

A text book of **PANCHAKARMA**

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INTRODUCTION

1. Introduction to Panchakarma, Panchakarma and Shodhana, its importance for promotion of health, prevention, and treatment of diseases.

Panchakarma presents a unique approach of Ayurveda with specially designed five procedures of internal purification of the body through the nearest possible route. Panchakarma has a full therapy role as promotive, preventive & curative procedure. Panchakarma is not only good for alleviating the disease but also a useful modality of treatment in preserving and promoting the perfect health. Besides the application in the treatment of disease, they are also used as preparatory measures before surgery and before administration of rasayana and vajikarana therapy and in kshetrikarana treatment (before internal administration of the mercurial & metallic preparations).

The order of treatment is

1. Purvakarma → dipana, pachana, snehana & swedana
2. Pradhana karma → vamana, virechana, niruha basti, anuvasana & nasya
3. Paschat karma → samsarjana krama, rasayanadi karma, samana prayoga

Definition:

Panchakarma refers to five major therapeutic procedures, which have purificatory and / or nourishing effects. These procedures can be used as health promotive, disease preventing or curative measures.

Lakshana of karma:

1. बहु - अति कर्तव्यतायोगी → capacity of multiple and broad spectrum action.
2. दोशनिर्हरण शक्ति → The capacity of eliminating the dosha.

Panchakarma & shodhana:

According to charaka among five karma only four does shodhana, anuvasana is considered as karma because it performs the expulsion of stool and pakvashaya gata vata. But according to vagbhata panchakarma & pancha shodhana are same.

The process of the forceful expulsion of the dosha is known as shodhana. It is of five types viz.

1. Niruha
2. Vamana
3. Virechana
4. Nasya
5. Raktamokshana

From the above evidences it is clear that panchakarma and shodhana are not the same.

Importance of panchakarma in promotion of health:

नाविशुद्ध शरीरस्य युक्तो रसयनो विधिः ।

न भाति वाससि क्लिष्टे रङ्गयोग इवाहितः ॥

If rasayana is administered without purification of the body then it will yield benefits just like the colouring of dirty cloths.

Shodhana is essential to obtain effects of Rasayana and vajikarana drug and if without shodhana they are administered, then they have little effect.

These measures are indicated as preparatory procedures before the administration rejuvenation therapy & aphrodisiac therapy.

Panchakarma plays vital role in the preservation, maintenance & conversation of health & promotion of longevity.

Importance of panchakarma in prevention of diseases:

Regular practice of it will prevent the achaya purvaka vata prakopa, dhatu kshaya and also does mala shodhana.

Practice of panchakarma in ritucharya will prevent the diseases by expelling the chaya poovaka prakupita doshas and sthana samshraya avastha of shat kriyakala.

Maharshi charaka advocated shodhana followed by rasayana as prophylactic measures for the prevention of epidemics and pandemics.

Employing panchakarma followed by rasayana & vajikarana chikitsa for parents can effectively prevents the occurrence of autoimmune disorders and genetic diseases in the progeny.

Judicious use of panchakarma can prevent the metastasis of different types of cancers.

Importance of panchakarma in treatment of diseases:

दोषाः कदाचित् कुप्यन्ति जिता लङ्घनपाचनैः ।

जिताः संशोधनैर्यै तु न तेषां पुनरुद्भवः ॥

The dosha that are nullified by shodhana never recurs but those pacified by langhana, pachana etc. may recur.

दोषाणां च द्रुमाणां च मूलेऽनुपहते सति ।

रोगाणां प्रसृतानां च गतानामागतिर्ध्रुवा ॥

If the plant is destroyed except root, then it grows again, in the same way, if dosha are not destroyed from the root, they again cause diseases.

Shodhana therapy acts on the root sites of dosha and remove them from the body, so that there is no further nutrition to the other dosha sthana leading to a healthy condition, thus panchakarma is a radical treatment.

मलापहं रोगहरं बलवर्णप्रसादनम् ।

पीत्वा संशोधन सम्यग्युषा युज्यते चिरम् ॥

If shodhana is administered properly it pacifies the disease, destroys the disease and increases the bala & varna.

Without breaking the boundary wall, it would not be possible to dry up a pond. Similar is in the case when the dosha are exceedingly aggravated.

All disorders occur due to suppression and forceful expulsion of natural urges. Panchakarma is the best treatment for the diseases caused by suppression of natural urges.

Vatanulomana is the prime line of treatment for diseases due to suppression of urges and basti is best among vatanulomana therapies.

Vamana & virechana followed by rasayana can effectively cure prediabetes condition and also the diabetes.

Weak digestive fire is the cause for all diseases. For correction of digestive fire panchakarma is the best treatment.

2. Trividha Karma- Purva, Pradhana and Pashchat Karma in relation to Shodhana and their importance.

Purvakarma:

- | | |
|------------|------------|
| 1. Dipana | 3. Snehana |
| 2. Pachana | 4. Svedana |

Pradhana karma:

Charaka

- | | |
|--------------|--------------|
| 1. Vamana | 4. Anuvasana |
| 2. Virechana | 5. Nasya |
| 3. Niruja | |

Sushruta & Astanga hridaya

- | | |
|--------------|------------------|
| 1. Vamana | 4. Nasya |
| 2. Virechana | 5. Raktamokshana |
| 3. Basti | |

Paschat karma:

- | | |
|---------------------|-------------------|
| 1. Samsarjana krama | 3. Samana prayoga |
| 2. Rasayanadi karma | |

Purvakarma (preparatory procedures):

Purvakarma is needed to prepare the body with prescribed methods to organize the body for eliminating the dosha.

Purvakarma includes:

1. Dipana (enhancing the agni)
2. Pachana (digestion of ama)
3. Snehana (for dosha utklesha)
4. Svedana (dosha: shakha → koshtha)

Need of purva karma:

Vamana and virechana are the purificatory procedures against the normal physiological processes of the body. Anything against any physiological activity of the body is bound to aggravate the vata dosha. Hence sneha, mardava etc. properties are helpful in protecting the body from the negative onslaught of vata dosha.

Importance of purvakarma:

- Snehana helps to increase drava guna needed for the transfer of vitiated dosha.
- As the fire causes the water in moist wood to trickle out from every pore, similarly sudation causes the adhered toxic matter to melt and flow out in a person who has been previously oleated.
- As the dirt of cloth is separated and washed by soap & water, so by oleation and sudation, the toxic matter in the body is segregated and washed out by emesis or purgation.
- Samshodhana given without snehana and svedana would destroy the body like the bending of dry stick causes breaking of stick

Pradhana karma:

1. Vamana: when there is excessive accumulation of dosha in the pranavaha srotas.
2. Virechana: when excess pitta is accumulated in the koshtha
3. Basti: basti is the most effective treatment of vata disorders.
4. Nasya karma: dosha accumulated in the sinus, throat, nose or head region is eliminated through the nose.
5. Raktamokshana: rakta dushti causes repeated attacks of skin disorders. In such conditions bloodletting is advocated.

Paschat karma:

After bio-purification, agni & strength of body becomes weak, so to restore the strength of Agni & body special dietetic regimen is advised.

Samsarjana krama:

It is the dietetic plan after the purification to restore the agni and bala.

Importance of samsarjana krama:

- Due to elimination of dosha from the body after samshodhana karma agni becomes weak hence peyadi samsarjana krama should be employed.

- Samana vayu & kledaka kapha are disturbed in vamana. In virechana samana vata, pachaka pitta & apana vayu are disturbed. So, to normalize them samsarjana krama is vital & essential.
- Provides nutrition & helps to normalize the body tissues, which are weakened due to purificatory process.

3. Indications of Shodhana, Shodhana according to Ritu

Indication of shodhana:

Before the administration of rasayana and vajikarana aushadha yoga.

For prevention of kalaja roga

Before the administration of rasa aushadhi and samana yoga

Shodhana is indicated in the stage of bahu dosha.

Shodhana is indicated in sthaulya, uttama bala, bahu pitta, bahu kapha, bahu ama dosha, jvara, chardi, atisara, hridroga, vibandha, gourava, udgara, hrillasa etc.

In tiryaka gata dosha

Shodhana is indicated in apathya nimitaja dosha prakopa.

In emergency conditions like poisoning.

Contraindications of shodhana:

- Hemanta, shishira, grishma rtu.
- If the patient does not follow the physician's advice, is aggressive, fearful, doubtful, ungrateful, fickle minded, hates the physician etc.
- Atikshina bala, atikshina mamsa
- Mumursa (who is in the end stage of disease and predicted to die soon)
- Upavasita, alpagni, abhighata, kshatakshina
- Bala, vriddha, garbhini, Sukumara
- Alpadosha avastha

Unfit age for panchakarma:

Karma → contraindicated age

1. Virechana → < 10 years & > 70 years
2. Nasya → < 7 years & > 80 years
3. Dhuma → < 18 years
4. Kavala → < 5 years
5. Siravyadha → < 16 years & 70 years

Symptoms of bahu dosha:

अविपाकोऽरुचिः स्थौल्यं पाण्डुता गौरवं क्लमः। पिडकाकोठकण्डूनां सम्भवोऽरतिरेव च॥
 आलस्यश्रमदौर्बल्यं दौर्गन्ध्यमवसादकः। श्लेष्मपित्तसमुत्क्लेशो निद्रानाशोऽतिनिद्रता॥
 तन्द्रा क्लैब्यमबुद्धित्वमशस्तस्वप्नदर्शनम्। बलवर्णप्रणाशश्च तृप्यतो बृंहणैरपि॥
 बहुदोषस्य लिङ्गानि तस्मै संशोधनं हितम्। ऊर्ध्वं चैवानुलोमं च यथादोषं यथाबलम्॥

Shodhana according to rutu:

- The dosha prakopa occurring seasonally will cause kalaja roga (seasonal diseases). So, the acharyas told to remove the specific dosha during specific aggravating seasons, so that kalaja roga does not occur.
- The suitable time for shodhana therapy in healthy person for prevention of roga is Vasant for kapha dosha.
Pravruta for vata
Sharada for pitta dosha.

Shodhana ayogya kala:

- During hemanta, body is exposed to great discomfort because of affliction by excessive cold. The dosha do not get detached and remain adhered to the channels in the body due to their excessive stability and firmness caused by the effect of cold wind.
- The drugs used for shodhana i.e., vamana are ushna in nature but because of affliction with excessive cold their therapeutic effectiveness, is diminished so that it cannot produce the desired effect and ayoga of vamana / virechana occurs and body gets afflicted with vata prakopa.
- During grishma there is a great discomfort in the body due to affliction by excessive heat.
- Dosha remains detached due to their excessive looseness caused by the contact of hot wind and sharp sunlight.
- The shodhana drugs are hot in nature, so when they are used in this time, their therapeutic effect is more potent because of affliction of excessive heat leading to atiyoga i.e., excessive elimination of dosha.
- During varsha ritu, the bodies of animals become excessively deliquescent (klinna) because of exposure to rain water invisibility of sun, stars, over casting of sky by clouds and presence of mud and water all over the earth.
- There is impairment of all drugs because of their contact with water and the moist wind associated with clouds.
- All these factors lead to ayoga or hina yoga of vamana and it takes long time for the body to recover from the effects of these shodhana therapies.
- Therefore, in the above mentioned 3 seasons ending with varsha ritu i.e., Vamanadi karma should not be administered, unless there is an emergency.

4. General Principles of doshagati from Koshta to Shaka and vice versa

Kostha to shakha gati:

व्यायामादूष्मणस्तैक्ष्ण्याद्धितस्यानवचारणात्

कोष्ठाच्छाखा मला यान्ति द्रुतत्वान्मारुतस्य च ॥

- By indulging in vyayama, ushna dravya sevana, tikshna dravya sevana, ahita acharana and maruta drutatva (instability of vata) the dosha will be moved from koshta to sakha.
- These vitiated doshas stay in the peripheral regions in a dormant state and do not cause any disease till the season or environment is conducive for them to act.
- The doshas wait for other favourable provocative factors in the form of the region, season etc. to cause diseases.

Shakha to kostha gati:

वृद्ध्या विष्यन्दनात् पाकात् स्रोतोमुखविशोधनात्

शाखा मुक्त्वा मलाः कोष्ठं यान्ति वायोश्च निग्रहात् ॥

By increase of doshas, liquefaction of dosha, digestion of dosha, cleansing of channels and control of vayu the doshas detaches from shakha and comes to kostha.

Flow chart of mode of action of purva karma:

Snehana dravya reach upto the cellular level by sukshma guna → Snehana increases the dosha by their drava guna and kledana karma and optimum saturation of dosha, paripakva dhatu and sanchita mala occurs in all cells of the body (vridhhi) → Svedana by virtue of ushna, tikshana, sukshma, drava, sara guna, liquifies dosha present in sthoola and sukshma srotas (vishyandana) → Pachana and svedana therapy increases agni at all levels and digest the ama dosha and detaches the dosha from dhatu & srotas (Paka) → pachana and svedana removes the obstruction in srotas by digesting the ama doshas, just like in fever (srotomukha vishodhana) → snehana and svedana pacifies the vata dosha by mainly snigdha & ushna guna respectively (vayoscha nigrahata) → by controlling the vata and by snehana and svedana dosha, move from sakha to kostha.

5. General precautions (Pariharya Vishaya) for Panchakarma

Parihara kala:

This is the period in which the restrictions should be observed. This period is equal to the days required for panchakarma therapy except for basti karma, in which it is double the time required for the course of basti therapy.

Parihara vishaya:

Dietetic & behavioural restrictions which should be observed before, during and after the course of panchakarma therapy are called as parihara vishaya.

Ashta mahadoshakara bhava:

उच्चैर्भाष्यं रथक्षोभमविचङ्क्रमणासने।

अजीर्णाहितभोज्ये च दिवा स्वप्नं समैथुनम्॥

तज्जादेहोर्ध्वसर्वाधो मध्यपीडामदोषजाः।

श्लेष्मजाः क्षयजाश्चैव व्याध्यः स्युर्यथाक्रमम्॥

Factors → complications

- Ucca bhasya → urdha desha roga
- Ratha kshobha → sarva desha roga
- Ati cankramana → adho desha roga
- Atyasana → madhya desha roga
- Ajirnasana → ama doshaja roga
- Ahitasana → doshaja roga
- Divaswapna → kaphaja roga
- Maithuna → kshaya roga

6. Specifications of Panchakarma theatre and necessary equipment

Guidelines for establishing standard panchakarma centre.

a. Man power requirement:

Qualified panchakarma physicians → 2 (1 male, 1 female)

Trained / skilled panchakarma technicians → 5 (2 males, 3 females)

Admin / cash / enquiry → 1 (1 male / female)

Housekeeping staff → 1 (1 male / female)

Pharmacist → 1 (1 male / female)

b. Space requirement:

Consultation rooms → 2 (10' × 10')

Waiting hall → 1 (20' × 20')

Panchakarma treatment rooms → 4 (10' × 14')

c. Equipments, furniture, miscellaneous items:

Multipurpose treatment tables → 2

Sarvanga baspa sveda yantra cum abhyanga table → 1

Sirodhara – whole set → 1

Nadi sveda yantra → 1

Sirobasti yantra – leather cap → 1

Avagaha sveda yantra (in bathroom) → 1

Stainless steel utensils 5 litre, 8 litre, 10 litre → each 2

LPG cylinder, full set with single burner stove → 6 to 8

Refrigerator → 1

Medicines & medicated oils

Daily supply of fresh medicinal leaves for treatment

Office stationery, computer, shelves, tables, chairs, stools, telephones, posters etc.

Lab attachment for investigation

B.P. instrument, thermometer, measuring glass, vessels, weighing machine, case records files.

Cot with bed in rest room → 2

d. Equipment & medicines:

Massage table (preferably wooden) each of 7 feet × 3 feet size.

Droni (wooden) each of 9 feet × 2.5 feet size

Steam cabin or chamber (wooden)

Pressure cooker

Face steamer

Sirodhara pot

Sirobasti yantra

Emesis chair

Enema can (1200ml capacity)

Enema syringe (200ml capacity)

Rubber catheter

Uterine canula

I.V. drip set

Electric heating apparatus or other heating device.

Other equipment / instruments required for panchakarma

e. Additional requirements:

Steam bath and sauna bath facilities should essentially be available

Provisioning of water, electricity with backup arrangement and sanitation facilities should be adequate.

Medicated and plain hot water facility should be available for bath and other therapeutic purposes.

Medicines used in the centre should be of quality & reputed firms and duly labelled.

Essential medicines for panchakarma centre:

Taila:

- | | | |
|----------------|---------------------|--------------------|
| • Anu taila | • Nirgundi taila | • Triphaladi taila |
| • Brahmi taila | • Sahacharadi taila | • Narayana taila |

Ghrita:

- | | |
|--------------------|----------------------|
| • Brahmi ghrita | • Phala ghrita |
| • Baladi ghrita | • Triphala ghrita |
| • Dashamula ghrita | • Panchagavya ghrita |

Churna / leha / modaka / gutika / arishta:

- Saindhava
- Avipatikara churna
- Abhayadi modaka
- Triphala churna
- Masha churna
- Trivrut leha
- Draksharishta

Kwatha churna:

- Bala
- Chandanadi
- Dashamula
- Panchatikta
- Rasnadi

Medicines for management of complications:

- Chandrakala rasa
- Ghrita
- Ghrita manda
- Haritaki churna
- Hemagarbha pottali rasa
- Phala varti
- Piccha basti kwatha churna
- Pravala pishti
- Sankha vati
- Sivakshara pachana churna

7. Importance of Koshta and Agni Parikshan

Types of agni:

Agni is classified into 4 types based on the bala viz.

1. Tikshana → pittaja
2. Manda → kaphaja
3. Vishama → vataja
4. Sama → tridoshaja

These types originate at the time of conception as a part of prakriti.

These are considered while selecting the patient for panchakarma. Always while examining the past history of patient should be taken when he was healthy.

Another type of classification told in the context of dashavidha pariksha which is viz.

1. Pravara
2. Madhyama
3. Avara

These are considered for dose fixation, formulating the drugs, planning of diet etc. while examining, the current history of patient or person should be taken to know the strength of agni.

Agni pariksha:

Agni assessment depends upon the two components viz. abhya vaharana shakti & jarana shakti

a. Assessment for abhya vaharana shakti:

The person not at all taking food in less quantity once in a day → avara

Taking food in less quantity twice a day or moderate quantity twice a day → madhyama

Taking food in normal quantity twice a day or excessive quantity twice or thrice → pravara

b. Evaluation of jarana shakti:

Jirna ahara lakshana:

- | | |
|--------------------------|------------|
| 1. Udagara suddhi | 4. Laghuta |
| 2. Utsaha | 5. Kshudha |
| 3. Yathochita malotsarga | 6. Trishna |

Absence of all the symptoms or presence of 1 to 2 symptoms → avara

Presence of 3 – 5 symptoms → madhyama

Presence of all 6 symptoms → pravara

Application of agni pariksha:

- Dose fixation of sneha
- Selection of type of sneha
- In mandagni avara matra of sneha is recommended.
- In mandagni brimhana type of sneha is recommended.
- In krura kostha and mandagni sakshara lavanayukta sneha should be given till the complete pacification of vata in kostha therefore shodhanartha sneha should be stored.
- Dose fixation of virechana drugs
- In alpa agni bala sadhyosneha is recommended.

Kostha pariksha:

The word kostha applies to both physiological and anatomical entities. The physiological entity is the nature of bowel habit since from birth and the anatomical entity includes all the organs of abdominal and thoracic cavities.

Kostha may be classified into three viz.

1. Mridu (mild)
 2. Madhyama (medium)
 3. Krura (hard)
- In mridu kostha there is a predominance of pitta in kostha and person having this purges even by milk.
 - In krura type there is a predominance of vata & kapha and purgation occurs with greatest difficulty.
 - While the in madhyama there is an equilibrium of three doshas and this is the most general type.
 - Purgatives should be administered in small doses to persons of mridu kostha, in moderate doses to those of madhyama kostha and in large doses to person of krura kostha.

Assessment criteria for koshta:

1. Mridu koshta:
 - Passes stools daily once or twice regularly
 - Semi formed or formed stools
 - Easy defecation
 - Less time required for defecation
 - Krita sajna (satisfactory) after defecation
 - Previous history shows often loose stools due to intake of ksira, ushna jala, mamsa rasa, kanji, guda, ikshu rasa etc.
 - Minor laxative often causes diarrhoea.
2. Madhyama koshta:
 - Passes stool daily once
 - Susamhata mala (formed stools)
 - Requires minimum stress
 - Requires little long time compared to mridu koshta
 - Krita sajna (satisfactory) after defecation doesn't often encounters diarrhoea
 - Requires medium dose of purgatives and does not purgate by minor laxatives or milk etc.
3. Krura koshta:
 - Does not pass stools regularly
 - Kathina or sushka mala pravriti
 - Requires enormous straining
 - Requires long time for defecation
 - Krite api akrita sajna (unsatisfactory defecation)
 - Seldom encounters diarrhoea and more frequently constipation
 - Requires potent (strong) purgatives

Application of koshta pariksha:

1. Snehana karma:

For snehana mridu, madhyama and krura koshta require 3, 5 and 7 days respectively.

2. Vamana karma:

Koshta → vamana drug

Mridu (bahu kapha) → mridu & alpa matra

Madhyama (madhyama kapha) → madhyama virya & madhyama matra

Krura (alpa kapha) → tikshna & uttama matra

3. Virechana:

Alpa, madhyama & uttama matra of aushadhi is given respectively in mridu, madhyama and krura koshta respectively.

4. Basti karma:

Mridu, madhyama and tikshana dravya basti is given for mridu, madhyama and krura koshta patients respectively.

In mridu koshta, madhu tailika basti are preferred.

Conclusion:

- So, from the above discussion, it can be concluded that agni and koshta pariksha are important tools, which have been misinterpreted and not used properly.
- For the administration of drugs and also in every stage of panchakarma agni & koshta pariksha plays a key role.
- If anyone administers purvakarma and pradhana karma of panchakarma without considering the agni and koshta; it leads to severe complications even death may occur.
- So, it is obligatory to include agni and koshta pariksha in the panchakarma practice for optimum results.

SNEHANA**1. Etymology and Definition of Sneha and Snehana****Etymology of sneha & snehana:**

Sneha:

The word sneha is derived from the root 'snih.' It has two meanings, one being 'snih pritaui' means to render affection and the other 'snih snehane' meaning to render lubrication.

Snehana:

Snehana word denotes a therapy which increases mainly snigdha guna in the body.

Definition of sneha and snehana:

Sneha:

The term sneha implies that a substance that brings oiliness or unctuousness.

Snehana:

स्नेहनं स्नेहविष्यन्दमार्दवक्लेदकारकम् ।

The procedure by which Snigdha, vishyandana, Mardavata and kledana is achieved is known as snehana.

2. Snehayoni- Sthavara and Jangama: Properties of Sneha dravyas, Snehopaga Dravyas**Sneha yoni: (Sthavara and Jangama)**

Sthavara: phala sneha & sara sneha

Jangama:

Natural → milk, medas, majja, egg

Artificial → vasa, navanita, dadhi, bee wax, ghee.

Animal source of oils and fat (Jangama sneha):

Fish, fair toothed animals, avians constitutes the sources of animal fats.

Dadhi, ksheera, ghrita, Amisha (meat), vasa, majja are the products of animals and birds.

Properties of sneha dravyas:

गुरुशीतसरस्निग्धमन्दसूक्ष्ममृदुद्रवम्]

औषधं स्नेहनं प्रायो, विपरीतं विरुक्षणम्]

The drug having properties like drava, sukshma, sara, snigdha, picchila, guru, sita, manda and mridu is called the snehana drug.

Snehopaga dravyas:

- | | |
|---------------|-------------------|
| 1. Mrudvika | 6. Kakoli |
| 2. Madhuka | 7. Ksheera kakoli |
| 3. Madhuparni | 8. Jeevaka |
| 4. Meda | 9. Jeevanti |
| 5. Vidari | 10. Shalaparni |

3. General knowledge of Ghrita, Taila, Vasa and Majja with their specific utility and actions, Yamaka, Trivruta and Maha Sneha**Ghrita:**

Ghrita is best among all the jangala sneha, because it is having a special capacity of adoptability i.e., “samskara sya anuvartanam” and among all types of ghrita. Goghrita is best.

Classification:

1. Nava – upto 1 year
2. Purana – more than 1 year

Purana → 1 to 10 years

Pra purana → 11 to 100 years

Kaumbham (कौम्भं) → 101 to 110 years

Maha ghrita → more than 110 years

- Rasa → madhura; purana ghrita → katu
- Virya → sita; purana ghrita → ushna
- Vipaka → madhura; purana ghrita → katu
- Guna → snigdha, shita, guru, mridu, Soumya, sukshma, Anabhishtyandi; purana ghrita → sara, tikshna, laghu
- Doshaghnata → vata – pitta samaka, kaphakara; purana ghrita → tridosahara
- Karma →

घृतं पित्तानिलहरं रसशुक्रौजसां हितम्। निर्वापणं मृदुकरं स्वरवर्णप्रसादनम्॥

It mitigates pitta & vata enhances the svara, varna, teja, bala, rasa, sukra and ojas, cakshushya, medhya, vayasthapaka, dahashamaka, alpa abhishtyandi, vrishya best for kshatakshina.

- Seasonal indication → sharada rutu

Suitable condition for use of ghrita:

Vata pitta prakruti, vata pitta rogi

Those desires for longevity, bala varna, svara pushti, smriti, medha, dheer, agni

Vridha, bala, dahapidita, sastra pidita, visha pidita

Taila:

- Properties:
Rasa: madhura
Anurasa: tikta, kashaya
Guna: tikshna, guru, snigdha, vikasi, sara
Virya: ushna
Vipaka: madhura
- Action on dhatu: good for rasa, sukra and oja, rasayana
- Karma:

मारुतघ्नं न च श्लेष्मवर्धनं बलवर्धनम् त्वच्यमुष्णं स्थिरकरं तैलं योनिविशोधनम्॥

Mitigates vata & kapha, increases pitta, bala, varna, Mardavata, tvachya, krimighna, garbhashaya shodhaka, bhagna sandhanakara, it subsides yoni – sira – karna sula.

- Seasonal indication: pravruta, sita kala
- Suitable condition for use of taila:
Vata prakruti, shleshma vriddhi, meda vriddhi, chala – sthula udara, taila satmya, vata vyadhi, krimi koshthata, nadi vrana, bhagna, krura koshtha and those desires of strength, tanutva, laghuta.

Vasa:

- Vasa is the sneha present in mamsa called as muscle fat.
- Properties: these are similar with the mamsa of animals from which they are obtained.
- Seasonal indications: Madhava kala
- Suitable conditions for use of vasa:

विद्धभग्नाहतभ्रष्टयोनिकर्णशिरोरुजि पौरुषोपचये स्नेहे व्यायामे चेष्यते वसा॥

Vasa is useful in healing punctured wounds, fractures, accidental trauma, prolapsed vagina, pain in ear and head, enhancing virility, oleation and for those doing physical exertion.

Majja:

The fatty network of connective tissue that fills the cavities of bones.

- Properties: properties should be understood based on the source of majja.
- Seasonal indications: Madhava rutu
- Suitable condition for use of majja:
Majja improves strength, semen, rasa, kapha, meda, and majja. It especially strengthens bone and useful for oleation.
- Ghrita is best among all. Taila comes after ghrita, then vasa & majja. In the same manner they are pittasamaka.
- Taila is guru than ghrita, vasa is guru than taila and majja is the guru than vasa.

Action of four sneha on dosha.

पित्तघ्नास्ते यथापूर्वमितरघ्ना यथोत्तरम्॥

घृतातैलं गुरु वसा तैलान्मज्जा ततोऽपि च।

On pitta dosha → vasa – pittaghna, majja – pittaghna tara, ghrita – pittaghna tama

On vata & kapha dosha → majja – vata shleshmaghna, vasa – vata shleshmaghna tara, taila – vata shleshmaghna tama

Yamaka, trivrut & maha sneha:

Yamaka sneha: the combination of any two sneha

Trivruta sneha: the combination of any three sneha

Maha sneha: the combination of all the four sneha

Properties of maha sneha:

The unctuous substances produce oiliness, vitality, complexion, strength and growth in the body and provide relief in vata, pitta & kapha.

4. Metabolism of fat**Metabolism of fat / lipid metabolism:**

- Lipid metabolism entails the oxidation of fatty acids to either generate energy or synthesize new lipids from smaller constituent molecules.
- Lipid metabolism is associated with carbohydrate metabolism, as products of glucose (such as acetyl CoA) can be converted into lipids.
- Lipid metabolism begins in the intestine where ingested triglycerides are broken down into smaller chain fatty acids and subsequently into monoglyceride molecules by pancreatic lipases; enzymes that break down fats after they are emulsified by bile salts.
- When food reaches the small intestine in the form of chyme, a digestive hormone called cholecystokinin (CCK) is released by intestinal cells in the intestinal mucosa.
- CCK stimulates the release of pancreatic lipase from the pancreas and stimulate the contraction of the gall bladder to release stored bile salts, into the intestine.
- CCK also travels to the brain, where it can act as a hunger suppressant.
- Together the pancreatic lipases and bile salts break down triglycerides into free fatty acids. These fatty acids can be transported across the intestinal membrane.
- However, once they cross the membrane, they are recombined again to form triglyceride molecules.
- Within the intestinal cells, these triglycerides are packaged along with cholesterol molecules in phospholipid vesicles called chylomicron.
- The chylomicrons enable fats and cholesterol to move within the aqueous environment of lymphatic and circulatory systems.

- Chylomicrons leave the enterocytes by exocytosis and enter the lymphatic system via lacteals in the villi of the intestine.
- From the lymphatic system, the chylomicrons are transported to the circulatory system.
- Once in the circulation, they can either go to the liver or be stored in fat cells (adipocytes).

Lipolysis:

- Lipolysis is the process of hydrolysis of triglycerides into fatty acids and glycerol.
- It takes place in the cytoplasm of the cell.
- The resulting fatty acids are oxidized by beta-oxidation into acetyl CoA which is used by the Krebs's cycle.
- The glycerol that is released from triglycerides after lipolysis directly enters the glycolysis pathway as DHAP.
- Because one triglyceride molecule yields three fatty acids molecules with as much as 16 or more carbon in each one, fat molecules yield more energy than carbohydrates and are an important source of energy for the human body.
- Triglyceride yield more than twice the energy per unit mass when compared to carbohydrates and protein.
- Therefore, when glucose levels are low, triglycerides can be converted into acetyl CoA molecules and used to generate ATP through aerobic respiration.

Ketogenesis:

- Ketogenesis is a metabolic pathway that produces ketone bodies, which provide an alternative form of energy for the body.
- If excessive acetyl CoA is created from the oxidation of fatty acids and the Krebs's cycle is overloaded and cannot handle it, the acetyl CoA is diverted to create ketone bodies.
- These ketone bodies can serve as a fuel source if, glucose levels are too low in the body.
- Ketones serve as fuel in times of prolonged starvation or when patients suffer from uncontrolled diabetes and cannot utilize most of the circulating glucose.
- In both cases, fat stores are liberated to generate energy through the Krebs's cycle and will generate ketone bodies when too much acetyl CoA accumulates.

Ketone body oxidation:

- Organs that have classically been thought to be dependent solely on glucose, such as the brain can use ketones as an alternative energy source.
- This keeps the brain functioning when glucose is limited.
- When ketones are produced faster than they can be used, they can be broken down into CO₂ and acetone.
- The acetone is removed by exhalation.
- The symptom of ketogenesis is that the patient's breath smells sweet like alcohol.

- This effects provides one way to telling if a diabetic is properly controlling the disease.
- The carbon dioxide produced can acidify the blood leading to diabetic ketoacidosis, a dangerous condition in diabetics.

Lipogenesis:

- Lipogenesis is the formation of fats from surplus glucose.
- When glucose levels are plentiful, the excess acetyl CoA generated by glycolysis can be converted into fatty acids, triglycerides, cholesterol, steroids and bile salts.
- This process called lipogenesis creates lipids from the acetyl CoA and takes place in the cytoplasm of adipocytes and hepatocytes.
- When you eat more glucose or carbohydrates than your body needs your system uses acetyl CoA to turn the excess into fat.
- Although there are several metabolic sources of acetyl CoA, it is most commonly derived from glycolysis.
- Acetyl CoA availability is significant, because it initiates lipogenesis.
- Lipogenesis begins with acetyl CoA and advances by the subsequent addition of two carbon atoms from another acetyl CoA. This process is repeated until fatty acids are the appropriate length.
- Because this is a bond creating anabolic process ATP is consumed.
- However, the creation of triglycerides and lipids is an efficient way of storing the energy available in carbohydrates.
- Triglycerides and lipids, high energy molecules are stored in adipose tissue until they are needed.

5. Achcha and Pravicharana of Sneha**Achcha:**

Achcha means intake of pure or only sneha (not mixed with other substances)

Taking large quantity of sneha after the digestion of previous night meal especially for shodhana is known as achcha sneha.

Aggravated pitta → ghee alone

Aggravated vata → ghee + salt

Aggravated kapha → ghee + yavakshara + trikatu

Types of achcha sneha:

1. Sodhana achcha sneha
2. Samana achcha sneha

Importance:

Produces snehana of all tissues quickly and thus aids in radical elimination or purification of doshas.

Indications:

स्नेहसात्म्यः क्लेशसहः काले नात्युष्णशीतले ।
अच्छमेव पिबेत् स्नेहमच्छपानं हि पूजितम् ॥

Contraindications:

स्नेहद्वेषी क्षामो मृदुकोष्ठः स्नेहमद्यनित्यश्च ।
अध्वप्रजागरस्त्रीश्रान्ता न अच्छं पिबेयुस्ते ॥

Vicharana sneha:

The administration of sneha internally or externally along with various kalpana after considering the dosha, satmya etc. factors is known as vicharana.

Pravicharana sneha bheda:

ओदनश्च वि लेपी च रसो मांसं पयो दधि। यवागूः सूपशाकौ च यूषः काम्बलिकः खडः॥२३॥
सक्तवस्तिलपिष्टं च मद्यं लेहास्तथैव च। भक्ष्यमभ्यञ्जनं बस्तिस्तथा चोत्तरबस्तयः॥२४॥
गण्डूषः कर्णतैलं च नस्तःकर्णाक्षितर्पणम्। चतुर्विंशतिरित्येताः स्नेहस्य प्रविचारणाः ॥२५॥

- | | | |
|---------------|-----------------|-------------------|
| 1. Odana | 9. Shaka | 17. Bhakshya |
| 2. Vilepi | 10. Yusha | 18. Abhyanjana |
| 3. Mamsa rasa | 11. Kambalika | 19. Basti |
| 4. Mamsa | 12. Khada | 20. Uttara basti |
| 5. Paya | 13. Saktu | 21. Gandusha |
| 6. Dadhi | 14. Tila pishta | 22. Karna taila |
| 7. Yavagu | 15. Madya | 23. Nasta karma |
| 8. Soup | 16. Leha | 24. Akshi tarpana |

Classification of vicharana sneha:

1. Based on route of administration:
 - a. Bahya → gandusha, abhyanga, akshi tarpana, karna taila
 - b. Abhyantara → nasya, basti etc.
2. Based on action:
 - a. Shodhana vicharana
 - b. Samana vicharana
 - c. Brimhana vicharana
3. Based on time required for bringing snehana effect:
 - a. Sadhyo snehana vicharana
 - b. Chira kalina vicharana

4. Shuddha or mishrita:

- a. Kevala sneha prayoga → nasya karma, akshi tarpana, gandusha, abhyanga, basti etc.
- b. Along with preparations → odana, vilepi, yavagu etc.

General indications for the use of vicharana sneha:

स्नेहद्विषः स्नेहनित्या मृदुकोष्ठाश्च ये नराः। क्लेशासहा मद्यनित्यास्तेषामिष्टा विचारणा॥

Benefits of Pravicharana:

- Pravicharana can change the physical nature of sneha by addition of different substances.
- It may change chemical property to some extent by samsakara.
- It can stimulate or inhibit cholecystokinin, pancreozymin secretions.
- Maharshi atreya's rule for achcha and vicharana sneha:
- Achcha sneha: kevala sneha + jatharagni sambandha
- Vicharana sneha: ana mishrita sneha + jatharagni sambandha or kevala sneha + no jatharagni sambandha.

6. Snehapaka and its importance in Panchakarma**Snehapaka:**

The sneha paka is classified into three viz.

1. Mridu paka
2. Madhyama paka
3. Khara paka

In the event that the kalka changes to niryasha is called as mridupaka, becomes round soft mass then it is madhyama paka and paste breaks down during wicking is known as kharapaka.

Kharapaka → abhyanga

Mridupaka → nasya

Madhyama → pana (oral administration) & basti

Sneha siddhi lakshana:

The cooking of the ghruta should be considered as complete if froth and the sound will vanish and the specific smell, colour and taste of preparation comes.

The cooking of an oil resembles in all respects that of a ghruta except that a plentiful of froth appears on the surface of the oil at the completion of cooking.

Importance of knowledge of sneha paka:

The sneha paka rules told in the classics should be strictly followed otherwise adverse effects may occur. For instance, if khara paka siddha oil is used for nasya karma, then irritation of the nasal mucosa occurs causing burning sensation and also there will be poor effects of drug due to decreased absorption of oil.

7. Types of Snehana: i) Bahya and ii) Abhyantara Snehana**i) Bāhya Snehana:**

Methods, indications and contraindications of the following types of Bahyasnehana; Mardana, Unmardana, Pādāghāta, Samvāhana, Karna Purana & Akshi Tarpan, Lepa, Talam, Murdhni Taila: Siro-Abhyanga, Shiro Seka/dhārā, Siro Pichu and Siro-Basti

Mardana – unmardana:

Mardana is applying deep pressure after application of oil in downwards direction (anuloma gati).

Unmardana is applying deep pressure after application of oil in upward direction (pratiloma gati).

Indications:

Tvaka, sira, mamsa, rakta, snayu, asthi, sandhigata vata

Contraindications:

Wound, fracture, dislocation, acute sprain, painful inflammatory conditions.

Padaghata:

Massage by foot with deep pressure after taila abhyanga is called padaghata.

Procedure:

The patient is advised to lie on the ground covered with mat. Then the masseur should stand on side of patient and hold the rope, which is hanged from the roof.

Then the masseur should deep his foot in the oil containing vessel and apply the oil with tolerable pressure over the abdomen, chest, limbs, and then on back.

The masseur should have well control and should apply adequate pressure.

Indications:

- In hemanta ritu
- In vasanta ritu
- In persons of well-built body
- After exercise in wrestlers

Samvahana:

Samvahana is Sukumar abhihanana with pani i.e., gentle stroke, gentle squeezing and applying gentle pressure with palms.

Actions:

प्रीतिनिद्राकरं वृष्यं कफवातश्रमापहम् ।

संवाहनं मांसरक्तत्वक्प्रसादकरं सुखम् ॥

Indications: vata rakta, nidranasa & other vatavyadhi

Contraindications: wound, acute pain

Karnapurana:

Filling of ear by lukewarm water for a stipulated period of time is called karna purana.

Procedure:

Purvakarma:

- Examination of ear for ruling out tympanic membrane perforation.
- Patient is advised to lie on the massage table on supine position. Abhyanga should be done over the ear and surrounding area and neck followed by mridu svedana (nadi sveda).

Pradhana karma:

- Then the patient is advised to lie on lateral position keeping the head on the pillow.
- Then the luke warm medicated oil is poured slowly in same position for prescribed time.
- The same procedure should be repeated on the other ear also.

Paschat karma:

- Oil is removed completely by inserting cotton in auditory meatus and advising the patient to tilt the head.
- Wipe the areas with soft towel.
- Advise the patient to be in same position for 5 minutes and then slowly sit on the table.

Duration:

- | | |
|---------------------------|---------------------------|
| • Karna roga → 100 matra | • Shiro roga → 1000 matra |
| • Kantha roga → 500 matra | • Swastha → 100 matra |

Benefits:

- Daily use of karnapurana prevents the occurrence of vataja karna roga, manyagraha, hanugraha and badhirya.
- It subsides the pain in jaw, neck, head and ear.

Akshi tarpana:

Akshi tarpana is to nourish the eye by fatty materials.

Indications:

- The patient seeing darkness in front of eyes.
- Eyes deficient in lacrimation, dry eyes, dirty eyes
- Hard lids with falling eyelashes, squinting eyes
- Eyes badly affected with disease.
- Arjuna, timira, abhishyanda, adhimantha
- Vatika and paitika diseases of eyes
- Injured eyes due to abhighata.

Contraindications:

On a cloudy, very hot or very cold days

In persons suffering from anxiety, tiredness, giddiness

Procedure:

- Tarpana should be administered after samsodhana of sira and kaya.
- The patient is asked to lie down on his back, in a room free from direct sun rays, wind and dust, and is given mild fomentation with a cotton soaked in lukewarm water.
- Then the eyes are encircled with firm, compact wall made up of paste of powdered masha (black gram)
- The height of this wall should be 2 angula
- The patient is asked to close the eyes and over the closed eyes, liquified ghrutamanda or prescribed medicated ghee is poured very slowly till the entire eyelashes are covered with the liquid ghee.
- Patient is instructed to blink the eyes slowly (unmesha & nimesha)
- After retaining the ghee for the stipulated time, the liquid is drained out through the hole made near the outer canthus and the eyes should be washed with luke warm water or triphala decoction.

Duration:

- | | |
|-----------------------------------|---------------------------|
| • Condition of eye → time (matra) | • Sandhigata → 300 matra |
| • Kapha predominant → 600 matra | • Vartmagata → 100 matra |
| • Pitta predominant → 800 matra | • Suklagata → 500 matra |
| • Vata predominant → 1000 matra | • Krishnagata → 700 matra |
| • Adhimantha → 1000 matra | • Drishtigata → 800 matra |

Lepa:

Lepa is a type of therapy, wherein paste of drug is applied topically to affected part.

Types of lepa:

Pralepa: sita, tanu, vishadi or avishoshi (compressing or non-compressing)

Pradeha: hot or cold, thick or thin, avishoshi

Aalepa: moderate character of both pralepa and pradeha

Method of lepa preparations:

The paste should be gently rubbed on skin, in upward or opposite direction of the hairs to make the action of application quicker & more effective.

Thickness of lepa:

Doshaghna → 1/4th anguli

Vishaghna → 1/3rd anguli

Varnya → 1/2 anguli

Rules:

- Pralepa should not be applied at nights and it should not be allowed to stay on the skin till it dries up, whereas pradeha can be allowed to stay on even after drying, in order to cause constriction in the affected part of the body.
- Second lepa should not be applied over the first lepa because as the thickness of material increases it results in rise in local temperature burning sensation & pain.
- Lepa, once dried, should not be reused by mixing any solvent.

Indications:

Kushtha, visarpa, shotha, Khalitya, Palitya, indralupta, shiroshoola, udarshoola

Contraindications: night time

Importance:

By pouring water over a burning house, the fire is extinguished immediately, in the same way the lepa pacifies the provoked local dosha by local application.

Moreover, it also has actions like shodhana, utsadana, ropana

Talam:

Application of medicated paste made of appropriate herbs on the scalp for a specific period of time.

Materials required:

Amalaki churna – 192 gm, buttermilk – 720ml, vessels, stove, plate, chair

Preparation of medicine:

Boil 192 gms of amalaki churna in 720ml buttermilk till the whole buttermilk is evaporated. Make a paste with this mixture before doing procedure.

Procedure:

- Anoint the patient well with suitable taila on head and body.
- Ask him to comfortably sit on a stool.
- Apply the mixture on the vertex about 3 – 5 cms thick in diameter.
- Massage the body gently while doing the process.
- After completion remove the paste from the head and rub the vertex with a dry cloth
- If the bath is contraindicated, rasnadi curna is rubbed on the head.

Duration: 45 – 90 minutes

Indications: psychiatric disorders, insomnia, skin diseases, dandruff, psychosomatic diseases, tension, headache, migraine, headache etc.

Contraindication: cold, acute bronchial asthma etc.

Murdhani taila / sira tarpana:

Murdhani taila is a process in which sneha is applied on the head, or it is a procedure of anointing the head with oil.

Murdha taila is of 4 types viz.

1. Abhyanga
2. Saka
3. Pichu
4. Basti

These are superior in their succeeding order.

1. Abhyanga:

Anointing the body with oil, ghee etc. is called abhyanga

Bheda:

1. Samvahana (whole body massage)
2. Kesa mardana (head massage)
3. Utsadana (massage with kalka)

Benefits:

अभ्यङ्गमाचरेन्नित्यं, स जराश्रमवातहा।

दृष्टिप्रसादपुष्ट्यायुःस्वप्नसुत्वक्त्वदार्ढ्यकृत्॥

Benefits of siro abhyanga:

शिरःश्रवणपादेषु तं विशेषेण शीलयेत्।

- It is good for headache. It prevents baldness, graying and falling of hairs.
- It provides strength to the skull
- It strengthens the hair roots.
- It nourishes the hair and indriyas
- The skin becomes beautiful and the face will be glowing
- Person will get good sleep & happiness.

Benefits of pada abhyanga:

- Pada abhyanga provides quick relief of roughness, stiffness, dryness, fatigue and numbness of the legs.
- It makes the legs soft, strong & stable.
- It promotes eyesight.
- It controls vata and is good for gridhrasi
- It prevents cracks over the legs and Sankocha of sira & snayu.

Indications of abhyanga:

- Those who are to be administered sudation and purificatory therapies.
- Those who excessively indulging in more alcohol, women and exercise, who think too much.
- Old aged person, children, debilitated, emaciated
- Abhyanga should be done regularly in bala, rogi & vriddha.

Contraindications:

वर्ज्योऽभ्यङ्गः कफग्रस्तकृतसंशुद्ध्यजीर्णिभिः॥

Persons having samadosha

Those who have given niruha basti

Taruna jvara

Procedure of abhyanga:

Anuloma gati → vata dushti

Pratiloma gati → kapha dusti

Anuloma + pratiloma gati → pitta dusti

Bath after abhyanga:

Frequency of abhyanga → time after which snana is taken

- Daily → 5 nadis
- Once in a week → 12 nadis
- Once in 15 days → 16 nadis
- Once in a month → one day

Current methods:

- Patient should be seated on the table, with leg extended.
- The oil with optimum temperature should be applied to head, first in the anterior fontanellae and then the whole scalp.
- Then oil massage of ear, palm and feet should also be done prior to the main process.
- The oil heated should be applied uniformly by two therapists on both sides of the table / droni
- Start massaging scalp, head and move down to neck, upper back, shoulders, upper arms, forearms, hands then chest, abdomen, low back, lower limbs.
- Abhyanga should be done in 7 postures viz. sitting, supine, left lateral, prone, right lateral, supine & sitting.
- Upper back should be massaged in upward down direction.
- Limb joints should be massaged in circular manner and muscles in linear manner.
- Umbilical region is massaged in circular manner.

2. Seka / sneha pariseka

Pouring of warm oil etc. over the body from a specific height for specific time is known as pariseka.

Indications:

- Kaphottakara vatarakta
- Karna vyadhana
- Pitta pradhana vata rakta
- Kapha pradhana vata rakta
- Ushtra greeva bhagandara

Sneha avagaha:

Immersion of complete body except head in warm oil containing tub for a specific period is called avagaha.

Indications:

- Dhanurvaya
- Apatanaka
- Bhagna
- Sarvanga vatavyadhi

3. Siropichu

Siropichu is a procedure in which a piece of cloth or gauze is folded and dipped in specific oil and kept on the anterior fontanelle. (Brahma randhra)

Procedure:

- Abhyanga should be done to the head, neck & shoulders. The patient is made to sit comfortably in an armed chair.
- Tie a band of cloth around the forehead above the ears.
- Place a piece of cloth having length and breadth of 16 cm each over the vertex.
- Then keep cloth pieces of same size one over the another to reach a height of about 2 cms.
- Pour the luke warm oil at the centre till the cloth is soaked completely.
- Generally, pichu is maintained for 30 – 90 minutes.
- Then remove the pichu and wipe the head completely.
- Apply rasnadi curna on the vertex.

Indications:

Hair fall, itching, cracking of the skin, burning sensation

Netra stambha, diseases of the head.

Paralysis, facial palsy, cerebral atrophy, cerebral dysfunction, diseases of the eyes, insomnia.

4. Siro basti:

The word siro basti is used here to indicated “to retain or to hold.” Thus, in sirobasti the oil is made to retain on the scalp for a prescribed time.

Procedure:

Purva karma includes 1. Sambhara sangraha & 2. Atura siddhanta

1. Sambhara sangraha:

- | | |
|-----------------------------|----------------------------|
| • Black gram flour – 200 gm | • Rasnadi churna – 6 gm |
| • Taila – 1.5 litres | • Cotton ribbon – 2 strips |
| • Spoon – 1 | • Large vessel – 1 |
| • Vessel (2 litres) – 1 | • Oil for abhyanga – 100ml |

2. Atura siddhanta:

It includes the procedure of shodhana by vamana and virechana karma.

Pradhana karma:

- The patient is made to sit erect on a chair; one strip of cloth smeared with masha kalka is pasted around the head above the ear.
- Then leather sheet of about 12 angulas applied with masha kalka at the bottom of the inner surface of it is tied around the head. So that the lower part of the leather sheet is attached to the strip of the cloth.
- The two ends of the leather sheet are attached together by using masha kalka.

- Another strip of cloth pasted with masha kalka is wrapped on the leather sheet.
- Now the basti yantra is ready.
- Then the suitable medicated oil warmed by keeping in hot water is poured on the inner surface of leather cap slowly and carefully.
- The quantity of oil should be 2 angulas above the scalp.

Duration:

In vata predominant diseases 10000 matrakala

In pitta predominant diseases 8000 matrakala

In kapha predominant diseases 6000 matrakala

In svastha → 1000 matrakala

The maximum duration of sirobasti is considered as seven consecutive days.

Paschat karma:

After removing the oil and basti yantra, mridu abhyanga is done, over the head and skanda pradesha.

The best time to do siro basti is evening.

Indications:

Ardhavabhedaka, vata vyadhi, mukha roga, karna roga, Darunaka, drishtigata roga, timira, mukha sosha, nasa sosha.

Sirodhara:

Sirodhara is a process in which medicated oil, milk buttermilk or kvatha is poured in a continuous stream of drip on, the head, especially on the forehead in a specific manner.

Indications:

- Ulcers, pricking pain, burning, suppuration and wound in scalp
- Stress & psychosomatic disorders
- Neurological disorders
- Psychiatric disorders generalized anxiety disorders
- Hypertension

Contraindication:

In kaphaja vikara

Purva karma:

Material required:

Sirodhara yantra - 1, gauze – 1, cotton earplugs – 2, suitable oil, buttermilk, milk – 1.5 litres, vessels – 3, rasnadi curna – 5 gm, soft towels – 2

Preparation of the patient:

- The patient should be advised to pass stool & urine.
- Then patients pulse, temperature and blood pressure should be recorded.
- The posture of the patient for sirodhara is supine position and dharapatra should be fixed 4 angula above the forehead.
- The eyes and ears should be covered with cotton to prevent the entry of liquid into the eyes & ears.

Selection of sneha:

- Vata dosha → tila taila
- Pitta dosha → ghrita
- Kapha dosha → tila taila
- Rakta dosha → ghrita
- Vata + pitta + rakta → ghrita + tila taila
- Vata + kapha + rakta → ½ ghrita + 1 tila taila

Pradhana karma:

- The room where sirodhara is to be performed should be clean, well-ventilated and very quiet.
- Sirodhara is done in the morning on empty stomach after the proper massage.
- The selected liquid should be kept in the dharapatra and poured continuously, neither very fast nor very slow on the forehead of the patient.
- The flow of the medicament may be adjusted either with the help of stop cork or by putting a small piece of cloth having a knot at its inner end.
- When the liquid starts pouring then the vessel is moved in the pendulum manner starting from one lateral side to the other lateral side.
- The liquid is collected in another vessel and is used to refill the dharapatra before it becomes empty.

Duration:

Dhara process is done for at least half an hour in the morning upto 21 days.

Period for changing of liquid:

Milk → everyday

Dhanyamla → for 3 days

Oil → 1st half 3 days then 2nd half 3 days on 7th day both half mixed.

Temperature: sukhoshna

Paschat karma:

- The head of the patient should be wiped out and dried.
- This is followed by a short duration of rest & massage of the body including head with oil and then a lukewarm bath.
- Apply rasnadi curna to the vertex of head.
- The patient is advised to have a light diet.

ii) Ābhyantara Snehana

Three Types of Ābhyantara Snehana: Shodhanārtha, Shamanārtha and Brimhanārtha Snehana, Indications and contraindications for Snehana

Shodhanārtha Snehana

- a) **Importance and method of Deepan Pāchan and Rookshana in Shodhanārtha Snehana. Properties of Rookshana Dravya. Samyak Rookshana Lakshana**

Indications and contraindications for snehana (snehya & asnehya)

Snehya:

- Person to whom sudation and purificatory measures to be conducted.
- Those who are habituated in taking more wine, excessive sexual contacts with women and doing heavy exercises.
- Persons thinking too much.
- Aged person, children, debilitated persons
- Emaciated and dry
- Who are having depleted of blood and reproductive tissues.
- Persons suffering from neurological disorders and eye diseases.
- Those having difficulty in quick awakening etc. are eligible for oleation therapy.

Asnehya:

- Those having very weak and strong digestive power
- Obese and very lean
- Persons suffering with urustambha, diarrhoea, indigestion, throat disorder, artificial poisoning, ascites, fainting, vomiting, anorexia, increased kapha, thirst and alcoholic intoxication.
- Abnormal delivery
- Immediately after performing nasya, vasti and virechana etc. are not eligible for administering oil internally.

Importance and method of deepana in shodhanartha sneha:

- The drug that kindles the agni but does not digest the ama is called dipana
- The process of stimulation of jatharagni is called dipana.
- Snehapana is contraindicated if a person is having agnimandhya. Hence it should first be ignited by dipana.

Dipaniya gana:

- | | |
|-----------------|--------------------|
| 1. Pippali | 6. Amlavetasa |
| 2. Pippali mula | 7. Maricha |
| 3. Chavya | 8. Ajamoda |
| 4. Chitraka | 9. Bhallatakasthi |
| 5. Sunthi | 10. Hingu niryasha |

Method of administration:

The dipaniya drugs are selected as per the palatability of the patient and according to the dosha involved.

These drugs are administered 2 – 4 days until the patient feels diptagni.

Utility of dipana karma & dravya:

Dipana drug improve abhya vaharana shakti (intake capacity), which is essential before snehapana for taking a large quantity of sneha.

Dipana drugs are used in Kshudha nasha after vyadhi shamana.

Importance and method of pachana in sodhanartha sneha.

- Pachana means digestion of amadosha.
- Pachana drugs does the digestion of ama but does not increase the agni.
- Snehapana is contraindicated if a person is suffering from ama. Hence it should first be treated by pachana.
- Pachana karma is for the digestion of ama and detachment of morbid dosha from the dushya and srotas.
- If snehana is done in amayukta dosha then it leads destruction of sajna and even death.

Method of use:

The pachana drugs are selected as per the palatability of the patient and the according to the dosha.

These drugs are administered 3 – 5 days suitable anupana till the appearance of ama pachana symptoms.

Utility of pachana karma & dravya:

- It increases the digestive capacity of sneha. So that the agni of the patient becomes sthira, strong and able to digest the large doses of sneha given on subsequent days of snehapana.
- It is beneficial in diseases like agnimandhya, ajirna, grahani, amavata etc.
- In the treatment of nava jvara
- In atisara as a medicine.

Importance and method of rookshana in sodhanartha snehana:

Drugs depleting the fat content, moisture content of the body and causes dryness in the body are called rukshana.

Method of administration:

These drugs are selected as per the palatability of the patient administered 5 – 8 days with suitable anupana till the appearance of samyaka rukshana symptoms.

Properties of rukshana dravya:

- Charaka told the properties of rukshana dravyas are ruksha, laghu, khara, tikshna, ushna, sthira, apicchila and kathina.
- Vagbhata told the properties opposite to the sneha dravya are to be considered as rukshana guna.

Samyaka rookshana lakshana:

Proper & timely evacuation of vata, stool& urine

Hridaya shuddhi, kantha shuddhi, udgara shuddhi, mukha shuddhi, tandra nasha, klama nasha, ruchi, sveda pravriti, Kshudha asaha, trishna asaha, utsaha, lightness of body, free from symptoms of disease.

b) Consideration of Agni and Koshtha in Snehana

Agni:

- Agni is a very important factor on the basis of which, the sneha matra should be decided.
- In the conditions of mandagni and uttamagni harshwa and uttama matras are to be administered respectively.
- If in case of mandagni, uttama matra sneha is administered it may increase mandagni, whereas if it is said that in harswa matra sneha acts as agni dipana.
- So, in conditions of mandagni, harswa matra should be given.
- Harshwa matra does not produce the desired snehana in uttamagni.
- So, one should be well acquainted with the agni of the subject before fixing the dose.

Koshtha:

- In case of mrudu koshtha, Uttama matra should not be given it causes agnimandhya and drava mala pravrtti.
- In case of krura koshtha, Hraswa or madhyama matra is not sufficient because it does not cause dosha utklesha.
- In general, snehapana is administered for 3, 5 & 7 days for mrudu, madhyama & krura koshtha respectively.

Shodhana sneha: the sneha which is given in ananna (empty stomach) & akshudha kala (not having hunger), when the meal of previous night is completely digested in medium dose is called as sodhana sneha.

c) Indication of Different Matra, Various dose schedules for Shodhanārtha Snehana; Hraseeyasi, Hrasva, Madhyama and Uttama Mātrā, Ārohana Mātrā

Uttama / bahu / pradhana matra:

- It is the maximum dosage for snehapana. It is the quantity which digests within 6 yama (24 hours).
- It is indicated in case of uttamagni, krura koshtha, balavana and sneha nitya.
- Besides as purvakarma for shodhana, it is beneficial in conditions such as: gulma, sarpadamsta, visarpa, unmada, mutrakrucchra.

Karma:

- Shighra vikara shamana
- Doshanukarshini
- It pervades through all the margas of the body.
- Balya, rasayana

Madhyama matra:

- It is the moderate dosage for snehapana. It is the quantity which digests within 4 yama (12 hours)
- It is indicated in case of madhyama agnibala, madhyama & mrudu koshtha, and madhyama bala.
- Besides as purvakarma for shodhana it is beneficial in conditions such as aruska, sphota, pidika, kandu, kustha, pama, vatarakta etc.
- It is also described as shamanartha snehana for that purpose madhyama matra is administered. (After digestion of previous meal) when hunger is manifested but, without intake of food.

Karma:

- Madhyama matra does not cause much complication, does not affect the person's strength much and causes snehana in a comfortable way.
- It is used as shodhanārtha or shamanārtha sneha.

Hrashwa / alpa / hina matra:

- It is the low dosage for snehapana. It is the quantity which digests within 2 yama (6 hours).
- It is indicated in case of alpagni, mridu kosta, durbala, Sukumara, bala, vriddha etc.
- Besides as purvakarma for shodhana, it is beneficial in conditions such as: jirna jvara, atisara, kasa, karshya etc.
- It is also described as brimhanārtha snehana. For that purpose, Hrashwa matra is administered with rasa, madhya, ksheera, yavagu and taken along with meal.

Karma:

Hrashwa matra does not cause complications, increases the person's strength and virility. It is used as shodhanārtha, shamanārtha or brumhanārtha snehana.

Hrsiyasi matra:

- It is the minimal dosage for snehapana.
- It is the quantity which digests within 1 yama (3 hours).
- It is only described by A. vagbhata.
- When the patient's type of kosta is not known and sneha is administered in large quantity in large quantity it may cause various complication or even death.
- Therefore, before administration of uttama, madhyama or hrashva matra, hrsiyasi matra should be used. It helps in assessing kosta, agni and satmya of the patient.

Arohana snehapana:

Arohana snehapana can be defined as an oral administration of sneha in the increment dosage. It is quoted that the individual who is posted for snehapana should drink ghrita or taila in the increment dosage for 3, 5 or 7 days.

d) Methods of Shodhanārtha Snehana.

1. Fixed dose on every day:

In this method, a fixed dose is administered everyday throughout the whole snehapana course.

e.g., Hrashwa matra = 1 pala (48ml) for 3 days or until samyaka lakshana are obtained.

2. Fixed dose increase:

In this method, the dose is increased daily by a fixed amount without consideration of agnibala and given until samyaka lakshana are obtained.

Table for fixed dose increase

Day	Uttama	Madhyama	Hrashwa
1	12 karsha	6 karsha	3 karsha
2	14 karsha	7 karsha	3 ½ karsha
3	16 karsha	8 karsha	4 karsha
4	18 karsha	9 karsha	4 ½ karsha
5	20 karsha	10 karsha	5 karsha
6	22 karsha	11 karsha	5 ½ karsha
7	24 karsha	12 karsha	6 karsha

3. Non fixed dose increases according to agnibala:

- In this method, the dose is increased based on the strength of agni.
- During snehapana, agnivridhi is expected, therefore, the patient will have a better abhya vaharana shakti and more sneha can be given. If more sneha is consumed pachana kala is bound to increase.

$$A.I. (\text{abhya vaharana index}) = \text{Test dose (T.D.)} / \text{Given dose (G.D.)}$$

- If A.I. is more than 1 it denotes the increase of abhya vaharana shakti.
- If A.I. is less than 1 it denotes improvement of abhya vaharana shakti.
- With the help of abhya vaharana shakti agnibala can be calculated.
- To formulate agnibala, one has to consider pachana kala, the time required to digest the given dose.

$$A.B.I. (\text{Agni Bala Index}) = \text{Test dose (T.D.)} / \text{Given Dose (G.D.)} \times \text{Time (T)}$$

- If the A.B.I. consequently decreases on the following days it indicates increase of agnibala, and vice versa.
- A.B.I. can be calculated from the 2nd day onwards.
- e.g.
- In a person 70 ml of sneha digests in 3 hours on 2nd day then the A.B.I. = $30/70 \times 3 = 1.29$
- On 3rd day 100 ml of sneha digests in 3.5 hours, so the A.B.I. = $30/100 \times 3.5 = 1.05$
- The 2nd day A.B.I. is 1.29 which is reduced to 1.05 on 3rd day indicates the increase of agni occurs by sneha.
- On 4th day one can increase the dose upto 140ml
- A.B.I. should be calculated till the completion of snehana.
- Lesser the A.B.I. more will be the agnidipti.

e) Anupāna of Sneha

Ushnodaka: for all the snehas except tuvaraka and bhallataka tails. Especially hot water is told for ghrita.

Yusha for taila

Manda for vasa and majja.

f) Jeerna and Jeeryaman Lakshana**Jiryamana lakshana:**

Siroruja, bhrama, nishthiva, murcha, sada, arati, klama, trishna, daha

Jirna lakshana:

- | | |
|----------------------------------|-----------------|
| • Siro rujadi jiryamana lakshana | • Kshudha |
| prashamana | • Trushna |
| • Vatanulomana | • Udgara suddhi |
| • Svasthyata | • Laghuta |

g) Samyak Yoga, Ayoga and Atiyoga of Snehana, Sneha Vyāpat & their management according to Ayurveda & Modern Medicine**Samyaka snigdha lakshana:**

वातानुलोम्यं दीप्तोऽग्निर्वर्चः स्निग्धमसंहतम्। मार्दवं स्निग्धता चाङ्गे स्निग्धानामुपजायते॥

- | | |
|-----------------|-------------------|
| • Vatanulomana | • Asamhata varca |
| • Agnidipti | • Gatra Mardavata |
| • Snigdha varca | • Gatra Snigdhata |

Ayoga of snehana lakshana:

पुरीषं ग्रथितं रुक्षं वायुरप्रगुणो मृदुः। पक्ता खरत्वं रौक्ष्यं च गात्रस्यास्निग्धलक्षणम्॥

- | | |
|--------------------|------------------|
| • Grathita purisha | • Agnimandhya |
| • Ruksha purisha | • Gatra rukshata |
| • Vayu pratilomana | • Gatra kharata |

Atiyoga of snehana lakshana:

पाण्डुता गौरवं जाड्यं पुरीषस्याविपक्वता। तन्द्रीरुचिरुत्केशः स्यादतिस्निग्धलक्षणम्॥

- | | |
|------------------|------------|
| • Panduta | • Utklesha |
| • Gaurava | • Aruchi |
| • Jadya | • Tandra |
| • Apakva purisha | |

Sneha vyapata:

तन्द्रा सोत्क्लेश आनाहो ज्वरः स्तम्भो विसञ्जता कुष्ठानि कण्डूः पाण्डुत्वं
शोफार्शास्यरुचिस्तृषा॥७५॥

जठरं ग्रहणीदोषाः स्तैमित्यं वाक्यनिग्रहः शूलमामप्रदोषाश्च जायन्ते स्नेहविभ्रमात्॥

- Stupor
- Nausea
- Flatulence
- Fever
- Rigidity of the body
- Skin diseases
- Itching
- Pallor
- Edema
- Hemorrhoids
- Tastelessness
- Diseases of stomach and duodenum
- Feeling of numbness
- Loss of speech
- Abdominal pain and various diseases related with ama could be caused by improper administration of sneha.

Sneha vyapata management:

- In these conditions, oleates should eject out of one's system using emesis or sudation.
- The physician should then give mild purgation after an interval of time, and also factoring in the severity of disease and the condition and predisposition of the patient.
- Administering takrarishta, using dry food items, drinking cow urine and consuming triphala are some of the medicines recommended for cure of complication caused by the consumption of sneha.

h) Diet and regimen during Snehana**Pathya:**

Ushnodaka upachara – use of warm water, because cold water increases abhishyandi property which causes hinderance in sneha digestion.

Brahmacarya – abstinence from sexual activities, because it causes vata prakopa.

Kshapasaya – only night sleep (because day sleep enhances kapha, which delays sneha digestion.)

Apathya:

vegavarodha, uccha vachana varjana, soka, krodha, hima, atapa, pravata varjana, yaana, adhva, dhuma, raja, divasvapna, Ratrijagarana, abhishyandi anna, rukshna sevana

Sadyo sneha: method of administration, dose fixation and utility

Sadyo snehana is a procedure of administration of sneha to achieve snehana instantly or within a shorter duration.

Method:

It is always given before, middle or at the end of meal or along with food articles or prepared with food articles. The method of administration is same as sodhanartha snehapana.

Sadyo snehana yoga:

- Phanita along with snehayukta tila curna
- Krisara along with sneha and phanita
- Fresh dugdha with ghee and sugar or ghee and salt
- Pancha prasrita peya: pancha prasrita peya is prepared with one prasrita each of catur sneha and one prastha of rice.
- Lavanayukta sneha:
- The sneha added with lavana oleates an individual instantaneously, because salt is abhishyandi, sukshma, aruksha, ushna and vyavaya
- The quantity of lavana mixed with sneha should be such that it should not cause excessive salty taste.

Dose fixation: on the basis of agnibala

Utility of sadyo snehana:

- It does snehana quickly and hence used in OP (outpatient) bases.
- It is highly beneficial in persons who do not have time, who dislikes sneha and not able to tolerate the achcha snehapana.
- बालवृद्धादिषु स्नेहपरिहारासहिष्णुषु||३९||

योगानिमाननुद्वेगान् सद्यःस्नेहान् प्रयोजयेत्|

The sadyosneha formulations which does not cause, udvega (nausea) are indicated in children, elderly etc. (woman, tender person), intolerant to restrictions of snehapana.

Shamanartha snehana: method of administration, dose fixation and utility.

Vagbhata opines that, samana snehana is the administration of madhyama matra of sneha during meal time (annakala) in empty stomach when one feels hungry.

Method of administration:

Samana sneha should be given in empty stomach after the digestion of the previous meal and when the person is feeling hungry.

During samana snehana, pathya and apathya prescribed in connection with the virechana are to be followed.

Dose fixation: on the basis of agni

Alpa agni bala → 25 – 50 ml

Madhyama agnibala → 50 – 100 ml

Uttama agnibala → 100 – 200 ml

Utility:

- Suddha sneha is primarily used for the treatment of vatavyadhi e.g., eranda taila in gulma.
- Pure and old ghee is given as samana sneha in unmada, apasmara, graha roga & manasa roga.
- Medicated sneha are given after sodhana to prevent the aggravation of vata to regain the bala and vrana of patient.
- Samana sneha used in the form of pana, abhyanga, basti, nasya

Brimhanarth Snehana: Method of administration, dose fixation and utility

The administration of small quantity of sneha along with mamsa rasa, madhya, ksheera etc. or mixed with food is known as brimhana sneha.

Method of administration:

Brimhana sneha should be given in lesser dose along with food articles such as yavagu, payasa, mamsarasa etc.

There is no food and behavioral restrictions for this type of sneha.

Dose fixation:

Dose of sneha should be fixed on the basis of agni bala. Currently we are giving 15 – 30 ml in alpagni bala patients.

Duration: till Samyak brimhana

Utility:

- Suddha sneha is used for promotion of health, prevention of diseases and for the treatment of various diseases.
- Medicated sneha are given after sodhana to prevent the aggravation of vata, to regain the bala and vrana of patient.
- Milk and ghee are used as nitya rasayana for promotion of health
- Brimhana sneha used in the form of pana along with milk or pathya kalpana, abhyanga, basti and nasya.

Yoga:

- | | |
|----------------------|--------------------|
| • Ashwagandha ghrita | • Shatavari ghrita |
| • Vidaryadi ghrita | • Nagabala sarpi |

Avapeedak Sneha: Method of administration, dose fixation and utility

The sneha which is given before meal at the middle of meal or at the end of meal or given before meal and after and digestion of previous night meal; the sneha which does pidana of dosha and sneha which gets pidana by anna is called as avapidaka sneha.

Utility:

Mutrakricchra, mutraghata, ashthila, retrograde ejaculation of semen, arsha, guda shoola, parinama shoola, gulma etc.

Method of administration:**Pragbhakta sneha:**

At early morning after the digestion of previous night meal when the patient is feeling hungry, then the hrishwa matra of sneha is given with hot water.

Thereafter yavagu should be given.

Patient is advised to take hot water frequently till complete digestion of sneha and food.

Jirnantaka sneha:

After the digestion of pragbhaktika sneha and meal patient is advised to take the liquid and light meal at night.

After the complete digestion of previous night meal, uttama matra of sneha is given at the morning when patient is feeling hungry in empty stomach.

Till the complete digestion of sneha hot water should be taken and no food should be taken.

Yoga:

- Brahmi ghrita
- Varunadi ghrita
- Shatavari ghrita
- Changeri ghrita
- Chirabilvadi ghrita

8. Snehana Kārmukata (mode of action)**Bahya snehana karmukata:**

Bahya snehana → drugs undergo pachana by bhrajaka pitta → virya of drugs absorbed through romakupa, dhamani → circulated all over the body → nourishment of dhatu & thus dosha shamana

Abhyantara sneha karmukata:**Anil hanti:**

One of the major properties of snehana is vata samana. Sneha dravya have predominantly opposite guna to vata dosha. So vayu gets subsided and vatanulomana is achieved.

Mardavakara:

Snigdha and mridu are important guna of sneha dravya hence snehana provides unctuousness and softness.

Mala sanga hanti:

Srotorodha inside the body occurs due to obstruction by accumulated mala / dosha which often occurs due to excessive rukshata.

Snehapana helps in providing snigdha and disintegration of mala due to its inherent guna, therefore enable movement of mala within the body.

Sneha as a solvent:

Sneha dravya, especially ghrita & taila, act as a good solvent for many metabolic waste products and helps to expel them from the body.

Sneha is able to enter cells easily because the cell membrane is made up of phospholipids, therefore, it also acts as a vehicle for medicinal drugs which are used to prepare sneha siddha aushadha.

Increase of water content of the body:

- Sneha has predominant of jala mahabhuta.
- The increased water content in the body due to snehapana ultimately leads to dosha utklesha and can be considered as temporary rasa & kleda vriddhi
- After proper snehana the cells of the body becomes completely saturated with fats.
- Then the fat material comes out of the cells to the extra cellular fluid by osmosis.
- Due to the aqueous properties of sneha and liquified mala brought from the tissues, the levels of fatty acids in the blood increases, resulting in high plasma volume.
- To keep the equilibrium of the normal plasma level the additional amount of liquid reached the kosta for excretion
- Once shodhana (vamana / virechana) is performed the excessive number of fluids and waste products are evacuated.

9. Special Procedures: Takradhara, Udvartanam, Putpāka, Aschotana, Anjana, Gandusha, Kavala, Dhoompāna, Udvartana, Utsādana, Udgharshana, Talapothichil

Takradhara:

Materials required:

- | | |
|-----------------------------------|-------------------------------------|
| 1. Dried amalaki fruits – 40 pala | 3. Buttermilk – 1 prastha |
| 2. Pure water – 9 prastha | 4. Crushed tubers of musta – 2 pala |

Preparation method:

40 pala of the dried amalaki fruit is boiled with 9 prastha of pure water till reduced to a decoction of 1 prastha.

To this is added an equal quantity of buttermilk made from fresh boiled cow's milk fermented overnight.

This mixture is used for dhara for the head, the patient being anointed previously with the prescribed oil on the head and body.

Indications:

- Dandruff of scalp
- Ekakushtha
- Diabetes
- Premature greying of hair
- Fatigue
- Headache
- Pricking pains of the palm and sole
- Pain in the chest
- Heart diseases
- Diseases of the eyes, nose, throat & ears

Udvartanam: Reinforced rubbing of body by curna is called udavartana.

Procedure of udavartana:

- The best time for udavartana is in the early morning between five and nine. Because in daily regimen it is mentioned before bath.
- Before doing udvartana, bladder & bowel should be emptied.
- Udavartana is started from legs, arms, chest, abdomen, back and gluteal region and it is done in upward direction.
- Generally, the duration is 30 to 45 minutes.
- After udvartana advise the patient to take rest for 15 minutes.
- After relaxation advise the patient to take hot water bath.

Indications:

- Obesity
- Diabetes mellitus associated with obesity
- Initial stage of MND, parkinsonism, muscular dystrophy, multiple sclerosis, cerebral palsy etc.
- Skin diseases having kapha & pitta predominant dosha.

Contraindications:

Wound, painful inflammatory conditions, acute sprain, excessive hair.

Actions:

उद्वर्तनं कफहरं मेदसः प्रविलायनम्]

स्थिरीकरणमङ्गानां त्वक्प्रसादकरं परम्]।

Putapaka:

It is a kind of tarpana chikitsa. Here instead of medicated ghee or oil, juices of mamsa, matsya and different plants, extracted by 'puta pakwa' method are used.

Types & Putapaka kala & indications:

1. Ropana Putapaka → 300 matrakala → pittaja & kaphaja netra roga
2. Snehana Putapaka → 200 matrakala → vataja netra roga
3. Lekhana Putapaka → 100 matrakala → kaphaja netra roga

Duration:

Putapaka should be applied for one day, two and three days in kaphaja, paitika and vatika eye diseases respectively.

Installing a few drops of medicament into the conjunctival sac through kaninika sandhi from 2 angula.

Indication:

It is indicated in acute inflammatory condition like redness, congestion, burning sensation, excessive lacrimation, inflammatory swelling and pricking pain.

Aschotana:

Aschotana is the therapeutic procedure of instilling medical drops into the eyes (conjunctival sac).

Vidhi:

- The patient is asked to lie on the therapeutic table in supine position in nivata sthana.
- An eye dropper is filled with medicinal liquid, and is held 2 angula above the patient's right eye.
- The left eye is closed.
- Then the aushadha dravya is instilled into the conjunctival sac.
- The same is done on the left eye.
- Both eyes are cleaned with a soft cloth.

Bheda & matra:

1. Ropana → 12 drops
2. Snehana → 10 drops
3. Lekhana → 8 drops

Amayika prayoga:

Vataja netra roga, pittaja netra roga, kaphaja netra roga, netrashotha, netradaha, ashru srava.

Anjana:

Anjana is the application of aushadha dravya on the margin of the eyelids. It nourishes the eyes makes them clear & promote vision.

Vidhi:

- The patient should sit straight or lie in supine position.
- Anjana dravya is applied on the margin of eyelids by using finger or shalaka.
- The patient is asked to blink several times, then keep the eyes closed and rotate the eyes to allow the medicine to spread.
- The eyes should remain closed until the effect of anjana has subsided.
- Then the eyes are washed with kashaya depending on the disease.
- The eyes are wiped with a clean cloth.

Bheda:

Based on karma:

- | | | |
|-----------|------------|------------|
| 1. Ropana | 2. Snehana | 3. Lekhana |
|-----------|------------|------------|

Based on kalpana:

- | | | |
|------------------|----------|-----------|
| 1. Gutika / vati | 2. Kalka | 3. Churna |
|------------------|----------|-----------|

Based on guna:

- | | |
|-------------------------|------------------------|
| 1. Mrudu – sauviranjana | 2. Tikshna – rasanjana |
|-------------------------|------------------------|

Amayika prayoga:

Vataja netra roga, pittaja netra roga, kaphaja netra roga, abhishyanda, adhimantha, timira, shuska akshi paka

Gandusha:

Gandusha is the procedure of holding any liquid in the mouth to its full capacity without any movement inside.

Bheda:

Types	Qualities of drugs	Indications
Snigdha	Oily & hot	Vataja mukha rogas
Samana	Sweet & cold potency	Pittaja mukha rogas
Sodhana	Katu, amla & lavana rasa, ruksha, ushna	Kaphaja mukha rogas
Ropana	Kashaya, tikta, madhura rasa, ushna virya and katu vipaka dravya	Mukhaja vrina

Gandusha ayogya (contraindications):

Persons suffering from visha, murcha, mada, sosha, raktapitta, kupita akshi mala, kshina and ruksha rogi

Gandusha is contraindicated below the age of 5 years.

Indications:

Diseases of neck, Shiroroga, ear diseases, diseases of oral cavity

Kavala:

Kavala is the procedure of holding sneha in the mouth upto half of its capacity with movement inside.

Indications:

Kavala is indicated in the diseases where there is bahu kapha sanchaya in mouth, guruta, jadya, alasya, ardita.

Utsadana:

Utsadana means reinforced friction of body with drugs containing sneha or medicine mixed with oil or other liquids in the form of kalka is called as utsadana.

Udgharsana:

Udgharsana means rubbing the body with powdered medicine without mixing oil or other liquids is called udgharsana.

Benefits: vata samana, stimulates bhrajaka pitta, destroys itching & redness.

Talapoticchil:

Application of wet medicated paste over the head and then covering the same with a processed plant leaf.

Materials required:

Amalaki, musta, kushmanda, manduka parni, brahmi, etc. taila, padma patra, stove, vessels, long strap of cloth etc.

Preparation of medicine:

Make a paste with the above-mentioned drugs for mixing buttermilk should be used.

Preparation of patient:

Patient is advised to sit comfortably in an arm chair

Hair can be completely removed.

Massage head with warm oil and then mild fomentation with a towel dipped in hot water.

Procedure:

- Tie the long strap of cloth around the head above the level of the ears and the eyebrows.
- Then paste the prepared medicine thickly (0.5 – 1 cm) on the scalp initially on the front, then right, back & left side leaving a small central portion.
- Pour the oil for tala into the centre portion.
- Place the padma patra over the paste so that it fully covers the head except for the centre.
- The leaf is kept in position by tying another long strip of cloth around the head.
- The duration of the procedure is about 30 – 60 minutes.
- After the specified time remove the paste completely
- Wipe off the head and apply rasnadi curna on the vertex of the patient.

Indications:

Psychiatric disorders, insomnia etc.

SVEDANA**1. Etymology and Definition of Sveda and Svedana****Etymology:**

Sveda:

The word sveda is derived from the root “svid”. Svid means to sweat or to perspire.

Svedana:

The word svedana is derived from the root ‘svid’ with ‘dhy’ pratyaya with the addition of bhava vachaka ‘nich’ and ‘ach’

Definition:

Sveda:

Sveda is one of the trimala and also the mala of meda dhatu, and its karma is kleda dharana.

Svedana:

Svedana is defined as the process by which the sweat or perspiration is produced in the body by using various methods.

Svedana is the procedure which relieves stiffness, heaviness and coldness of the body and produces sweating.

2. Classifications of Sveda/Svedana**Dvandaja sveda:**

On the basis of use of agni → 1. Anagni sweda 2. Sagni sweda

On the basis of properties of the drug used → 1. Snigdha 2. Ruksha

Basis of site of sveda → 1. Ekanga 2. Sarvanga

Basis of site of dosha → 1. Snigdhapurvaka ruksha sveda 2. Ruksha purvaka snigdha sveda

- | | |
|----------------|---------------------|
| 1. Bahya sweda | 2. Abhyantara sweda |
|----------------|---------------------|

- | | |
|--------------------|---------------------|
| 1. Samsamana sweda | 2. Samsodhana sweda |
|--------------------|---------------------|

Trivrut sveda:

- | | |
|------------------|-------------------------|
| 1. Ruksha sveda | 3. Snigdha ruksha sveda |
| 2. Snigdha sveda | |

- | | |
|-------------------|----------------|
| 1. Mridu sveda | 3. Mahan sveda |
| 2. Madhyama sveda | |

Four types of sveda:

- | | |
|------------------|----------------|
| 1. Tapa sveda | 3. Ushma sveda |
| 2. Upanaha sveda | 4. Drava sveda |

Seven types of sveda: (harita samhita)

- | | | |
|--------------|----------|-----------|
| 1. Loshtha | 4. Ghati | 7. Baluka |
| 2. Bashpa | 5. Jala | |
| 3. Agnijvala | 6. Phala | |

Eight types of sveda:

- | | | | |
|------------|-------------|------------|-------------|
| 1. Hasta | 3. Nadi | 5. Sankara | 7. Avagaha |
| 2. Pradeha | 4. Prastara | 6. Upanaha | 8. Pariseka |

Ten types of anagni sveda:

- | | | |
|-------------------|-------------|------------|
| 1. Vyayama | 5. Bahupana | 9. Aahata |
| 2. Ushna sadana | 6. Bhaya | 10. Aatopa |
| 3. Guru pravarana | 7. Upanaha | |
| 4. Kshudha | 8. Krodha | |

Thirteen types of sveda:

- | | | |
|--------------|--------------|------------|
| 1. Sankara | 6. Jentaka | 11. Kumbhi |
| 2. Prastara | 7. Asmaghana | 12. Kupa |
| 3. Nadi | 8. Karshu | 13. Holaka |
| 4. Parisheka | 9. Kuti | |
| 5. Avagaha | 10. Bhusveda | |

3. General Sweda dravya, Properties of Sweda dravyas, Swedopaga dravyas,**General sveda dravya:**

Vata – kapha roga:

Guduchi, sigru, mulaka, sarshapa, vasa, tulasi, brihat panchamoola

Pittanubandhi vata:

Dashamula, sura, mutra, amla, sneha

Properties of svedana drug:

उष्णं तीक्ष्णं सरं स्निग्धं रूक्षं सूक्ष्मं द्रवं स्थिरम्]

द्रव्यं गुरु च यत् प्रायस्तद्धि स्वेदनमुच्यते॥

Svedopaga gana:

- | | |
|--------------------|-------------|
| 1. Sigru | 6. Yava |
| 2. Eranda | 7. Kola |
| 3. Sveta Punarnava | 8. Kulattha |
| 4. Rakta Punarnava | 9. Tila |
| 5. Arka | 10. Masha |

4. Indications and contraindications of Svedana

Indications:

प्रतिश्याये च कासे च हिक्काश्वासेष्वलाघवे। कर्णमन्याशिरःशूले स्वरभेदे गलग्रहे॥२०॥
अर्दितैकाङ्गसर्वाङ्गपक्षाघाते विनामके। कोष्ठानाहविबन्धेषु मूत्राघाते विजृम्भके॥२१॥
पार्श्वपृष्ठकटीकुक्षिसङ्ग्रहे गृध्रसीषु च। मूत्रकृच्छ्रे महत्त्वे च मुष्कयोरङ्गमर्दके॥२२॥
पादजानूरुजङ्घातिसङ्ग्रहे श्वयथावपि। खल्लीष्वाभेसु शीते च वेपथौ वातकण्टके॥२३॥
सङ्कोचायामशूलेषु स्तम्भगौरवसुप्तिषु। सर्वाङ्गेषु विकारेषु स्वेदनं हितमुच्यते॥२४॥

Contraindications:

कषायमद्यनित्यानां गर्भिण्या रक्तपित्तिनाम्। पित्तिनां सातिसाराणां रूक्षाणां मधुमेहिनाम्॥१६॥
विदग्धभ्रष्टब्रध्नानां विषमद्यविकारिणाम्। श्रान्तानां नष्टसञ्ज्ञानां स्थूलानां पित्तमेहिनाम्॥१७॥
तृष्यतां क्षुधितानां च क्रुद्धानां शोचतामपि। कामल्युदरिणां चैव क्षतानामाद्यरोगिणाम्॥१८॥
दुर्बलातिविशुष्काणामुपक्षीणौजसां तथा। भिषक् तैमिरिकाणां च न स्वेदमवतारयेत्॥१९॥

5. Ten Types of Niragni Svedana

1. Vyayama: muscular exercise produces sweating in the body.
2. Ushna sadana: a room without ventilation particularly in the summer season may produce the sweating.
3. Guru pravarana: if a person lies by covering the body with thick cloths or woolen sheet then it may lead to sweating due to the non-conduction of body heat to the external environment.
4. Kshudha: excessive hunger produces sweating
5. Bahupana: consumption of excessive alcohol produces sweating
6. Bhaya: in emotional conditions such as fear & anger sweating occurs.
7. Krodha: in emotional conditions such as fear & anger sweating occurs.
8. Upanaha: poultice produces insensible sweating by preventing the loss of body heat.

The poultice is applied on the affected part and is converted bandaged with a cloth. If the poultice is applied in the night, it should be removed in the morning and if it is applied in the day, it should be removed in the night. So that irritation to the skin may not occur.

However, the period of application of poultice may be prolonged in the cold season.

9. Aahava: wrestling & fighting lead to sweating.
10. Aatapa: direct exposure to sun rays leads to perspiration

6. Knowledge of 13 types of Sagni Svedana and Chaturvidha Svedana**1. Sankara sveda:**

It is a type of pinda sveda.

Fomentation using bolus (pinda) prescribed drugs with or without being wrapped cloth

Ruksha (dry) sankara sveda:

In this type of sveda, hot solid substances such as sand brick and stone are used. It is a mild type of sveda and may be done by the patient himself in kapha and ama disorders affecting joints or muscles.

Snigdha (unctuous) sankara sveda:

Thick gruel is prepared from the substances like sesame, black gram, horse gram, citric fruits, ghee, oil, rice & milk pudding.

This type of sveda is more useful in the conditions of kevala vata.

Shashtik shali pinda sveda and nirgundi patrapinda sveda are its varieties.

2. Prastara sveda (stone slab sudation):

Material used: shuka dhanya, shami dhanya, Putapaka (kudhanya), veshavara, payasa, krushra, Utkarika

Covering material: kausheya (silk), woolen cloth, leaves of panchangula (eranda), arka

Method:

A slab of stone measuring about 7 feet × 2 feet is used as a bed.

On it, hot gruel prepared with cereals, milk pudding etc. is spread.

It is covered either by a sheet of cloth or leaves of castor.

The patient, after a proper massage all over the body is asked to lie down on it by covering his body with thick cotton sheet, till he gets proper perspiration.

3. Nadi sveda:

It is a type of agni sveda in which svedana is by vapours obtained by boiling liquids in a vessel through nadi.

Materials required:

Mula or phala of different herbs like eranda, shigru, amla, lavana, mutra, sneha etc. according to dosha. Commonly dashamoola are used to generate sveda.

Method:

Take the prescribed medicine and prepare the kashaya in a pressure cooker with a capacity of 5 – 10 litres, or in any other vessel in such a way that the vapour does not leak out.

The individual well massaged with vatahara taila should get exposed to vapour through the curved pipe.

Curvature of the pipe helps in preventing spillage of condensed drops coming out of the tube directly on the body of the patient.

A pressure cooker may also be used in that case the tube should be attached to the nozzle where normally the weight is attached. Other vapour producing instruments may also be used with required modification.

4. Pariseka sveda:

Materials: drava which alleviates vata, vata – kapha

Instruments: kumbhi (pitcher), varshanika (small pot with many openings), pranadi

Method:

Decoction of the prescribed drugs is prepared and lukewarm decoction is filled into a pot.

Individual who has undergone abhyanga with suitable oil should take parisheka.

This type of fomentation is called parisheka sveda.

Nowadays modified parisheka sveda is done under the name of pizhichil.

5. Avagaha:

Immersion of the affected part in a tub filled with suitable warm liquid is known as avagaha sveda.

It can be carried out for the whole body in sarvanga vyadhi and locally in disease, such as painful arsha.

Materials: vatahara – kwatha, ksheera, taila, ghrita, pishita rasa, ushna jala

Instruments: jala kashtha (tub)

Chakrapani comments that, jalakoshtha is a large tub like vessel which is used for the purpose of avagaha.

Method:

- The hot decoction prepared from vata relieving drugs, hot milk, ghee, oil or water as per feasibility may be used.
- After proper massage that patient is asked to sit or lie down in the tub filled with liquid by keeping the head above.
- In case of sitting position, the level of the liquid should be up to clavicle and the warm liquid may be poured continuously on the shoulder.
- For lying position, it should be sufficiently filled so that the body remain immersed in the liquid.
- The patient may remain for 48 minutes in the tub. Thereafter the patient is allowed to come out from the tub and the liquid is cleaned with a towel.
- The patient may take a light meal after taking hot bath.

Indications:

Sarvanga vata, arsha, katipradesha shula, gridhrasi etc.

6. Jentaka sveda:

- Jentaka svedana refers to application of heat by staying inside a room specifically constructed for this purpose.
- Inside the room, there will be a facility for burning the medicinal plants and a resting place for the patient.
- Initially, the indicated plants are burnt to heat up the room.
- When all the smoke in the room has cleared, the patient is allowed to enter and stay inside with the body covered by a thick blanket to induce perspiration.
- If due to excessive svedana, complications such as dizziness occurs, the patient should not stand up because he / she may faint while trying to leave the room.
- In general, when the patient feels free from all obstructions and stiffness, numbness, pain and heaviness are relieved the patient should exit the room.
- The patient should not apply cold water immediately to the eyes as it may cause eye disorders.
- After the heat has subsided, a lukewarm bath should be taken; approximately after 1 muhurta.
- Then the patient is allowed to consume food.

7. Ashmaghna sveda:

This is a kind of fomentation where the perspiration is induced by making the person to lie down over a preheated slab of stone.

Materials required:

Compact slab of stone measuring the length of a man

Sticks / fuel having vata hara property.

Hot water

Silk / woolen sheets.

Method:

- Firewood having vatahara properties should be burnt over a compact slab of stone.
- When stone gets heated firewood should be removed and hot water should be sprinkled over the slab.
- Stone should be covered with silk / woolen sheets.
- Person who has undergone sarvanga abhyanga should lie on the stone and should be covered with a sheet.
- Patient should be made to lie till proper fomentation occurs.

8. Karshu:

Karshu is a pit containing a large space inside and a narrow opening at the top.

For this type of sveda, a small trench of 5 feet \times 1.5 feet \times 2 feet is dug and is filled with smokeless burning coal.

A cot covered with bed sheet is spread on it.

The patient, after proper abhyanga is asked to lie down on the cot by covering the body with bedsheet till he gets good perspiration along with other symptoms of proper svedana.

9. Kuti sveda:

Kuti should be constructed which should not be too high and too wide.

It should be round in shape with no windows. The inner wall of the cottage should be plastered with kushtadi drugs.

In the centre of the hut a bed covered with cotton, silk, deer skin, woolen should be placed.

The bed should be surrounded with the furnace filled firebrands.

The patient after proper abhyanga is asked to lie down on the cot by covering the body with a cotton sheet till he gets perspiration and other symptoms of proper svedana.

10. Bhu sveda:

On the ground, a suitable area measuring about 7 feet \times 3 feet is well cleaned.

The process mentioned in Ashmaghna sveda is repeated.

The only difference between these two is that in prastara sveda a stone slab is used while in bhu sveda the same process is done on the ground.

However, an auspicious area, which is free from excessive wind, should be selected for this purpose.

11. Kumbhi sveda:

Materials:

Kumbhi, vatahara kwatha, bed, iron ball, stone, thin bed sheet.

Method:

- A pitcher containing vatahara decoction should be buried in earth upto half or one third of its length.
- A bed covered with thin cloth should be placed over the kumbhi.
- There after a hot iron balls or stones should be put into the pitcher.
- The person who has undergone abhyanga should lie or sit on the bed.
- The heat coming out of the pitcher will aid in fomentation.
- It is a very mild type of baspa sveda and may be used even in pitta disorders.

12. Kupa (pit) sveda:

A well like pit is made with diameter equal to the width of the cot and depth twice of it. Inner side of the pit should be well cleaned.

Pit is filled with the dry dung of elephant, horse, cow, or camel and burnt to smokeless coat.

Then a cot covered with a cotton bed sheet is kept on it.

After abhyanga the patient is asked to lie down on the cot by covering his body with cotton sheet.

The patient starts sweating with ease.

13. Holaka sveda:

Materials: dry dung, bed, cloth / thin sheet

Method:

A heap of dung equal to the size of a bed should be made and ignited.

When it is well burnt and becomes smokeless, a bed covered with thin cloth is kept over it.

Person who has undergone abhyanga is asked to lie down on the cot by covering his body with a bed sheet.

Chaturvidha sveda:**1. Tapa sveda:**

Tapa sveda is done by patting the body with heated cloth, metal plate, palm of the hand, etc.

2. Upanaha sveda:

Upanaha is the application of poultice prepared with vacha, kinva, shatahawa, devadaru, any kind of dhanya, dravya with a pleasant smell, root of rasna, eranda or meat; each one is added with more of lavana, sneha, takra, ksheera in the disease of only vata.

Drugs of surasadi gana for vata associated with sleshma and padmakadi gana drugs for vata associated with pitta.

After applying the poultice which is snigdha & ushna the part of the body should be bandaged with soft piece of leather or silk, woolen cloth or from leaves of the plants which alleviates vata.

Salvana upanaha:

Preparation of upanaha adding more quantity of saindhava lavana is specially indicated in vata dosha afflicted conditions. This upanaha is known as salvana upanaha.

3. Ushma sveda:

Ushma may be obtained by Utkarika and stone pot, sherd, pebbles, mud, cuttings of leaves, grains, dried dung of animals, sand husk etc. heated well in different ways and administered according to place and time.

4. Drava sveda:

The medicated water made by boiling should be filled into a jug with spout, or a tube and poured comfortably over the painful part covered with cloth.

7. Detailed Knowledge with their Utility of the following Svedana procedures:

Sankara/Pinda Sveda-Ruksha and Snigdha Sveda Patrapinda Sveda, Jambir Pinda Sveda, Valuka Sveda, Churna Pinda Sveda, Kukkutand Pinda Sveda, Shashtika Shalipinda Sveda, Nadi Sveda, Bashpa Sveda Ksheer dhooma, Ksheer Seka, Kwath Seka, Avagaha Sveda, Dhanymla Dhara Parisheka Sveda, Pizichil, Upanaha Sveda, Annalepa

Sankara / potalli sveda:

It is a type of pinda sveda.

Fomentation using bolus (pinda) prescribed drugs with or without being wrapped cloth

Ruksha (dry) sankara sveda:

In this type of sveda, hot solid substances such as sand brick and stone are used. It is a mild type of sveda and may be done by the patient himself in kapha and ama disorders affecting joints or muscles.

Snigdha (unctuous) sankara sweda:

Thick gruel is prepared from the substances like sesame, black gram, horse gram, citric fruits, ghee, oil, rice & milk pudding.

This type of sveda is more useful in the conditions of kevala vata.

Shashtik shali pinda sveda and nirgundi patrapinda sveda are its varieties.

Patra pinda (potalli) sveda:

Patra pinda svedana is the application of heat by using a potalli containing a bolus (pinda) made from medicinal leaves (patra).

It is a form of snigdha svedana because abhyanga is performed as purvakarma, the bolus contains sneha dravya and the potalli is additionally dipped into warm sneha dravya before application.

Yogya:

- | | |
|---------------|-----------------|
| • Vataja roga | • Sandhi graha |
| • Katisula | • Asthikshaya |
| • Sandhi sula | • Asthisausirya |

Commonly used dravya:

1. Patra → nirgundi, eranda, arka
2. Taila → bala taila, ashvagandha taila, eranda taila
3. Prakshepaka dravya → haridra, sunthi, saindhava

Required aushadha dravya:

- Patra → 1 kg
- Narikela → 100 gm
- Saindhava lavana → 5 – 10 gm
- Churna → 5 – 10 gm
- Taila for frying → 120 ml
- Taila for heating the potalli → Q.S.
- Taila for abhyanga → Q.S.

Preparation of potalli:

- The medicinal leaves are chopped into small pieces.
- Oil for frying is heated in a wok and the prakshepaka dravyas are added.
- Then the leaves are added bit by bit while stirring continuously.
- Fry the leaves for 5 – 10 minutes
- A square cotton cloth (about 45 cm) is spread on a working area and half of the fried leaves are placed on its centre.
- The free corners of the cloth are approximated to cover the leaves.
- Their free ends are folded in the middle and are tied with a thread to form the potalli.
- In general, two of such packs are prepared. However, one potalli may be sufficient, if only a small area requires svedana.

Vidhi:

1. Purvakarma:

Preparation of potalli

Abhyanga

Heating the potalli, about 200 ml of taila is warmed in a pot and potalli is placed inside.

Heat of the potalli must be checked before applying to the patient.

2. Pradhana karma:

- The heated potalli is applied on the indicated area.
- Movements are done in linear fashion on the extremities from above downwards and on the front from below upwards.
- On the joints, the potalli is moved in circular fashion.
- It may also be placed below the knee joint and kept there for a while.
- Depending on the body surface on which svedana is performed, the procedure might take about 15 – 60 minutes.
- Potalli should be reheated when required.

3. Paschat karma:

Massage is performed on the same area for 5 – 10 minutes.

The patient should be covered and take rest for additional 20 minutes in nivata sthana before washing off the oil and sweat.

Jambira pinda svedana:

Jambira pinda svedana is the application of heat by using a potalli containing a bolus made from jambira and other medicinal drugs.

Yogya:

- Amavata
- Sandhigraha
- Avabahuka
- Osteoarthritis
- Muscular cramps

Required aushadha dravya:

- Jambira (lemon) 700 gm
- Narikela 100 gm
- Methika 35 gm
- Shatavari 35 gm
- Haridra 35 gm
- Lasuna 2 bulbs
- Saindhava 8 gm
- Eranda taila 60 ml
- Taila for heating the potalli Q.S.
- Taila for abhyanga Q.S.

Preparation of potalli:

Mature fruits of jambira are cut into small pieces and lashuna cloves are crushed.

Eranda taila is heated in a wok and the prakshepaka dravyas are added.

Then jambira pieces are added and the mixture is fried while stirring continuously until it gains a reddish colour.

A square cotton cloth (about 45 cm) is spread on a working area and half of the fried leaves are placed on its centre.

The free corners of the cloth are approximated to cover the leaves.

Their free ends are folded in the middle and are tied with a thread to form the potalli.

In general, two of such packs are prepared. However, one potalli may be sufficient, if only a small area requires svedana.

Vidhi:

1. Purvakarma:

Preparation of potalli, Abhyanga

Heating the potalli, about 200 ml of taila is warmed in a pot and potalli is placed inside.

Heat of the potali must be checked before applying to the patient.

2. Pradhana karma:

- The heated potalli is applied on the indicated area.
- Movements are done in linear fashion on the extremities from above downwards and on the front from below upwards.
- On the joints, the potalli is moved in circular fashion.
- It may also be placed below the knee joint and kept there for a while.
- Depending on the body surface on which svedana is performed, the procedure might take about 15 – 60 minutes.
- Potalli should be reheated when required.

3. Paschat karma:

Massage is performed on the same area for 5 – 10 minutes.

The patient should be covered and take rest for additional 20 minutes in nivata sthana before washing off the oil and sweat.

Valuka sveda:

Valuka svedana is the application of heat by using a potalli containing sand. Abhyanga is not indicated as purvakarma.

Yogya:

- Kaphaja roga
- Medo roga
- Urustambha
- Amavata
- Granthi

Valuka: 2 kgs of properly cleaned sand collected from the bank of a clean water.

Preparation of potalli:

- 500 gm of valuka is placed on a piece of cloth and potalli is formed. The remaining 1.5 kg are placed in a wok which will then be heated.
- When the sand is properly heated, the previously prepared potalli is placed on the sand in the wok.
- It should be kept there for a considerable period so that the whole sand inside the potalli is heated properly.
- Potalli can then be applied for svedana.

According to bhaisajya ratnavali potalli can be dipped in hot kanji for heating.

Vidhi:

1. Purvakarma:

Preparation of potalli

Abhyanga

Heating the potalli, about 200 ml of taila is warmed in a pot and potalli is placed inside.

Heat of the potali must be checked before applying to the patient.

2. Pradhana karma:

The heated potalli is applied on the indicated area.

Movements are done in linear fashion on the extremities from above downwards and on the front from below upwards.

On the joints, the potalli is moved in circular fashion.

It may also be placed below the knee joint and kept there for a while.

Depending on the body surface on which svedana is performed, the procedure might take about 15 – 60 minutes.

Potalli should be reheated when required.

3. Paschat karma:

Massage is performed on the same area for 5 – 10 minutes.

The patient should be covered and take rest for additional 20 minutes in nivata sthana before washing off the oil and sweat.

Complication & management:

Common complication is burns for which application of murivena and Shatadhauta ghrta can be advised

Churna pinda sveda:

Churna pinda svedana is the application of heat by using a potalli containing a bolus made from churna of various medicinal drugs.

General required quantity of churna for 2 potalli = 1 kg.

Yogya:

- Vata kaphaja roga
- Arthritis
- Lumbago
- Sciatica
- Neurological disorders

Preparation of potalli:

The powder should be fried in the vessel till it attains a golden brown colour.

It should be divided into 2 equal parts and tied into 2 potallis.

Vidhi:

1. Purvakarma:

Preparation of potalli

Abhyanga

Heating the potalli, about 200 ml of taila is warmed in a pot and potalli is placed inside.

Heat of the potali must be checked before applying to the patient.

2. Pradhana karma:

The heated potalli is applied on the indicated area.

Movements are done in linear fashion on the extremities from above downwards and on the front from below upwards.

On the joints, the potalli is moved in circular fashion.

It may also be placed below the knee joint and kept there for a while.

Depending on the body surface on which svedana is performed, the procedure might take about 15 – 60 minutes.

Potalli should be reheated when required.

3. Paschat karma:

Massage is performed on the same area for 5 – 10 minutes.

The patient should be covered and take rest for additional 20 minutes in nivata sthana before washing off the oil and sweat.

Kukutanda pinda sweda:

Kukutanda means Egg Yolk, Pinda means a bolus. Sweda means Fomentation or sudation.

The sweda or the sudation given by using a bolus which is prepared by using egg yolk along with some herbal medicines which are indicated for the condition is called as Kukutanda sweda (Kukutanda kizhi).

Treatment procedure:

The treatment procedure is divided in to three parts...

Purva karma(pre procedure)

Pradhana Karma(main Procedure)

Paschat Karma(Post Procedure)

Purva karma (pre procedure):

Selection of the patient:

Selection of the patient for this procedure depends up on the diagnosis which is done with Astha vidha pareeksha (eight-fold examination) and Dashavidha Pareeksha (ten-fold examination) which is done by a qualified physician

Selection of the medicine:

The chicken egg yolk is taken along with some medicinal herbs which have the pharmacological and therapeutic property of relieving pain, inflammation and stiffness and also which can rejuvenate and strengthen the joints and soft tissue, stops the degeneration and improves the circulation are selected as per the condition of the patient depending on Rogi bala (Strength of the patient) Roga Bala (severity of the disease).

Pradhana karma(main procedure):

The person is made to lie on the droni, if Abhyanga(massage) is indicated then it is performed for a few minutes with medicated oil followed with Kukutanda Kizhi, where the bolus which is prepared with the Kukutanda is heated and sudation is given to the affected part of the body.

Duration of the treatment—25 to 30 min

Paschat karma(post procedure):

After the treatment the person is advised to take rest for a while.

Indications:

- Bell's palsy
- Greeva graham
- Skin nourishment
- Hanugraha
- Apabahuka

Mode of action:

- The mode of action of Anda Sweda shows in three forms, they are mild snehana effect, fomentation effect, and nourishing effect.
Skin is a large and highly complex organ, with extensive network of blood vessels, branches, and sensory receptors that monitor touch, pressure, temperature, and pain.
- Here the nourishing effect will be in from the ingredients, the main ingredient being egg yolk that contains proteins and fat-soluble vitamins A, D, E, and K and lecithin which is present in egg yolk is having cosmetic and pharmacological application and that is how this treatment helps in nourishing skin and as acts on various pathological conditions.
- When the procedure Anda Sweda starts, the heat produced by the medicated bolus increases the temperature to more than 2 to 3 c in all areas of the body, and vasodilatation will take place due to which increased blood will enhance transformation of the necessary nutrients and oxygen which are supplied and waste products are expelled because of increased blood supply the metabolism will increase as a result the output of waste products from the cells are increased.
- Healing earth Multispecialty ayurveda hospital gives importance to the selection of the medicine, and eggs which are from authentic source for the procedure, so that to avoid any kind of complications and to give the optimal results.

Sastika shali pinda svedana / navarakizhi:

Sastika shali pinda svedana is the application of the heat by using a potalli containing a bolus made from sastika shali.

Yogya:

- | | |
|----------------------------------|----------------------|
| • Vata vyadhi | • Phakka roga |
| • Diseases of the nervous system | • Cerebral palsy |
| • Spinal cord degeneration | • Poliomyelitis |
| • Neuropathy | • Muscular dystrophy |
| • Chronic rheumatism | • Muscle wasting |
| • Emaciation | • Fatigue syndrome |

Required aushadha dravya:

- Sastika shali 500 gm
- Ksheera 3 litres
- Balamula yavakuta 750 gm
- Taila for abhyanga Q.S.
- Jala 12 litres

Preparation of potalli:

- Coarse powder of Balamula is taken in a vessel and added with 12 litres of water.
- The mixture is boiled on a low flame until reduced to 3 litres.
- The liquid is strained.
- 1.5 litre of the kashaya is mixed with equal amount of ksheera and kept in a vessel which will be used for boiling sastika shali until it becomes thick and semi-solid.
- Sufficient quantity of hot water can be used if rice requires more boiling.
- The properly cooked rice is equally divided into 4 portions and 4 potallis are prepared.
- The remaining 1.5 litre of kashaya is mixed with the remaining 1.5 litre of ksheera in another vessel and heated.
- This liquid is used for heating the potalli.

Vidhi:

Abhyanga is done before performing svedana karma.

Then 2 warm potallis should be applied gently in a synchronized manner by two therapists followed by gentle massage with the other hand.

The other 2 potallis are kept warm in the vessel with kashaya & ksheera.

At the end of the end of procedure, the medicine remaining on the patient's body should be scrapped of with coconut leaves or with any similar device, the body is wiped dry and covered.

The patient should take complete rest for half an hour, and is then allowed to take a warm water bath.

Ksheera dhuma:

Ksheera dhuma is modified form of nadi svedana which is used to generate steam. It is found to be especially in urdhwa jatru gata roga.

Yogya:

- | | |
|--------------|----------------------------|
| • Hanugraha | • Vishvachi |
| • Manyagraha | • Ardita |
| • Avabahuka | • Mastoiditis |
| • Katigraha | • Trigeminal neuralgia |
| • Vata rakta | • Cervical disc prolapses. |
| • | |

Materials required:

- | | |
|----------------------------|------------------------|
| • Milk → 500 ml | • Blanket 1 |
| • Bala kwatha → 500 ml | • Nadi sveda apparatus |
| • Oil for abhyanga → 50 ml | • Eye pad 1 |
| • Rasnadi churna → 5 gm | • Chair 1 |

Preparation of medicine:

Bala kwatha: 500 gm of crushed Balamoola is boiled with 2 litres of water, 500 ml of milk and reduced to 500 ml. This is used to generate steam for the therapy.

Pre-operative procedure:

Patient should be seated in a chair and talam should be applied with suitable oil.

Abhyanga should be done over face, forehead, neck, shoulder & chest.

Eyes should be covered with cotton cloth after placing lotus petals over both lids.

The head and neck portion are covered from the back with a blanket.

Procedure:

The patient should sit comfortably for the procedure.

Then steam from the apparatus is directed over the face, neck, chest & shoulder.

Special care should be taken to avoid burns and to get uniform steam.

The procedure should be continued up to the appearance of sweat.

It is done for about 15 minutes.

Intermittent opening of the mouth is to be done.

Post operative procedure:

Eye pads are removed from the eyes and sweat is wiped off.

Talam is to be removed & rasonadi churna should be applied.

Kavala or gandusha should be done with proper medicines.

The patient should take complete rest.

Precautions:

Eye should be tied to protect from heat.

Move the pipe of svedana apparatus frequently to avoid burns.

Ideal time to perform the procedure is between 7 – 10 am & 4 – 6 pm.

Sarvanga ksheera dhara / Ksheera seka:

Sarvanga Ksheera dhara is a specialized Ayurvedic therapy used to treat various ailments like inflammatory conditions, Musculo-skeletal disorders, neurological disorders, skin disorders, Diabetic neuropathy, psychological disorders, sports injury etc.

“Sarvanga” mean whole body and “dhara” means pouring. Sarvanga Ksheera Dhara is a process in which medicated milk is poured over the whole body maintaining a specific height, rhythm and temperature, performed by two qualified therapist, which is being prescribed by an Ayurvedic consultant in a systematic way

Benefits:

- Prevents muscles wasting and degeneration of bones
- Helps to reduce inflammation of joints
- Provides strength to muscle tissues
- Relieves pain, stiffness of the joints
- Increases vasodilation and brings lightness to the joints and muscles.
- Increases flexibility of the joints

Treatment duration:

40 to 45 min

The treatment duration depends on the consulting physician and the severity of the condition.

Treatment course duration:

7 days, 14 days, 21 days

The treatment course duration depends on the consulting physician and the severity of the condition.

Mode of action of sarvanga ksheera dhara:

The Therapeutic action of Ksheera dhara depends on

- The pharmacological action of the medicine
- Therapeutic action of the procedure like rhythmic steaming of the medicine.
- Local application of the heat and the timings of the treatment.

When the Sarvanga Ksheera dhara is being performed, the warm decoction poured over the body helps in proper perspiration of the body and thereby detoxifies the body.

The medicines in the milk decoction come in contact with the skin and enters inside through the skin pores. Since the procedure is performed from a particular height and a particular temperature is maintained, there will be formation of energy by which the medicine can easily enter into the pores through friction and thermal action. The permeability of the medicine through the skin pores is enhanced.

Because of the temperature which is maintained during the treatment, vasodilatation happens because of which increased blood flows through the area so that the necessary oxygen and nutrition materials are supplied and the disease-causing toxins are removed.

Because of increased blood supply the metabolism will increase as a result the output of toxins from the cells are increased.

The pharmacological action of the medicine and the temperature which is maintained during the treatment act as a counter irritant which is the thermal stimulus and may affect the pain sensation, itching sensation

It also induces muscles relaxation and increases the efficiency of muscle action as the increased blood supply ensures the optimum condition for muscle contraction and relaxes the mind and induces the sleep.

Indications:

- Osteo-arthritis
- Rheumatoid Arthritis
- Inflammation
- Eczema
- Diabetic neuropathy
- Sports injuries
- Paralysis
- Psoriasis
- Rejuvenation
- Gouty Arthritis
- Stress
- Eczema
- Leukoderma

Contraindications:

- Fever: As the temperature might increase during the therapy
- Rhinitis: Severity of disease will increase
- Certain forms of cancer
- Severe sinusitis
- Certain cardiac problem
- Indigestion
- Haemorrhagic disorders
- Acute illness
- Diarrhoea
- Pregnancy
- Extreme fatigue

Sarvanga kashaya dhara / kwatha seka:

Sarvanga kashaya dhara is a specialized Ayurvedic therapy used to treat various ailments like inflammatory conditions, infectious conditions, skin diseases (psoriasis, eczema, dermatitis, leukoderma, urticarial), sports injury, Musculo-skeletal disorders etc.

“Sarvanga” mean whole body and “dhara” means pouring. Sarvanga Kashaya Dhara is a process in which medicated decoction is poured over the whole body maintaining a specific height, rhythm and temperature, performed by two qualified therapist, which is being prescribed by an Ayurvedic consultant in a systematic way

Benefits:

- Improves circulation to the skin
- Reduces skin inflammation
- Helps to reduce itching sensation all over body
- Reduces skin dryness
- Helps to heal the wounds
- Acts as antibacterial therapy

Treatment duration:

40 to 45 min

The treatment duration depends on the consulting physician and the severity of the condition.

Treatment course duration:

7 days, 14 days, 21 days

The treatment course duration depends on the consulting physician and the severity of the condition.

Mode of action of sarvanga kashaya dhara:

The Therapeutic action of Sarvanga Kashaya dhara depends on

- The pharmacological action of the medicine
- Therapeutic action of the procedure like rhythmic steaming of the medicine.
- Local application of the heat and the timings of the treatment.

When the Sarvanga Kashaya dhara is being performed, the warm decoction poured over the body helps in proper perspiration of the body and thereby detoxifies the body.

The medicines in the decoction come in contact with the skin and enters inside through the skin pores. Since the procedure is performed from a particular height and a particular temperature is maintained, there will be formation of energy by which the medicine can easily enter into the pores through friction and thermal action. The permeability of the medicine through the skin pores is enhanced.

Because of the temperature which is maintained during the treatment, vasodilatation happens because of which increased blood flows through the area so that the necessary oxygen and nutrition materials are supplied and the disease-causing toxins are removed.

Because of increased blood supply the metabolism will increase as a result the output of toxins from the cells are increased.

The pharmacological action of the medicine and the temperature which is maintained during the treatment act as a counter irritant which is the thermal stimulus and may affect the pain sensation, itching sensation

It also induces muscles relaxation and increases the efficiency of muscle action as the increased blood supply ensures the optimum condition for muscle contraction and relaxes the mind and induces the sleep.

Indications:

- | | | |
|------------------------|-------------------|------------------|
| • Psoriasis | • Eczema | • Vitiligo |
| • Pigmentation | • Sports injuries | • Varicose ulcer |
| • Dry skin | • Body ache | • Wounds |
| • Circulatory problems | • Rejuvenation | • Diabetic foot |
| • Urticarial | • Sprain | • Nail infection |
| • Inflammation | • Chronic pains | |
| | • Insomnia | |

Contraindications:

- Fever: As the temperature might increase during the therapy
- Rhinitis: Severity of disease will increase
- Certain forms of cancer severe sinusitis
- Certain cardiac problem
- Indigestion
- Haemorrhagic disorders
- Acute illness
- Diarrhoea
- Pregnancy
- Extreme fatigue

Avagaha sveda:

Immersion of the affected part in a tub filled with suitable warm liquid is known as avagaha sveda.

It can be carried out for the whole body in sarvanga vyadhi and locally in disease, such as painful arsha.

Materials: vatahara – kwatha, ksheera, taila, ghrita, pishita rasa, ushna jala

Instruments: jala kashtha (tub)

Chakrapani comments that, jalakoshtha is a large tub like vessel which is used for the purpose of avagaha.

Method:

- The hot decoction prepared from vata relieving drugs, hot milk, ghee, oil or water as per feasibility may be used.
- After proper massage that patient is asked to sit or lie down in the tub filled with liquid by keeping the head above.
- In case of sitting position, the level of the liquid should be up to clavicle and the warm liquid may be poured continuously on the shoulder.
- For lying position, it should be sufficiently filled so that the body remain immersed in the liquid.
- The patient may remain for 48 minutes in the tub. Thereafter the patient is allowed to come out from the tub and the liquid is cleaned with a towel.
- The patient may take a light meal after taking hot bath.

Indications:

Sarvanga vata, arsha, katipradesha shula, gridhrasi etc.

Dhanyamla dhara:

It is a type of kayaseka, included under drava sveda.

Dhanyamla is included under sandhana kalpana.

It is used in vata rogas, especially with kaphanubandha

Materials required:

- Dhanyamla → 5 litres
- Oil for abhyanga → 100 ml
- A pot with small hole in the centre → 2
- Vessels → 4
- Rasnadi churna → 5 gm
- Masseurs → 2

Pre-operative procedure:

- Patient should be made to sit / lie down on the droni; talam should be kept on head and sarvanga abhyanga should be done.
- In some conditions it is done without abhyanga.
- Gauze should be tied around the head above the eyebrows.
- Ear should be plugged with gauze.
- The patient should be covered with a thin cloth below the neck.
- This procedure may be done without covering the body too.

Procedure:

- Warm dhanyamla is poured with kindi by two attendants standing on either sides of the droni.
- Temperature should be around 42°C.
- Dhara should be poured at a medium speed and from a height of 6 – 12 cm.
- It can be done hot or cold according to the condition.
- Fresh dhanyamla should be used every day.

Post-operative procedure:

- After dhara, the body & head are cleaned using a soft towel.
- Ear plugs & gauze are removed & rasnadi churna is applied to the head.
- Rest is advised for 1 hour and then asked to take bath.
- Abhyanga before bath is optional.

Duration:

45 minutes per day for minimum of seven days. It is probably done in morning hours in moderate climate.

Pizhichil:

The whole body is bathed in streams of lukewarm medicated oil with simultaneous soft massage.

Pizhichil literally means squeezing.

Method:

- The patient with minimum cloth is asked to lie down on the droni.
- Ideally five masseurs are required two for each side and one helper for collecting, heating & supplying of the oil.
- 18'' × 18'' cloth piece is taken by each masseur and dipped in the hot oil kept in a bowl placed in the droni within the reach of the masseurs.
- The oil soaked cloth is squeezed from the first with the help of thumb and simultaneously massage is done with the other hand.
- The oil is poured from the height of about 9 inches. It is stored from upper side and continuously down towards the lower side without interruption.
- The helper collects the oil, reheat it and puts it in the bowl.
- It should be done in the seven positions mentioned for abhyanga about 5 minutes in each position.
- The temperature of oil should be kept at 40 to 42 °C depending upon the tolerance of the patient.
- It is advisable to change the oil daily, if the patient is affordable, otherwise same oil can be reused for a maximum period of 7 days by adding the lost quantity of oil during the process daily. However, on the eighth day it has to be replaced by the new oil.

Indications:

- | | |
|-----------------------|---|
| • Hemiplegia | • Sciatica |
| • Paraplegia | • Pain in abdomen |
| • Post polioparalysis | • Colic and other painful conditions involving many parts of the patient. |
| • Low backache | |

Upanaha sveda:

Types of upanaha sveda:

According to chakrapani 1. Sagni 2. Niragni

The one in which there is a direct contact of agni can be called as sagni type.

In niragni type the powder form of the drugs are applied directly on the body parts by mixing them with suitable 'drava dravya' to form paste. They are applied without exposing them into agni for heating.

Procedure:**1. Purva karma:**

Atura pariksha →

The patient is examined in relation to prakriti, vikriti etc.

Then the affected area should be examined properly and mark the tender region. Examine for scars, wounds if any at the joint.

Atura siddhanta →

Patient is asked to sit erect by extending lower limbs on the table.

Expose the affected area properly.

Support the limbs, so that they are placed horizontally and comfortably.

2. Pradhana karma:

- The prescribed medicines will be made into paste form by adding sufficient amount of godhuma.
- Then upanaha is prepared by heating it over medium flame.
- When it is half cooked around 30 ml of prescribed medicated oil is added & stirred well.
- It should be stirred continuously to prevent formation of lumps.
- Once it is cooked well it should be taken out of flame.
- The part to which upanaha is to be applied is exposed.
- Sthanika abhyanga with prescribed oil is optional.
- The prepared medicine is applied in pratiloma gati over the affected part.
- It should of thickness of mahisha ardha charma or 0.5 cms.
- Then it is covered with preheated and softened vatahara leaves like eranda patra.

3. Paschat karma:

Upanaha can be retained for around 12 hours then removed and the port should be cleaned with warm water.

In summer season it can be retained upto 6 hours.

Annalepa:

Anna means cooked rice and lepa is application.

In this process the gruel is prepared from the patient without wrapping in cloth.

Before doing anna lepana, sarvanga, abhyanga should be performed.

Lukewarm anna should be applied gently over parts with slight mardana or pressure.

Entire procedure may be finished within an hour.

Indications:

- | | |
|----------|-------------------------|
| • Shosha | • Rakta dushti |
| • Shula | • Daha pradhana vyadhis |
| • Vata | |

8. Local Basti such as Kati Basti, Janu Basti, Greeva Basti and Urobasti

Kati basti:

The process in which oil is retained in the low back region for period of 10000 matra is called kati basti.

Materials required:

- Black gram flour – 350 gms
- Suitable medicated oil 150 - 250 ml
- Vessels 3
- Spoon 1
- Cotton Q.S.
- Hot water bath 1
- Therapist 1

Procedure:

- Make thick dough with black gram powder by mixing with adequate quantity of water.
- Using the thick dough make a rim and fix it firmly on the low back region where the highest pain is present.
- Take the specified oil, warm it and pour on the inner wall of the rim taking care not to spill out.
- When oil becomes cool, remove it with cotton & again refill with warm oil.
- Uniform temperature should be maintained throughout the procedure.

Indications:

- Lumbar spondylosis
- Disc prolapses
- Lumbar canal stenosis
- Ankylosing spondylitis
- Radiculopathies
- Fracture dislocation of vertebrae
- Mechanical backache

Janu basti:

Retaining the hot oil over the knee joint region for a period of 10000 matra is called janu basti.

Materials:

- Black gram flour – 350 gms
- Suitable medicated oil 150 - 250 ml
- Vessels 3
- Spoon 1
- Cotton Q.S.
- Hot water bath 1
- Therapist 1

Procedure:

Make thick dough with black gram powder by mixing with adequate quantity of water.

Using the thick dough make a rim and fix it firmly on the low back region where the highest pain is present.

Take the specified oil, warm it and pour on the inner wall of the rim taking care not to spill out.

When oil becomes cool, remove it with cotton & again refill with warm oil.

Uniform temperature should be maintained throughout the procedure.

Indications:

- Painful knee conditions like osteoarthritis
- Ligament injuries
- Meniscal tear
- Rheumatoid arthritis
- Sandhigata vata
- Sandhi sula etc.

Complication & management:

Accidental burns: stop the procedure and perform agnidagdha chikitsa

Yoga: ksheerabala taila + nirgundi taila

Mahamasha taila + murivenna taila

Greeva basti:

Retaining the oil for 8000 matra on the nape (back of neck is called greeva basti).

Materials:

- Black gram flour – 350 gms
- Suitable medicated oil 150 - 250 ml
- Vessels 3
- Spoon 1
- Cotton Q.S.
- Hot water bath 1
- Therapist 1

Procedure:

- Make thick dough with black gram powder by mixing with adequate quantity of water.
- Using the thick dough make a rim and fix it firmly on the low back region where the highest pain is present.
- Take the specified oil, warm it and pour on the inner wall of the rim taking care not to spill out.
- When oil becomes cool, remove it with cotton & again refill with warm oil.
- Uniform temperature should be maintained throughout the procedure.

Indications:

- | | |
|------------------------|----------------|
| • Cervical spondylosis | • Avabahuka |
| • Neck stiffness | • Disc disease |

Note:

Nowadays steel rings or fibre rings are available in small, medium and big sizes, which can be used with great ease. It is less time consuming & black gram dough requirement is less.

Urobasti:

Retaining the lukewarm oil (38°C) over the chest region for a period of 6000 matra is called urobasti. The area covered depends on the pathological conditions of chest.

Indications:

Regulate vata dosha in the chest region, improves the blood circulation, muscular chest pain, strengthens heart muscle, useful in asthma, dystrophy, cardio-myopathies etc.

Mode of action:

- Bahya samana chikitsa
- Bahya snehana & svedana
- Different actions as per selection of oil
- Local rise in temperature
- Local increase in circulation due to dilation of capillaries at terminal region leads to contraction of internal vessels. Thereby blood is drawn towards periphery finally promoting phagocytosis and also combating inflammatory process.
- Drainage of excessive fluid through lymphatics also take place.

9. General precautions during Sagni Svedana and Methods to protect vital during svedana

General precautions during sagni sveda:

1. After considering the roga, rogi, rutu and desha if not too intense or not too mild sveda is employed then it will be effective.
2. Dosha → vata: upanaha, pitta samsrishta: drava svedana, kapha: tapa, ushma sveda, kaphamedavrita: niragni
3. Ritu → sita rutu: mahan sveda, ushna rutu: mrudu sveda
4. Rogi → uttama bala: mahan sveda, madhyama bala: madhyama sveda, avara bala: alpa sveda
5. Desha → jangala desha: madhyama sveda, anupa desha: uttama sveda
6. Mrudu svedana should be given to the heart region, testis & eyes or avoided if not much essential. Groin & lower abdomen should be given moderate sveda. For other parts svedana should be done up to desired extent.

Methods to protect the vital organs during svedana:

1. Eyes should be protected by covering them with lotus leaves.
2. Heart region should be kept cool by the local application of cool substances.
3. While doing bashpa sveda etc. sarvanga sveda, cotton pad dipped in cold water should be placed on the cortex of head.
4. Mild svedana with utmost care should be taken in 1. Pitta prakriti 2. Svedana during summer season; otherwise burn wound, vertigo, fainting etc. may occur.
5. Svedana should not be done without abhyanga. If svedana is done after abhyanga then it confers beneficial effects

6. In the patients of neurological disorders such as paralysis etc. where in sensory loss is present the svedana should be done carefully by a skilled therapist.
7. Svedana should be avoided in gangrene, open wound etc.
8. Patients having kushtha, kamala, hepatitis B and other pitta pradhana roga svedana with hot water bath is advised.

10. Samyak Yoga, Ayoga and Atiyoga of Svedana

Features of samyaka svinna or sveda:

- Sita uparama (relief of coldness)
- Sula uparama (relief of pain)
- Stambha nigraha (relief of stiffness)
- Gaurava nigraha (relief of heaviness)
- Mardava (softness of the body)
- Sveda (adequate sweating)
- Vyadhihani (remission of disease)
- Sitarthitvam (desire for cold)

Features of asveda:

- Sveda apravruti (no sweating)
- Sita aprasama (no relief of coldness)
- Sula aprasama (no relief of pain)
- Stambha aprashamana
- Gaurava (heaviness)

Features of atisveda:

- | | | |
|----------------|------------------|----------|
| • Pitta | • Daurbalya | • Klama |
| • Murccha | • Sandhi pida | • Jvara |
| • Gatra sadana | • Sphota utpatti | • Chardi |
| • Trushna | • Rakta prakopa | |
| • Daha | • Bhranti | |

11. Complications of Svedana and their Management according to Ayurveda & Modern Medicine

Ayurveda:

- The food which is madhura, sheeta, drava, snigdha
- Juice made of cold water & sugar should be drunk.
- Lavana, amla, ushna, katu dravyas should not be used.
- The patient should keep in sheeta gruha.
- His body should be smeared with paste of chandana

- In case of excessive sveda which may cause bhrama, murccha, daha etc. The treatment for respective disease should be immediately administered.
- In case of sphota or vrana fomentation should be stopped immediately and jatyadi taila, jatyadi malam, shatdhauta ghrita, jatyadi ghrita, ropana ghrita etc. should be applied.

Modern:

- Cold water should be sprinkled
- Head low position should be maintained
- Cold water to drink
- Management of dehydration.

12. Diet and management during and after Svedana

Nivata sthana: the place should be devoid of direct entry of wind.

Jeerna anna: previously taken meal should be digested

Sneha abhyakta shareere: bahya snehana should be performed.

Sheeta aachchadana over chakshu

13. Parihār Vishaya

Avoid exposure to intense sunlight, direct wind and cold breeze.

Avoid immediate entry into AC room or AC car.

Avoid cold drinks, cold water, curd etc. kaphavardhaka diet.

Avoid day sleep.

Avoid cold water bath

14. Svedana Kārmukata (Mode of action)

Ayurvedic:

- Svedana dravyas has its main action like stambhaghna, gauravaghna, sitaghna, sveda karakatwa.
- Svedana drugs by ushna and tikshana guna are capable of penetrating the micro circulatory channels (srotas) where they activate sweat glands to produce more sweat.
- After dilatation of microchannels, laghu and sara guna of these drugs enables them to act on the dosha in the channels, remove the stagnation, making the sticky content mobile and direct them to move towards koshta or excrete them through micropores of the skin in the form of sweat, resulting in srotoshodhana.
- The dosha brought into koshta are expelled out with the help of vamana or virechana therapy.
- In disease state, the srotas have many types of abnormalities.
- In such srotas even after mobilization, the dosha are likely to be obstructed.

- So, it is necessary to make the srotas suitable for the movement of loosened dosha.
- This is achieved with the help of svedana, which is supposed to be the best softening method, restoring softness & elasticity.
- Sveda is the by-product of meda dhatu which dominates in jala mahabhuta. The sveda produces kleda in the body, which is also apa mahabhuta pradhana.
- The udaka dhatu is present in the body in various forms like faeces, urine, sweat, lymph and blood etc.
- It performs important function like jivana, tarpana, mala shodhana etc.
- When sveda vaha srotas is vitiated, it leads to presentation of various symptoms like irregular production of sweating, roughness of the skin, burning sensation all over the body etc.

Modern:

- Sweat consists of sodium chloride, water, urea, lactic acid, potassium, calcium etc. all these substances are present in extra cellular fluid also, which provide nutrition to cells.
- Excessive sweating in the body leads to depletion of contents of extra cellular fluid.
- Sodium chloride is one of the major substances which is lost during sweating.
- Due to its loss, feeling of exhaustion or weakness in the body occurs.
- Svedana by its qualities like ushna, tikshana etc. does stimulation of the body. It increases the metabolic rate of the body.
- Ushna guna of sveda dilates the capillaries thus it increases circulation.
- Increased circulation leads to more elimination of waste products and more absorption of sneha or drugs through the skin.
- It also stimulates muscle and nerves which promotes its renovation.
- Heat administration in svedana may produce hypno analgesic effect by diverted stimuli.
- Sweating controls, the heat production, water and electrolyte balance in the body.
- Sweat glands are controlled by central nervous system.
- Hypothalamus is the centre of heat regulation in our body.
- Though the signals generated by the temperature receptors of the hypothalamus are extremely powerful in controlling body temperature, receptors in other parts of the body also play an important role in the temperature regulation.
- The temperature control system employs two important mechanisms to reduce heat, when the body temperature is too hot during the svedana karma.

1. Vasodilation:

- Due to svedana in almost all areas of the body the blood vessels of skin become intensely dilated.

- This is caused by inhibition of the sympathetic centres present in the posterior hypothalamus that caused vasoconstriction.
- Full vasodilation can increase the rate of heat transfer to the skin as much as eight folds.
- So, it can be inferred that the ushna guna of svedana karma leads to stimulation of sympathetic nervous system and there is vasodilation.
- Ushna guna also increases the circulation of rasa & rakta in the body.

2. Induction of sweating:

- An additional one degree increase in body temperature causes enough sweating to remove ten times of the basal rate of body heat production.
- During svedana karma the body temperature rises to more than 2 – 3 °C.
- It results in increased sweating by the above said mechanism.
- Due to the effect of sara & sukshma guna of svedana dravya the leena dosha are also liquified in the body and they come out through micropores which are present over the skin as pores of sweat glands.
- As there is extreme vasodilatation due to production of heat, it results in more excretion of liquified vitiated dosha from the body resulting in sroto shodhana.
- Thus, svedana dravya induces cleansing effect in the body.

15. General Knowledge about current Sudation techniques like Sauna bath, Steam bath

Sauna bath:

A sauna is a small room or building designed as a place to experience dry or wet heat sessions, or an establishment with one or more of these facilities.

The steam and high heat make the bathers perspire.

How to give sauna bath?

- Ask the patient to undress in dressing room.
- Ask the patient to drink 1 – 2 glass of water or any sport drink (avoid caffeine) which has electrolytes.
- Ask the patient to shower first as this is to moisten the skin and to remove any possible body or fragrant odours, which do not belong to the sauna.
- Do not give a sauna bath for over 10 – 15 minutes.
- Ask patient to exit sauna bath if patient feels uncomfortable or becomes sleepy.
- Cool off with fresh air and cool water without shocking the system and to avoid shivering give a warm foot bath if patient has cold feet and then repeat the session.
- Do not give more than 3 sessions at a time in the sauna bath.

Precautions:

Avoid alcohol

Time limit: do not spend more than 20 minutes at a time in a sauna. First time spend a maximum of 5 – 10 minutes. As they get used to the heat, they can slowly increase the time to about 20 minutes.

Water intake

Health benefits:

- | | |
|-------------------------|-----------------------------------|
| 1. Improved circulation | 4. Improved cardiovascular health |
| 2. Relieve the pain | 5. Relieve of skin problems |
| 3. Reduced stress level | 6. Relieve of asthma |

Steam room / steam bath:

- A steam room is created when a water filled generator pumps steam into an enclosed space so there is moisture in the air.
- The temperature inside a steam room is generally between 43 – 45 °C with a humidity level of 100%
- It is advisable not to spend longer than 15 – 20 minutes inside steam bath.

The correct way to take steam bath:

- Patient should be subjected to shower before first session.
- Time of stay in the steam bath in accordance with personal sensitivity of the patient
- Do not exceed 15 – 20 minutes
- Cool off with cool fresh air and cold water without shocking the system and avoid shivering.
- Subject patient to warm foot bath if the patient has cold feet.

Health benefits:

1. Improved circulation and cardiovascular health
2. Improved skin health
3. Workout recovery
4. Loosens stiff joints & relieves joint pain
5. Reduced stress levels
6. Opening of mucous membranes which improves breathing, treat colds and unblock sinuses.

Steam room & sauna:

Steam rooms and saunas are similar as both are heated rooms used for relaxation and to help relieve symptoms of some medical conditions.

The key difference is that while steam rooms are filled with moist heat, a sauna provides dry heat.

The temperature in a sauna is higher than a steam room, while the humidity level is much higher in a sauna.

Precautions:

Avoid alcohol

Time limit: do not spend more than 20 minutes at a time in a sauna. First time spend a maximum of 5 – 10 minutes. As they get used to the heat, they can slowly increase the time to about 20 minutes.

Water intake

Steam room is contraindicated in pregnant woman, heart diseases, very low or high blood pressure, epilepsy, intake of antibiotics or mind-altering drugs.

VAMANA**1. Etymology, definition and importance of Vamana Karma****Etymology:**

The root 'vam' means 'udgar'. It is derived from the root verb 'udgru' and conveys the exact interpretation through meaning like ejection, going out, oozing, stream, eructation, echo & hissing sound.

By applying lyut suffix to the root verb 'vamane' the word vamana is derived. It accords for four meanings 1. Mardane 2. Chardane 3. Nissarane 4. Svarabhisyanda

Definition:

तत्र दोषहरम् ऊर्ध्वभागं वमनसंज्ञकम् ।

Vamana is a process in which vitiated dosha are expelled through the upper route i.e., mouth. Chakrapani mentions that urdhwabhaga should be considered as urdhvamukha.

Importance of vamana karma:

- Vamana occupies the top place among all the eliminative procedures and needs extraordinary care during the process for which vamana has been kept ahead of virechana in panchakarma therapy.
- Best line of treatment for the kaphaja disorders
- It is essential to administer vamana before rasayana & vajikarana, without vamana if rasayana & vajikarana administered then the effects will be less and take longer time.
- Vamana is used in emergency conditions like poisoning, indigestion etc.

2. Utility of Vamana Karma in health and disease

- The seasonal kaphaja diseases occurring in vasant ritu can be prevented by administering vamana in vasanta ritu.
- Vamana is highly effective in asthma, chronic bronchitis, chronic sinusitis, psoriasis, allergic dermatitis, hypothyroidism, obesity & type 2 diabetes mellitus.
- Vamana is highly effective in poisoning, indigestion and severe kapha dominant tamaka shwasa.
- Vamana is highly effective in diseases of rasavaha, raktavaha, mamsavaha, medovaha, pranavaha, & annavaha srotas.

3. Indications and Contraindications for Vamana

Indications:

- | | | |
|--------------|---------------------|-----------------|
| • Pinasa | • Mandagni | • Hrilasha |
| • Kustha | • Viruddha anna | • Arochaka |
| • Navajvara | • Ajirna | • Avipaka |
| • Rajyakshma | • Vishuchika | • Apasmara |
| • Kasa | • Alashaka | • Unmada |
| • Shwasa | • Vishapita | • Atisara |
| • Galagraha | • Garapita | • Shopha |
| • Galaganda | • Adhoga raktapitta | • Pandu roga |
| • Shlipada | • Praseka | • Mukhapaka |
| • Prameha | • Arsha | • Stanya dushti |

Contraindications:

- | | | |
|--|--------------------------|---|
| • Kshata kshina | • Pipasa | • Aasthapita |
| • Atisthula | • Kshudha | • Anuvasita |
| • Atikrusha | • Bhara adhvahata | • Hrid roga |
| • Bala | • Kshama | • Udavarta |
| • Upavasa,
maithuna,
adhyayana,
vyayama, chinta
prasakta | • Garbhini | • Gulma |
| • Vriddha | • Sukumara | • Udara roga |
| • Durbala | • Samvritta kosta | • Asthila |
| • Shrama | • Dushchardana | • Svaropaghata |
| | • Urdhvaga
raktapitta | • Timira |
| | • Prasakta chardi | • Shira, shankha,
karna, akshi shula |
| | • Urdhvavata | |

4. Knowledge of Koshta and Agni

Koshta:

Arundatta has mentioned three types of koshta in relation to vamana.

Dominance of kapha in koshta is considered as mrudu koshta for vamana.

Similarly, madhyama shleshma gives rise to madhyama kusta and slight kapha in koshta is krura koshta.

By implication it can be said that the patient who has a dominance of kapha in koshta requires less dose of vamana dravya, while those having slight kapha requires more dose of the drug.

Agni:

Assessment of agni is very essential before vamana karma for fixing the dose of abhyantara snehana.

Also, the knowledge of agni is very important

In case of ati teekshanagni person to who's the aushadhi is administered will digest it quickly without causing vamana.

5. General knowledge of Vamana and Vamanopaga drugs; properties, actions, preparations, preservation with special reference to Madanphala, Kutaja, Nimba, Yashti, Vacha

Madanaphala:

Botanical name: randia dumetorum

Family: rubiaceae

Synonyms: madana, karahata, ratha, pinditaka, phala, shwasana

Collection:

Between vasant & grishma in pushya, ashvini or mrugashira nakshatra in maitre muhurta.

Fruits should be pakwa, yellow, neither touched by insects rotten or bitten by insects, not small should be collected.

Should be cleansed and bundled up in sacred grass, smeared with cow dung and kept for 8 days in a heap of yava, tusha, masha, shali, kulattha or mudga.

Preservation:

When the fruits have become soft, sweet and pleasant smelling, they should be taken out and dried.

When they are dried, their seeds should be taken out.

Seeds should be soaked and macerated with ghrita, dadhi, madhu, phala and dried again.

Then they should be filled up to the neck in a new pot which is clean and free from dust, well closed with lid, well protected and placed securely in a swing.

Properties:

Rasa: madhura, tikta

Guna: ruksha, laghu

Veerya: ushna

Vipaka: katu

Action (karma):

Kaphapittahara, vatanulomana, aashukari

Preparations (yoga): 133

Kutaja:

Botanical name: holarrhena antidysentrica

Family: apocyanaceae

Synonyms: vatsaka, kutaja, shakra, vrukshaka, girimallika.

Its seed are called as indrayava, kalingaka.

Collection & preservation:

Fruits should be collected in their proper season and should be dried & stored.

Properties:

Rasa: tikta, kashaya

Guna: laghu, ruksha

Veerya: sheeta

Vipaka: katu

Karma (action): Kaphapittahara

Indications:

- | | | |
|--------------|-------------|-----------|
| • Raktapitta | • Hrud roga | • Visarpa |
| • Sukumara | • Jwara | |
| • Anatyaya | • Vatarakta | |

Yoga: 18 yogas

Nimba:

Botanical name: azadirachta indica

Synonyms: arista, Subhadra, pichumarda, sarvatibhadra

Properties:

Rasa: tikta, kashaya

Guna: laghu, ruksha

Veerya: sheeta

Vipaka: katu

Karma: deepana, Kaphapittahara, krimighna

Indications: jvara, prameha, kushtha

Yashtimadhu:

Botanical name: glycyrrhiza glabra

Family: fabaceae

Synonyms: madhuka, madhu yashti, yashti, jalaja

Properties:

Rasa: madhura

Guna: guru, snigdha

Veerya: sheeta

Vipaka: madhura

Karma: tridosahara, rasayana, vrushya

Sangraha vidhi: yasti mula are collected dried, roughly powdered and stored.

Yoga:

Yashtimadhu kwatha 3 – 6 litres alone or mixed with other Yamaka dravya such as madanphala, is taken to induce vamana, yashtimadhu churna 2 – 6 gm is also used.

Sangraha vidhi (nimba):

Nimba twaka is collected, dried, roughly powdered and stored.

Yoga (nimba): nimba kvatha, 2 – 4 litres, alone or mixed with other vamaka dravya such as madanphala is taken to induce vamana.

Vacha:

Botanical name: acorus calamus

Family: araceae

Synonyms: aruna, golomi, ugragandha, ugra, karsani

Properties:

Rasa: katu, tikta

Guna: laghu, tikshna

Vipaka: katu

Virya: ushna

Prabhava: medhya

Karma:

Kaphavata shamaka, medhya, lekhana, vamaka, dipana, pachana, vibandhahara, aadhmanahara, shulaghna, mutra vishodhaka, kanthya, mukha rogahara, jvaraghna, atisaraghna

Sangraha vidhi: rhizome of vacha is collected, dried, powdered and stored.

Yoga:

Vacha churna 1 – 2 gm are generally used along with other vamaka dravya to induce vamana.

Vamanopaga drugs:

Vamanopaga drugs are supportive drugs to the process of vomiting.

They help in aiding the act of vomiting as well as minimize the complication which may arise during the course of vamana.

1. Madhu:

Rasa: kashaya & madhura

Veerya: sheeta

Guna: guru, sheeta, ruksha

2. Madhuka:

Glycyrrhiza glabra

Rasa: madhura

Vipaka: madhura

Veerya: sheeta

Guna: guru, snigdha

3. Kovidara: bauhinia purpurea

Rasa: kashaya

Veerya: sheeta

Vipaka: katu

Guna: ruksha, laghu

4. Karbudara (kanchanara): bauhinia variegata

Rasa: kashaya

Veerya: sheeta

Vipaka: katu

Guna: ruksha, laghu

5. Neepe (Kadamba): anthocephalus cadamba

Rasa: madhura, kashaya, lavana

Vipaka: katu

Veerya: sheeta

Guna: guru, ruksha

6. Vidhula (vetasa): salix caprea

Rasa: tikta, katu

Vipaka: katu

Veerya: ushna

Guna: laghu, ruksha

7. **Bimbi:** coccinia indica

Rasa: tikta

Vipaka: katu

Veerya: ushna

Guna: laghu

Ruksha: teekshna

8. **Shanapushpi:** (crotalaria verrucosa)

Rasa: tikta, katu, kashaya

Vipaka: katu

Veerya: ushna

Guna: laghu, ruksha, teekshna

9. **Sadapushpi:** (arka) calotropis gigantea

Rasa: katu, tikta

Vipaka: katu

Veerya: ushna

Guna: laghu, ruksha, teekshna

10. **Pratyaka pushpi (apamarga):** achyranthus aspera

Rasa: katu, tikta

Vipaka: katu

Virya: ushna

Guna: laghu, ruksha, teekshna

The vamanopaga drugs reduce the irritative property of vamana yoga.

Helps in dissolution of vamana drugs & thus proper absorption, distribution, and metabolism.

Vamana occurs better in full stomach, so for this purpose the drug having madhura, cold, potency etc. are used.

6. Purva Karma of Vamana: Deepan-Pāchana, Abhyantara Snehana and diet

Deepana pachana:

Prior to snehapana, pachana karma should be carried out

Medications like Agnitundi vati, shankhavati, chitrakadi vati & trikatu churna etc. are given till samyaka amapachana lakshana appear.

Abhyantara snehana:

The specific sneha selected as per the condition should be given at the morning time for a period of 3 – 7 days or till the appearance of samyaka snigdha lakshana after assessing the kosta & agnibala

The sneha should be given in increasing dose pattern according to the agnibala

Diet during the days of snehapana:

Drava, ushna, Anabhishyandi

The food must not have too unctuous material mixed in it.

Also, it should not contain the articles having the property to provoke any other dosha.

Patient should be advised to drink lukewarm water whenever needed.

7. Management of one gap day-Abhyanga & Svedana, diet, special Kapha increasing diet

Abhyanga & sveda:

Chakrapani commented that abhyanga & svedana should be done for two or three days i.e., on the day of completion of snehapana, during the day and on the day of vamana.

Diet for previous day of vamana:

Food which aggravates kapha dosha such as milk, krishara made up of rice, masha vada, masha payasa, sesame & jaggery in enough quantity along with the curd.

Diet just preceding to vamana karma:

In patient of less strength, old age, very young age having fear for vamana, vaidhya can provide yusha, ikshurasa, milk, mamsarasa, madhya, tushodaka, yavagu, manda according to the condition.

To others, just before starting vamana, yavagu mixed with ghrita can be given. However excess quantity of ghrita should not be given.

8. Preparation of the patient on Morning of Vamana day

- At first oil massage and svedana is given.
- Then it is important to convince the patient about the details of vamana and things to be followed.
- During vamana process, patient is advised to concentrate on vamana process, by keeping away the factors such as kama, krodha, lobha, irshya etc.
- Charaka also advocated vaidhya to create an atmosphere by svastivachana, bali, homa, mangala, prayaschita etc. before vamana for wellbeing of patient and keeping him in good mental health throughout the procedure.

9. Vamaka Yoga, Anupana, fixation of dose and method of administration

Vamaka yoga:

1. Madanaphala: vacha : saindhava : madhu :: 4 : 2 : 1 : Q.S.

Uttama	6 gm	2 gm	2gm	Q.S.
Madhyama	4 gm	1.5 gm	1 gm	Q.S.
Avara	3 gm	1 gm	1 gm	Q.S.

Anupana: madhu

Dose:

While describing the process of vamana. Charaka told the dose of madanaphala pippali powder as the quantity of powder kept inside the fist of patient's own hand i.e., antarnakha mushti pramana

Methods of administration:

After performing purvakarma patient should be brought to vamana room. Then the patient is advised to sit on the vamana chair, which is janu-tulya sama & asankirnam

In classical method scholars told to give ghrita yukta yavagu before giving the madanaphala kashaya yoga then kashaya yoga should be given till the complete removal of pitta.

Sushruta → ksheera, dadhi, takra, yavagu, mamsa rasa etc.

Vagbhata → ikshurasa, yusha, mamsa rasa, madya & tushodaka

Practically → milk, sugarcane juice, decoction / hot infusion of yashtimadhu

10. Administration of Vamanopaga Dravya such as milk, sugarcane juice, Yashtimadhu decoction

In traditional method milk, ikshu rasa or madya is given for drinking upto full stomach before giving madanaphala prayoga.

Patient should be advised to swallow the vamana yoga at a time without delay; otherwise, he gets nausea and vomits the vamana yoga.

Thereafter the vamanopaga drugs are again given at the end of process.

Lastly, lavanodaka should be given to expel the remained medicine and for pittanta vamana.

11. Lakshana indicating Doshagati during the process

Symptoms	Process (due to changes in dosha)	Factors (producing changes)
Appearance of sweating on forehead	Dosha are liquified	Due to hot & penetrating properties, the humors are disintegrated and then exuded through major & minor channels
Erection of hairs (romaharsha)	Dosha moving towards amashaya	Due to hot property, dosha exude and float towards kosta, these humor float through channels polished by oily material without sticking to it.
Adhmana	Enters the amashaya	These humor enter the amashaya by anupravana bhava (ability to flow)
Nausea (praseka) salivation (hrillasa)	Dosha moving towards mouth	After excited by udana vayu, vama dravya by their agni & vata predominance and self-tendency to move upwards

12. Management during Vamana Karma & observations

- If bouts of vomiting do not start after 20 minutes, then the hot infusion of Glycyrrhiza glabra should be given & observed for 5 – 10 minutes.
- By doing so of bouts do not occur then advise the patient to touch the throat with kamala nala, eranda nala or index & middle fingers to stimulate the vomiting.
- If above said measures fail to initiate the bout of vomiting the bout is weak, less in quantity, then it should be stimulated and potentiated by administration of the paste of pippali, amalaki, vacha, saindhava and hot water until pitta appears in the vomitus.

Observation during the act of vomiting:

- For collecting vomitus, a vessel should be kept ready.
- Now the patient should be instructed to vomit without much strain.
- During the act of vomiting, nurse should hold the forehead & chest of the patient.
- Charaka suggests that umbilical region of the patient should be gently massaged from below upwards i.e., pratiloma.
- During the procedure, vama kashaya or vamanopaga dravya explained previously can be administered repeatedly till the appearance of pitta in vomitus.
- For measuring the output of vomitus, one can use the bowl for collection.

- Afterwards it can be measured by measuring flask or jug.
- To analyse the changes in pH, strips of pH paper can be used and samples of the vomitus after each vega are collected in separate test tubes for further analysis.

Vega nirikshana & nirnaya:

During vamana in each vega colour, taste, odour, consistency, sound etc. should be observed.

	Pravara	Madhyama	Avara
Vaigiki	8 vega	6 vega	4 vega
Maniki	2 prastha	1 ½ prastha	1 prastha
Antiki	Pittanta	Pittanta	Pittanta
Laingiki	Samyaka siddha lakshana	Samyaka siddha lakshana	Samyaka siddha lakshana

13. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Vamana Karma

Samyaka yoga lakshana of vamana karma:

क्रमात् कफः पित्तमथानिलश्च यस्यैति सम्यग्वमितः स इष्टः॥१५॥

हृत्पार्श्वमूर्धन्निद्रियमार्गशुद्धौ तथा लघुत्वेऽपि च लक्ष्यमाणे॥१६॥

In case of a person that gets kapha, pitta, and vata in succession, who experiences clarity in epigastrium side of chest, head, sense organs and lightness in the body is considered to have undergone proper emesis.

Atiyoga lakshana of vamana karma:

तृणमोहमूर्च्छानिलकोपनिद्राबलादिहानिर्वमनेऽति च स्यात्॥

If excess emesis is administered then it gives rise to thirst, unconsciousness, fainting, aggravation of vata, insomnia, debility etc.

Ayoga lakshana of vamana karma:

If inappropriate emesis is administered then it gives rise to sphotaka, kotha, discomfort in epigastrium as well as in sense organs and heaviness of the body.

14. Post Vamana management

After completion of vamana, all types of care have to be taken, till the patient starts taking the normal, diet, and it may be grouped under paschat karma.

It may be subsided into three groups viz.

1. Dhumapana
2. Pariharya vishaya
3. Samsarjana krama

Dhumapana:

After samyaka vamana, patient is advised to wash mouth, hands & feet, then to rest for a muhurta.

Afterwards patient is advised to inhale the smoke of any one of the three types of smoke i.e., snaihika, vairechanika, or upasamaniya according to condition.

Prakriti → dhumapana

Vata → snaihika

Kapha pitta prakriti and utklista dosha → vairechanika

Sama dosha prakriti → upasamaniya

Svastha → prayogika

15. Types of Shuddhi-Hina, Madhya and Pravara

	Pravara	Madhyama	Avara
Vaigiki	8 vega	6 vega	4 vega
Maniki	2 prastha	1 ½ prastha	1 prastha
Antiki	Pittanta	Pittanta	Pittanta
Laingiki	Samyaka siddha lakshana	Samyaka siddha lakshana	Samyaka siddha lakshana

16. Peyadi Samsarjana Krama and Tarpanadi Krama with their specific indications**Samsarjana krama:**

The specific diet prescribed after samshodhana karma till the patient starts taking his normal diet may be taken as samsarjana krama.

Due to dosha elimination from the body after samshodhana karma. Agni becomes hampered. In order to restore the strength of agni and prana, peyadi samsarjana krama should be followed.

Charaka reveals its importance by giving example that small sources of fire, if stimulated by adding small & light fuel later on become so big that it can burn anything.

Similarly, by applying samsarjana krama, jatharagni can be increased to such an extent that it can digest all types of food.

Samsarjana krama according to strength: (sushruta)

Good strength → three annakala

Medium strength → two annakala

Less strength → one annakala

Charaka divided samsarjana krama into two divisions as

1. Peyadi samsarjana krama
2. Tarpanadi samsarjana krama

1. Peyadi samsarjana krama:

Days	Annakala	Pravara suddhi	Madhyama suddhi	Avara suddhi
1	morning	-	-	-
	Evening	Peya	Peya	Peya
2	Morning	Peya	Peya	Vilepi
	Evening	Peya	Vilepi	Krita / akrita yusha
3	Morning	Vilepi	Vilepi	Krita / akrita mamsa rasa
	Evening	Vilepi	Akrita yusha	Normal diet
4	Morning	Vilepi	Krita yusha	-
	Evening	Akrita yusha	Akrita mamsa rasa	-
5	Morning	Krita yusha	Krita mamsa rasa	-
	Evening	Krita yusha	Normal diet	-
6	Morning	Akrita mamsa rasa	-	-
	Evening	Krita mamsa rasa	-	-
7	Morning	Krita mamsa rasa	-	-
	Evening	Normal diet	-	-

Peya → 1 part rice + 14 times water = liquid

Vilepi → 1 part rice + 4 times water = semi-solid

Yusha → 1 part pulse + 6 times water = more liquid less solid (without adding anything → akrita, after adding salt and condiment as well as prepared with ghee then it is named as krita yusha.)

Mamsa rasa → cleaned meat is cut into small pieces and meat juice is prepared by adding water and then by cooking properly.

2. Tarpanadi krama:

Charaka advised to follow “tarpanadi krama” as samsarjana krama in these conditions –

1. When kapha & pitta are eliminated in a smaller quantity during samsodhana.
2. In alcoholic patient
3. The patients having vata, pitta prakriti

This is preferred against ‘peyadi samsarjana krama’ as peyadi samsarjana may produce abhisyanda (increase in the secretions) again in the srotas of ‘vishodhita’ (well purified) body.

	1	2	3
Arundatta	Lajja + saktu	Jirna, Sali, odana	Mamsarasa + odana
Parameswara	Lajja + saktu	Yusha + anna bhojana	Mamsarasa + anna

Rasa samsarjana krama:

During "Annasamsarjana krama", there are chances of dosas getting excited due to augmented Agni. To prevent such increase, doshas are mitigated by arranging "Taste of the recipes" in such a series that the chances of increase will be lessened. It is elaborated by "Dalhana" and Cakrapani.

Taste used		Probable effect of dosha and agni
Charaka	Sushruta	
Sweet, sour, pleasant to heart, unctuous	Sweet & bitter	To pacify vata pitta & to balance agni To pacify vata situated in pakwashaya
Sour & salty	Unctuous, sour, salty, pungent	To increase agni bala To pacify vata & kapha and to augment agni in the upper site
Sweet & bitter	Sweet, sour, salty	To pacify pitta To pacify pitta & vata
Astringent & pungent	Sweet, bitter	To pacify kapha pitta situated in the upper region.

Here, unctuous & dry properties should be used alternatively in appropriate manner. Chakrapani says that these properties can be planned through the means of Taste (Rasa). When the taste having unctuous property is applied, then the taste having dry property can be planned & the same pattern is followed; further unctuous & dry properties are mentioned here as representatives. One can arrange heavy & light properties & further more in the same manner.

Need for samsarjana krama:

1. Helps to regularise the Agni which is weakened due to purificatory process
2. To overcome Dosha Kshaya/dhatu Kshaya.
3. By arranging in such plan, diet comprising of all the tastes can be served through 12 meals along with different qualities.

17. Complication of Vamana and their management with Ayurveda and modern drugs

Cause for vyapata:

अकालेऽल्पातिमात्रं च पुराणं न च भावितम्।

असम्यक्संस्कृतं चैव व्यापद्येतौषधं द्रुतम्॥

- Akala
- Alpa matra
- Ati matra
- Purana
- Not bhavita
- Asamyak samskruta

प्रेष्यभैषज्यवैद्यानां वैगुण्यादातुरस्य च॥

- Improper functioning of
- Preshya → paricharaka
- Bhaishajya → aushadha
- Vedhya → vaidhya
- Aatura → rogi

Vamana vyapata:

आध्मानं परिकर्तिश्च स्रावो हृद्गात्रयोर्ग्रहः।

जीवादानं सविभ्रंशः स्तम्भः सोपद्रवः क्लमः॥२९॥

अयोगादतियोगाच्च दशैता व्यापदो मताः।

- | | | |
|---------------|---------------|------------|
| • Adhmana | • Gatra graha | • Upadrava |
| • Parikartika | • Jivadana | • Klama |
| • Srava | • Vibhramsha | |
| • Hrid graha | • Stambha | |

1. Adhmana:

Nidana: alpa matra aushadha prayoga in bahudosh, atiruksha, heenagni and to the patient with udavarta.

Samprapti: nidana → leads to utklesha of dosha → which causes margavarodha (obstruction to channels) → admapayet nabhi (distention at naval region)

Lakshana: prustha, parshwa, shiro ruja (pain in back, sides and head), shwasa (dyspnoea), sanga of vit, mutra and vata (obstruction to movement of flatus, faeces, urine)

Chikitsa: abhyanga, sweda, varti, niruha and anuvasana basti, sarva udavartahara karma

2. Parikartika:

Nidana: balavat aushadha prayoga in atisnigdha, gurukostha, saama and

Balavata aushadha for kshama, mrudukostha, shranta, alpabala

Samprapti: nidana → reaches guda and causes excitation of dosha along with ama

Lakshana: severe pain with slimy and bloody discharge.

Chikitsa:

In amavastha: langhana, pachana, ruksha, ushna, laghu bhojana

In kshaama then after amapachana brumhana vidhi should be adopted.

3. Parisrava:

Nidana: alpa matra / alpa veerya aushadha in bahudoshavastha

Samprapti: nidana → dosha utklesha → alpa srava associated with kandu, shopha, kushtha, gaurava

Lakshana: Agninasha, staimitya (feeling of body wrapped with cold cloth), aruchi, pandu

Chikitsa:

Alpa dosha → shamana

Bahu dosha → vamana

Snehana followed by teekshna virechana

After shodhana churna, asava arishta

4. Hridroga:

Nidana: vega nigraha after taking aushadha

Samprapti: dosha prakopa → reaches hrudaya and causes hrudgraha

Lakshana: hikka, kasa, pain in sides, lalasrava, akshi vibhrama, jihwa khadati, unconsciousness, danta kitakitapayan

Chikitsa:

Physician should not get confused in this condition and should administer emesis immediately.

Pittaja Murcha- Madhuroushadha (prescribe medicine with sweet property)

Kaphaja Murcha - Katu Dravya (prescribe medicine with pungent property)

After Samshodhana, Pachana Dravya should be administered.

5. Angagraha:

Nidana:

Vega Nigraha after taking Aushadha (Withholding urges after administration of medicines)

Vegavarodha by Kapha (Obstruction of channels by Kapha)

Ati Vishuddha (Excessive purification).

Samprapti:

Vata gets aggravated leading to Angagraha

Lakshana: Stambha (Stiffness), Vepathu, Nistoda (pricking of pain), Saada (tiredness),

Udveshtana (Twitching type of pain), Manthana (Churning type of pain)

Chikitsa:

Sneha, Sweda and other vatopakrama

6. Jeevadana:

Nidana: Administering Atiteekshna Aushadha in mrudu kostha and Laghu Dosha

Samprapti: After eliminating impurities it takes away vital blood by churning.

Test for shuddha rakta:

One should give blood mixed with food to a crow or dog. If it eats it is not vitiated otherwise it is vitiated.

White cloth piece impregnated with it and dried should be washed with warm water. If the colour fades it is pitta and if it is completely wiped off it is vital blood.

Chikitsa:

If he suffers from Trushna, Murcha and Mada, then one should treat him till he survives.

Raktapana: Fresh blood of Mruga, Go, Mahisha, Aja should be administered.

- Raktabasti
- Piccha basti
- Sheeta basti
- Anuvasana with ghrita manda

7. Vibhramsha:

If Guda Bhramsha (prolapsed rectum) takes place, it should be put back by stiffening it with Dravyas having Kashaya Rasa.

In case of Unconsciousness due to Atiyoga one should advice to use consolation and musical sounds.

After the administration of Vamanoushadha if it stops without expulsion of Dosha after expulsion of Vamaka Dravya, it leads to Dosha Prakopa which in turn causes kandu etc. This condition is known as Vibramsha.

Chikitsa: Depending upon the Vyadhi avastha Chikitsa should be done.

8. Stambhana:

Nidana: (unctued patient) taking Sneha Virechana

Samprapti: As it is Mrudu, will get Avruta by Dosha because of which it is not able to expel doshas out. Further it will cause stambha.

Lakshana: (expels slightly) with vata Sangha, Guda stambha, Guda Shula.

Chikitsa: Langhana-pachana, Teekshna basti, Virechana

9. Upadrava:

Nidana: Administration of Ruksha Virechana for Ruksha and Alpa Bala Rogi.

Samprapti: Vata gets Prakopa causing Ghora Upadrava

Lakshana: Stambha, Sarva gatra Shula, Murcha

Chikitsa: Sneha, Sweda, Vatahara Vidhi

10. Klama:

Nidana: Administration of Mrudu Aushadha for Snigdha and Mrudu Kosta person

Samprapti: Increases Kapha and Pitta which causes Avarodha of Vata leading to Klama associated with Tandra and Gourava.

Lakshana: Along with the above Dourbalya and Anga sada.

Chikitsa: Ashu Ullekhana, Langhana-Pachana, Snigdha and Teekshna Virechana

18. Pariharya Vishaya

उच्चैर्भाष्यमत्याशनमतिस्थानमतिचङ्क्रमणं क्रोधशोकहिमातपावश्यायातिप्रवातान् यानयानं
ग्राम्यधर्ममस्वपनं निशि दिवा

स्वप्नं विरुद्धाजीर्णासात्म्याकालप्रमितातिहीनगुरुविषमभोजनवेगसन्धारणोदीरणमिति

- Speaking loudly
- Eating too much
- Standing for a long time
- Moving for long time
- Anger and grief
- Exposure to sun and strong wind
- Travelling by vehicles
- Indulging in sexual intercourse
- Vigil during night
- Sleeping during day time
- Ingestion of viruddha, asatmya, guru type of food.
- Vegasandharana

19. Vamana Karmukata (Mode of action).

Vamana mode of actions:

Vamaka drugs possessing properties like Ushna, Tikshna, Sukshma, Vyavayi and Vikasi → And with their 'Swavirya' → Move to 'Hrudaya' → From there, through various 'Dhamanis' → Reach to micro and macro channels in the body → Act over the vitiated complexes in the body → (i) With 'Agneya Property' - liquefies (Vishyandayati) the complexes (Dosha Sanghata) → (ii) With 'Tikshna property' - Breaks them down into smaller particles (Vicchindanti) → Liquefied matter then glides through various unctuous or smooth channels towards Koshtha. This action takes place through Anu-Pravana bhava (i.e., smaller-flowing tendency) → Enters 'Amashaya' and then is stimulated by 'Udana Vayu' It has the dominance of 'Agni' and 'Vayu' elements in the constitution along with self-disposition (Prabhava) → Move in upward direction towards oral cavity, expelled outside through oral cavity → Vamana action

Properties:

1. Ushna:

The process of “vilayanam” is headed by Ushna property. Thus, Ushna property helps to separate the vitiated matter from srotas & also helps 'Tikshna property to defragment them. In modern parlance, it may be like the action of catalytic agents which convert the saturated compounds into unsaturated one or in a form in which they are more reactive.

2. Tikshna:

‘Tikshna Guna’ carries the particles which are broken down & separated from- all the micro & macro channels (shakha) to Amashaya (koshtha) due to 'the anupravanabhava' of the drugs.

3. Sukshma:

Sukshma property makes the pathway for Vamana drugs to reach minute channels & removes the morbid matter from them to reach Amashaya in the process of Vamana.

4. Vyavayi:

Vyavayi drugs when administered in the body initiate their actions immediately, irrespective of their digestion by the body.

Due to Vyavayi property of Vamana drugs, they spread quickly in the whole body and reach each and every cell & start the action before their pachana.

5. Vikasi:

Dalhana explains that Vamana drugs due to vikasi property also pervade through the whole body without digestion just like that of vyavayi. Further he mentions that loosening of dhatu bandhana means Dhatu Saithilya.

Vamana drugs reach rapidly to the cellular level due to vikasi and vyavayi properties, penetrate the microchannels and scraps of morbid dosha's with their “Tikshna property” & convey the same to Amashaya through circulation.

6. Saratva:

This property shows tendency of the drug to remain in an active form. Due to this Guna, Vamana drugs, after administration, work continuously without any break (opposite to Sthira property). It may be said that due to this guna, the vamaaka drugs bring Doshas to koshta & then expel them out.

Udana vayu:

Udana Vayu has the prime role in conducting the whole Vamana process as it occurs in its own site.

During the process of vomiting, it is stimulated & works continuously. It helps the Vamana drugs to drag the vitiated matter from channels (prayatna). It provides energy to expel these things out (Urja) It maintains the courage & strength of the patient to bear this much strenuous process (bala).

Modern view:

Vomiting is the oral expulsion of upper gastrointestinal contents resulting from contractions of gut & thoraco-abdominal wall musculature. Vomiting is the means by which the upper GIT rids itself of its contents when almost any part of the upper tract becomes excessively irritated, over distended, or even over excitable.

Act of vomiting:

The act of Vomiting is accompanied by a complex series of movements which are controlled by the vomiting centre present in the dorsal portion of the lateral reticular formation in the medulla oblongata. The Vomiting centre is the final common pathway for the act of vomiting. Once the vomiting centre has been sufficiently stimulated & vomiting act instituted; the first effects are:

1. A deep breath
2. Rising of the hyoid bone & the larynx to pull the upper esophageal sphincter open.
3. Closing of the glottis.
4. Lifting of the soft palate to close the posterior nares.

Next a strong downward contraction of the diaphragm comes along with simultaneous contraction of all the abdominal wall muscles. This squeezes the abdominal viscera including the stomach between the diaphragm & the abdominal muscles making the intragastric pressure to a high level. As a result, the pyloric region also is firmly contracted and occluded, whereas the body & fundus of the stomach are relaxed. Cardiac sphincter is also relaxed and finally, lower esophageal sphincter opens completely. As a result of all these factors, the gastric contents are thrown upward into the esophagus & then into the mouth.

Vomiting is usually preceded by the sensation of nausea & increased secretion of saliva, bronchial fluid & sweat. The muscles involved in the act of coughing take part in the act of Vomiting, and the vagal, vomiting, & cough centres have a close functional relationship.

Muscles & musculature during vamana:

Vomiting is produced by the bursts of activity involving contraction of-diaphragm, intercostals & abdominal muscles in a pattern distinct from that of a respiration. This activity is coordinated with the relaxation of the Crural fibers around the esophagus.

Vamana: mechanism of action through nervous system:

The process of Vamana proceeds through the way of nervous system. Vamana Karma occurs at three different levels in this mechanism.

1. Activation of emesis.
2. Stimulation of vomiting centre.
3. Actual motor response through motor nerves.

1. Activation of emesis:

- a. Vomiting starts in the stomach or upper GIT, when it is full of contents (like Akantapana during Vamana). It becomes over distended and over excitable afterwards.
- b. In another way, Electrical stimuli or administration of certain drugs (which have Vamaka Prabhava) may stimulate Chemoreceptor trigger zone directly to produce Vamana.
- c. Emesis is provoked by several psychic stimuli or by noxious thoughts or smells that originate in the cerebral cortex. These types of stimuli directly stimulate the certain areas of the hypothalamus. This act may be seen when a Vamana is induced by Ghreya Vamaka yoga's.

2. Stimulation of vomiting centre:

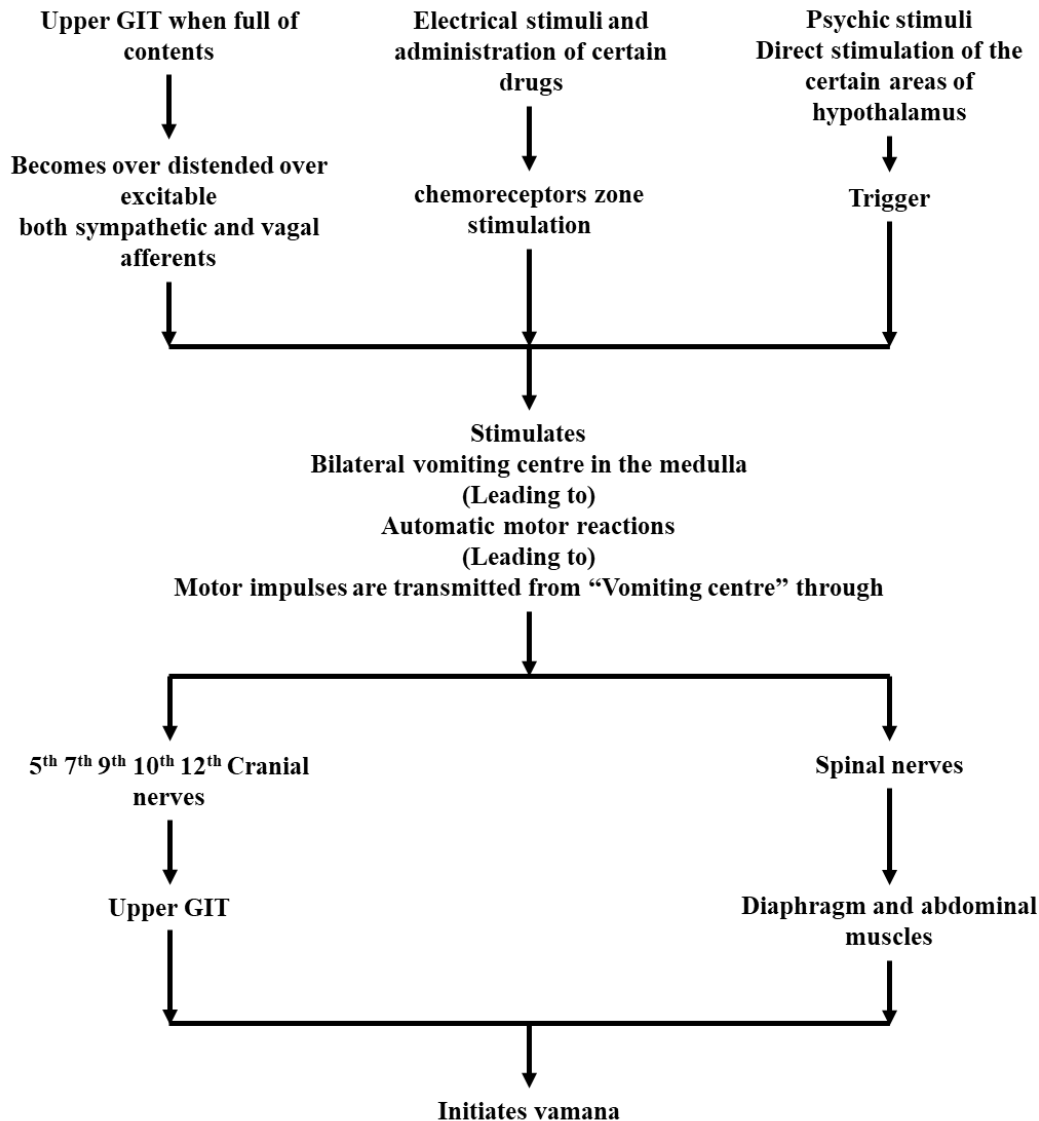
All types of vomiting stimuli directly stimulate bilateral vomiting centre in the medulla.

3. Actual motor response through motor nerves.

These stimuli further lead to automatic motor reactions which further send direct motor impulses to be transmitted from vomiting centre to:

- a. 5th 7th 9th 10th 12th cranial nerves & then towards upper GIT.
- b. Spinal nerves which further progress to diaphragm & abdominal muscles.

This at last produces the vomiting.



Action of vamaana through stress mechanism:

There is "Physical and mental stress" which is produced in the whole body during the act of Vomiting. Vomiting produces inflammation and mucosal damage secondary to insult to gastric mucosa. "It is amazing that almost any type of stress, whether physical or neurogenic, will cause an immediate and marked increase in ACTH secretion by the anterior pituitary gland, followed within minutes by greatly increased Adreno-cortical secretions of cortisol ". A wide variety of nonspecific stimuli can cause marked increase in the rate of cortisol secretion by adrenal cortex.

Secretions of cortisol takes place during minor stress too, such as a febrile illness, laceration, severe exercise, bouts of gastroenteritis with vomiting and diarrhoea and minor surgery. The normal adrenals respond by secreting about 100 mg. of hydrocortisone per day.

Actually, cortisol is secreted to achieve immediate effect of blocking most of the factors that are promoting the inflammation. But in addition, the rate of healing is enhanced. This probably results from the same, mainly the undefined factors that allow the body to resist many other types of physical stress when large quantities of cortisol are secreted.

VIRECHANA**1. Etymology, definition and importance of virechana karma****Etymology:**

The word virechana is derived from the root - 'Ricir' dhatu, 'vi' upasarga with 'nich' and luut pratyayas giving meaning Visheshana Rechayateeti.

Definition:

The act of expelling doshas through adhobhaga is known as virechana. Meaning of word 'adhobhaga' implies to guda marga.

Importance:

- Virechana karma is one of the prime purificatory procedures among panchakarma, which is a supreme procedure for elimination of the pitta dosha.
- Virechana is prime modality of treatment for pitta doshanirharana, as Amashaya is samanya sthana for pitta & kapha which holds good for both.
- It is also advocated as the part of ritu charya in sharad ritu.
- Virechana is not as complicated as vamana, because of the expulsion of the dosha in normal route.

2. Utility of virechana karma in health and disease

Dosha: Pitta, Pitta sthanagata alpa kapha, Kapha sthanagata bahupitta, Pittavrut vata & Sannipata of dosha

Dushya: Rasa, Rakta, Mamsa, Asthi, Majja, Sukra

Srotas: Rasavaha, Raktavaha, Mamsavaha, Asthivaha, Majjavaha, Sukravaha

3. Indications and Contraindications for vamana**Indications:**

विशेषतस्तु कुष्ठ ज्वर मेहोर्ध्वरक्तपित्त भगन्दरोदरार्शोर्ब्रध्न प्लीह गुल्मार्बुद गलगण्ड ग्रन्थि
विसूचिकालसक मूत्राघात क्रिमिकोष्ठ विसर्प पाण्डुरोग शिरःपार्श्वशूलोदावर्त नेत्रास्यदाह हृद्रोग व्यङ्ग
नीलिका नेत्रनासिकास्यस्रवण हलीमक श्वास कास कामलापच्यपस्मारोन्माद वातरक्त योनिरेतोदोष
तैमिर्यारोचकाविपाकच्छर्दि श्रयथूदर विस्फोटकादयः पित्तव्याधयो विशेषेण महारोगाध्यायोक्ताश्च;
एतेषु हि विरेचनं प्रधानतममित्युक्तमग्न्युपशमेऽग्निगृहवत्॥ (Cha. Si. 2/13)

Contraindication:

अविरेच्यास्तु सुभग क्षतगुद मुक्तनालाधोभागरक्तपित्ति विलङ्घित दुर्बलेन्द्रियाल्पाग्नि निरूढ
कामादिव्यग्राजीर्णं नवज्वरि मदात्ययिताध्मात शल्यादिताभिहतातिस्निग्धरूक्षदारुणकोष्ठाः
क्षतादयश्च गर्भिण्यन्ताः॥ (Cha. Si. 2/11)

4. Knowledge of Koshtha and agni**Koshtha:**

In mridu, madhyama and krura koshtha persons, mridu, madhyama & tikshana virechana dravya should be given respectively.

If the koshtha of patient is unknown then he should be administered mridu aushadhi.

Agni:

In atimandagni and atitikshanagni virechana is contraindicated. In ati mandagni, the given virechana drug does not undergo digestion, so no virechana vega will occur as virechana occurs during the digestion of virechana aushadhi.

5. Classification of virechana aushadhi

Classification of virechana aushadhi can be done with various view points as follow...

1. Based on the origin of utilized part:

- I. Animal origin: Ksheera, Mastu, Takra, Mutra
- II. Plant origin:
 - a. Moolini Virechana dravya
 - b. Phalini virechana dravya
 - c. Ksheerini
 - d. Twak

2. Depending upon the intensity:

- I. Mridu virechaka dravya
- II. Madhyama virechaka dravya
- III. Teekshana virechaka dravya

3. Based on dosha:

- I. Vata : Snigdha, Ushna, Lavana
- II. Pitta : Kashaya, Madhura
- III. Kapha : katu

4. Based on mode of action: (acc. to Sharangadhara)

- I. Anulomana:
The drugs which move the mala downwards after digesting them and breaking their bandha are known as anulomana.
Ex: Haritaki
- II. Sramsana:
The drugs which expel the slishta malas (malas adhere to the lumen of intestine) without digesting.
Ex: Aragwadha
- III. Bhedana:
The drugs which disintegrate the abadhha or badhha or pindita forms of malas and then evacuating through adhomarga.
- IV. Rechana:
The drugs which eliminate pakwa and apakwa malas by making them in drava form through adhomarga.

5. Virechana agrya dravya:

Mrudu virechana	: Aragwadha
Tikshana virechana	: Snuhi
Sukha virechana	: Trivrit
Bhedana & Anulomana	: Amlavetasa
Anulomana	: Hingu
Sramsana	: Yaavashuka

General properties of virechana dravya:

1. Ushna
2. Teekshana
3. Sukshma
4. Vyavayi
5. Vikasi
6. Adhobhaga prabhava

6. General Knowledge of single and compound virechana drugs; properties, actions, preparations, preservation with special reference to Trivrutta, Aragwadha, Eranda, Katuki, Jaipal

1. Trivrutta:

Latin name: Ipomoea turpethum / Operculina turpethum

Family: Convolvulaceae

Synonyms: त्रिभण्डी त्रिवृता चैव श्यामा कूटरणा तथा

सर्वानुभूतिः सुवहा शब्दैः पर्यायवाचकैः॥४॥

Guna karma:

Rasa	: Kashaya, Madhura
Guna	: Laghu, Ruksha, Tikshna
Veerya	: Ushna
Vipaka	: Katu
Doshaghnata	: Pitta kaphahara

Collection and preservation:

- The root should be collected from the herb, grown in good soil and place.
- Should be collected in Shukla paksha.
- Person going to collect should do fasting and wear white garments.
- The root that has penetrated deep, which is smooth and has not spread sideways should be gathered.
- It should be split and pith inside should be removed and the bark should be dried and preserved.

Formulations: Avipatikara churna, Manibhadra guda, trivrit leha

2. Aragwadha:

Botanical name: Cassia fistula

Family: Leguminosae

Synonyms: आरग्वधो राजवृक्षः शम्पाकश्चतुरङ्गुलः।

प्रग्रहः कृतमालश्च कर्णिकारोऽवघातकः॥३॥

Guna Karma:

Rasa	: Madhura
Guna	: Guru, Mridu, Snigdha
Veerya	: Sheeta
Vipaka	: Madhura
Doshaghnata	: Vata kaphahara

Collection and Preservation:

- Fruits should be collected in fruiting season.
- Fruits which are heavy and rich in pulp should be collected and preserved in sand.
- After 7 days fruits should be dried in sunlight and pulp should be taken out and preserved.

Formulations: Aragvadharista

3. Eranda:Botanical name: *Ricinus communis*

Family: Euphorbiaceae

Synonyms: Eranda, Aamanda, Chitra, Gandharv hastaka, Panchangula, Vardhamana, Deergha danda, Vyadambaka

Guna karma:

Rasa	: Madhura, Katu, Anurasa: Kashaya
Guna	: Tikshna
Virya	: Ushna
Vipaka	: Madhura
Karma	: Dipana, Sroto vishodhanam
Doshaghnata	: Vata kaphahara

Formulations: Gandharvahastadi Eranda taila, Nimbamritadi Eranda taila, Sukumara Eranda taila, Nirgundyadi Eranda taila

4. Katuki:Botanical name: *Picrorhiza kurroa*

Family: Scrophulariaceae

Synonyms: Katvi, Katuka, Tiktaa, Krishnabheda, Ashoka, Matsya sakala, Chakrangi, Shakuladani, Matsyapitta, kandaruha, Katurohini

Guna karma:

Rasa	: Tikta
Guna	: Ruksha, Laghu
Vipaka	: Katu
Veerya	: Sheeta
Doshaghnata	: Kapha pittahara

Formulations: Arogyavardhini vati, Patolamuladi Kashaya, Patoladi churna

5. Jaipal:Botanical name: *croton tiglium*

Family: Euphorbiaceae

Synonyms: Danti bija, Tintidiphala

Guna Karma:

Rasa	: Katu
Guna	: Guru, Snigdha, Tikshna
Veerya	: Ushna
Vipaka	: Katu
Karma	: Kapha vatahara, Deepana, Jalodarahara
Doshaghnata	: Kapha vatahara

Shodhana:

The dried seeds of Jayapal are made into potli by tying in cloth. Then hang the potali in pot containing 3/4th part of cow's milk, and boil on mild fire for 3 hours. After 3 hours remove the seed dried under shadow and then preserve in clean and dry container.

Formulations: Icchabhedi rasa, Abhayadi modaka

6. Icchābhedi Rasa:

Ingredients: Jayapāla, Shuṇṭhī, Maricha, Pārada, Gandhaka, Taṅkana bhasma

Mātrā: 1-2 vaṭī / 1-4 ratti

Anupāna: Shītāmbu, Triphalā kvātha, Ghṛta, etc.

Prayoga: Jalodara, Shotha, Viṣa, Kuṣṭha

7. Abhayādi Modaka:

Ingredients: Harītakī, Āmalakī, Shuṇṭhī, Maricha, Pippalī, Pippalīmūla, Viḍaṅga, Tvak, Tejapatra, Musta, Jayapāla, Trivṛt, Sharkarā, Madhu

Mātrā: 1-2 vaṭī / 1-4 ratti

Anupāna: Shītāmbu, Triphalā kvātha, Ghṛta, etc.

Prayoga: Vibandha, Jalodara, Vātavyādhi, Shotha, Āmavāta, Vātarakta

8. Trivṛt Leha:

Ingredients: Trivṛt kaṣāya & kalka, Sharkarā, Madhu, Trijātaka (Tvak, Elā, Patra)

Mātrā: 15-40 gm

Anupāna: Uṣṇodaka, Kṣīra, Madhu

Prayoga: Mṛdu/Madhya Virechana, Pittaja roga, Amlapitta, Yakṛtroga, Kāmalā, etc.

9. Māṇibhadra Guḍa:

Ingredients: Guḍa (576 gm), Trivṛt (144 gm),

Viḍaṅga, Āmalakī, Harītakī (48 gm each)

Mātrā: 15-40 gm

Anupāna: Uṣṇodaka, Triphalā kvātha, Madhu

Prayoga: Gulma, Plīhā, Ādhmāna, Shotha, Udara, Kaṭishūla, Vātavyādhi, Vṛddhi

10. Gandharvahastādi Taila:

Ingredients: Eraṇḍamūla, Yava, Nāgara, Jala for Kvātha;

Kṣīra, Eraṇḍa taila, Eraṇḍa kalka, Shuṇṭhī kalka for Tailapāka

Mātrā: 30-80 ml

Anupāna: Uṣṇodaka, Kṣīra, Shuṇṭhī kvātha

Prayoga: Gulma, Plīhā, Ādhmāna, Shotha, Udara, Kaṭishūla, Vātavyādhi, Vṛddhi

11. Avipattikara Chūrṇa:

Ingredients: Trivṛt, Shuṇṭhī, Maricha, Pippalī, Harītakī, Bibhītakī, Āmalakī, Musta, Viḍa lavaṇa, Viḍaṅga, Elā, Patra, Lavaṅga, Sharkarā

Mātrā: 15-40 gm

Anupāna: Uṣṇodaka, Kṣīra

Prayoga: Amlapitta, Vibandha, Kāmalā, Yakṛt-Plīhāroga, Arsha, Chardi

7. Purva Karma of Virechana: Deepan-Pachana, Abhyantara Snehana and Diet:

Deepan-Pachana: Prior to Snehapana, Pacana Karma should be carried out. Medicines like Agnitundi Vaṭi, Sankha Vaṭi, Citrakadi Vaṭi, and Trikatu Curṇa etc. are given till samyak Amapachana Lakshana appear.

Abhyantara Snehana: The specific Sneha selected as per the condition should be given at the morning time (Sodhana Sneha Kāla) for a period of 3-7 days or till the appearance of Samyak Snigdha Lakshana after assessing the Koshtha & Agnibala. The Sneha should be given in increasing dose pattern according to the Agnibala.

Diet during the days of Snehapāna: During Snehapāna, patient is advised to take diet having Drava (liquid), Ushṇa (hot), Anabhishtyandi properties. The food must not have too unctuous material mixed in it. Also, it should not contain the articles having the property to provoke any other Dosha. Patient should be advised to drink lukewarm water whenever needed.

8. Management of 3 Gap Days- Abhyanga, Svedana and Diet

Abhyanga and Svedana: For three days, Abhyanga is carried out with application of medicated oil on the whole body followed by Sarvanga Svedana preferably with Bashpa Sveda.

Diet:

Before Virecana for 3 days, patient is advised to take easily digestible, Laghu, Māmsa Rasa.

Diet should be such that, it should not increase Kapha, as it may cause Vamana; for Virecana Manda or Alpa Kapha condition is desirable. Sushruta advised light diet and Phalāmla Rasa (Sour fruit juice). Dalhaṇa commenting on it, said that this type of diet will increase the Pitta and will be useful for Virecana.

9. Management on Morning of Virechana Day

Ācārya Caraka elaborately described the method of administration of Virecana drug which is as follows - After administration of Snehana and Svedana, finding the patient to be cheerful, slept well, completely digested previous meal and on empty stomach. It is essential that patient should remain in calm mood, because intestinal motility, secretion of various enzymes and that of mucous are very sensitive towards emotional disturbance. Any emotional stress may alter the intestinal motility as well as secretions causing disturbances in Samyak Virecana. Acharya Sushruta told to give easily digestible liquid food in small quantity in the morning and Virechana Aushadhi should be administered at noon time.

10. Preparation of Virechana Kalpa, Anupana, Dose and Method of Administration

Caraka says that Dose, which causes Samyak Yoga by expelling out all the vitiated Dosha by avoiding Ayoga and Atiyoga, is considered as proper dose for Sodhana. This dose differs in every patient according to the different condition. It is generally calculated by observing Rogabala, Rogibala, Agnibala, Koshtha, Aushadha Virya, Dosha, etc. At the time of fixation of dose, one should keep in mind the form of Virecana Aushadhi i.e., whether it is in form of Curna, Kvatha, Svarasa, Modaka etc.

Dose for different koshtha:

1. When diseases, digestive fire and the patient are having medium strength, the dose of kvatha is one Anjali that of the churna is one bidalapadaka and the dose of the kalka is one aksa.
2. B.P.Pu. 5/49-50

Kalpana	Hina for mridu koshtha	Madhyama for madhyama koshtha	Uttama for krura koshtha
Kvatha	02 Tola	04 Tola	08 Tola
Kalka, churna, modaka	01 Tola	02 Tola	04 Tola
Svarasa (Half of kvatha)	01 Tola	02 Tola	04 Tola
Ushnodaka	04 Tola	08 Tola	12 Tola

3. Uttama 2 pala, Madhyama 1 pala, Avara ½ pala (Bh. Si.)

11. Method of Virechana Karma and Management During Virechana Karma & Observations

Virecana drugs are administered after the time of Kapha has passed. It should preferably be administered in empty stomach.

Pulse, blood pressure, respiration, and temperature should also be recorded prior to administration of Virecana Yoga and at regular interval during the Vega too.

After drinking purgative drug, the patient should think of nothing else but purging and pass the stool at toilet near to the bed. He should not suppress urge of defecation, lie in a windless room, avoid use of cold water and exposure to cold wind, and should not strain without the urge.

Just after administration of the drug, to avoid vomiting following measures should be adopted-

- Patient is asked to gargle with hot water and smell or inhale the fragrance of flowers
- Sprinkling of cold water over face.
- Tambula Sevana (betel leaf chewing) (Bhavprakash)
- If Vega are not induced then Svedana should be done over abdomen.

Apart from the above following things should be assessed with due importance-

a) Aushadhi Jirna Lakshana

b) Aushadhi Ajirna Lakshana

Virecana Aushadhi should not be administered again in condition of Ajirna Lakshana as it may cause Atiyoga by enhancing the action of previously undigested medicine.

If Aushadhi Jirna Lakshana are present and Virecana Vega is not occurred adequately, then Virechaka Dravya should be given on next day.

If still Virecana does not occur properly, then Virecana will be resumed after 10 days by starting with Snehana.

If the Dosha are not expelled out either through oral or anal route, then fomentation should be done to the abdomen (Ca.Ka.12/64).

Hrita Dosha Lakshana:

There should be sequential elimination of Purisha, Pitta and Kapha along with Karshya, Gatra Daurbalya and Laghuta.

12. Symptoms of Samyak yoga, Ayoga and Atiyoga of virechana karma

Samyaka yoga lakshana:

स्रोतोविशुद्धीन्द्रियसम्प्रसादौ लघुत्वमूर्जोऽग्निरनामयत्वम्॥

प्राप्तिश्च विट्पित्तकफानिलानां सम्यग्विरिक्तस्य भवेत् क्रमेण। (Cha. Si. 1/17-18)

In case of proper purgation, a person experiences clarity in all channels of body, freshness in sense organs, lightness in the body, improvement in digestive strength and attains disease free status. Feces, pitta, kapha and vata are expelled in succession.

Ayoga lakshana:

स्याच्छलेष्मपित्तानिलसम्प्रकोपः सादस्तथाऽग्नेर्गुरुता प्रतिश्या||

तन्द्रा तथा च्छर्दिरोचकश्च वातानुलोम्यं न च दुर्विरिक्ते| (Cha. Si. 1/18-19)

When purgation is given improperly and inadequate then it causes vitiation of kapha, pitta, vata, suppression of digestive strength, heaviness in the body, coryza, drowsiness, vomiting, anorexia and absence of vatanulomana (reverse movement of vata).

Atiyoga lakshana:

कफास्रपित्तक्षयजानिलोत्थाः सुप्त्यङ्गमर्दक्लमवेपनाद्याः||

निद्राबलाभावतमःप्रवेशाः सोन्मादहिक्काश्च विरेचितेऽति| (Cha. Si. 1/19-20)

Excess purgation leads to vata aggravation due to diminution of kapha and pitta that causes, numbness, body aches mental fatigue, tremor, insomnia, debility, black outs, insanity and hiccup.

13. Post virechana management

All the diet and regimens mentioned under vamana paschat karma should be followed except dhumapana.

Soon after the samyaka virechana karma, the patient becomes physically weak and the digestive capacity will be unstable. Hence, the patient is not allowed to take normal diet, which can cause further vitiation of agni. Therefore, samsarjana krama should be followed in order to bring back the strength and equilibrium in the state of agni.

14. Types of shuddhi- Hina, Madhya and Pravara and accordingly samsarjana krama

Suddhi	Pravara	Madhyama	Avara
Vaigiki	30 Vega	20 Vega	10 Vega
Maniki	4 Prastha	3 Prastha	2 Prastha
Antiki	Kaphanta	Kaphanta	Kaphanta

Samsarjana krama: Same as vamana karma

Any Karma vichara:

If basti is to be given, then it should be started on 9th day after virechana. Samana aushadhi should be given after samsarjana krama.

15. Complication of virechana and their management with ayurveda and modern drugs

No.	Vyapata	Definition	Lakshana	Chikitsa
1.	Ādhmāna	Alpa Aushadha given in case of Bahudoṣa, Rūkṣatā, Hīnāgni or Udāvarta Ayoga janya	Doṣa Utkleṣha leading to obstruction of Srotas causing Ādhmāna, Prṣṭha-Pārshva-Shiroruja, Dāruṇa Shvāsa-Viṇ-Mūtra-Vāta saṅga	Abhyaṅga, Svedana, Varti, Nirūha Basti & Anuvāsana Basti
2.	Parikartika	Balavat Auśadha given in case of Snigdhatā Gurukoṣṭha Sāma or in case of Kṣāma Mrdukoṣṭha Shrānta Alpabala Rogī	Doṣa reach the Guda in Sāma condition and get expelled out immediately causing Parikartika Tivrashūla Sapicchāsra	Laṅghana, Pāchana, Rūkṣaṇa, Laghu Uṣṇa Āhāra, Bṛmhaṇa Āhāra for emaciated patients
3.	Parisrāva	Alpamātra Auśadha given in case of Bahudoṣa	Doṣa Utkleṣha leading to obstruction and Doṣa get expelled (Parisrāva) frequently in small quantity, Alpa Shopha, Kaṇḍū, Kuṣṭha, Gaurava, Agnināsha, Utkleṣha, Staimitya, Aruchi, Pāṇḍu	Shamana Auśadha or Shodhana by Vamana; After Snehana, Tikṣṇa Virechana is administered followed by Āsavāriṣṭa processed with Dīpana Dravya
4.	Hṛdgraha	Vegadhāraṇa after administration of Vamana Yoga OR Atiyoga due to excessive aggravation of Vāta	Aggravated Vātādi Doṣa localize in Hṛdaya causing Hṛdgraha, Hikkā, Kāsa, Pārshvashūla, Shrama, Lālāsṛāva, Akṣi vibhrama, Niḥ Sajnā Jihvā khādita (unconsciousness while biting the tongue), Danta kiṭikiṭa (grinding of teeth)	Vamana should be induced immediately; Madhura Dravya is given in case of Pitta-Mūrchā, Kaṭu Dravya in case of Kapha-Mūrchā; Pāchana Dravya OR Snigdha-Amla-Lavaṇa Dravya in case of Vāta prakopa
5.	Gātragraha	Vegadhāraṇa after administration of Virechana Yoga or obstruction by Kapha leading to Vāta prakopa	Vāta prakopa leading to Stambha, Vepathu, Toda, Sāda, Dveṣṭana (cramps/spams), Manthana (trembling)	Vātahara karma such as Sneha Svedādi
6.	Jivādāna	Tikṣṇa Virechana given in case of Mrdu Koṣṭha and Alpa Doṣa	Expulsion of Doṣa followed by expulsion of Jīva Rakta	Shīta Basti by using Kṣīra processed with Dravya like Priyaṅgu, Kāshmarī, Badara, Dūrva, Ushīra, etc. OR Picchā Basti OR Sneha Basti with Maṇḍa & Ghṛta

7.	Vibhramsha	Virechana Atiyoga leading to Guda vibhramsha OR Vamana Virechana Ayoga leading to Vibhramsha	Guda vibhramsha, Sajnanasha OR Vibhramsha, Kanḍū, Shūla, etc.	Application of Kaṣāya Dravya and pushing the rectum back to its place. OR Treatment depends on the individual condition
8.	Stambha	Sneha Virechana given in case of Snigdhatā leading to Doṣāvaraṇa	Vitiated Vāyu causes Gudastambha and Shūla with frequent expulsion of Doṣa in little quantity	Tīkṣṇa Basti or Virechana followed by Laṅghana and Pāchana
9.	Upadrava	Rūkṣa Virechana given in case of Rūkṣatā or Alpabala	Vāta prakopa causing severe complications such as Sarvāṅga Stambha & Shūla, Mūrcchā	Vātahara karma such as Sneha Svedādi
10.	Klama	Mṛdu Vīrya Auṣadha given in case of Snigdhatā and Mṛdukoṣṭha	Kapha Pitta duṣṭi and obstruction of Vāta leading to Klama, Tandrā, Gaurava, Daurbalya, Aṅgasāda	Immediate Vamana, Laṅghana, Pāchana, Snigdha-Tīkṣṇa Shodhana

16. Pariharya vishaya

उच्चैर्भाष्यमत्याशनमतिस्थानमतिचङ्क्रमणं क्रोधशोकहिमातपावश्यायातिप्रवातान् यानयानं

ग्राम्यधर्ममस्वपनं निशि दिवा

स्वप्नं विरुद्धाजीर्णासात्म्याकालप्रमितातिहीनगुरुविषमभोजनवेगसन्धारणोदीरणमिति

- Speaking loudly
- Eating too much
- Standing for a long time
- Moving for long time
- Anger and grief
- Exposure to sun and strong wind
- Travelling by vehicles
- Indulging in sexual intercourse
- Vigil during night
- Sleeping during day time
- Ingestion of viruddha, asatmya, guru type of food.
- Vegasandharana etc.

17. Virechana Karmukta

Snehana & Svedana as Pūrvakarma help in Doṣa Utkleśha, liquification and transport of Doṣa from Shākhā to Koṣṭha.

Virechana Dravya generally have the following properties:

- 1) **Uṣṇa** - liquification of Doṣa
- 2) **Tikṣṇa** - separation of adhered Doṣa
- 3) **Sūkṣma** - penetration even into minute channels
- 4) **Vyavāyi** - pervades and acts quickly before having to undergo digestion
- 5) **Vikāsi** - breakdown of Doṣa
- 6) **Prṭhvī-Āpa pradhāna** - promote downward movement due to Gurutva

Ingested Virechaka Dravya get absorbed and move through Sthūla & Sūkṣma Srotas by Sūkṣma and Vyavāyi Guṇa. Adhered Doṣa get separated by Tikṣṇa Guṇa and liquified by Uṣṇa Guṇa which helps in movement of Doṣa towards Āmāshaya & Pakvāshaya. Due to Vikāsi Guṇa, Doṣa get broken down into smaller molecules. This will cause abdominal irritation, ultimately leading to Doṣa Nirharaṇa through Adhoabhāga supported by Prṭhvī-Āpa Mahābhūta pradhānata.

According to Ā. Sharangadhara, Virechana Dravya can be classified into the following based on their mode of action:

1. **Anulomana**

That which moves the Mala downwards after digesting them and breaking their attachment is known as Anulomana.

For example, Harītakī.

2. **Sraṁsana**

That which carries the digested Mala or the indigested Mala, which is adhered in the Koṣṭha, downwards is known as Sraṁsana.

For example, Kṛtamālaka/Āragvadha.

3. **Bhedana**

That which directs the Abaddha (unformed) Mala and Baddha (formed) or Piṇḍita (thick/accumulated/united) Mala, after breaking them, downwards is known as Bhedana.

For example, Kaṭukī.

4. **Rechana**

That which makes the digested or indigested Mala fluid and expels them forcefully is known as Rechana.

For example, Trivṛt.

The strong ingested medicines for inducing purgation get digested and cause irritation and low-grade inflammation of the intestinal mucosa. This changes the permeability of the membranes. Due to inflammation, there will be hyperemia due to capillary dilatation and arteriolar dilatation mechanisms. This promotes quick absorption of the active principles of the purgative drugs.

Due to increased permeability, fluid exudation into the intestines is stimulated which leads to accumulation of water and electrolytes. This causes liquification of the stool.

Modern Explanation of Possible Action of Virecana Karma

In modern texts while explaining laxatives said that they probably induce limited low-grade inflammation in the small and lower bowel to promote accumulation of water and electrolytes and stimulate intestinal motility. From the above view we can say that Ayurvedic Sodhana are mild irritant to the stomach and the intestinal mucosa, to cause inflammation. Due to this, the permeability of the membrane changes and those substances come out due to the changed permeability which cannot come out in normal condition.

This medically produced mild inflammation facilitates quick absorption of the active principles (Virya) of the drug in initial stage. Later on, it facilitates the excretion of the morbid matters, which generally are not supposed to be excreted out through the mucosa of gut. It is possible only because inflammation increases the permeability of the capillaries, which in turn allow the absorption, as well as excretion of such substances which are not allowed in normal condition.

The gross signs of inflammation are redness, heat, swelling, pain and loss of functions. These signs occur due to the three following changes at microscopic level.

1. Hyperemia- It occurs due to capillary dilatation and arteriolar dilatation mechanisms.
2. Exudation - Exudation is the increased passage of protein rich fluid through the vessel wall, in the intestinal tissue. The advantages result of fluid increases is dilution of toxins.

Some chemical factors are also responsible which increases the permeability in response to acute inflammation.

a. Vasoactive Amines:

Inflammation → Mast cells → Histamines → Increased permeability

Inflammation → Platelets → Serotonin → Dilatation

b. Vasoactive polypeptide:

These causes vasodilatation

Some of the above factors may be responsible for the increased permeability of intestinal mucosa, in response to the inflammation caused by irritant Virecana Yoga.

Drugs which accelerate the passage of food-

1. Bulk purgatives
2. Stool softener
3. Osmotic purgatives
4. Stimulant purgatives

Drugs which increase GI motility-

- Local stimulant effect on motility
- Acceleration of gastric emptying, but no effect on gastric secretions.
- Thought to activate cholinergic neurons.

Following mechanisms may be responsible for fluid accumulation and gastro intestinal motility in the lumen.

1. Inhibition of Na^+ K^+ cycle in crypt cell, hence increase the secretion of water and electrolytes.
2. PAF a Phospholipid pro-inflammatory mediator and it produces significant stimulation of colonic secretion and gastro-intestinal motility.
3. Nitric Oxide (NO) also involved in stimulation of intestinal secretion via prostaglandin and cyclic-GMP-dependent mechanisms, in addition, NO may inhibit segmenting contraction in the colon, promoting laxation.

A variety of laxatives both osmotic and stimulant have been found increase the activity of NO synthesis and to increase the biosynthesis of PAF in the gut.

The defecation reflex:

The mass movement drives the faeces into the sigmoid or pelvic colon. The desire for defecation occurs when some faeces enter rectum due to the mass movement. Usually, the desire for defecation is elicited by an increase in the intrarectal pressure to about 20 to 25 cm H₂O. The act of defecation is preceded by voluntary efforts like assuming an approximate posture, voluntary relaxation of external sphincter and the compression of abdominal contents by voluntary contraction of abdominal muscles. The process of defecation involves the contraction of rectum and relaxation of internal and external anal sphincters. In this, the distension of stomach by food causes contraction of rectum. This may be weak contraction. But the strong contraction and relaxation of anal sphincters occurs due to the reflex mediated by parasympathetic nerves and the reflex centre in the sacral segment of spinal cord.

BASTI**1. Etymology, definition and importance of Basti as Ardha-Chikitsa****Etymology:**

The word Basti is derived from the root 'vas' by adding 'Tich' pratyaya and it belongs to masculine gender.

Vas means to reside, to stay, to dwell, to cover, to coat etc.

Basti indicates, the procedure in which the drugs are administered through the Anal canal and it is retained for certain period of time, drag the waste matters from all over the body into the colon and eliminates them out of the body resulting into the desired effect.

Basti is also considered as an organ for the reservoir of urine. It is basically a structure having soft and elastic nature. It is used as an instrument for the administration of drugs via anal route.

Definition:

नाभिप्रदेशं कटिपार्श्वकुक्षिं गत्वा शकृद्दोषचयं विलोडय ॥

संस्नेह्य कायं सपुरीषदोषः सम्यक् सुखेनैति च यः स बस्तिः | (Cha. Si. 1/40-41)

The Karma in which, the medicine is administered through anal canal reaches up to the Nābhi Pradesh, Kati, Pārśva, Kukshi (i.e., up to small intestine, anatomical land marks on the abdomen) churns the accumulated Dosha and Purīsha, spreads the unctuousness (potency of the drugs) all over the body and easily comes out along with the Purīsha and Dosha is called Basti.

Importance of Basti as Ardha-Chikitsa:

1. There is no other therapy equivalent to Basti as it does shodhana quickly & comfortably; does apatarpana or santarpana rapidly and free from complication.
2. No therapy other than Basti provides immediate strength; hence it is supreme line of treatment particularly in children and aged person.
3. The Basti Karma is equivalent to all the other Karma and if properly administered acts like Amrita (nectar).
4. Basti nourishes the body up to the tip of hairs and nails Basti is beneficial in children, young, elder, and healthy patients.
5. Basti is major among all Karma because it destroys the disease by cleansing the Srotases and by increasing the Oja, Teja, Sukra, Agni and Medhā.

2. Utility of Basti Karma in Health and Disease

1. Basti is used as preventive measure in Pravrit to prevent the occurrence of Vataja Roga.
2. Basti is the choice of treatment in diseases due to suppression of natural urges
3. Basti highly effective in Marmabhighatajanya and Marma Vikara
4. Basti is very useful in children as they are not able to take bitter and large quantity of drugs.
5. Basti is very useful in conditions (Cholera, gastritis etc.) where vomiting is present.

3. Basti Yantra- Putaka & Netra, Detailed Study of Traditional Basti Yantra and Their Doshas Knowledge of alternative Basti yantra-enema can, enema syringe, modified plastic/rubber bag for putaka, modified plastic netra

Basti Yantra:

The apparatus containing Basti Puṭaka attached with Netra is called as Basti Yantra.

Basti Netra (Enema Nozzle)

Materials used: gold, silver, copper, bronze, Cow's horn, bones of animals etc.

Shape -Gopuccha Samana

Size - Mūlabhāga- Angushtha Samana (equal to thumb)

Agrabhāga- Kanisṭhikā Samāna (equal to little finger)

Karnika (ridges) - 3

one at 3 Angula from Mūlabhāga, which acts as limiting ridge means it is the maximum insertion point of Netra into guda. The other 2 Karṇikā present at the Mūlabhāga meant for tying the Basti Puṭaka.

Size according to the age: (Cha. Si. 3/8)

Age	Size in Angula	Increase per year	Diameter of tip
1-6 years	6	-	Mudgavahi
7-12 years	8	1/3	Kalayavahi
13-20 years	12	1/2	Kolasthivahi

Basti Netra dosha & their vyapada:

ह्रस्वं दीर्घं तनु स्थूलं जीर्णं शिथिलबन्धनम्।

पार्श्वच्छिद्रं तथा वक्रमष्टौ नेत्राणि वर्जयेत्॥

अप्राप्त्यतिगतिक्षोभकर्षणक्षणनस्रवाः।

गुदपीडा गतिर्जिह्वा तेषां दोषा यथाक्रमम्॥

Bastinetra Doṣa	Nozzle Defect	Upadrava
1) Hrasva	Too short	Aprāpti (enema fluid does not reach its destination)
2) Dīrgha	Too long	Atigati (enema fluid penetrates too far)
3) Tanu	Too thin	Kṣobha (irritation due to instability)
4) Sthūla	Too thick	Karṣaṇa (bruising of rectal wall)
5) Jīrṇa	Too old	Kṣaṇa (injury of rectal wall)
6) Shithila Bandhana	Loosely tied	Srava (leaking of enema fluid)
7) Pārshva Chidra	Hole at the side	Gudapīḍā (pain in rectum)
8) Vakra	Curved	Jihmā Gati (slow/false/crooked movement of enema fluid)

Basti Putaka:

The urinary bladder of the animals such as buffalo, sheep, goat, cow etc.

Features: Drudha (strong), Tanu (Thin), Nashta sira (devoid of veins), Vigandha (Devoid of odor), Kashaya rakta (saphron red), Sumridu (soft), Susuddha (well cleaned), Yatha anurupa (size accordingly)

Basti Putaka dosha & their vyapada:

विषममांसलच्छिन्नस्थूलजालिकवातलाः।

स्निग्धः क्लिन्नश्च तानष्टौ बस्तीन् कर्मसु वर्जयेत्॥

गतिवैषम्यविस्रवसावदौर्गन्धनिस्रवाः।

फेनिलच्युत्यधार्यत्वं बस्तेः स्युर्बस्तिदोषतः॥ (Cha. Si. 5/6-7)

Bastipuṭaka Doṣa	Bladder Defect	Upadrava
1) Viṣama	Irregular formed	Gati Vaiṣamya (irregular flow of enema fluid)
2) Māṁsala	Fleshy/Bulky	Visratva/Āmagandhā (makes enema fluid smell fleshy)
3) Chinna	Perforated/Cut/Torn	Srava (leaking of enema fluid)
4) Sthūla	Too thick	Daurgrāhya (difficult to handle/use)
5) Jālika	Having many pores	Nisrava (exudation of enema fluid from the bladder)
6) Vātala	Containing air	Phenilatva (frothiness of enema fluid)
7) Snigdha	Oily/Greasy/Slippery	Chyuti (slipping while use)
8) Klinna	Putrefied/Rotten	Adhāryatva (inability to hold the bladder; inability of the bladder to hold the enema fluid)

Modified plastic bag:

Plastic bag of 41 micron and higher quality

Advantages:

- East to tie the Netra
- Easy to handle
- Single use and disposable, hence chances of infections are very rare.
- Saves the time for procedure
- Very few putaka dosha

Plastic Netra:

Prepared from good quality plastic.

Advantages:

- Easy to handle
- Can be reused after proper washing in antiseptic solutions
- Light in weight
- Minimal Netra Dosha
- Can be used for single person for whole course and so chances of infections are less

Enema Pot or Can:

The measuring can attach with the pipe.

Advantages:

- Easy & simple to administer
- Easy for cleaning
- The rubber catheter can be used for a single person & then disposed using rubber catheter one can able to give high rectal/low rectal enema
- No chance of complications which are told in classical Basti Netra & Putaka

Enema syringe:

- Nowadays modified basti yantras are available in the market. This has a stainless-steel body with bronze head or Delrin head.
- The disposable basti tip is screwed to the head.
- The tip has an ideal hole size for ayurvedic use.
- These are available in the 100ml/250ml sizes for matra basti and anuvasana basti.
- The tips are also available in two sizes – adult and pediatric.

Rubber catheter:

- It can be used in place of basti Netra.
- Rubber catheter can be used for a single use and then disposed.
- By using catheter one can give high rectal and low rectal enema.
- 12 size for elders & 8 size for pediatric ages
- Less chance of injury and complications

4. Classification of Basti

Based on procedure:

1. Niruha
2. Anuvasana
3. Uttara

Based on adhisthan:

1. Pakvasayagata basti
Basti dravya administered through anal canal into the colon is called pakvasayagata basti.
It includes both Sneha and Niruha basti.
2. Garbhashayagata basti:
The drugs are administered through the vagina into the uterus is called Garbhashayagata basti.
3. Mutrasayagata basti:
The drugs are administered through the urethra into the urinary bladder is called Mutrasayagata basti.
4. Vrina basti:
Kashaya is instilled into the vrina for shodhana and ropana purpose.

Based on the predominant dravya used in basti:

1. Sneha basti:
The basti in which snehas are administered into the colon through anal canal is called Sneha basti.
2. Niruha basti:
In this type of basti, kashaya is the main content. The Kashaya, madhu, saindhava, Sneha and kalka are the ingredients commonly used in niruha basti.

Based on numbers of basti:

1. Karma basti
2. Kala basti
3. Yoga basti

5. Karma, Kala and Yoga basti schedules along with their utility

1. Karma Basti:

In this schedule, 30 basti are to be administered. Out of these 18 are anuvasana, while remaining i.e., 12 basti are niruha. Initially on the first day, one anuvasana is given which is followed by 12 niruha and 12 anuvasana alternately. Lastly, five anuvasana are to be given.

1A	2N	3A	4N	5A	6N
7A	8N	9A	10N	11A	12N
13A	14N	15A	16N	17A	18N
19A	20N	21A	22N	23A	24N
25A	26A	27A	28A	29A	30A

Indications:

- Gambhiranugata Mala (Deep seated vitiated Dosha)
- Krameṇa Sancita Mala (Gradually collected Dosha)
- Vātapradhāna Roga
- Uttama Śarira & Satva Bala

2. Kāla Basti:

Caraka mentioned that it includes half number of Basti to that of Karma Basti. But Cakrapāni commented that it includes 16 Basti. Anuvāsana should be given first day, then 6 Anuvāsana and 6 Niruha given alternatively and at last 3 Anuvāsana ($10 A + 6 N = 16$).

1A	2N	3A	4N
5A	6N	7A	8N
9A	10N	11A	12N
13A	14A	15A	16A

Indication:

- Pitta Samsarga
- Madhyama Bala, Madhyama Dosha, Madhyama Sadhanayukta.
- In Svastha Vātādi Dosha Prakopa due to seasonal changes

3. Yoga Basti:

This pattern of Basti includes the group of eight Basti, out of which 5 are Anuvāsana and 3 are Niruha. The schedule is started with Anuvāsana on the day one followed by three Niruha and three Anuvāsana alternatively. Lastly, one Anuvāsana is to be given. ($5A + 3N = 8$)

1A	2N	3A	4N
5A	6N	7A	8A

Indications:

- Kaphanubandhi vata prakopa
- Alpa bala
- Mild vitiation of vata dosha

6. Niruha basti: Its etiology, synonyms, definition, classification, sub-classification & indications and contraindications

Nirukti:

It is called Nirūha because it expels Doṣa and relieves the body from diseases.

It is called Āsthāpana because it prevents aging and support/prolongs the lifespan.

It is called Kaṣāya Basti because decoction is the main ingredient of Nirūha Dravya.

Definition:

The Basti karma which eliminates the vitiated Doṣa from the body and increases strength of the body is called Nirūha Basti.

Synonyms:

Nirūha Basti, Nairūhika Basti, Āsthāpana Basti, Kaṣāya Basti

Classification:

Depending upon the therapeutic effect of Nirūha Basti, it is named differently:

- | | |
|----------------------------|---------------------|
| 1. Vātahara Basti | 6. Utkleshana Basti |
| 2. Pittahara Basti | 7. Shodhana Basti |
| 3. Kaphahara Basti | 8. Shamana Basti |
| 4. Shoṇita Doṣahara Basti | 9. Doṣahara Basti |
| 5. Doṣa Samsargahara Basti | |

Depending upon specific indication of Nirūha Basti, it is named differently:

- | | |
|-------------------------|----------------------------|
| 1. Pramehahara Basti | 7. Abhiṣyandahara Basti |
| 2. Visarpahara Basti | 8. Kṛmihara Basti |
| 3. Raktapittahara Basti | 9. Dāhahara Basti |
| 4. Kuṣṭhahara Basti | 10. Mūtrakṛcchrahara Basti |
| 5. Vātaraktahara Basti | 11. Parikartikāhara Basti |
| 6. Gulmahara Basti | |

Depending upon the basis of main Dravya of Nirūha Basti, it is named differently:

- | | |
|--------------------|---------------------|
| 1. Kṣīra Basti | 6. Dadhimastu Basti |
| 2. Māmsarasa Basti | 7. Amlakāñjī Basti |
| 3. Gomūtra Basti | 8. Surākṛta Basti |
| 4. Rakta Basti | 9. Āsavakṛta Basti |
| 5. Kṣāra Basti | |

Depending upon the dose of Nirūha Basti, it is named differently:

- | | |
|-------------------------|---------------------------|
| 1. Chatu Prasṛta Basti | 5. Aṣṭa Prasṛta Basti |
| 2. Pañcha Prasṛta Basti | 6. Nava Prasṛta Basti |
| 3. Shad Prasṛta Basti | 7. Ekadasha Prasṛta Basti |
| 4. Sapta Prasṛta Basti | 8. Dvadasha Prasṛta Basti |

Guna: Niruha type of medicated enema has following benefits:

- Prevents ageing
- Promotes happiness, longevity, strength, power of digestion, intellect, voice and complexion
- It accomplishes all objects.
- It is harmless for children, old persons and youth.
- Cures all diseases
- Evacuates feces, kapha, pitta, vata and urine
- Promotes sturdiness of the body
- Enriches semen and promotes strength
- It cures all the diseases by removing accumulated dosha from entire body.

Indications:

विशेषतस्तु सर्वाङ्गैकाङ्गकुक्षिरोग वात वर्चो मूत्रशुक्रसङ्ग बलवर्णमांसरेतःक्षय दोष आध्मान
अङ्गसुप्ति क्रिमिकोष्ठ उदावर्त शुद्धातिसार पर्वभेद अभिताप प्लीह गुल्म शूल हृद्रोग भगन्दर
उन्माद ज्वर ब्रध्न शिरःकर्णशूल हृदयपार्श्वपृष्ठकटीग्रह वेपन आक्षेपक गौरव अतिलाघव
रजःक्षयार्त विषमग्नि
स्फिग्जानुजङ्घोरुगुल्फपार्ष्णिप्रपदयोनिबाह्वङ्गुलिस्तनान्तदन्तनखपर्वास्थिशूल शोष स्तम्भ
आन्त्रकूज परिकर्तिका अल्पाल्पसशब्दोग्रगन्धोत्थानादयो वातव्याधयो विशेषेण
महारोगाध्यायोक्ताश्च; एतेष्वास्थापनं प्रधानतममित्युक्तं वनस्पतिमूलच्छेदवत्॥ (Cha. Si.2/16)

Contraindications:

अनास्थाप्यास्तु अजीर्ण्य अतिस्निग्ध पीतस्नेहो उत्कलष्टदोष अल्पाग्नि यान्कलान्त अतिदुर्बल
क्षुत्तृष्णाश्रमात्ता अतिकृश भुक्तभक्त पीतोदक वमित विरिक्त कृतनस्तःकर्म कुद्ध भीत मत्त मूर्च्छित
प्रसक्तच्छर्दि निष्ठीविका श्वासकासहिक्का बद्धच्छिद्रोदकोदराध्मान अलसक विसूचिका आमप्रजाता
आमातिसार मधुमेह कुष्ठार्ताः॥ (Cha. Si.2/14)

6.1 Dose fixation of Niruha basti according to the age

1st year → ½ Prasrita
1st year to 12th year → ½ Prasrita increase
12th year to 18th year → 1 Prasrita increase
18th to 70th year → 12 Prasrita
After 70 years → 10 Prasrita

6.2 Contents and method of preparation of niruha basti dravya**Basti Samyojana karma (Preparation of the Basti):**

All the ingredients taken in the required quantity, then mix by triturating in the order of Madhu, Saindhava, Sneha, Kalka, Kvātha and then Avāpa Dravya one by one gradually until it becomes a homogeneous mixture. Then churn the solution to make it finer and more homogeneous and heated over hot water bath steam (Bāshpa Sveda) to make it Sukhoshna.

Characteristics of a well prepared Basti Dravya:

A well prepared Basti Dravya should not run quickly out of the hand nor it sticks or remains steady on the hand. It should be uniform mixture without separation of its contents.

6.3 Diet

Vata Pradhana → Mamsa rasa

Pitta Pradhana → Ksheera Pradhana ahara

Kapha Pradhana → Yusha

6.4 Administration of niruha basti

Instructions to the patient:

Patient is to be advised to pass his natural urges before Basti Pranidāna and not to laugh, cough, sneeze, and yawn while administering Basti.

Basti Pranidāna:

- The patient having the symptoms of proper digestion and not having very much hunger, after performing Abhyanga and Bashpa Sveda should be brought to Basti room.
- Then advise to lie down in the left lateral position on the Basti table, keeping his/her left hand below the head as a pillow, (extend the left leg completely and flex the right leg at the knee joint, keeping on the left leg by flexing the hip joint.)
- Then Sukhoshṇa Sneha is to be applied in the anal region and on the Bastinetra, remove the cotton piece and slightly squeeze the Puṭaka to remove air and keep the thumb on the Netra while introducing it.
- Introduce the Bastinetra slowly in the direction of the vertebral column up to the 1/4 part of the Netra (the Karnikā which fixes into the anus).
- Then hold the Basti Putaka in the left hand and keep the right hand on the Putaka. After this press it gradually with the uniform pressure, neither too fast not too slow without shaking the hand and instruct the patient to breath in deeply.
- Press the Putaka till little quantity of Basti Dravya remains in the Putaka otherwise Vayu enters the Pakvāśaya, and then withdraw the Netra gradually. Basti Pīḍana Kāla is 30 Mātrā. (Time required for the insertion of the basti dravya)
- Then advised the patient to lie down in the supine position with a pillow below the hips till he gets the urge for defecation and when he/she gets the urge told to sit in Utkāṣana and pass the urge. After giving Basti Anticlockwise massage should be done on the abdomen starting from the Lt. ileac fossa to Rt. ileac fossa.

6.5 Pratyagamana kala, Post niruha basti management

Basti Pratyāgamana:

One Muhurta (48 minutes) is the maximum period of time with in which the Pratyāgamana of Basti should occur. If it does not occur then it causes-

- | | | |
|------------------|---------|---------|
| • Vata pratiloma | • Sula | • Jvara |
| • Vistabdha | • Arati | • Death |

If basti does not come out-

- Administration of phalavarti
- Administration of tikshna virechana
- Tikshna basti
- Svedana over the pelvic region

Ati tikshna basti should not be administered.

Paschat karma:

The diet should be prescribed according to the disease and condition of the patient, comprising of soup of pulse, milk and meat soup. When the meal is digested, on the same day evening after consuming the light diet, the patient may be given Anuvasana basti to provide him strength.

6.6 Samyak yoga, Ayoga and Atiyoga of the niruha

Samyaka yoga:

प्रसृष्टविण्मूत्रसमीरणत्वं रुच्यग्निवृद्ध्याशयलाघवानि॥

रोगोपशान्तिः प्रकृतिस्थिता च बलं च तत् स्यात् सुनिरुदलिङ्गम्] (Cha. Si. 1/41-42)

When niruha i.e., evacuating type of enema is administered properly then it causes proper elimination of stool, urine and flatus; promotes appetite and power of digestion; gives lightness to the ashaya; attenuates disease and restores natural health and strength.

Ayoga:

स्याद्गुक्छिरोहृद्गुदबस्तिलिङ्गे शोफः प्रतिशयायविकर्तिके च॥

हृत्लासिका मारुतमूत्रसङ्गः श्वासो न सम्यक् च निरुहिते स्युः॥ (Cha. Si. 1/42-43)

When niruha i.e., evacuating type of enema is not administered properly then it causes pain in head, cardiac region, anal region, urinary bladder and genital organs; edema, coryza, griping pain and nausea; retention of flatus and urine and dyspnea.

Atiyoga:

लिङ्गं यदेवातिविरेचितस्य भवेत्तदेवातिनिरुहितस्य॥ (Cha. Si. 1/43)

Symptoms of excessive outcome of evacuative enema are similar to the symptoms to that of excessive administration of purgation therapy.

6.7 Complication of niruha basti and its management according to ayurved and modern medicines

Basti Vyāpat	Nidāna	Lakṣaṇa	Chikitsā
1) Ayoga	Krūra Koṣṭha, Mala pūrṇa Koṣṭha, Rūksha, Vātolbaṇa; Shīta Basti, Alpalavaṇa, Alpasneha, Alpadrava, Ghana, Alpamātrā	Gurukoṣṭha, Vāta-Vit-Mūtra graha, Nābhi-Basti ruja, Dāha, Hṛllāsa, Guda Shvayathu, Kaṇḍū, Gaṇḍāni Vaivarnya, Aruchi, Vahni Mārdava	Pramāthya pāna, Svedana, Phalavarti, Virechana, Nirūha Basti
2) Atiyoga	Uṣṇa Tīkṣṇa Basti, Mṛdu Koṣṭha	Excessive elimination of Vit, Pitta, Kapha, Drava Dhātu; Balakṣaya, Svarakṣaya, Dāha, Kaṇṭhashoṣa, Bhrama, Trṣṇā	Shīta Parisheka, Avagāha, Shīta-Kaṣāya-Madhura Annapāna, Raktapitta-Atisāra-Jvara Chikitsā
3) Klama	Āmasheṣa, Mṛdu Nirūha	Klama, Dāha, Hṛtshūla, Moha, Veṣṭana, Gaurava, Agnimāndya	Rūksha Svedana, Pāchana, Kvātha (Pippalī, Katruna, Ushīra, Devadāru, Mūrva, Sauvarchala Lavaṇa), Peya, Kṣāra, Basti with Dashamūla Kvātha & Gomūtra
4) Ādhmāna	Alpavīrya Dravya, Mahādoṣa, Rūksha, Krūra Koṣṭha	Ādhmāna, Marma pīḍa, Vidāha, Apāna Vāyu duṣṭi, Gurukoṣṭha, Muṣka-Vaṅkṣaṇa Vedanā, Hṛdayarodha, Hṛtshūla	Snehana, Svedana, Varti, Nirūha Basti with Pīlu, Sarṣapa & Gomūtra, Sneha Basti with Sarala & Devadāru
5) Hikkā	Atitīkṣṇa Basti administered in Mṛdu Koṣṭha, Abala Rogī and causes Atinirharana, leading to Hikkā	Hikkā	Hikkānigrahaṇa Dravya, Bṛmhaṇa, Hikkā Chikitsā Sneha Basti with Taila (Balā, Dashamūla, Triphalā, Guḍa, Saindhava), Prasanna & Amla Aranala
6) Hṛtprāpti	Atitīkṣṇa Basti, Savāta Basti, Mandavega	Hṛtprāpti	Nirūha Basti (Kasha, Kusha, Utkata, Amla Dravya, Lavaṇa, Karavīra, Badara) Sneha Basti (Vātashāmaka Dravya; Dashamūla, etc.)
7) Ūrdhvata	Vāta-Vit-Mūtra veganigrahaṇa after administration of Basti, Ativega	Ūrdhva Gamana, Basti Dravya may be expelled from Mukha, Mūrcchā	Shīta Mukha seka, Rubbing the flanks, abdomen and lower body, keep head elevated, Vātānulomana, Virechaka, Compression of Kaṇṭha, Basti with Uṣṇa Tīkṣṇa Dravya / Dashamūla & Gomūtra, Nasya, Dhūma, Sarṣapa Kalka Shiropalepa

8) Pravāhikā	Mṛdu Vīrya Basti in case of Bahu Doṣa, leading to Doṣa Utkleśha	Doṣa are expelled in Alpamātrā, Shopha, Jaṅgha-Uru Sadana, Niruddha Māruta, Atisāra lakṣaṇa	Abhyaṅga, Svedana, Nirūha Basti, Shodhana Dravya, Anulomana Dravya, Laṅghana, Peyādi krama
9) Shiroarti	Tanu, Mṛdu, Shīta Basti Dravya, Alpamātrā given in case of Durbala, Krūra Koṣṭha, Tīvra Doṣa	Vāta gets further vitiated and moves in all directions of the body, especially upwards affecting the head – Shiroarti. Grīva-Manyā graha, Shira-Kaṇṭha bhedana, Bādhīrya, Karṇanāda, Pīnasa, Netra vibhrama	Abhyaṅga Salavaṇa, Shirovirechana (Pradhamana Nasya & Dhūmapāna), Snigdha Tīkṣṇa Anulomaka Bhojana, Anulomana Dravya, Sneha Basti (Tīkṣṇa & Anulomaka)
10) Aṅgārti	Atidoṣa Nirharana due to Guru Tīkṣṇa Basti given to a patient who has not undergone proper Pūrvakarma; or not at all	Gatra veṣṭana, Nistoda, Bheda, Sphuraṇa, Jṛmbhana	Abhyaṅga Salavaṇa, Uṣṇa Parisheka, Prastara Sveda (Eraṇḍapatra Kvātha), Nirūha Basti (Yava, Kulattha, Kola, Dashamūla – Kvātha, Bilva Taila, Lavaṇa), Avagāha Sveda, Sneha Basti (Bilva Taila / Yaṣṭimadhu Taila)
11) Parikarta	Rūkṣa Tīkṣṇa Atimātrā Basti given to a patient with Mṛdu Koṣṭha and Alpa Doṣa	Parikartikā, Trika-Vaṅkṣaṇa-Basti Toda, Nābhī Adharuja, Vibandha, Alpa Utthāna	Kṣīrabasti with Madhura & Shīta Dravya (E.g.: Ikṣurasa, Yaṣṭimadhu Kalka & Taila), Kṣīra Bhojana, Mṛdu Bhojana
12) Parisrava	Amla Uṣṇa Tīkṣṇa Atilavaṇa Basti given in case of Pitta Roga leads to Lekhana of Guda	Vidāha, Raktasrava, Pittasrava, Atipravṛtti, Moha	Basti (Ardra, Shālmālī, Vṛnta with Ajā Kṣīra and Ghṛta; boiled and administered when cooled down), Seka / Pradeha on Guda pradesha with Madhura & Shīta Guṇa Dravya, Raktapitta & Atisāra Chikitsā

6.8 Pariharya vishaya and kala

Pariharya Vishaya:

अत्यासनस्थानवचांसि यानं स्वप्नं दिवा मैथुनवेगरोधान्॥

शीतोपचारातपशोकरोषांस्त्यजेदकालहितभोजनं च। (Cha. Si. 1/54-55)

During cleansing therapies, one should avoid excessive sitting, standing, speaking and riding, sleep during day time, sexual intercourse, suppression of natural urges, cooling regimens, exposure to sun, grief, anger and intake of untimely and unwholesome food.

Kala:

कालस्तु बस्त्यादिषु याति यावांस्तावान् भवेद्द्विः परिहारकालः। (Cha. Si. 1/54)

The interval between two courses of any basti etc. (cleansing therapy) should be double the period required for administration of that therapy.

7. Anuvasana Basti: Its etymology, synonyms, definition, classifications, sub-classifications & indications and contraindications.

Etymology:

The anuvasana word is derived from the root word 'vaasa' with prefix 'anu'. The Basti which is administered every day is called Anuvasana. In second and third derivation, according to dosha vitiation or according to disease the administration of specific sneha is called anuvasana.

Synonyms: anuvasana basti, sneha basti

Definition:

The Basti which remains inside the body for a day without causing any harm or Basti which can be administered every day is called Anuvasana.

Classification:

Based on matra it is of three types:

1. Uttama → 6 pala → 300 ml
2. Madhyama → 3 pala → 150 ml
3. Avara → 1½ pala → 75 ml

Indications:

- Vātavyādhi, Daruṇa Anila Roga, Sarvāṅga roga, Ekāṅga roga, Kuṣṭhi roga, Bala kṣaya, Varṇa kṣaya, Māṁsa kṣaya, Retasa kṣaya, Aṅga supti, Kṛmikoṣṭha, Udāvarta, Parvabheda, Abhitāpa, Gulma, Ānāha, Khuḍa, Plīhāroga, Shuddhātisāra, Shūla, Shiroshūla, Karṇashūla, Jīrṇa Jvara, Pratishyāya, Hṛdroga, Hṛdaya graha, Pārshva graha, Prṣṭha graha, Kaṭi graha, Shukra graha, Anila/Adhovāta graha, Mala graha, Vṛddhi, Ashmarī, Rajonāsha, Vepana, Ākṣepaka, Gaurava, Atilāghava, Viṣamāgni, Bhagandara, Parikartika, Unmāda
- Alpālpa Uttana (frequent evacuation of stool in small quantity)
- Sashabdha Utthāna, Ugragandha Utthāna
- Shūla Shoṣa Stambha located in Sphika, Jānu, Jaṅgha, Uru, Gulpha, Pārṣṇi, Pada, Yoni, Bahu, Aṅguli, Stana, Danta, Nakha, Parva, Asthi
- Tīkṣṇāgni, Rūkṣa, Kevala Vāta Roga (diseases only due to Vāta Doṣa)
- Anuvāsana Basti can be given on daily basis in conditions such as Rūkṣa Nitya, Diptāgni, Vyāyāma Nitya, Mārutāmaya, Udāvarta.

In others, Sneha generally digests in three days, so it should not be given on daily basis for a long period. In the following manner, Sneha Basti does not cause any complications:

1st day = Anuvāsana Basti

2nd day = Pathya Annapāna & Vihāra

3rd 4th or 5th day = Anuvāsana Basti is given again.

Contraindication:

- Samshudda (who has undergone Shodhana; Vamana & Virechana),
- Datta-Nāvana (who has undergone Nasya), Bhukta (who has just eaten a meal), Pītodaka (who has just drunk water)
- Ajīrṇa, Atisnigdha, Pīta Sneha, Utkliṣṭa Doṣa, Alpāgni, Yānaklānta (exhaustion due to travelling), Krodha, Bhaya, Mūrccchita, Atidurbala, Kṣudha, Tṛṣṇā
- Atikṛsha, Urahkṣata, Āmāṭisāra, Chardi, Shvāsa, Kāsa, Hikkā, Niṣṭhīvikā, Praseka, Arsha, Ādhmāna, Agnimāndya, Baddhodara, Chidrodara, Udakodara, Kuṣṭha, Madhumeha, Alasaka, Visūchikā
- Āmaprajātā (premature birth), Garbhinī (up to 7th month)
- Abhukta (without having eaten)
- Navajvara, Plīhodara, Kaphodara, Pāṇḍu, Kāmalā, Pīnasa, Pratishyāya, Viḍbheda, Gurukoṣṭha, Kṛmikoṣṭha, Abhiṣyandi (Pittaja, Kaphaja), Kārshya, Sthaulya, Ūrustambha, Viṣha pīta, Gara Viṣa, Apachī, Shlīpada, Galagaṇḍa, Arochaka

7.1 Dose fixation of Anuvasana Basti according to age

Dose according to age:

Dose of sneha basti is 1/4th of niruha basti matra.

Age (in years)	Dose (tola)		Age (in years)	Dose (tola)
1	1 tola		11	11 tola
2	2 tola		12	12 tola
3	3 tola		13	14 tola
4	4 tola		14	16 tola
5	5 tola		15	18 tola
6	6 tola		16	20 tola
7	7 tola		17	22 tola
8	8 tola		18	24 tola
9	9 tola		After 70 year	20 tola
10	10 tola		-	-

Dose of prakshepa dravya:

The quantity of powder of shatahawa and saindhava to be added to sneha is –

Uttama → 6 masha

Madhyama → 4 masha

Avara → 2 masha

7.2 Contents and Method of preparation of Anuvasana Basti dravya

Anuvasanopaga dravya:

- | | |
|----------------|------------------|
| 1. Rasna | 6. Vruschira |
| 2. Suradaru | 7. Punarnava |
| 3. Bilwa | 8. Shvadamshttra |
| 4. Madana | 9. Agnimantha |
| 5. Shatapushpa | 10. Shyonaka |

Prakshepa dravyas:

Saindhava and Shatahava may be added to the oil of Anuvasana because they facilitate its proper and better return.

7.3 Diet

After Anuvasana the patient should be given warm water to drink whenever he feels thirsty and in meals light wholesome food should be given. If the patient is having good digestive power, then on the same day evening light diet may be given after returning the Basti. In the next morning the warm water or water prepared with Dhaniya and Shunti should be given. It improves the digestion and appetite of the patient.

The next anuvasana can be given on the third day.

Relation of food with anuvasana basti:

Sneha Basti should never be given without taking food, because in empty Koshta, the Sneha may go upwards. So always Anuvasana should be given immediately after taking meal (Ardra Paninam) because the Anuvasana Basti given during the digestion period of meal causes fever.

At the same time care should be taken that the patient should not take excessive quantity of food.

7.4 Administration of Anuvasana Basti

Anuvasana basti kala:

In the morning during Hemanta, Shishira, Vasanta Rtu.

In the evening during Grīṣma, Varṣa, Sharada Rtu.

Vidhi:

Purva karma:

- Snehana, Svedana, Shodhana (Vamana, Virechana) can be performed before Sneha Basti procedure. Sneha Basti should be administered 7 days after Virechana. If the disease is caused by Vāta alone, Sneha Basti can be administered without performing Shodhana previously.

- On the day of Sneha Basti procedure:
Snāna (Uṣṇodakena), Āhāra bhojana (less than ¼ than the usual quantity);
Hita, Laghu, Asnigdha, Arūkṣa
- Chaṅkramana, Vit-Mūtra pravṛtti
- Abhyaṅga, Svedana
- Preparation of Sneha Basti Dravya
- Preparation of Bastinetra (rubber catheter) & Bastipuṭaka (enema syringe)

Pradhana karma:

- The client is made to lie down on the table in the left lateral position, with the left leg extended and the right leg flexed at the hip and knee. The buttocks and anal region should be exposed.
- The anal orifice of the client is smeared with the help of a cotton swab. The tip of the rubber catheter is also lubricated.
- The therapist should hold the enema can with Basti Dravya in the left hand, while keeping the rubber catheter in the right. The catheter should be bent to prevent leakage of Basti Dravya.
- Then the rubber catheter is gently inserted into Guda in the direction of Prṣṭa Vamsha (vertebral column). While inserting, hands should be steady, and it should neither be done too fast nor too slow.
- Then the Bastipuṭaka is elevated, and rubber catheter is straightened. Thus, the Basti Dravya can easily flow by the gravitational force. A little quantity of Basti Dravya should remain in Bastipuṭaka to prevent Vāta from entering.
- If during the administration of Basti Dravya, the patient gets the urge to pass feaces and flatus, the Bastinetra should be removed and one should wait till the urge has passed. Then the remaining Auśadha should be administered.
- The rubber catheter is again removed and bent.
- After removal, the buttock of the patient should gently be struck. The patient should turn to supine position. After some time, he/she should turn to left lateral, prone and right lateral positions respectively.
- Afterwards, the patient should lie again in supine position while keeping the lower part of the body elevated to retain the Basti Dravya and allow it to spread. In this position, the patient is asked to rub the palms against each other, while at the same time the therapist rubs the sole of the patient vigorously. Further, the therapist should flex and extend the client's legs at the hip and knee for several times. Then the patient is asked to raise the legs by flexing the hip several times.

7.5 Pratyāgamana Kāla, Post Anuvasana Basti management

Pashchata karma:

Pratyagamana kala:

- In general, Sneha Dravya should be expelled in 3 yāma (9 hours).
- If it is not expelled within 9 hours, one should wait for one Ahorātra (24 hours). After that, if Sneha Dravya is still retained, it should be expelled by using Phalavarti or Tīkṣṇa Basti (strong decoction enema).
- If Sneha does not come out due to Rūkṣa and if it does not cause any complications, then it should be ignored. But the patient should not take any food at night.
- If Basti Dravya comes out immediately, then another Anuvāsana Basti should be administered because the previous one did not produce any Snehana.

Pathya: Drava, Uṣṇa, Laghu, Pathya, Mātravat Āhāra

In the next morning, the patient should drink warm water boiled with Nāgara and Dhānyaka or only Uṣṇodaka.

Uṣṇodaka helps in digestion of Apakva Sneha, disintegrates Kapha and does Vātānulomana. Therefore, it should be given to the patient after Vamana, Virechana, Nirūha and Anuvāsana Basti.

7.6 Samyak Yoga, Ayoga and Atiyoga of Anuvasana.

Samyaka yoga lakshana:

प्रत्येत्यसक्तं सशकृच्च तैलं रक्तादिबुद्धीन्द्रियसम्प्रसादः ।

स्वप्नानुवृत्तिर्लघुता बलं च सृष्टाश्च वेगाः स्वनुवासिते स्युः॥

- | | |
|----------------------------------|-------------------|
| • Sa Anila Sa Purisha Sneha | • Bala |
| Pratyagamana | • Srushtasca Vega |
| • Raktadi Buddhi-Indriya Prasada | • Absence of Daha |
| • Svapnanuvrutti | • Absence of Ruja |
| • Laghuta | |

Ayoga lakshana:

अधःशरीरोदरबाहुपृष्ठपार्श्वेषु रुग्णक्षयरं च गात्रम् ।

ग्रहश्च विष्मूत्रसमीरणानामसम्यगेतान्यनुवासितस्य ॥

- | | |
|--------------------|-----------------|
| • Adha sarira ruja | • Ruksha srava |
| • Udara ruja | • Purisha sanga |
| • Prustha ruja | • Mutra sanga |
| • Parsva ruja | • Vata sanga |
| • Ruksha gatrata | |

Atiyoga lakshana:

हृल्लासमोहक्लमसादमूर्च्छाविकर्तिका चात्यनुवासितस्य।

- Hrillasa
- klama
- Murccha
- Moha
- Sada
- Vikartika

7.7 Complication of Anuvāsana and its management according to Ayurved and Modern Medicines

Sneha basti vyapada and their management:

Sneha Vyāpat	Nidāna	Lakṣaṇa	Chikitsā
1) Vātāvṛta	Shīta or Alpa Basti Dravya given in a patient with excessive Vāta	Aṅgamarda, Jvara, Ādhmāna, Shīta, Stambha, Ūrupīḍana, Pārshvaruk	Nirūha Basti prepared with Kalka which is Sneha, Amla, Kṣāra and Uṣṇa. Anuvāsana Basti on the same evening with same Dravya.
2) Pittāvṛta	Uṣṇa Basti given in Pitta predominance	Dāha, Rāga, Trṣṇā, Moha, Tamaka, Jvara	Nirūha Basti with Madhura and Tikta Dravya.
3) Kaphāvṛta	Mṛdu Basti given in Kapha predominance	Tandrā, Shīta, Jvara, Ālasya, Praseka, Aruchi, Gaurava, Mūrcchā, Glāni	Nirūha Basti prepared with Surā and Gomūtra, Madanaphala taila, Kaṣāya, Kaṭu, Tīkṣṇa, Uṣṇa and Amla Dravya.
4) Annāvṛta	Basti prepared with Guru Dravya given to a patient who has overeaten prior to the procedure	Chardi, Mūrcchā, Aruchi, Glāni, Shūla, Nidrā, Aṅgamarda, Āma, Dāha	Pāchana with Kaṭu and Lavaṇa Kvātha or Chūrṇa. Mṛdu Virechana Āma Chikitsā
5) Purīṣāvṛta	Alpabala Basti given to a patient with Varcha Sañchaya (accumulated faeces)	Vāta-Vit-Mūtra Saṅga, Shūla, Gurutva, Ādhmāna, Hṛdaya graha	Sneha Sveda, Guda varti, Nirūha Basti prepared with Shyāma Trivṛt and Bilva, followed by Anuvāsana Basti. Udāvarta Chikitsā
6) Abhukte Praṇīta	Sneha Basti given forcefully to a patient who has not eaten anything prior to the procedure	Sneha Dravya comes out of Mukha or other orifices of the head.	Stambhana Dravya, Virechana Dravya, Chardinigrahaṇa Dravya, pressure should be applied over the throat. Nirūha and Anuvāsana Basti should be given with Taila; cooked with Gomūtra, Shyāma Trivṛt, Yava, Kola, Kulattha

7.8 Pariharya Vishaya and kala

Parihāra Vishaya are specific regimens which should be avoided during the whole course of Basti karma as well as for a time period twice as long as the time of the Basti course.

अत्यासनस्थानवचांसि यानं स्वप्नं दिवा मैथुनवेगरोधान्॥५४॥

शीतोपचारातपशोकोषांस्त्यजेदकालहितभोजनं च॥५५॥

During cleansing therapies, one should avoid excessive sitting, standing, speaking and riding, sleep during day time, sexual intercourse, suppression of natural urges, cooling regimens, exposure to sun, grief, anger and intake of untimely and unwholesome food.

8. Basti Kārmukatā (Mode of action).

Mode of action:

- The basti when administered does the churning of Doshas situated in Nabhi pradesha, Kati, Parshwa etc. and expels it from the body.
- Through the systemic action Basti, can remove the Doshas from whole of the body. Though Basti is given in the Pakvashaya its active ingredients i.e., "Virya of the Basti" spreads in the entire body as stated by Sushruta.
- Parashara had highlighted the importance of Guda, by saying that Guda is Mula for all the siras in the body. Hence the nourishment of the Guda by administration of Basti causes nourishment of entire Shareera.

Considering these references, the mode of action can be stated on virtue of:

- Absorption in systemic circulation
- Colon cleansing
- Gut brain theory

Absorption in systemic circulation: Though small intestine is supposed to be an important organ for absorption of food & drugs colonic administration of drug has specific importance. Thus, colon targeted drug delivery is gaining popularity. It is a concept that is being used in Ayurveda in the form of Basti.

- Colon targeted drug delivery is an old concept in new perspectives.
Why is colon targeted drug delivery needed?
- Targeted drug delivery to the colon would ensure direct treatment at the disease site, lower dosing and fewer systemic side effects.
- Colon-specific drug delivery system is considered to be beneficial in the treatment of colon diseases.
- The colon is a site where both local and systemic drug delivery could be achieved. Topical treatment in inflammatory bowel disease, i.e., ulcerative colitis or Crohn's disease.
- A number of other serious diseases of the colon, e.g., colorectal cancer also may be treated more effectively if drugs were targeted to the colon.
- Formulations for colonic delivery are also suitable for delivery of drugs which are polar /or susceptible to chemical and enzymatic degradation in the upper GI tract, highly affected by hepatic metabolism.

Why Basti may prove better than oral drugs for colon targeted drug delivery?

- As a site for drug delivery, the colon offers a near neutral PH, reduced digestive enzymatic activity, a long transit time and increased responsiveness to absorption enhancers; however, the targeting of drugs to the colon is very complicated.

Due to its location in the distal part of the alimentary canal, the colon is particularly difficult to access.

In addition to that the wide range of pH values and different enzymes present throughout the gastrointestinal tract, through which the dosage form has to travel before reaching the target site, further complicate the reliability and delivery efficiency.

However, Basti has,

- Direct access to colon.
- Quick action as transit time is not an obstructive factor.
- No enzymatic degradation as in case of oral drugs targeting colon while travelling from upper G.I. tract.

Successful delivery through this site also requires the drug to be in solution form before it arrives in the colon or, alternatively, it should dissolve in the luminal fluids of the colon, but this can be a limiting factor for poorly soluble drugs as the fluid content in the colon is much lower and it is more viscous than in the upper part of the GI tract.

Basti itself is a thick liquid consistency fluid providing enough solution media for drug absorption.

Influence through ENS (Enteric Nervous System):

- a. ENS (Enteric Nervous System) is a Substantial group of neurons.
- b. It is capable of Autonomous reflex without influence of central nervous system.
- c. More than 500 million neurons present in the ENS (Enteric Nervous System) is called "second brain"
- d. There are so many similarities between CNS and ENS regarding cellular structure, neuropeptide secretion and specific functions. Recent studies have shown that there is great influence of CNS and ENS (Enteric Nervous System) on each other. Thus, Basti may act over the receptors of the ENS to stimulate the CNS causing secretion of required hormones or other chemicals. Hence the effect of Basti may also be associated with "Touch & Go Theory" causing activation of ENS receptors.

9. Knowledge of following types of Basti:

Madhutailika Basti, Erandmuladi Basti, Yāpana Basti, Pichchha Basti, Kshira Basti, Kshara Basti, Vaitarana Basti, Panchaprasutik Basti, Lekhana Basti, Krumighna Basti, Tikta kshira Basti, Ardhamātrika Basti

1. **Madhutailika basti:**

The basti mainly contains Madhu and Taila in equal proportion. Hence this basti is named as madhutailika basti.

Paryaya of madhutailika basti:

1. Yuktharatha basti: can be used anytime even when travelling.
2. Yapanasasti: can be used any time.
3. Siddhasasti: useful for curing many diseases
4. Doshaharasasti: eliminates vitiated doshas
5. Snigdhasasti: denotes predominant oily nature and the prolonged usage like that of matrastasti.

Importance:

- There are no much restrictions told after administration of this basti like Yana, Maithuna and in terms of Annapana.
- It can be administered in Sarvakala.
- It is an Mrudubasti and hence there is less chance for complications.
- It is very beneficial in raja, sukumara, stree, shishu etc. and can be administered in above said persons without any restrictions.
- It is very much useful in improving bala and Varna.
- It can be administered without previous shodhana.

Ingredients:

- | | |
|--------------------|------------------|
| • Makshika: 200 ml | • Kalka: 25 gms |
| • Lavana: 12 gm | • Kwatha: 400 ml |
| • Sneha: 200 ml | |

Indications:

Krimi, Kushta, Udavarta, Gulma, Arshas, Bradhna (inguinal swelling), Pleeha and Meha (obstinate urinary disorder including Diabetes).

Benefits: Deepana, Brumhana, Balavarnakara, Nirupadrava, Vrushya and Rasayana.

2. Erandamuladi basti:

Erandamooladi niruha basti is mentioned in Charaka samhita and it contains 35 drugs. It is one of the important kaphahara basti. There are 22 ushna veerya and 7 sheeta veerya drugs. 9 drugs are having katu vipaka and 20 drugs are having madhura vipaka and also kapha-vata shamaka are 10 in number. Most of the drugs are having Laghu, Ruksha Gunas and Katu, Tikta and Kashaya rasa and as avapadravya, Gomutra is also mentioned.

Ingredients:

- | | |
|--------------------|-------------------|
| • Makshika: 200 ml | • Sneha: 200 ml |
| • Lavana: 15 gm | • Kwatha: 300 ml |
| • Kalka: 30 gm | • Gomutra: 100 ml |

Indications: Pain and heaviness of jangha, pada, trika, prushta, vibandha (retention of urine, faeces and flatus), adhmana, ashmari, anaha, arshas, grahani, vatakapha diseases and also in peripheral vascular disorders.

Benefits - Lekhana, Dipana.

3. Yapana basti:

These are important sets of basti mentioned in Charaka samhita siddhi sthana. Both Anuvasana and niruha yapanas have been mentioned in Charaka samhita. The basti which sustain, support, and maintain the life and promotes longevity is called as Yapanabasti.

It refers to:

- Sustaining the life
- Nourishment of the tissues
- Alleviation of the disease
- Supporting and maintaining the life
- Reserving the homeostasis in the bod constituents
- Checking of ageing process and enhancing the deprived tissues.

Importance of yavana basti:

- It performs both the functions viz shodhana and Snehana which is done by niruha and snehabasti respectively.
- It is indicated in Swastha, Atura and Vruddha pointing towards its preventive, curative and promotive nature.
- It can be administered in all the seasons at all time and in all the age groups
- No necessity of administration of snehabasti in between and initially
- No necessity of prior Vamana and Virechana.

Ingredients:

- | | |
|--------------------|---------------------|
| • Makshika: 200 ml | • Sneha: 200 ml |
| • Lavana: 15 gm | • Kwatha: 300 ml |
| • Kalka: 30 gm | • Mamsarasa: 100 ml |

Indications:

- | | |
|-----------------|---|
| • Shukrakshaya | • Person indulging in excessive coitus (Ativyavaya) |
| • Mamsakshaya | • Vandyatwa |
| • Balakshaya | • Klaibya |
| • Indriyakshaya | |

Benefits:

Deepana, Brumhana, Balavarnakara, Nirupadrava, Vrshya and Rasayana

4. Piccha basti:

Picchabasti is indicated in jeerna atisara avastha and jeerna grahani by charaka and vagbhata. Picchabasti acts as grahi (bowel binding), and contains dipana and pachana drugs. Piccha basti is explained as one of the treatment in Arsharoga. Picchabasti cures excess bowel movements and duodenal disorders.

Ingredients:

- | | |
|--------------------|------------------|
| • Makshika: 200 ml | • Sneha: 200 ml |
| • Lavana: 15 gm | • Kwatha: 350 ml |
| • Kalka: 30 gm | |

Indications: Pittaja Atisara, jwara, gulma, shotha, jeerna atisara, grahani, gudabramsha and raktsrava.

Special indication: In vatasleshma vibandha (obstruction), in excessive atisara due to kapha or when associated with pain.

Here the patient should be given picchabasti prepared with the paste of pippali, bilva, kushta, shatavari and vacha added with salt.

Benefits: It acts as evacuative and sustaining and overcomes the advanced stage of the above diseases. It stabilizes the functions of dosha, dhatu and mala.

5. Kshira basti:

- There are many bastis in which ksheera is used as Avapa dravya or Kashaya dravya in the form of Ksheerapaka. All these bastis are popularly considered as ksheera bastis. Few examples for Ksheera basti are Pancha prasrutika basti, Ksheera Vaitarana, Manjisthadi Ksheera basti, Yastimadhu Ksheera basti etc.
- Milk is an emulsion or colloid of butterfat globules within a water- based fluid that contains dissolved carbohydrates and protein aggregates with minerals. One of the important factors about the milk is that it contains calcium; it can be absorbed without the help Vit-D,
- under the influence of lactose in the distal small intestine via the paracellular route. This promotes the absorption of calcium and provides simultaneous intake of phosphorous that is essential for bone deposition. Hence Ksheera bastis have a wide and effective applicability in
- Asthivaha sroto Vikaras.
- Ksheera bastis act as Bruhmana shodhana basti. Ksheerabasti can be prepared with varied Ksheerapaka for better effect in varied conditions based on Yukti.

6. Kshara basti:

Ingredients:

- | | |
|----------------------|------------------|
| • Saindhava: 12 gm | • Guda: 100 gm |
| • Shatapushpa: 12 gm | • Amlika: 100 gm |
| • Gomutra: 400 ml | |

Indications:

Shula, vibandha, anaha, mutrakrichra, daruna, krimi, udavarta, vata disease.

7. Vaitarana basti:

According to Garuda purana, Vaitarana is the name of the river, which a person is supposed to cross during death in his astronomical kingdom. This vasti is so powerful in a sense that it can bring back life of a person who is about to cross the vaitarana river.

Ingredients:

- Amalika kalka: 50 gm
- Guda: 25 gm
- Saindhava: 15 gm
- Gomutra: 200 ml
- Taila: 50 ml

Phalasruti:

Shula, anaha, amavata

8. Pancha prasrutika basti:

Basti having the 5 prasruta quantity of basti dravya is called panchaprasrutika basti.

Patola, nimba, mahanimba, rasna, saptaparna – 4 prasruta

Ghrita: 1 prasruta

Kalka: sarshapa

Indications: meha abhishyanda, kustha

9. Lekhana basti:

Ingredients:

- Makshika: 200 ml
- Saindhava: 12 gms
- Triphala kashaya: 400 ml
- Go mutra: 150 ml
- Kshara: 36 gms
- Katu taila: 300 ml
- Ushakadi prativapa: 100 gms

Indication: Lekhana, hyperlipidemia and obesity.

Notes: Ushakadi gana contains a lot of mineral drugs, so it is not used in practice. The other kalka dravyas are commonly used. For drava dravya instead of dhanyamla, kulattha kashaya can also be used. It is better to do Anuvasana basti on the same day to avoid inflammatory colitis.

10. Krimihara / krimighna basti:

Ingredients:

Tila taila: 1 prasrita

Kalka – vidanga & pippali: as per condition

Kashaya: 5 prasrita

Kashaya dravya: Vidanga, haritaki, vibhitaki, amalaki, sigru, madanaphala, musta and akhukarni (danti).

Indication— Krimi nashartha.

11. Tikta ksheera basti:

Ingredients:

Makshika: 100 ml

Lavana: 12 gms

Sneha (pancha tikta ghrita or pancha tikta guggulu ghrita etc.): 100 ml

Kalka (guduchi, yashtimadhu, nimba, patola, manjistha): 40 gms

Kwatha (yashtimadhu ksheerapaka or dashamula ksheerapaka): 300 ml

Indications:

The asthi dhatugata disorders should be treated with Panchakarma, especially basti (enema) prepared with bitter drugs, milk, and ghee.

12. Ardhamatrika basti:

According to Vangasena and Chakradatta Ardhamatrika-basti stands superior among all basti karmas because it has many advantages like –

- It can be administered without any preparatory measures i.e., snehana and swedana and it is not essential to follow the post procedure regime i.e., paschat karma.
- It can be administered to sukumara, aged, women and to those who have fear about basti karma.
- Its action is must faster than other bastis.
- It can be administered in any dosha predominance and in sannipataja conditions.
- It arrests the re-occurrence of the diseases.
- It can be done daily or on alternate days.

Ingredients:

- Makshika: 100 ml
- Lavana: 12 gm
- Sneha: 100 ml

- Kalka: 12 gm
- Kwatha (dashamula + madana): 350 ml

Indications: Yakshma, Shoola, Krimi, Vatarakta and can be used in almost all the diseases.

Benefits: Shukrala, Varnakara, Balakara, Vrishyakara and pumsavanakara.

10. Uttara Basti: its definition, indications and contraindications, Detailed study of traditional Basti Yantra and their Doshas Knowledge of alternative Basti Yantra

Nirukti:

The Basti administered through Uttaramārga and has Shreṣṭha Guṇa is known as Uttara Basti.

Paribhāṣā:

The Basti which is administered after Nirūha Basti and through the Uttara Mārga is called Uttara Basti.

Āmāyika Prayoga:

Shukra Duṣṭi, Ārtava Duṣṭi, Kaṣṭārtava, Atyārtava, Yoniroga, Aparāsaṅga, Mūtrāghāta, Mutraroga, Ashmarī, Sharkarā, Bastiroga, Basti shūla, Vaṅkṣaṇa shūla, Shukrotseka

Samyak Lakṣaṇa & Vyāpat of Uttara Basti are similar to that of Sneha Basti.

Bheda:

1. Puruṣa (Mūtra & Shukra Mārga)
2. Strī
 - a. Mūtra Mārga
 - b. Yoni Mārga

1. Snehana
2. Shodhana

Uttara Basti Yantra:

1. Traditional Uttarabasti Yantra
 - a. Bastinetra / Puṣpanetra

Bastinetra should be made from gold, silver, etc.

For Males:

Its orifice should be the size of Sarṣapa bīja (mustard seed).

Length = 14 aṅgula (Ā. Sushruta)

12 aṅgula (Ā. Charaka)

For Females: Its orifice should be the size of Mudga (green gram).

Length for Females = 10 aṅgula (Ā. Sushruta)

- b. Bastipuṭaka = Urinary bladder of goat, camel or boar.

2. Alternative Uttarabasti Yantra
 - a. Bastinetra / Puṣpanetra

For Males: Rubber catheter

For Females: Rubber catheter / Stainless steel Cannula

- b. Bastipuṭaka = Syringe

10.1 Preparation of patient

- 2-3 Niruha Basti are to be given before the administration of Uttara Basti. It is also in practice to give morning Niruha Basti and in the afternoon Uttara Basti. However, it is not clear whether Niruha should be given as Purvakarma when Kashaya is taken as medicine for Uttara Basti.
- On the day of Uttara Basti, Sthanika abhyanga and Nadi Sveda is to be given to the lower abdomen, thighs and groins and advice to take bath.

- In Snaihika Uttara Basti Yavagu added with ghee and milk should be given before the administration of Basti.

Time of administration:

- Male: morning time
- Female:
- Rutukala is the apt time for the administration of uttarabasti, as during this period the yoni or garbhashaya will be avaranarahita, thus receives the drug easily i.e., does Snehana easily. However, it can be administered other than rutukala in anrutavapi and atyayika conditions like Asirgdhara, Yoni Shula etc.

Position of the patient:

Male:

After voiding the urge of mala and mutra, patient should be seated on a knee-high and soft seat in a straight and comfortable position. His phallus should be made erect.

Female:

Patient should be made to lie down in supine position with well flexed thighs.

10.2 Preparation of trolley for uttara basti

- | | |
|----------------------|--------------------------|
| • Uttarabasti yantra | • Cuscus speculum |
| • Lithotomy table | • Sponge holding forceps |
| • Hole towel | • Xylocaine jelly |
| • Medicine | • Tampon |
| • Kelley's pad | • Gauze pieces |
| • Tray | • Cleaning agents |

10.3 drug preparation and Fixation of dose

Preparation of the medicine:

- Take the medicated oil in required, quantity in a pre-cleaned container.
- Autoclave the oil along with all the required materials.
- This description of Uttara-Basti Netra suggests the intra Vesicular / Urethral administration of Uttara Basti. With this Basti -Netra intra Urethral administration may not be possible.
- The following may be taken as Uttara-Basti Netra for Urethral administration.
- Urinary rubber catheter no. 8 or 11
- 50 cc syringe (glass or dispersible) may be used as Basti Putaka.

Fixation of dose:

Dose should be fixed considering vaya, bala, satva, satmya etc.

Author → dose of sneha

Charaka → ardhapala (24 ml)

Vagbhata → 1 shukti (24 ml)

Sushruta → 1 prakuncha (1 pala) at the age of 25 years

Kashaya: 1 prasruta (96 ml)

10.4 method of administration in male and females.

Male:

After smearing the ghee, the probe should be inserted into urethra. If the probe can be passed without any obstruction, then the Basti should be introduced according to the length of phallus in the same manner as that of Netra for Guda i.e, carefully without shaking.

If it enters too far, it hurts and if insufficiently inserted, the medication will not reach the destination. Slowly medicine should be pressed in.

After pressing, without shaking it and without causing discomfort Netra should be withdrawn.

Paschat karma:

After the medicine has returned, a second and third enema should be given. In the evening considering the Dosha, Ksheera, Yusha or Mamsa Rasa has to be taken.

Female:

Basti netra should be administered gently in the direction of Vertebral column. Medicine should be administered into the Yoni by gently pressing the Putaka.

Like this 2, 3 or 4 enema should be administered in day and night.

Paschat Karma:

After the medicine has returned, a second and third enema should be given. In the evening considering the Dosha, Ksheera, Yusha or Mamsa Rasa must be taken.

Procedure should be repeated after an interval of 3 days.

10.5 observations

Basti pratyagama kala:

The utara basti dravya pratyagamana is 100 matrakala. In the absence of UB dravya pratyagamana one may wait and neglect. If it is upadravakari it must be expelled using teekshna utara basti.

Chikitsa for apratyagamana:

- Kashaya of Shodhana Dravya is used as Niruha Basti in the dose of 1 and 2 Prasruta in Mutra and Yoni Marga respectively.
- Shodhana Dravya Siddha Phalavarti.
- Probe is inserted in Mutra marga and abdomen is pressed forcefully below the umbilicus.
- Varti of size of Mudga, Ela, Sarshapa should be prepared by triturating Aragwadha Patra with Nirgundi Patra swarasa, Gomutra and Saindhava and dried in shade. This varti is smeared
- with Ghee and inserted into Mutra marga with the help of Shalaka.
- Sthulavarti of 4 Angula prepared out of above said drugs is placed in Yoni marga to achieve the returning of sneha.

10.6 complications and their management

If daha is present after the administration of utara basti

- Sharkara + madhu mixed in sheeta kashaya of yashti madhu
- Ksheera vruksha sheeta kashaya + ksheera for basti

In practice, complications found can be categorized as,

Immediate: 1. Shock 2. Pain

Late: 1. Peritonitis 2. Infection

- Shock (Neurological): Neurological shock may be due to the forceful insertion of Rubber Catheter in Urethra and in sphincter of Urinary bladder or a patient in anxious mood. This condition needs immediate resuscitation or else may be life threatening.
- Pain (Spasmodic): Pain may be due to the forceful insertion in Urethra. It is usually self-limiting and if necessary, antispasmodics can be given.
- Peritonitis: If the medicine is forcefully pushed it may spill in to peritoneal cavity leading to inflammation there.
- Infection: The source of infection may be either through the improper sterilization of the instrument or medicament or poor aseptic precautions during the procedure. This condition may require a course of antibiotic therapy and a good nursing care.

NASYA**1. Etymology, definition, Significance of Nasya Karma.****Etymology:**

The word Nasya is derived from 'Nasa' Dhatu.

It conveys the sense of Gati-motion (Nasa Gatau) & Vyapti means pervasion (Nasa Vyaptau).

The literary meaning of the word Nasya is being in the nose or the things beneficial to the nose. Vacaspatyam derives word 'Nastaha' which means beneficial for the nose.

Definition:

Nasya Karma is a therapeutic measure where the medicated oil, Kvatha, Svarasa, Churna etc. are administered through nose to eliminate the vitiated Dosha situated in Sira for the treatment of urdhvajatrugata Vikaras.

Synonyms:

Shirovirechana, sirovireka, murdhavirechana, nastah pracchardana, nastah karma, navana

Significant of nasya:

Nasya therapy cures the diseases specific to the supra-clavicular region, cleanses the dirt or waste in the Indriyas, cleanses the bad odor of mouth, strengthens the mandibular joint, tooth, head, neck, coccyx, arm, and chest. It also prevents the premature appearance of wrinkles, premature graying of the hair, baldness, and Vyanga (hyperpigmentation).

2. Classifications and sub-classifications

No.	Acharya	Sankhya	Classification
1.	Charaka	3	According to mode of action – rechana, tarpana, samana
		5	According to the method of administration – navana, Avapidana, dhmapana, dhuma, pratimarsha
		7	According to various parts of drugs utilized – phala, patra, mula, kanda, pushpa, niryasha, tvak
2.	Sushruta	5	Shirovirechana, pradhanana, avapida, nasya, pratimarsha
3.	Vagbhata	3	Virechana, brimhana, shamana
4.	Kashyapa	2	Brimhana, karshana
5.	Sarangdhara	2	Rechana, snehana
6.	Bhoja	2	Prayogika, snaihika
7.	Videha	2	Sanjna prabodhaka, stambhana

3. Knowledge of general Dravya used for Nasya Karma, Shirovirechana Gana, Shirovirechanopaga dravyas

Shirovirechana gana:

Vidanga, apamarga, trikatu, Daruharidra, surala, sirisha bija, brihati, sigru, madhuka sara, saindhava, rasanjana, eladvaya, pruthvika

Shirovirechanopaga gana:

Jyotishmati, kshavaka, maricha, pippali, vidanga, sigru, sarshapa, apamarga, sveta, mahasveta

4. Indications and contraindications of Nasya

Indications:

- In general Nasya karma is useful in the disorder of organs situated above the clavicle. It is particularly indicated in the following conditions –
- Shiro, Danta, Manya Stambha
- Galagraha, Hanugraha
- Peenasa, Galashundika, Galashaluka
- Shukla roga, Timira
- Vyanga, Upajihwika
- Ardhavabhedaka
- Greeva, Amsa, Asaya, Nasika, Karna, Akshi, Murdha, Kapala, Shiroroga
- Apatantraka, Apatanaka, Galaganda, Danta Shula, Dantaharsha, Dantachala, Akshiraji, Arbuda, Swarabheda, Vakgraha, Gadgada, Krathana, Urdhvajatrugata Vatadi Vikara

Contraindications:

- Ajeerna (indigestion)
- Bhuktabhakta (who has taken meals)
- Pitasneha (who had taken sneha)
- Pita madya (consumed alcohol)
- Pita toya (consumed water)
- Snata sira (taken head bath)
- Snatukama (desires to take bath)
- Kshudarthartha (having hunger)
- Trushna (suffering with thirst)
- Shramarthartha (tired)
- Matta (intoxicated)
- Murchita (fainted)
- Shastra dandahata (injured by weapons and stick)
- Vyavayaklanta (fatigue due to coitus)
- Vyayama klanta (fatigue due to exercise)

- Pana klanta (fatigue due to alcohol)
- Navajvara pidita (fever of recent origin)
- Shokabhitapta (afflicted with grief)
- Virikta (undergone virechana)
- Garbhini (pregnant)
- Nava pratishyaya (acute rhinitis)
- Anrutu (improper season)
- Durdina (cloudy day)

Reasons for contraindications:

Ajeerni and bhuktabhakta → obstructs the urdhwavahasrotas and causes kasa, shwasa, chardi, pratishyaya.

Peetasneha, madya, toyapatukaama → causes excessive discharge from mukha, nasa, and causes timira and Shiroroga.

Shira snata, krute cha snana → causes pratishyaya

Kshudarta → causes vata prakopa

Trushnarta → increases trushna and causes dryness of mouth

Vyavaya, vyayama, pana klanta → affects shira, skandhas, netra and uras.

Navajwara, shokabhitapta → the heat spreading in the vessels in the eyes, will cause timira and jvara.

Shastra, dandahata → increases pain

Virikta → indriya upaghata

Anuvasita → causes shirogurutva, kandu, krimi dosha

Garbhini → causes garbha stambha

Anrutu and durdina → causes diseases due to cold, puti nasa Shiroroga.

5. Time of administration of Nasya

Time schedule in different seasons:

Rutu (season)	Time of nasya
Grishma rutu	Before noon (morning)
Sita rutu	Noon
Varsha rutu	Day should be clear
Sharada + Vasant	In the morning (vagbhata)
Shishira + Hemanta	Noon
Grishma + Vasant	Evening

Time schedule in doshaja vikara:

Disease	Time of nasya
Kaphaja vikara	Morning
Pittaja vikara	Noon
Vataja vikara	Evening

Nasya should be given daily in morning and evening in Vataja Siroroga, Hikka, Apatanaka, Manyastambha and Svarabhramga.)

6. Dose fixation of different types of Nasya

Dose fixation of different types of nasya:

No.	Types of nasya	Dose (bindu in each nostril)		
		Hrishva	Madhyama	Uttama
1.	Snehana nasya	8	16	32
2.	Sodhana nasya	4	6	8
3.	Marsa nasya	6	8	10
4.	Avapida nasya (kalka nasya)	4	6	8
5.	Pratimarsha nasya	2	2	2

Sharangadhara:

Tikshna aushadhi	1 shana (4 marsha)
Hingu	1 yava
Saindhava	1 marsha
Dugdha	8 shana
Jala (aushadha siddha)	3 karsha
Madhura dravya	1 karsha

One bindu is equal to 0.5 ml, one yava is 1/6th of shana (0.5 gm), one masha – 2 gm, one karsha is 12 gm.

7. Diet and regimen before and after Nasya Karma

Diet and regimen before nasya karma:

There are no direct references regarding diet and regimen before Nasya in classics. But as general rule one should avoid cold, Abhishyandhi, Guru, Picchila, Snigdha Ahara, drinking of liquids, drinking of alcohol, and drinking of Sneha. Also, one should avoid head bath, avoid exposure to cold breeze and cold-water bath.)

Immediate measures after nasya administration:

Lie in supine position for about a minute.

Feet, shoulder, palms, and ears should be massaged.

Head, cheek, and neck should be again subjected to sudation.

Avoid swallowing of nasya aushadhi & kaphadi dosha.

Spit out the excessive medicine which has come into the oropharynx.

Dhuma & gandusha: medicated dhuma and gandusha are advocated to expel out the remnant kapha lodged in kantha (gullet) and sringataka.

Parihara:

Stay in windless place and take light meal and luke warm water.

Avoid dust, smoke, sunlight, alcohol, riding, anger, excess fat and liquid diet

Day sleep and cold water for any purpose like pana, snana etc. should be avoided after nasya karma.

8. Administration of Marsha, Pratimarsha, Avapeedaka, Dhoomapana and Dhuma Nasya

1. Marsha nasya:

The procedure of administration of nasya can be divided into 3 steps viz.

1. Purva karma
2. Pradhana karma
3. Paschat karma

1. Purva karma:

- Selection of the patient: Before posting a patient for Nasya Karma one should check whether the patient is fit or unfit for the treatment.
- Examination of the patient: Patient should be examined for Deshadi factors.
- Sambhara Sangraha:
Medication for nasya: Q.S.
Oil for abhyanga: Q.S.
Oil and churna for talam: Q.S.
Cotton pad, gauze, lotus petals to protect eyes during swedana
For swedana: boiling water, towels or nadi sweda yantra
Gokarna: 2 (for instilling medicine)
Warm water for kavala: Q.S.
Dhumavarti (prayogika, snaihika, vairechanika)
- Preparation of the patient:
After evacuating the natural urges like urine and faeces, the patient is advised to wash the face and mouth with luke warm water. He should be given Abhyanga and Sweda over Uttamanga.
He should be made to lie in a room devoid of breeze and fomentation should be given to parts above his shoulders.
- Position of the patient:
The Patient should be made to lie straight in supine position extending his arms and legs, legs should be slightly raised and the head slightly extended up to 45 degree.

2. Pradhana karma:

- After fulfilling all the pre requirements, eyes of the patient are covered with Chaturguna Vastra (four folded cloth).
- The medicament to be administered is placed in a vessel made of Swarna (gold), Rajata (silver), Tamra (copper), Mrut Patra (small mud vessel) or Sukti (conch shell) and then made luke warm by placing it in a vessel containing hot water.
- Later, tip of patients nose is drawn upward by the Vama Pradeshni (left index finger), and with the Dakshina Hasta (right hand), the lukewarm medicament is instilled into both nostrils using Suktika or Pichu.
- The medicine is administered to both nostrils in an Avichhinadhara (a continuous stream), one after the other, keeping one nostril closed while the other is instilled with medicine.
- The patient should remain relaxed during and after the time of administration of Nasya and must avoid speech, anger, sneezing, laughing and excessive shaking of the head.

3. Paschat karma:

- The following regimen should be followed after the administration of Nasya.
- The Patient should lie in supine position for hundred Matrakalas.
- After administration of Nasya, the regions of ears, forehead, scalp, and cheek, nape of neck, shoulders, palms and sole are massaged,
- The Patient is asked to inhale the medicine with moderate force and to spit it through his mouth turning the head to either side alternatively without rising from the cot.
- Frequent fomentation is given till all the medicament is brought out and care is taken that no portion of the medicament is left behind.
- Depending on the type of Shuddhi, Dhoomapana can be advised.
- Kavala with hot water is done to get the mouth and throat cleaned.

2. Pratimarsha nasya:

Pratimarsa Nasya could be given daily and even in all the seasons in morning and evening.

Method:

It is given by dipping the finger in the prescribed Sneha and then instilled into the nostrils. The patient should be advised not to sniff the Sneha.

Dose:

Two Bindu morning and evening. The Sneha should at least reach from nose to gullet, but it should not be too much in quantity producing secretion in throat.

Indications:

Pratimarsa could be given in any age, any season, even in unsuitable time & season i.e., in Varsha and Durdina.

- Bala (child)
- Vriddha (elder)
- Bhiru (feared)
- Sukumara (tender)
- Durbala (Weak patients)
- Kshata (injured)
- Trishna (thirstiness)
- Mukhasosha (dryness of mouth)
- Valita (wrinkles)
- Palita (greyness of hair)

Contraindications:

- Dushya Pratishyaya
- Madhyapi
- Bahudosha
- Krimija Siroroga
- Badharya (deafness)
- Utklishta Dosha

It is contraindicated in above said conditions because the Sneha Matra is incapable to eliminate Dosha or destroy the Krimi; causes further aggravation of aggravated Dosha.

Pratimarsha kala:

1. End of night
2. End of day
3. After food
4. After vomiting
5. After day sleep
6. After walking long distance
7. Fatigue
8. After copulation
9. After application of oil to head
10. Mouth gargle
11. After micturition
12. Application of collyrium
13. After defecation
14. After brushing teeth
15. After laughing

Difference between marsha and pratimarsha:

Marsha nasya	Pratimarsha nasya
Age: 7 – 80 years	Age: birth to death
Effect: aashukari (immediate)	Effect: chirakari (delayed)
Benefits: more	Benefits: less
Dose: 6, 8, 10 bindu	Dose: 2 bindu
Should follow the regimen strictly	Not essential to follow
More chances of complication	No complication

3. Avapeeda nasya:

Instillation of extracted juice of leaves or paste (Kalka) of required medicine is Avapeeda Nasya.

For this Kalka of different Shirovirechana drugs can be used like Pippali, Maricha etc.

Method:

- Material required:
- Drugs in wet form like patra, kanda, kashaya, other drava dravyas.
- Khalva Yantra
- Clean white cloth
- Cotton / clean cloth

Preparation of medicine:

Clean drug is taken in a Khalva and triturated well to prepare a Kalka (paste).

Prepared Kalka is placed in a clean white cloth and squeezed to get juice.

If Kwatha is used then cotton/cloth is dipped in it and then it is squeezed.

Dose:

Avara: 4 bindu

Madhyama: 6 bindu

Uttama: 8 bindu

Types of dravya used	Indications
Shirovirechana dravya	Abhishyanda (increased kapha and medas), sarpadamsha, visanja (unconsciousness)
Sharkara, Ikshurasa, ksheera, ghrita, mamsarasa	Ksheena, raktapitta
Kalka	Krushta, durbala, bheeru, Sukumara, yoshita

Types of avapeeda nasya:

1. Stambhana Nasya: for this type Ikshu rasa, Ksheera etc. are used.
2. Shodhana Nasya: In this Shirovirechana dravyas like saindhava, pippali etc. are used.

4. Pradhamana or dhumapana:

Dhumapana or pradhmana is type of Nasya mainly used for the purpose of Shodhana.

The powder should be blown by mouth into nostril through a tube of 6 angula length.

Instruments and method:**Materials Required**

Six inches long pipe (or straw)

Fine powders of Shirovirechana dravyas, preferably obtained from micro-pulveriser or powder filtered with cotton cloth.

1st Method:

2-3 pinch of fine powder is filled at the one end of the straw.

Placing that end at the opening of nostril air is blown from the other end of the straw.

Dose: 3 Muchuti matra (3pinch)

2nd Method - According to Videha

One shukthi (24gm) of fine powder is kept in a pottali of thin cloth and then patient is asked to inhale deeply, so that the subtle particles of medicine enter into nostrils.

Benefits - It expels out the Doshas in more quantity.

Indications:

Cheto Vikara (mental disorder)

Krimi (worm infestation)

Visha (poisoning)

Utkata Dosha (excessively vitiated Doshas)

Visanjna (loss of consciousness)

5. Dhuma nasya:

Inhalation of medicated smoke/fumes through the Nasal route and exhalation of the same through the mouth is called Dhuma Nasya.

Types of dhuma nasya:

It is of 3 types:

1. Prayogika
2. Snaihika
3. Vairechanika

1. Prayogika dhuma:

That which is used daily is called prayogika.

Kala:

Snatva: Soon after bath

Bhuktva: After meals

Samullikya: After vomiting

Kshutva: After sneezing

Dantanigrushya: Brushing teeth

Navana: After putting nasal drop

Anjana: After applying collyrium

Nidhrante: After the end of sleep

2. Snaihika dhuma:

Dhuma which causes Snehana is Snehika Dhuma. It is prepared with drugs of Madhura Gana added with a suitable quantity of Vasa, Ghrita and Madhuchista.

3. Vairechanika dhuma:

This is used for the elimination of dosha.

Drugs like Apamarga, Jyotishmati, Haratala, Manashila, Agaruru etc. are used in Vairechanika Dhuma Nasya.

Type of dhuma	Length of nalika	Times of inhalation in a day
Prayogika	36 angula	2 times
Snaihika	32 angula	1 time
Vairechanika	24 angula	3 - 4 times

Method of dhuma nasya:

The Person should sit comfortably keeping his body and eyes straight and his mind steady.

Then, patient should inhale through one nostril keeping the other one closed.

It is repeated three times

Smoke inhaled through nostril should be exhaled from the mouth and that which is inhaled through the mouth should also be exhaled from the mouth.

This is to be followed because the smoke moving in upward direction may harm the eyes.

Age for Dhuma: 12-70 years

Samyaka dhuma lakshana:

Lightness in Ura, Kanta and Shira

Tanuta of Kapha

Asamyaka lakshana:

Avishuddha Swara

Coating of Kapha in Kanta

Stimuta in Mastaka

Atiyoga lakshana:

Dryness in Talu, Murdha and Kanta

Increased thirst

Excessive secretion

Murcha

Affects Indriyas

6. Dhumapana:

Dhūmapāna is the therapeutic procedure of inhaling medicated fumes produced by medicinal drugs while subjecting them to heat.

It helps in prevention and elimination of diseases of urdhva jatru Pradesha which are due to Kapha and Vāta Doṣa.

Dhūmapāna through the nasal route is called Dhūma Nasya.

Bheda:

1. According to Ā. Charaka: - 3
 - a. Prāyogika (Vāta-Kapha shamana)
 - b. Vairechanika (Kapha haraṇa)
 - c. Snaihika (Vāta shamana)

2. According to Ā. Sushruta: - 5
 - a. Prāyogika (Vāta-Kapha shamana)
 - b. Vairechanika (Kapha haraṇa)
 - c. Snaihika (Vāta shamana)
 - d. Kāsaghna (Kāsa shamana)
 - e. Vāmanīya (Vamana karma)
3. According to Ā. Vāgbhaṭa: - 3
 - a. Snigdha / Mr̥du (Vāta shamana)
 - b. Madhya (Vāta-Kapha shamana)
 - c. Tīkṣṇa (Kapha haraṇa)
4. According to Ā. Sharangadhara: - 5
 - a. Shamana (Vāta-Kapha shamana)
 - b. Br̥nhana (Vāta shamana)
 - c. Rechana (Kapha haraṇa)
 - d. Kāsahara (Kāsa shamana)
 - e. Vāmana (Vamana karma)

Dhūmapāna Dravya:

1. Prāyogika: Elā, Māmsī, Tvak, Patra, Nāgapuṣpa, Priyaṅgu, Hareṇuka, Madhuka, Guggulu, Sarjarasa, Guggulu, Shilājatu, Ushīra, Devadāru, Keshara, Lodhra, Nyagrodha, Utpala, Plakṣa, Udumbara, Ashvattha, Tagara, Kuṣṭha, etc.
2. Vairechanika: Tīkṣṇa Dravya; Shuṇṭhī, Maricha, Pippalī, Viḍaṅga, etc.
3. Snaihika: Tila, Shigru, Bibhītakī, Madhucchiṣṭa, Sarjarasa, Guggulu, Madhuka, Musta, Elavāluka, Madana, Ushīra, etc.
4. Kāsaghna: Br̥hatī, Kaṇṭakārī, Shuṇṭhī, Maricha, Pippalī, Hiṅgu, Guḍūchī, etc.
5. Vāmanīya: Madanaphala, Jīmūta, Ikṣvāku, Vatsaka, Dhāmārgava, etc.

Dhūmapāna Kāla:

- a. According to Charaka Saṁhitā:
 1. Snātvā (after bathing)
 2. Bhuktvā (after eating)
 3. Samullikhya (after tongue scrapping)
 4. Kṣutvā (after sneezing)
 5. Dantānnighṛṣya (after cleaning the teeth)
 6. Nāvanānte (after Nasya karma)
 7. Añjanānte (after collyrium)
 8. Nidrānte (after sleeping)

b. According to Aṣṭāṅga Hr̥daya:

1. Mṛdu Dhūmapāna is administered after Kṣavathu, Jṛmbha, Viṭ-Mūtra pravṛtti, Strī sevā, Shastra (surgery), Hāsa, Dantadhāvana.
2. Madhyama Dhūmapāna is administered after dinner, Nāvana and same conditions as mentioned under Mṛdu Dhūmapāna.
3. Tīkṣṇa Dhūmapāna is administered after Nidrā, Nasya, Añjana, Snāna and Vamana karma.

Dhūmanetra:

Dhūmanetra is the Nāḍī Yantra which is used for Dhūmapāna Vidhi. It is a straight, tubular instrument.

The proximal end should have the width of a little finger with an opening of the size of a green pea (Kalāya).

The distal end should have the width of a thumb with an opening of the size of a horse gram (Kulattha).

Length:

1. According to Charaka Saṁhitā:

- Prāyogika = 36 aṅgula
- Vairechanika = 24 aṅgula
- Snaihika = 32 aṅgula

2. According to Sushruta Saṁhitā:

- Prāyogika = 48 aṅgula
- Vairechanika = 24 aṅgula
- Snaihika = 32 aṅgula
- Kāsaghna = 16 aṅgula
- Vāmanīya = 16 aṅgula

Yogya:

Kāsa, Shvāsa, Pīnasa, Visvaratva (hoarseness of voice), Pūtigandha (halitosis), Kesha Doṣa, Kehsapātana, Karṇa-Āsya-Akṣi Srāva, Kaṇḍū, Arti, Jāḍya, Tandrā, Hidhmā/Hikkā, Shirogurava, Shiroshūla, Ardhāvabhedaka, Karṇashoola, Netrashūla, Galagraha, Putīnasya, Manyāgraha, Kṛmi, Atinidrā, Danta Daurbalya, Khālitya, Palita, Kṣavathu

Ayogya:

- Pitta duṣṭi, Rakta duṣṭi
- Udara, Meha, Timira, Ūrdhvānila, Ādhmāna, Rohiṇī, Pāṇḍuroga
- Shirasya abhigate (head injury)
- Virikta (those who have undergone purgation)
- Datta-Bastiṣu (those who were given Basti)
- Jāgarite Nishi (those who kept awake at night)
- After consuming Matsya, Madya, Dadhi, Kṣīra, Kṣaudra, Sneha, Viṣa

Dhūmapāna Vidhi:

The patient should be seated comfortably and sit upright while focusing on the procedure only.

According to Ā. Vāgbhaṭa, medicated fumes should be inhaled through both nostrils alternately, while keeping the other one closed and the mouth open.

However, if the Doṣa located in the nose and head are not in Utkleśha Avastha, for Utkleśhanārtha, fumes are first inhaled through the mouth. Then they are inhaled through the nose.

If Doṣas are residing in the throat, for Utkleśhanārtha, fumes are first inhaled through the nose, then through the mouth.

According to Ā. Charaka, medicated fumes should be inhaled through the nose if Doṣas are located in Shirāḥ, Ghrāna or Akṣi; and through the mouth if Doṣas are located in Kaṇṭha or Mukha.

According to Ā. Sushruta:

- i) Prāyogika Dhūmapāna - through the nose
- ii) Vairechanika Dhūmapāna - through the nose
- iii) Snaihika Dhūmapāna - through the mouth & nose
- v) Kāsaghna Dhūmapāna - through the mouth
- vi) Vāmanīya Dhūmapāna - through the mouth

The fumes should always be exhaled through the mouth. Exhalation through the nose (Pratiloma Gati) will lead to Netraroga / Dṛk-vighāta.

(Conclusive, Dhūma Nasya is only of 3 types: Prāyogika, Vairechanika, Snaihika)

Dhūmapāna Mātrā:

1 time = 3 inhalations & exhalations

1. Prāyogika = 2 times
2. Vairechanika = 3-4 times in Kapha vṛddhi / Until Kapha Nirharāṇa
3. Snaihika = 1 time in Vāta vṛddhi

Samyak Dhūmapāna Lakṣaṇa:

- Hṛt-Kaṇṭha-Indriya Saṁshuddhi
- Shirasaḥ-Ura-Kaṇṭha Laghutva
- Doṣa shamana, Kapha Tanuta (liquification of Kapha)

Ayoga Dhūmapāna Lakṣaṇa:

- Avishuddha Svara
- Sa Kapha Kaṇṭha
- Stimita Mastaka (rigidity of head)

Atiyoga Dhūmapāna Lakṣaṇa:

- Tālu-Mūrdha-Kaṇṭha Shuṣkatā
- Tr̥ṣṇā
- Muhyate (being perplexed, confused)
- Raktasrāva
- Adhika Srāva (excessive lacrimation)
- Shirobhrama
- Mūrcchā
- Indriya Upatapyante (disturbance of sense organs)

Upadrava:

Raktapitta, Āndhya, Bādhirya, Tr̥ṣṇā, Mūrcchā, Mada, Moha, Shirobhrama

Chikitsā:

Shītopchāra, Sarpi pāna, Snaihika Nāvana, Añjana, Tarpaṇa

7. Navana nasya:

It's a type of nasya karma which can be practiced regularly.

It is of 2 types 1. Snehana 2. Shodhana

1. Snehana nasya:

It is a type of Navana Nasya in which medicated oil or ghee is used. It is useful in the following:

Snehanartha in Shunyashiras (emptiness of head)

Bala jananaartha for Greeva, Skandha, Uras

Prasada jananaartha for Drushti

Dose:

Types of dose	Dose in each nostril
Avara matra	8 bindu
Madhyama matra	Shukti pramana (16 bindu)
Uttama matra	Pani shukti pramana (32 bindu)

According to bhoja: in swastha

For prayogika nasya: 8 bindu in each nostril

For snehana: 16 bindu (shukti pramana) in each nostril

Paschat karma in sneha nasya:

After Sneha Nasya one should not swallow the Sneha coming out of the mouth after overflowing from Shrungataka. It should be spitted out to avoid the risk of excitation of Kapha.

Videha mentions that Kasa and Chardi are the complications of swallowing Sneha Nasya. Again, he indicates swallowing of sneha in some conditions like Ksheena Mamsa Bala and who are suffering from Urdhwajatrugata Vata Vikaras.

Indications:

Vataja Shiroroga, falling of teeth, hair and moustache, Karna shula, Karna kshveda, Timira, Swaropaghata, Nasa roga, Asya shosha, Avabahuka, premature wrinkles, premature falling of hair, Daruna prabhoda, Vatapitta roga and Mukha roga are the conditions in which Navana Nasya is indicated.

Samyaka yoga lakshana:

- Lightness of head
- Good sleep
- Easy. awakening
- Reduction in illness
- Clarity of sense organs
- Feeling of happiness
- Easy breathing
- Good sleep

Atiyoga lakshana:

- Excessive discharge
- Heaviness of head
- Disorders of sense organs
- Itching
- Tastelessness
- Running nose

Ayoga lakshana:

- Vitiation of vata
- Dryness of the sense organs
- No remission of illness

2. Shodhana nasya:

In Shodhana Nasya medicated oil prepared from Shirovirechana dravyas is used.

Dose:

Avara matra: 4 bindu

Madhyama matra: 6 bindu

Uttama matra: 8 bindu

Indications:

- Shirogaurava
- Shira shula
- Peenasa
- Ardhavabheda
- Krimi
- Apasmara
- Ghrananasha
- Moha
- Stambha
- Supti
- Gurutva
- Sleshmaja
- Shiroroga

Shirovirechana is indicated in conditions such as Accumulation of Kapha in palate, throat and head, Aruchi, Shirogaurava, Shirashula, Peenasa, Ardhavabhedha, Krimi, Pratishyaya, Apasmara, Loss of smell sensation and Jatru Urdhwagata Kaphaja Vikara.

Samyaka yoga:

The symptoms of Samyak (proper) Nasya according to Charaka are Urah-Shiro-Laghava (Feeling of lightness in chest and head), Indriyavishuddhi (sensorial proficiency) and Srotovishuddhi (cleansing of channels).

In addition, Sushruta has described Sukhaswapna-Prabodhana (good sleep and awakening), Chitta-Indriya-Prasannata (mental and sensorial happiness) and Vikaropashama.

Ayoga lakshana:

Features of Ayoga (inadequacy) Nasya are Galopalepa (throat coated with mucus), Shirogurava (heaviness in head), and Nishthivana (excessive spitting) are seen. According to Sushruta, Vata Vaigunya (vitiation of vata), Indriya Rukshata (dryness in Indriyas), Roga Ashanti (no relief in symptoms of the disease), Kandu (itching), Upadeha (feeling of wetness), Guruta (heaviness) and Srotasam Kaphasrava (excess mucus secretion in channels) are the symptoms of Hina Shuddhi.

Treatment: Kaphaghna chikitsa

Atiyoga lakshana:

Kaphasrava (Salivation), Shiroguruta (heaviness in head) and Indriya Vibhrama (confusion), Mastulungagama, Vataviddhi and Shiroshunyata (emptiness of head) are the symptoms of Atiyoga of Nasya and also the symptoms of Atiyoga of Shirovirechana.

Treatment - Vataghna Chikitsa.

9. Symptoms of Samyak-yoga of Nasya**Samyaka yoga lakshana:**

- | | |
|------------------------|---------------------------|
| • Lightness of head | • Clarity of sense organs |
| • Good sleep | • Feeling of happiness |
| • Easy. awakening | • Easy breathing |
| • Reduction in illness | • Good sleep |

Atiyoga lakshana:

- | | |
|-----------------------------|-----------------|
| • Excessive discharge | • Itching |
| • Heaviness of head | • Tastelessness |
| • Disorders of sense organs | • Running nose |

Ayoga lakshana:

- | | |
|-------------------------------|---------------------------|
| • Vitiation of vata | • No remission of illness |
| • Dryness of the sense organs | |

10. Complication of Nasya and their management

Complication of nasya:

Inadequate or excessive application of Nasya, or its extreme heat or coldness, a sudden or delayed application, drooping posture of the head or its movements during the application, instillation after meal, or its application in any forbidden case may produce complications such as thirst, eructations etc., due to the action of the aggravated or decreased Doshas of the body.

The complications which occur due to abuse of Nasya or Sirovirecana categorized into two classes viz., one due to Utklesa (excitation) of the Doshas and another due to Kshaya (decrease) of the Doshas.

Management:

Doshotklesha janya: shamana, shodhana

Kshaya janya: brumhana

11. Parihārya Vishaya

Mainly Ushna ahara and vihara are advised during Nasya karma. Ushna Ahara and Vihara will help to check both Vata and Kapha. Since, Nasya is the preferred modality of treatment for Urdhawajatrugata Vikaras, and Urdhavajatru is the seat of Kapha, both Kapha and Vata should be equally tackled. Ushna upachara will help to balance the same. Shira snana (head bath) is to be avoided.

12. Nasya Karmukata (mode of action)

- Nasya Karma is one of the Panchakarma procedures that not only alleviates the vitiated Doshas, but also causes complete eradication of the vitiated Dosha and the disease.
- According to Charaka Samhita, drug administered through the nose enters in the Uttamanga and eliminates the morbid Doshas residing there.
- In this context, Acharya Vagbhata has clarified that drugs administered through nose the doorway to Shira, reaches the Sringataka Marma of Head (Shira), which is a Sira Marma and formed by the Siras of Nasa, Netra, Kantha and Shrotra. Thus, we can say that drug administered through Nasya may enter the Siras above and purifies them.
- Indu, the commentator of Astanga Sangraha, mentioned the exact Sthana of the Sringataka Marma which can be considered as the middle Cephalic Fossa.
- The middle cephalic fossa is the region which, in connection with Ethmoid and Sphenoidal sinuses, consists of Meningeal vessels mainly Internal Carotid Artery, Cranial Nerves (3rd, 4th, 5th, and 6th) and the Optic Nerve.
- The pituitary gland can be approached through the Sphenoidal sinus by trans antral and trans nasal routes. The sphenoidal sinus is inferiorly in connection with the Naso-Pharynx and posteriorly with the brain stem. The above description shows that Shringataka Marma can be correlated with the Middle Cephalic Fossa.

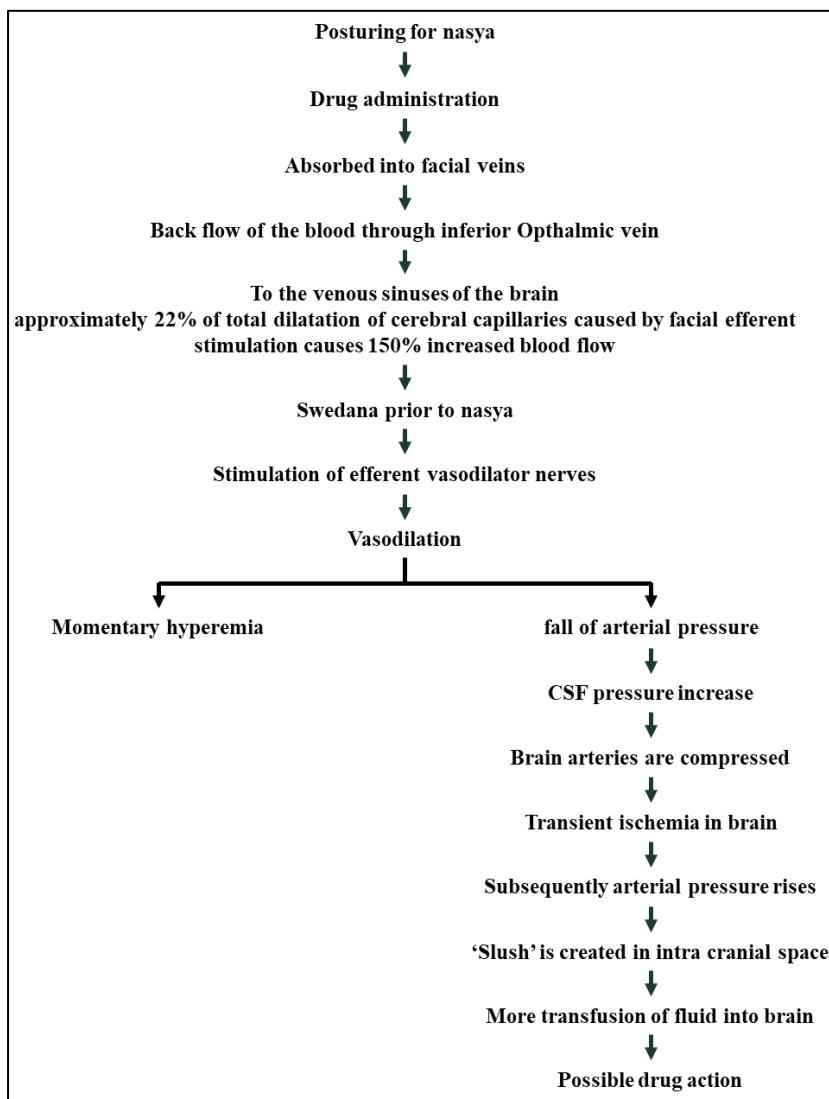
Advantages of nasal delivery of drugs:

- Drug degradation is absent
- Hepatic first-pass mechanism is absent
- Rapid drug absorption
- Quick onset of action.
- Better nasal bioavailability for smaller drug molecules
- Drugs which cannot be absorbed orally may be delivered to the systemic circulation through nasal drug delivery system.
- Convenient route when compared with parenteral route for long term therapy.

To understand the mode of action of nasya, following are the probable pathways:

1. At the level of blood circulation
2. At the level of lymphatic channels including CSF
3. At the level of neuro endocrinal & neuro vascular stimulation
4. At the level of neuropsychological levels

1. Level of blood circulation:



2. Level of lymphatic channels including CSF:

Lipid soluble substances-transported across the epithelial membrane → Gain access into lymphoid tissue → Enter brain through the extended Arachnoid sheath from brain to sub mucosal area of nose → Probable drug action

3. Level of neuro endocrinal & neuro vascular stimulation:

Stimulation of peripheral olfactory nerve → Peripheral olfactory nerve act as Chemoreceptors → Particles get identified by these Chemoreceptors. → Stimuli carried to olfactory bulbs → Stimulation on higher centres- hypothalamus & limbic system → Higher centers are connected to Anterior & Posterior pituitary → Effect on endocrine system & nerve system

4. Neuro-psychological levels:

The adjacent nerves called terminal nerves which runs along the olfactory are connected with the limbic system of the brain including the hypothalamus.

This limbic system is also connected with the behavioural aspect of human beings, besides control over endocrine secretions.

Thus, certain drugs administered through the nose may have an impact on immediate psychological functions by acting on the limbic system through olfactory nerves.

Effect on drug absorption and transportation:

Keeping the head in a lowered position and retention of medicine in nasopharynx, helps in providing sufficient time for local drug absorption. Any liquid soluble substance has greater chance for passive absorption directly through the cell of lining membrane. On the other hand, abhyanga and svedana also enhance the drug absorption.

The later course of drug transfusion can occur in two ways:

1. By systemic circulation
2. Direct pooling into the intracranial region.

This direct transportation can be assumed again in two paths, viz.

- a. By vascular path,
- b. By lymphatic path.

a. Vascular path:

Vascular path transportation is possible through the pooling of nasal venous blood to the facial vein, which naturally occurs. Just opposite to the entrance the inferior ophthalmic veins have no valves in between. So that, blood may drain on either side, i.e. the blood from facial vein can enter cavernous venous sinus of the brain in a reverse direction. Thus, such pooling of blood from nasal veins to venous sinuses of the brain is more likely in the head lowered position due to gravity. Resulting in absorption of drug materials into meninges and related parts of the intracranial organs.

b. Lymphatic path:

Drug transportation by the lymphatic path, can reach directly into the CSF as it is known that the Arachnoid matter sleeve is extended to the Submucosal area of the nose along with olfactory nerve.

RAKTAMOKSHANA**1. Definition, importance and Types of Raktamokshana****Definition:**

रक्तस्य मोक्षणं रक्त मोक्षणम् ।

Letting out impure blood from the body is known as Raktamokshana.

Raktamokshana is a procedure of removing the vitiated rakta in diseases caused mainly by Rakta and Pitta. It is carried out either by using sharp surgical instruments or by parasurgical measures.

Importance:

1. Rakta takes important role in spreading the disease from one part to the other part of the body by carrying the vitiated Dosha. Because of the vitiation of Rakta, the sodhana of Rakta is essential. Raktamokshana by Siravyadha is considered to be the supreme therapy as it drains out the vitiated Rakta and cures the diseases.
2. Those who undergo Raktamokshana regularly at proper time will not be afflicted with Tvak Dosha, Granthi, Sopha and other Raktaja Roga.
3. In chikitsa sushruta quotes the benefits of raktamokshana that, it not only purifies the channels but also lets the other parts become free from disease and the action is faster than other remedies.
4. The Siravyadha is considered as the half treatment or even some scholars as complete treatment (depending upon the condition) in Salya Tantra, as the Basti is considered in Kayachikitsa.
5. The diseases which are not cured by Sneha, Lepa etc. are cured instantaneously by Siravyadha.
6. In Visarpa, Raktamokshana is the best treatment. It alone produces the same effect as all other therapies combined.

2. General Principles and rules of Raktamokshana

1. Raktamokshana should be done according to the strength of Rogi, Roga and Āshaya (site of structure from where blood is released). The blood flows easily and properly out from vessels of located in the limbs; less so from the head.
2. If Raktasrāva does not occur properly, vitiated blood should be removed again either on the same day in the evening or on the next day. If the blood is excessively vitiated, Raktamokshana should be done again after a fortnight.
3. Raktamokshana Kāla:
 - Raktamokshana should be performed in moderate climatic conditions; neither too hot nor too cold.
 - It should be done during the day when the sun is visible.
 - During Sharada Rtu, Rakta tends to get vitiated so Raktamokshana is indicated.
 - During Varsha Rtu, it should be done when the sky is clear.

- During Grīṣma R̥tu, it should be done when the atmospheric temperature is comparatively low (morning or evening).
- During Shīta Kāla (Hemanta & Shishira R̥tu), it should be done during mid-day.
- 4. Raktamokṣaṇa should not be done on persons who are below the age of 16 or above the age of 70 years.
- 5. Rakta is Jīvasthāna. So, one should always take care not to cause Atiyoga of Raktamokṣaṇa. Additionally, due to excessive Raktamokṣaṇa, Vāta gets aggravated. Therefore, extra special care should be given if the patient is afflicted with Vātavyādhi.

3. Classification of Raktamokshana

1. Shastra kṛta visravaṇa
 - a. Sirāvyadha
 - b. Pracchāna
2. Anushastra kṛta visravaṇa
 - a. Jalaukāvacharaṇa
 - c. Alābū-avacharaṇa
 - b. Shṛṅgāvacharaṇa
 - d. Ghaṭīyantrāvacharaṇa

4. General Indication and Contra indication of Raktamokshana

General Indications:

Kuṣṭha, visarpa, Piḍaka, Raktapitta, Asṛgdara, Guḍapāka, Meḍhrapāka, Mukhapāka, Plīhā, Gulma, Vidradhi, Dadru, Charmadala, Shvitra, Pāma, Vātarakta, Vaivarṇya, Tiktodgāra, Amlodgāra, Kaṭūdgāra, Klama, Krodhādhikyātā, Buddhisammoha, Lavaṇāsyatā, Sveda, Sharīra daurgandhya, Raktatvak, Raktanetratā, Raktamūtratā, Bhrama, Arsha, Apachī, Dantapuppuṭa, Dantaveṣṭa, Granthi, Galashūla, Shlīpada, Ūrustambha

General Contraindications:

Bāla, Vṛddha, Garbhini, Sūtikā, Abhukta, Daurbalya, Asvinna, Atisvinna, Sarvāṅga Shopha, Kṣīṇa, Pāṇḍuroga, Udara, Mūrcchā, Chardi, Shoṣa, Shvāsa

5. Jalaukavacharana: Knowledge of different types of Jalauka (Leech), Indications and contraindications of Jalaukavacharana, various types of Jalauka. Method of Application, Samyak Lakshana, Complication of Jalaukavacharana and their management with Ayurveda and Modern medicines.

Jalaukavacharana is a method of Raktamokshana. It can be applied even to Parama Sukumaras as it is a safe and less complicated process. “The physician who has detailed knowledge about Jalaukas, their habitat, their method of collection, varieties, storage and method of application is successful in treating any disease amenable to them.”

Synonyms of jalauka:

Rate, Jalauka, Jalaragi, Jalayuki, Jalika, Jalsika, Jalajantuka, Veni, Jalaloka, Jalookasa, Rakta Payani, Rakta Sandamshika, Jalajivani, Raktapata, Jala Sarpini, Jala Soochi, Jalatanou, Jalaluka.

Definition of jalauka:

For which Jala is Ayu is called Jalayuka.

That which resides in Jala is Jalauka.

Leech:

Kingdom: Animalia

Phylum: Annelida

Class: Clitellates

Sub class: Hirudinea

External features:

Shape & size:

- Leeches are small, soft, invertebrate vermiform worm like structure
- Elongated, dorso-ventrally flattened.
- Almost cylindrical when contracted and ribbon shaped when extended
- 7 to 15 cm is length, having 6 longitudinal reddish or brown strips.
- Broadest near the posterior end & narrowest near the anterior end.
- Dorsal surface is somewhat convex and ventral surface is plane.
- Transverse outline is almost oval.
- Dorsal surface brightly olive green and ventral surface is orange yellow or black & yellow.
- Black stripe marks on median longitudinal at dorsal side of the body.

Suckers:

Hollow muscular organs on each end of the body are known as suckers.

1. Anterior Sucker— (Oral sucker) (Cephalic sucker): It is comprised of a cup like hollow, pre oral chamber and the mouth. It contains three jaws with sharply serrated edges, which are used like circular saws, and on them are about 100 horny teeth used to incise the host. Sucks blood with this end. After sucking inverted Y shaped mark at the site is seen.
2. Posterior Sucker— (Anal sucker): the posterior sucker is mainly used for leverage and is also useful for the purpose of locomotion.

Classification of jalauka:

A. Based on Poison

1. Saviṣa Jalauka

- i. Kṛṣṇā: anjana churna varna i.e., black in colour like kajjali, and has a broad neck.
- ii. Karburā: Ayata like Varmy fish (Sarpakara), over the udara a slight elevation or depression is seen.
- iii. Algardā: Hairy, big in size (Mahaparshva), has a black mouth.
- iv. Indrāyudhā: The body is marked with various coloured ridges like an Indrayudha (Rainbow).
- v. Sāmudrikā: Blackish yellow with dotted skin and resembles colour of many flowers, Dhavala bindhu Chitra (flower like white spots over body).
- vi. Gochandanā: Narrow mouth (Anumukhi), Marked by bifurcating lines at the lower end, like the scrotal sac of a bull.

Originate from decomposed urine and fecal matter of toads and poisonous fish, in ponds of stagnant and turbid water.

General characters: Thick and elongated middle portion, both ends are thin, Slow moving, Fatigues quickly, Sucks slowly and little quantity of blood.

2. Nirviṣa Jalauka

- i. Kapilā: Colour like Manahshila (real gar) at the sides, the dorsal surface is slimy (Snigdha) and coloured like a Mudga pulse (Greenish shade).
- ii. Piṅgalā: Colour - Reddish or reddish brown, Shape - Round, Locomotion - fast moving
- iii. Shaṅkhmukhī: Colour - Blackish red like that of the liver, Sucks blood fast, has sharp and long suckers.
- iv. Mūṣikā: Colour & Shape - like that of Rat, has a foul-smelling body.
- v. Puṇḍarikamukhī: Colour - like Mudga (greenish black), its mouth resembles the fully bloomed lotus.
- vi. Sāvarikā: Savarika is one which is marked with impressions like glossy lotus leaves, measures 18 Angulas in length. Its medicinal use is advised in lower animals.

Originate from decomposed vegetable matter, decayed stems of several aquatic plants such as Padma, Utpala, Nalina, Kumuda, Pundarika, etc. found in clear water.

General characters: Strong and large bodied, “Greedy” (start sucking readily and a lot of blood), Round, Blue colored lining on the dorsal side of the body.

B. Based on Gender

1. Puruṣa Jalauka

Hard skin, big head along with semi-lunar look with a large front portion. Indicated in highly vitiated Doṣa and Jīrṇa Roga.

2. Strī Jalauka

Delicate, thin skin, small sized head, the lower body is large.

Indicated in Alpa Doṣa and Āshu Roga.

Indication:

Personalities: Nrupa, Adhya, Bheeru, Sukumara, Bala, Sthavira, Naari, Parama sukumara.

Diseased Conditions: VataRakta, Visarpa, Kusta, Visha

Following are some other conditions where Jalaukavacharana can be performed:

Venous illness, acute phlebitis, varicose veins (Thrombo phlebitis, post thrombotic syndrome, phlebothrombosis), Acute gout attack, infections, Otitis media, Mastoiditis, Glaucoma, high blood pressure, Eczema etc.

Contra-indication: Absolute-hemophilia, Relative-pregnancy, anemia and hypotonia.

Collection and preservation of jalauka:

Collection:

Season - The best time for collecting Jalauka is Sharad ritu (autumn).

The Jalauka can be caught with a piece of wet leather, in tanks, or streams and where there are lotuses. They can be collected by applying fresh meat of dead animals to the legs of human being himself and is kept in his leg water for some time. When Jalauka gets attracted and stick to his legs, they can be removed by sprinkling Saindhava over their mouths, and collected. Poisonous leeches must be thrown out.

Preservation:

Place the leeches in non-chlorinated fresh water. Not more than 50 leeches should be placed in a 2-gallon container.

A tight-fitting lead is necessary to avoid escaping of the leeches.

Multiple small holes should be made to the lid for ventilation.

Leeches should be kept cool, 5°C to 7°C and not exposed to heat above 20°C or direct sunlight.

Change of water is needed twice in a week on a routine schedule.

Method of application of jalaukavacharana vidhi:

1. Pūrvakarma:

- Preparation of equipment: Nirviṣa Jalauka (3-4), Cotton swab, Gauze piece, Kidney tray, Needle, Saindhava Lavaṇa, Haridrā chūrṇa, Madhuka chūrṇa
- Preparation of the leeches: Water is kept in a kidney tray and mixed with about two spoons of Haridrā chūrṇa. The leeches are placed in the tray.
- The leeches become very active. They are kept in the turmeric water for about 48 minutes and are then shifted to another kidney tray containing clear water.
- Preparation of the patient: No specific preparation of the patient is necessarily needed. However, Snehana and Svedana can be done to improve the effect of Jalaukāvacharaṇa.
- Snehapāna (Hīna Mātrā; for 2-3 days before the procedure)
- Abhyaṅga & Bāṣpa Svedana (on the day of the procedure)

2. Pradhānakarma

Jalaukāvacharaṇa should be done during the morning time.

- i. Virukṣaṇa Chikitsā is done on the expected site of leech application. This is done by rubbing dry powder of properly cleaned soil or cow dung. It is essential to remove the oiliness because the leeches may not attach if the site is greasy.
- ii. Application of Jalauka: Jalauka is picked up between the thumb and index finger, and its mouth is held close to the application site. The leech may be grasped between the fingers with a cotton or gauze piece. If the leech fails to attach itself, then a drop of milk or blood may be placed on the site. If even this fails, a small puncture is made with a needle to cause bleeding, and the leech is applied.
- iii. Observation & Care: When the leech starts sucking the blood, rhythmic wavy movements of its body are seen. It should then be covered by a wet gauze piece. While draping the leech, the mouth portion is kept free. At frequent intervals, small amount of water is poured on the leech to keep it moist and cool. As the leech continues sucking, one can observe the wavy movements in its body as well as increase in its dimension.
Jalauka only sucks vitiated blood, just like a swan drink only the milk from a mixture of milk and water. When it completes sucking, it falls off by itself.
When itching and pain occur at the site of leech application, it indicates that Jalauka started sucking pure blood. If it does not detach independently, Jalauka should be removed by sprinkling Saindhava Lavaṇa or Haridrā chūrṇa over its mouth.

3. Pashchātkarma

- i. Care of Vraṇa: As the saliva of the leech contains hirudin and anticoagulant, even after the leech separated, bleeding continues. Therefore, as soon as the leech detaches, bleeding should be arrested. After cleaning the site and dusting with Madhuka chūrṇa, the wound is bandaged tightly.
- ii. Care of Jalauka: In a kidney tray, about one spoon of Haridrā chūrṇa or Saindhava Lavaṇa is kept. The leech is grasped between the thumb and index finger, and its mouth is made to touch the Haridrā chūrṇa or Saindhava Lavaṇa. Sooner or later, the leech starts vomiting the blood. Leech is allowed to expel as much as possible. When it stops vomiting, the remaining portion of the blood is squeezed out. This is done by grasping the tail end between thumb and index finger, and the body of the leech is squeezed from the tail towards the mouth. The leech is then placed in clean water, and becomes more active again.
If the leech is not made to vomit the vitiated blood, it is likely to die.
If it is made to vomit properly, the leech may be reused for Raktamokṣaṇa after about one week. Jalauka should always be handled gently.

Complication of jalaukavacharana and their management with ayurveda and modern medicine:

Complications:

If Savisha Jalauka is used it will cause Daha, Shopha, Paka, Kandu, Pitaka, Visarpa, Jwara, Moorcha and Shwitra.

Treatment:

Pittahara kriya

Alepa

If Hinayoga- To achieve Samyak yoga the wound is rubbed (Avagattana) with Madhu.

Atiyoga - Sheetala Jala Parishechana and Rakta Stambhaka drugs are sprinkled.

Bleeding may continue for some time, due to the leeches hirudin. Bleeding time will vary depending on location, from a few hours to three days. This is a function of hirudin and other compounds that reduce the surface tension of the blood. Anti-clotting medications also affect the bleeding time.

Applying pressure can reduce bleeding, although blood loss from a single bite is not dangerous. The wound normally itches as it heals, but should not be scratched, as this may complicate healing and introduce other infections. An antihistamine can reduce itching, and applying a cold pack can reduce pain and swelling.

Some people suffer from severe allergic or anaphylactic reactions from leech bites and require urgent medical care. Symptoms include red blotches or an itchy rash over the body, swelling around the lips or eyes, feeling dizzy and difficulty in breathing.

Diet for patient after jalaukavacharana:

After-bloodletting, the intake of foods and drinks which are neither too hot nor too cold, light and stimulants of digestion are recommended.

Pathyapathya:

Exercise, sexual intercourse, cold bath, day sleep, exposure to breeze, food having Kshara, Amla, Katu Rasa, and Shoka should be avoided till the body gets normal strength.

6. Pracchāna: Indications and contraindications of Pracchana. Method of Application, Samyak Lakshan, Complication of Pracchana and their management with Ayurveda and Modern medicines

Pracchana:

The therapeutic procedure of incising the skin superficially and thereby accomplishing Raktamokṣaṇa is called Pracchāna.

Yogya:

- Piṇḍita Rakta (congestion of blood), Indralupta, Kṣudrakuṣṭha, Tvakroga, Utsedhyukta Vraṇa
- As Pūrvakarma for Shṛṅga, Alābū or Ghaṭīyantra Avacharaṇa

Ayogya:

- Before or after Sirāvyadha / Jalaukāvacharaṇa
- Marmasthāna

Vidhi:

1. Pūrvakarma
 - Preparation of equipment: Scalpel blade, cotton swab, Gauze piece, Disinfectants, Madhuka chūrṇa
 - No specific preparation of the patient is necessarily needed. However, Snehana and Svedana can be done to improve the effect of Pracchāna.
 - Snehapāna (Hīna Mātrā; for 2-3 days before the procedure)
 - Abhyaṅga & Bāṣpa Svedana (on the day of the procedure)
2. Pradhānakarma
 - The site of the lesion where incision will be made is painted with disinfectant.
 - With a scalpel, a straight (Rju) incision is made which should neither be too deep (Nāti gambhira) nor too shallow (Nāti uttāna). The depth is approximately 2 mm. The incision is always made from the distal part to the proximal part of the body. Similar incisions are made parallel to the earlier one involving the complete area of the lesion; the incisions should not be done obliquely (Na tiryak).
 - While incising, Sirā, Snāyu and Sandhi should be avoided.
 - When the bleeding stops, the incised site is bandaged after applying the powder of Madhuka (Glycyrrhiza glabra).
3. Pashchātkarma
 - Pathya: Laghu Āhāra, Dīpana, Viśhrāma
 - Apathya: Atishīta & Atyuṣṇa Āhāra, Guru Āhāra, Adhyashana, Māruta, Agni, Ātapa sevana, Krodha, Shokādi, Vyāyāma, Divāsvapna, Travelling, Continuous studying, Continuous sitting in the same position

Upadrava & Chikitsā:

Excessive bleeding: Dravya should be applied which are Kaṣāya, Shīta and Stambhaka. If bleeding does not stop, Pāchana should be done with Shaṅkha Bhasma.

7. Sirāvedha: Indications and contraindications of Siravedha. Method of Application, Samyak Lakshan, Complication of Siravedha and their management with Ayurveda and Modern medicines

Siravyadha:

The surgical procedure of puncturing or sectioning a vein for therapeutic purpose and thereby accomplishing Raktamokṣaṇa is called Sirāvyadha.

It should be done in people who are physically strong and not afraid of the procedure.

The vein which is near the site of the lesion or disease is most ideal for Sirāvyadha.

It is preferred to perform this procedure in the morning after taking light and liquid diet.

Yogya:

Visarpa, Vidradhi, Plīhā, Gulma, Agnimāndya, Jvara, Mukharoga, Netraroga, Mada, Lavaṇāsyatā, Kuṣṭha, Vātarakta, Raktapitta, Kaṭūdgāra, Amlodgāra, Bhrama

Ayogya:

Bāla, Vṛddha, Bhīru, Garbhinī, Rūkṣa, Kṣataksīṇa, Shrama, Madyāpa, Klība, Adhva-karshita, Strī-karshita, Vāmita, Virikta, Asthāpita, Anuvāsita, Jāgarita, Karshya, Kāsa, Shvāsa, Shoṣa, Pravṛddha Jvara, Ākṣepaka, Pakṣāghāta, Upavāsa, Pipāsā, Mūrcchā

Different sites of siravedha according to disease:

Disease name	Vedhya sira sthana
Padadaha, Padaharsha, apabahuka, chippa, visarpa, Vatakantaka, Vicharchika, padadari, vatarakta	Two angula above the kshipra marma
Koshtukashirshaka, kanja, pangu	In leg four angula above gulpha
Gridhrasi	Four angula below or above janu sandhi
Vishvachi	Four angula below or above kurpara sandhi
Apachi	Two angulas below indrabasti marma in legs
Galaganda	Uru moola
Pleeha roga	Kurpara sandhi or sira between little and index finger of left upper limb.
Yakrit roga, kasa, shwasa	Kurpara sandhi or sira between little and index finger of right upper limb.
Pravahika, udarashoola	Two angula near shroni
Parikartika, upadamsha, shukra dosha	Medhra sthita sira
Mutravridhhi	Posterior side of vankshana
Jalodara	Four angula lateral and below umbilicus
Antravridhhi, Parshwashoola	Vein between parshwa, kaksha sthana
Bahushosha, apabahuka	Sira between two amsa
Tritiyaka jvara	At the middle of trika sandhi
Chaturthaka jvara	Below amsa sandhi on lateral side
Apasmara	Middle of amsa sandhi
Unmada	Between shankha and keshanta pradesha
Jihwa and danta roga	Lower surface of tongue

Procedure of siravyadha:

1. Pūrvakarma
 - Preparation of equipment: Intravenous cannula, 20 cc syringe, tourniquet, Kidney tray, Disinfectants, Cotton swab, Bandage material, Madhuka chūrṇa
 - Snehapāna (to be done 2-3 days before the procedure)
 - Abhyaṅga & Bāṣpa Svedana (to be done on the day of the procedure)
 - Laghu & Drava Āhāra (E.g.: Yavāgū)

2. Pradhānakarma

- The patient should be placed in a comfortable position so that the vein which is to be punctured can be approached easily. Supine position is in most occasions the best choice.
- The circulation in the selected vein is blocked by applying a tourniquet just proximal to the site which will be punctured.
- The site is painted with aseptic solution.
- The vein is slightly stroked by releasing the index finger from the thumb to make it more distended.
- The engorged vein is punctured with the IV cannula. It is inserted into the vein to its fullest length. The needle within the cannula is removed. This will lead to release of blood from the vein. Blood flow is allowed until it stops by itself; or until a maximum amount of 540 ml (1 prāṣṭha) of blood is drained.
- The cannula is removed and the punctured site is bandaged after applying the powder of Madhuka (Glycyrrhiza glabra).

3. Pashchātkarma

- Pathya: Laghu Āhāra, Dīpana, Viśhrāma
- Apathya: Atishīta & Atyuṣṇa Āhāra, Guru Āhāra, Adhyashana, Māruta, Agni, Ātapa sevana, Krodha, Shokādi, Vyāyāma, Divāsvapna, Travelling, Continuous studying, Continuous sitting in the same position

Amount of rakta visravana in siravyadha:

One Prastha has been advocated as the maximum limit of bloodletting in a strong adult person with excessively vitiated doshas. In this regard Dalhana elaborated that Rakta can be let out in amounts as shown in the table below:

Uttama	1 prastha	648 ml
Madhyama	½ prastha	324 ml
Heena	1 kudava	196 ml

Normal limit of siravyadha:

A physician should allow a part of the vitiated Rakta to remain inside the body rather than draining it excessively. Shamana chikitsa should be adopted to remove the remaining vitiated Doshas. This is to prevent the Ati-Visravana of Rakta leading to complications.

After puncturing the vein, a wise physician should look for Samyak srava lakshanas. Further, Samyak Srava can be divided into Pravara Shuddhi, Madhyama Shuddhi and Hina Shuddhi according to the symptoms obtained by proper puncturing.

Samyaka vyadha lakshana:

- Svayameva avatiṣṭhate (bleeding from the punctured site stops by itself)
- Lāghava (feeling of lightness)
- Vedanā shānti (remission of the pain)
- Vyādhirvega parikṣaya (remission of the disease)
- Manoprasāda (feeling of serenity)

Complication of siravyadha and its management:**1. Ayoga / Hīnayoga Vidda / durvidha****a. Nidāna:**

- If Sirāvyadha is done on a cloudy day or if it is done in a windy place.
- If Pūrvakarma is not done properly (Snehana, Svedana).
- If puncturing is done improperly.
- If Sirāvyadha is performed after intake of Guru Āhāra.

b. Lakṣaṇa:

Shopha, Dāha, Rāga, Pāka

c. Chikitsā:

Elā, Kuṣṭha, tagara, Pāṭhā, Bhadrādāru, Viḍaṅga, Chitraka, Trikaṭu, Āgāradhūma, Haridrā, Arkāṅkura, Naktamāla phala; either 3 or 4 or as many as available of these Dravya should be powdered, mixed with plenty of Lavaṇa and Taila, and rubbed on the punctured site. This will cause proper flowing of Rakta.

2) Atiyoga Vidda / atisrava:**a. Nidāna:**

- If Sirāvyadha is done when there is excessive heat.
- If there was Atiyoga of Svedana.
- If the vein is punctured excessively.
- If blood is allowed to flow out excessively by an unskilled, inexperienced or ignorant physician.

b. Lakṣaṇa:

Shiro-abhitāpa, Āndhya, Adhimantha, Timira, Dhātukṣaya, Ākṣepaka, Pakṣāghāta, Ekāṅgaroga, Trṣṇa, Dāha, Hikkā, Shvāsa, Pāṇḍuroga, Maraṇa

c. Chikitsā:

Lodhra, Madhuka, Priyaṅgu, Gairika, Sarjarasa, Shālmālī puṣpa, Shankha, Shukti, Māṣa, Yava and Godhūma should be powdered above the punctured site and pressed with the tip of the finger. The patient should be covered with a moist cloth, kept in a cold room, treated with Shīta Upanāha and Pariṣeka; or they are may be burnt (cauterized) either by Kṣāra or Agnikarma.

d. Modern Management:

Ligation of the punctured vein, hemostatic drugs, blood transfusion if needed.

Management of murccha during siravyadha:

1. Immediate removal of the instrument from the wound.
2. Cold sponging.
3. Proper ventilation and aeration.
4. Consolation and assurance to the patient.
5. Further Siravedha immediately after the management of unconsciousness is avoided.
6. If the unconsciousness disappears, then the procedure of Siravyadha can be repeated after 2 - 3 days.

8. Knowledge of emergency management of complications such as water & electrolyte imbalance, shock, bleeding per rectal, hematemesis, epistaxis

Water and electrolyte imbalance:

Electrolytes play a vital role in maintaining homeostasis within the body. They help to regulate myocardial and neurological functions, fluid balance, oxygen delivery, acid-base balance and much more. Electrolyte imbalances can develop by the following mechanisms: excessive ingestion; diminished elimination of an electrolyte; less drinking or excessive elimination of an electrolyte.

Total body water is distributed in two major compartments: 55- 75% is intracellular [intracellular fluid (ICF)], and 25-45% is extracellular [extracellular fluid (ECF)]. The ECF is further subdivided into intravascular (plasma water) and extravascular (interstitial) spaces in a ratio of 1:3.

Extracellular fluid volume deficit is a common fluid disorder in surgical patients. The fluid deficit is not water only, but water and electrolytes in approximately the same percentage as they exist in normal extracellular fluid.

Management - Water deficit and excess management

Water Deficit:

Intake of water

IV 5% dextrose or dextrose saline or Normal saline

Intake output chart should always be maintained to properly adjust the fluid administration and to prevent water intoxication.

Water Excess:

Fluid intake should be stopped, particularly the IV fluid

IV 200ml hypotonic (5.85%) saline solution should be given. This may be added with a diuretic (patient remain in stupor with renal insufficiency)

Electrolyte imbalance:

Sodium:

Hyponatremia:

Clinical Features - Sunken eyes, Anxious, Tongue is dry, hard & reddish brown, skin is dry, wrinkled & subcutaneous tissue feel lax, BP reduced, Pulse will be fast, Urine becomes dark & scanty with high specific gravity.

Management

IV normal saline (0.9%)

Ringer's solution may be administered in case normal saline is not available.

Renal function should be monitored

When there is severe loss of plasma volume, infusion of plasma or plasma substitutes should be considered.

Hypernatremia:

Clinical Features - Puffiness of the face, pitting edema in the sacral region & ankle region, increased weight & polyuria, in infants increased tension in anterior fontanelle

Management:

Stoppage of infusion

Diuretics if edema present

Treatment of apparent hypernatremia should be according to the merit of the individual cases.

Potassium:

Hypokalemia:

Clinical Features— Gradual onset of drowsiness, Speech becomes slow & slurred, Muscular hypotonia & weakness, Incontinence of urine, Peripheral BP is lowered & pulse rate becomes slow, Skin remains warm & dry, reddish flush of face, severe thirst.

Management:

Oral administration of potassium is always chosen first.

Potassium salt should be administered orally or Potassium chlorides in the form of effervescent tablets 2gm 6 hourly.

When patient is comatose or nauseous & has difficulty in swallowing, IV administration is unavoidable.

If potassium deficit is due to excessive vomiting – potassium chloride is administered

If urine volume is adequate - 2gm of potassium chloride may be administered IV over a period of 4 hours.

If potassium deficit is due to diarrhoea - Orally potassium citrate 2gm is administered every 6 hourly. The IV solution should contain sodium acetate in addition to potassium chloride.

Hyperkalemia:

Clinical Features - Nausea, vomiting, intermittent intestinal colic & diarrhoea, low BP, low heart rate, poor peripheral circulation and cyanosed skin.

Management:

Exogenous administration of potassium should be stopped

Temporary lowering of serum potassium & suppression of myocardial effect of hyperkalemia can be accomplished by IV administration of 10% solution of calcium gluconate.

Magnesium:

Magnesium deficiency:

Clinical Features - Hyperactive tendon reflexes, Muscle tremors, Tetany, Irritable, Aggressive & restlessness.

Management:

Magnesium deficiency is best treated by parenteral administration of magnesium chloride or sulphate solution about 2mEq of magnesium per kg body weight administered daily when the renal function is good.

Excess of Mg leads to lethargy, weakness, and progressive loss of deep reflexes.

Management:

Acute symptoms may be controlled by slow IV administration of 5 to 10mEq of calcium chloride or gluconate.

Persistence of symptoms, peritoneal dialysis or Hemodialysis should be done.

Calcium:

Hypocalcemia:

Hypocalcemia presents with clinical features like numbness, tingling sensation in the circumoral region & the tip of fingers & toes, hyper tendon jerk, muscle cramp with carpopedal spasms & tetany. The Chvostek's sign will be positive.

Management:

IV administration of calcium gluconate or chloride.

Calcium lactate maybe given orally with supplement of vitamin D.

Hypercalcemia:

Clinical Features - Early-stage symptoms: Anorexia, nausea, vomiting, fatigue, lassitude & weakness.

Later stage symptoms: Headache, Pain in the back & extremities, thirst, polyuria, polydipsia, stupor, and coma

Management:

Intravenous phosphate should be given slowly over a period of 12 hours once daily for more than 2 to 3 days.

Corticosteroids.

Shock and its management:**Definition:**

Shock is defined as a condition where the circulatory system fails to provide the nutritional needs of the cells and also fails to remove the metabolic waste products. The main cause of shock being low blood flow to the vital organs.

Types:**1. Hypo-volaemic Shock -**

(a) May be due to loss of blood E.g., Hemorrhagic shock

(b) Due to loss of plasma or water and electrolytes E.g., Shock in burns, dehydration etc.

2. Neurogenic Shock -

Trauma to spinal cord or spinal anaesthesia etc. cause blockage of the sympathetic nervous system resulting in loss of arterial and venous tone causing pooling of blood in the peripheral circulatory system. Thus, cardiac output falls.

3. Vasovagal Shock –

Dilatation of peripheral vessels in the limb muscles and splanchnic system, causes reduced blood flow to the cardia and brain. This results in decreased cardiac output, bradycardia, cerebral hypoxia, loss of consciousness etc.

4. Cardiogenic Shock -

In various diseases like myocardial infarction, CCF, pericardial effusion, the heart fails to pump blood.

5. Septic Shock –

Gram negative septicemia is the cause of such a condition. E.g., Cholangitis, meningitis, peritonitis etc. may lead to septic shock.

6. Anaphylactic Shock –

Administration of various drugs namely Penicillin etc. causes sudden broncho-spasm, laryngeal oedema, and respiratory distress leading to total hypoxia. This is caused due to increase of histamines.

Management:

- Maintenance of airway and breathing - The trachea of the patient who is unconscious or whose airway is obstructed, must be intubated.
- Blood pressure - Should be kept above 90mmHg. In case of hypo-volemic shock, adequate quantities of fluids/blood should be infused.
- The bladder should be catheterized to measure the volume of urine output.
- Continuous monitoring of heart rate and rhythm, blood pressure, oxygen saturation and urine output, arterial blood gases etc. is important.

- In case of septic shock, apart from other general measures, the septic source needs to be identified and removed, empirical antibiotic therapy needs to be initiated; various septic sources viz pus in an abscess, necrotic or gangrenous tissue needs to be drained or excised.
- In anaphylactic. shock, apart from other measures, injection adrenaline 0.3 - 0.5 mg SC/IM/IV is administered. Injection hydrocortisone 1.5 mg/Kg and Injection Aminophylline 5mg/Kg over 20 minutes (in case of broncho-spasm) is administered.

Bleeding per rectum:

It is the condition in which the blood is lost through Rectum. Blood in the stool can be bright red or maroon in colour. There are chances that patient may complain of pain per rectum and anus and abdominal pain or cramping. The bleeding may arise from any part of the GI-Tract including rectum.

Management:

- Diagnostic procedures, such as endoscopy, colonoscopy or angiography, may, be done to pin point the source of bleeding.
- Blood transfusions to combat blood loss in severe rectal bleeding.
- Drainage of stomach contents.
- Intravenous fluid replacement.
- Surgery may be required in severe cases.

Hematemesis:

Hematemesis is the vomiting of blood. The vomited blood volume in excess of 5.5 liters could be life threatening.

Management:

Minimal blood loss -	Kept NPO (nil per os) Proton pump inhibitor (e.g., omeprazole) Blood Transfusion (if Hb% <8.0gdl)
Significant blood loss -	Resuscitation

Fluid/Blood is administered preferably by central venous catheter.
Patient is prepared for emergency endoscopy.

Epistaxis:

Epistaxis is defined as an acute hemorrhage from the nostril, nasal cavity or nasopharynx. It is one of the common problem which can rarely be life threatening. There are many different etiologies, more common one being trauma.

Management:

- Direct pressure is applied by pinching the soft fleshy part of nose (Little's area) for 5 - 10 min.
- Tilting the head forward helps to decrease the chance of nausea & airway obstruction.

- The local application of a vaso-constrictive agent (e.g., oxymetazoline)
- Silver nitrate to cauterize bleeding blood vessels.
- In severe case of Epistaxis, the posterior nasal pack is necessary. In this type of pack, a Foley's catheter is inserted through the nose into the nasopharynx and the balloon is inflated with saline. Gentle forward traction is applied to stop the bleeding. Careful observation of patient is needed in this pack. Usually, it is applied for 2-3 days.

PHYSIOTHERAPY

1. Definition, Utility and Importance of Physiotherapy.

Introduction to Physiotherapy

Physiotherapy is the science of treatment by exercise, massage, heat, light, electricity or other physical agencies; use of drugs is avoided.

Physiotherapy, also referred to as physical therapy, involves evaluating, diagnosing and treating a range of diseases, disorders and disabilities by using physical means.

Utility of Physiotherapy:

- Physiotherapy can be used in the diagnosis and management of a wide range of injuries, disease processes, and other conditions, including:
- Back and neck pain, Occupational injuries Amputee rehabilitation, Stroke rehabilitation, Chronic airway disease, Postural problems, Arthritis, Spinal cord injuries, Sciatica, Asthma management, Neurological conditions, Developmental and pediatric problems, Impaired mobility, Incontinence, Sport injuries, etc.

Importance of Physiotherapy:

- Physiotherapy is the most commonly prescribed treatment to assist in the recovery of many injuries and conditions. Chronic pain, car and sports injuries and challenges with mobility can all be greatly improved with the use of physiotherapy.
- Physiotherapy is a drug-free health care practice which can be helpful for individuals of all ages to break down the barriers to physical function. It is used in patients pre- or post-surgery, to help people to recover from a chronic illness, injury, industrial or motor vehicle accidents, and in age related conditions.
- Physiotherapy relieves pain, improves joint mobility, increases strength and coordination, and improves cardio-respiratory function.
- Physiotherapy also plays an important role in health promotion, disability and disease prevention.

Modes of physiotherapy:

1. Massage:

Treatment of a disease or injury by skillful manual manipulation of the body tissue. This helps in relieving pain and spasm, induces relaxation, helps in promoting absorption of exudates, and helps in stretching adhesions and increase metabolism.

2. Electrotherapy:

Treatment by electro physical modalities which include low frequency, medium and high frequency currents. This includes actinotherapy and heliotherapy.

- Actinotherapy: The word "actis" is a Greek word meaning "a ray". Treatment by using rays (using lamp as the source) is known as Actinotherapy.
- Heliotherapy: The treatment by sun radiation is known as Heliotherapy.

3. Exercise therapy:

Accelerating patients recovery from injuries and diseases which have altered his normal way of living by repeated muscular activity in range, strength and duration. Mainly of 2 types- Active and Passive.

2. Basic Knowledge of Static exercise, Infrared, Short wave diathermy, Electromagnetic therapy, Wax bath therapy, Ultrasonic therapy.

Basic knowledge of static exercise:

Exercise:

Performance of physical exertion for improvement of health or correction of physical deformity.

Static or Muscle-setting exercise:

Voluntary contraction and relaxation of skeletal muscles without changing the muscle length or moving the associated part of the body. It includes method of maintaining muscle strength and tone by alternately contracting and relaxing a skeletal muscle or group of skeletal muscles without moving the associated body part. These kind of activity are useful in preventing atrophy of the muscles, especially in patients with conditions involving the joints.

Static stretching:

Static stretching is used to stretch muscle while the body is at rest. It is composed of various techniques that gradually lengthen a muscle to an elongated position (to the point of discomfort) and hold that position for 30 seconds to two minutes. 30 seconds is the minimum duration to get the benefits of stretching, whereas two minutes is the maximum (if a position can be held for more than two minutes, a further stretch should be performed). During this holding period or directly afterwards, participants may feel a mild discomfort or warm sensation in the muscles.

Advantages:

Static stretching exercises involve specialized tension receptors in our muscles. When done properly, Static stretching slightly lessens the sensitivity of tension receptors, which allows the muscle to relax and to be stretched to greater length.

- Static stretching also augments the joint and can promote instability in the joint, thus making an individual more susceptible to injury.
- Stretching helps keep you flexible and counteracts the repetitive movements of exercise. When performed correctly and at the right time, static stretches help you lengthen tight muscles and improve your balance and overall fitness. A good stretch session also helps relieve stress and tension.

Contraindication for stretching exercise:

- Joint instability
- Disease affecting the tissue being stretched e.g., RA
- Acute injury
- Vascular injury e.g., thrombo-embolism
- Infection
- High blood pressure

Precaution:

- Static exercises tend to drive up blood pressure in an instant. Thus, the people with circulation problems and high blood pressure should avoid over-exerting pressure without muscle movements.
- One should not hold the breath while performing these exercises as this would lead to increase in blood pressure.
- Professional advice is always highly recommended.
- Not recommended for children and adolescents whose bones are still growing. There are higher chances of damage to tendons and connective tissues.
- Don't force a joint beyond its normal range of motion, this can lead to instability of the joint.
- Not recommended in patients suffering from osteoporosis or taking steroids. The risk of fracture is elevated.
- Avoid aggressive stretching of muscle that have been immobilized in a splint or cast
- Avoid stretching swollen & edematous tissue as they are more susceptible to damage.

Infrared therapy:

Infrared rays were discovered by a German scientist named Sir William Hershell in 1800.

The infra-red rays are electromagnetic waves with the wave lengths of 750nm to 40,000nm and frequency 4×10^4 and 7.5×10^{11} Hz. It lies beyond the red boundary of visible spectrum.

Any hot body can produce infra-red rays like the sun, electric bulb, coal fire and gas fire, etc.

Sun is the natural source of infra-red radiations.

IR rays are of 3 categories:

1. Near IR rays (0.76-1.56 microns)
2. Mid IR rays (1.5-4 microns)
3. Far IR rays (4-1000 microns)

According to biological research Far IR rays are absorbed very easily by the human body. It helps in all aspects of bodily growth and development. These Far IR rays are also called light of life. When its intensity is high in the body, we feel healthy and will be able to overcome ailments. However, when it begins to decline, body will be subjected to attack by ailments.

In physiotherapy infra-red rays are produced by 2 types of generators:

1. Non-luminous generators- produces only Infra-red rays
2. Luminous generators- produces Infra-red rays, UV and Visible rays.

Non-luminous generator:

1. Consists of coil wound on a cylinder of insulating material like porcelain.
2. An electric current is passed through the wire which results in the production of heat.
3. This heat produces infra-red rays which are transmitted through the porcelain.
4. The porcelain gets heated and generates the radiation including visible rays.
5. To avoid this, coil is embedded in fireclay or placed behind fireclay.
6. Now the emission of rays is from the fireclay which is commonly painted black and thus very few visible rays are produced.
7. The coil is placed at a spherical reflector.
8. The reflector is mounted on an adjustable stand.

Luminous generator:

These generators are in the form of incandescent lamps or bulbs.

This is lamp in which there is tungsten filaments and filled with inert gas at low pressure.

Depth of Penetration: It depends on the wavelength

Luminous generator: IRR having 350-4000nm
Dermis and epidermis

Non-Luminous generator: IRR having 750-15000nm
Superficial dermis

Physiological effect:

IRR produces heating effect in the superficial epidermis resulting Vasodilatation → Increased oxygen supply, nutrient supply → Drainage of waste products → Resulting in the relief of pain.

Therapeutic uses:

- Increases blood circulation
- Wound healing
- Decreases inflammation
- Relieves pain
- Improves metabolism
- Long term exposure improves health and immunity

Contra indications:

- Area of anaesthesia
- Patient of arterial disease
- Eczema
- Gastric ulcer and hemorrhage

Disadvantages:

- Burns
- Electric Shock
- Overdose headache
- Injury to eyes
- Faintness

Short wave diathermy:

Diathermy is a Greek word which means - through heating.

Short Wave diathermy current is high frequency electromagnetic waves of the frequency between 107 to 108 Hz and wavelength between 30 and 3m to generate heat in the body tissues. It provides the deepest form of heat.

The therapeutically used frequencies and wavelength are 27.12MHz and 1 m.

Methods of application: There are two methods of application

1. Capacitor method
2. Cable method

1. Capacitor method:

In this the electrodes and patient's tissue form a capacitor. The capacitance depends on

1. The size of the electrodes
2. Distance between the electrodes
3. Tissue between the electrodes

2. Cable Method:

In this a thick and insulated cable is used for treatment purpose. The cable is coiled around the patient's body and is separated from patients body by a layer of insulating material.

Indications:

- Inflammation of shoulder joint
- Inflammation of Elbow Joint (Tennis Elbow)
- Degeneration of joints of neck (Cervical Spondylosis)
- Degeneration of joints like knee and hip (Osteoarthritis)
- Ligament Sprains in knee joint
- Low Back Ache
- Plantar fasciitis (Heel Pain)
- Sinusitis

Contraindication:

- | | |
|------------------------------------|------------------------------------|
| • High fever | • Severe kidney and heart problems |
| • Fluctuating blood pressure | • Pregnant women |
| • Very sensitive skin | • Mentally retarded individuals |
| • Persons with untreated fits | • Tuberculosis of bone |
| • Persons using cardiac pace maker | • Malignant cancer |

Advantages:

Relaxation of the muscles, effective in bacterial infections and Relief of pain.

Treatment Time:

Initial Stage - 5-10 minutes

Moderate Stage 10-20 minutes

Severe State - 20-30 minutes

Disadvantages:

- Burns
- Scalds (Boils)
- Overdose
- Shock
- Electric Sparking
- Faintness

Electromagnetic therapy:

Electromagnetic therapy or electromagnetic field therapy refers to therapy involving the use of electromagnets.

Substance which attracts the iron pieces and set itself in the north and south pole when it is freely suspended. This property is known as magnetism.

Types of magnets:

There are two types of magnet viz.

1. Natural magnets
2. Artificial magnets

Properties of the magnet:

1. A magnet attracts magnetic substances like iron, steel, cobalt, nickel towards it. The attraction appears to be maximum at the end.
2. When a magnet is suspended freely with the help of an unspun thread, it comes to rest along the North-South direction.
3. Like poles repel each other and unlike poles attract each other.
4. Hammering and heating the magnet destroys the magnetic property of the magnets.

Electromagnet:

A simple electromagnet consisting of a coil of insulated wire wrapped around an iron core. The strength of magnetic field generated is proportional to the amount of current. The magnetic therapy is a physiotherapy for it uses electromagnetic energy & it is an effective, safe & noninvasive cure. The magneto therapy regenerates the injured cell by improving the enzyme secretion & repolarizes the cellular membrane Furthermore, it produces an anti-stress action and promotes an acceleration of all reparative phenomenon with bio-regeneration, anti-inflammatory & analgesic action without side effect.

Duration:

Depends upon the disease and patients tolerance. It can be used once a day or twice as per conditions. In the beginning it should be used for 5min, later the duration can be increased but not more than 10mins. In cases of joint pain, gout, arthritis it can be used up to 30 minutes. Should not take bath up to one hour after the treatment.

Benefits:

- Relieves the pain, it acts as a potent analgesic
- It accelerates the healing processes
- It stimulates the cellular exchange
- It improves the flow of nutrition and the oxygenation of the tissue
- It reduces the inflammation
- It stimulates the re-absorption of edema
- Degeneration
- It slows down the process of bone density

Precaution or contraindication:

- Pregnancy
- Individuals with pacemakers or similar device
- Bleeding wounds

Complications:

- Heaviness
- Headache
- Sleeping symptoms

Wax bath therapy:

Wax bath therapy is an application of the molten paraffin wax on the body parts. The melting point of wax is 510-550C. If the molten wax is poured at this temperature, it may cause burn. So, some impurities like paraffin or mineral oil are added to lower the melting point for safe application. Thus, the temperature of the paraffin wax is maintained at 40-440c.

Methods of application:

- Dipping and wrapping
- Immersion
- Direct pouring
- Toweling or bandaging
- Brushing method

Indications:

- Edema & inflammation (sub-acute and early chronic stage)
- Swelling of hands in RA
- Degenerative joint disease
- Adhesion & scar

Treatment time:

The time duration for the treatment is about 30 – 45 minutes.

Contraindications:

- Open wounds
- Skin rashes
- Allergic conditions
- Impaired skin sensations
- Defective arterial supply

Ultrasonic therapy:

Ultrasound refers to mechanical vibrations which are essentially same as sound waves but of a higher frequency. Such waves are beyond the range of human hearing and therefore also called as ultrasonic.

Frequency of Ultrasound:

Any vibration at a frequency above the audible sound range, i.e., 20-20000 Hz. Different therapies are employed in range from 0.5-4 MHz.

At 1 MHz, frequency is most useful in individuals with a high percentage of cutaneous fat and whenever the desired effects are in the deeper structures.

At 3 MHz, the energy is absorbed in the more superficial tissues with a depth of penetration 1 and 2 cm.

Ultrasound therapy is based on biological effects of ultrasonic oscillations which are not electric. Despite of that, this therapy is sometimes included in the list of electrotherapeutic methods.

An ultrasound (US) therapeutic system consists of two main parts:

1. Generator of high frequency of electric current and
2. The application probes, the US source itself, which consists of a piezoelectric transducer.

Techniques of application:

1. Direct contact method
2. Water bath method
3. Water bag method

Absorption:

Ultrasound is absorbed by the tissues and converted to heat at that point. This contributes the thermal effect of ultrasound.

Dosage:

Three factors determine ultrasound dosage as follows:

1. Size of the treatment area
2. Depth of the lesion from the surface
3. Nature of lesion

Mode:

Continuous mode produces more heat and is used for musculoskeletal conditions such as muscular spasm, joint stiffness, pain etc.

Pulsed mode produces less heat so it is used for soft tissue repair like tendinitis etc.

Duration of Treatment:

- Size or the area determine the treatment time i.e., 1-2 minute for every cm²
- Minimum: 1 – 2 minute
- Maximum: 8 minute
- Average: 5 minute
- For chronic: longer treatment time
- For acute: lesser treatment time

Main indications of US therapy:

- | | |
|---------------------------|------------------|
| • Soft tissue injuries | • Scar tissue |
| • Chronic indurate oedema | • Varicose ulcer |
| • Bone injuries | • Plantar warts |

Contraindications:

- | | |
|-----------------------------|--------------------|
| • Thrombo-phlebitis | • Acute sepsis |
| • Tumours | • Pregnancy |
| • Cardiac disease | • Haemorrhage |
| • Implants (metal implants) | • Anaesthetic area |



THANK YOU