aggregated in the netra, vartma, sira, akshikosha and Shringataka and are disposed off from the eye through distinctive channels. The nasolacrimal duct which opens underneath the inferior meatus empties the Doshas from the eye.<sup>30</sup>
- It is well comprehended that anjana has extensive variety of activity particular to eye. When sneha dravyas are utilized as anjana medication, they could be having sustained nourishing impact on netra, vartma, akshikosha, shira, Shringataka etc.
- Different nerves pertaining to the eye may get stimulated through anjana karma.

- While explaining the mode of action of anjana Acharya has given immense importance to the term 'Shringataka'. From the Samhita it is clear that Shringataka is a sadyapranahara marma, situated in siras, nourishes the indriyas.

## SHIRODHARA

It is a type of Murdhasneha, in which suitable Taila is continuously poured on the fore head in an organized manner from a specific height, allowing spreading over the scalp for a specific time period. In this procedure medicines other than oil like medicated ghee, milk, buttermilk etc. can also be used. It is usually done in Anxiety, Insomnia, Neurological, Psychological, and Psychosomatic disorders. Murdha taila<sup>31</sup> modality of treatment includes<sup>32</sup> Abhyanga, Seka, Pichu, Sirobathi. These four types are best lines of treatment to relieve the disease of the head in their succeeding order. Sirodhara is nothing but seka.

### Procedure of Shirodhara

#### Poorvakarma

- Rogi pareeksha for arhata and anarhata.
- Abhyanga should be done over the face, neck, shoulder and chest. (Whole body Abhyanga is ideal) of the patient. After closing the eyes cotton is kept over the eye lids and it should be tied by Gauze around the head above the eyebrows to avoid entry of medication in the eyes.
- Ear plug should be applied.
- Patient is asked to lie on droni in supine position.

#### Pradhan Karma

- Then lukewarm dhara Dravya is poured into the earthen ware or dharapatra and allowed to produce dhara with cotton varthi, which should be hanging hangs down 4 inches above the forehead of the patient.
- A uniform speed is to be maintained during the entire process. By moving dharapatra in an oscillatory fashion dhara Dravya is made to fall on entire length of forehead in specific rhythm. Patient should not feel any discomfort.
- The drug which flows down from the forehead will flow down the droni and is collected in a vessel.
- The Dravya from this vessel is collected and reused after made lukewarm. Temperature of the Dravya is to be maintained throughout the procedure.
- **Time and Duration:** The procedure can be done continuously for 7 days for a period of 30 to 60 min in morning hours.

#### Pashatkarma

- On completion of Dhara process, the head of the patient is wiped out and made dried. This is followed by a short duration of rest and massage of the body including head with oil and then a lukewarm bathe.
- The patient is advised to have a light diet, avoid exposure to direct air.

### Mode of action of Sirodhara

Tarpaka kapha present in the head is responsible for support and Nourishment of the indriyas by its Snehana property<sup>33</sup>. Remarkable on the above depiction of Sushruta, Dalhana has offered two interpretations with

### Respect to the activities of Tarpaka Kapha

1. Nourishment of the Mastishka and Indriyas.
2. Empower them to perform their particular functions.
  - The cerebrospinal liquid, which secures, helps and supports the mind, is closest to Tarpaka Kapha. Further fluid partition of various sense organs like lymph in the skin, endolymph and perilymph in the inner ear, aqueous and vitreous humour in the eye, the salivation in the mouth and mucosal secretion of nose can also be taken into consideration as Tarpak kapha. All these are particularly nourished by Sirodhara for proper functioning of all sense organs including eyes.
  - Absorption occurs through skin. Medicated oil is poured continuously for longer time its contact period is increased hence absorption. Medicine used is Luke warm to facilitate more absorption.
  - It has proven its efficacy in reducing stress and strengthens the emotional status.

### Tarpana and putapaka

#### Tarpana

Tarpana is derived from the “trp”dhatu literary means to nourish. It is one amongst the nethrakriakarmas<sup>34</sup> in which medicine is applied in eyes for a specific period of time. This procedure provides advantage of higher contact time of the medication with the eye. It is indicated for almost all type of eye diseases and provides benefits of clear vision, discernment of colours, lightness and proper functioning of eye by nourishing it.

#### Poorvakarma

- Rogi pareeksha for ahara and anaharata.
- Tarpana should not be performed on a cloudy, very hot or very cold days.

#### Pradhan karma<sup>35</sup>

- Patient position – Supine lying.
- It is generally performed in morning or evening time.
- Two circles made of green gram paste of two angula height are encircled around the eyes to withhold the tarpana drug inside.
- The medicine (ghee) is melted, tempered to body temperature and poured in eyes with closed lids up to the level of ‘pakshma agra’.
- Patient is allowed to blink eyes slowly for the whole procedure.
- After attainment of samyaka lakshana a small hole is made at ‘apanga’ region and used medicated ghee is collected in a vessel.

- Tarpana is preferably done in morning hours for a period of 1000 matra kala or till attainment of samyaka lakshana.<sup>36</sup>

#### Paschat karma

Mild Swedana with the help of cotton dipped in lukewarm water can be used.

#### PUTAPAKA

Putapaka is nethrakriya karma, performed as Paschat karma of Tarpana. It is administered same as tarpana and directed in all diseases where tarpana is indicated. It helps in rejuvenating eyes which are tired due to tarpana.<sup>37</sup>

#### Poorvakarma

Tarpana

#### Pradhan karma

- Administered same as *tarpana*.
- The medicine is made ‘koshna’ and applied.

**Duration-** 200 matra<sup>38</sup>

#### Paschat karma

1. Eye bandage with Mallika (Jasminum sambac Ait. Oleaceae) or malathi kusuma (Aganosma dichotoma)<sup>39</sup> in night.
2. *Dhoomapana*<sup>40</sup>

### Mode of action of tarpana and putapaka

In tarpana and putapaka large quantity of medication is allowed to be in contact with eyes for longer duration. Bioavailability increases with the increase of concentration and contact time. This higher concentration causes pooling of medication results in deeper permeation of medication. It may be of prime significance to extend the medicine to the posterior segment of eye which is still a cumbersome task by means of topical application.

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37. Dr.Kaviraj Atrideva Gupta & Vaidya Yadhunandana Upadhyaya, Ashtanga Hridaya, Chaukhambha Prakashana, A.H.Su.24/7-24.
38. Y.T.Acharya, Sushruta Samhita, Chaukhambha Samskrit Samsthana, Su.Ut.18/6-8.18/23
39. Dr.Kaviraj Atrideva Gupta & Vaidya Yadhunandana Upadhyaya, Ashtanga Hridaya, Chaukhambha Prakashana, A.H.Su.24/20-24.
40. Y.T.Acharya, Sushruta Samhita, Chaukhambha Samskrit Samsthana, Su.Ut.18/43.

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