



Review Article

## APPLIED ASPECT OF PANCHAKARMA AND THEIR MECHANISM OF ACTION IN URDHWAJATRU GATA-ROGA (DISEASE OF EYE, ENT, ORODENTAL, HEAD AND SCALP)

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### ABSTRACT

The phrase “Swasthyasya Swasthya Rakshnam” represents, maintaining the health of a healthy person, prevention of disease and “Aaturasya Vikara Prasamanam”, which means curing the disease of ailing person. These are the main aim and objective of Ayurved. The *Shalakyatantra*, a part of *Astanga Ayurved*, deals with the disease above throat. It includes the disease and treatment of *Netra, Karna, Nasa, Kantha, Mukha, Danta* and *Siro-Kapala Gata Roga*. *Sansamana* (conservative), *Samsodhana* (*Panchakarma*) and the *Shastra chikitsa* (surgical procedures) are the essential treatment modalities followed to treat a disease. These are the basic treatment modalities, explained in the classical texts of Ayurved. Panchakarma is a branch of Ayurveda, meant for the removal of vitiated *Dosha, Mala* or toxic part of body and balances *Dosha-Dushya* through, *Vamana, Virechana, Nashya, Basti, Rakta Mokshyana* etc. In the disease like *Abhisyanda, Adhimantha, Timira, Danta Nadi, Upakusha* and *Dusthapratishyaya*, most of the *Panchakarma* therapies are indicated according to their severity of the disease. In practice the patient, who undergoes *Panchakarma* or *Sodhana Chikitsa* as *Pradhana karma* or *Poorvakarma* shows better result than the patient treated without *Sodhanakarma*. The patients, treated with *Sodhanakarma* recover faster than patient treated only with *Shamana-chikitsa* does. Therefore, increasing and mainstreaming the *Panchakarma* procedure in *Shalaky Tantra* will definitely provide an effective and satisfactory outcome in *Urdhwajatrugata* disorders.

### INTRODUCTION

*Sansamana* (conservative), *Samsodhana* (*Panchakarma*) and the *Shastra chikitsa* (surgical procedures) are the essential treatment modalities followed to treat a disease in Ayurveda<sup>[1]</sup>. *Samsodhana Chikitsa* is one of the best methods to remove, reduce and balance the *Saririka Dosha*. *Samsodhana* or *Sodhana chikitsa* is also known as the *Panchakarma Chikitsa*. The *Panchakarma* includes the *Poorvakarma Snehana* and *Swedana*<sup>[2]</sup>.

The *Pradhanakarma* as the *Vamana, Virechana, Anuvasana Basti, Niruha Basti* and *Nashya*<sup>[3]</sup>. *Basti* can be added instead of *Anuvasana* and *Niruha Basti* with *Raktamokshana* in *Panchakarma* therapy. *Shalakyatantra* is one among the eight branch of Ayurved and it deals with the disease of *Netra, Karna, Nasa, Siro-Kapala* and *Mukhagata roga*<sup>[4]</sup>. While considering the predominant *Dosha* of *Urdhwajatrugata roga, Karna* and *Danta* are *Vata* predominant, so the treatment followed is *Vatahara chikitsa* like *Sneha* as *Pana, Kavala Gandusha, Sneha Virechana* and *Siro Basti* etc. *Mukha* is *Kapha* predominant, so treatment followed are *Kaphahara chikitsa, Lekhana, Pratisarana, Siro Virechana* and *Jalaukavacharana* etc. The diseases of *Kantha* are *Kapha-Rakta* predominant, so treatment followed are *Vamana, Siro Virechana, and Raktamokshana* etc. In *Siro-Kapalagata Roga* the treatment followed are

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*Nashya, Raktamokshana, Siro-Virechana, Mudhni-Taila* and *Dhoomapana* etc. In *Danta Nadi, Upakusha* and *Dusthapratishyaya* almost all the *Panchakarma* therapy are indicated according to the *Dosha-Dushya, Baya* (age) and *Kala*. The disease treated with *Panchakarma* or *Sodhana Chikitsa* as *Pradhana karma* or as *Poorvakarma*, never reoccur and shows better result than the patient treated without *Sodhana Karma*<sup>[5, 6]</sup>. Here in this context an attempt is made to collect and to discuss the applied aspect of *Panchakarma* with their mechanism of action in *Shalakyatantra*.

### AIMS AND OBJECTIVES

- To elaborate and to discuss the concept of *Panchakarma* in *Shalakyatantra* with their mechanism of action.

### MATERIALS AND METHODS

Literatures will be collected from different classical textbooks of Ayurveda, from journals and

from dissertations. The details of *Panchakarma* techniques and their special indications in *Shalakyatantra* are discussed in details.

### Panchakarma In Shalakyatantra

*Panchakarma* is a branch of Ayurved, which is adopted in every clinical department of Ayurved according to the *Dosha-Dushya, Dhatu, Desha* (site of disease), *Kala* of disease (duration of disease/ chronicity) and *Baya* (age of patient). The *Panchakarma* includes the *Poorvakarma Snehana* and *Swedana*<sup>[2]</sup>, the *Pradhanakarma* as the *Vamana, Virechana, Anuvasana Basti, Niruha Basti* and *Nashya*<sup>[3]</sup>. *Basti* is also considered instead of *Anuvasana* and *Niruha Basti* with *Raktamokshana* in *Panchakarma* therapy. Here are few general considerations or facts regarding the *Panchakarma* and their applied aspects are discussed below.

**Table 1: Panchakarma According to Dosha involved in Urdhwajatrugata Roga**

Dosha predominance	Treatment Protocol
Vata predominant disease	Basti, Snehana Basti and Nashya
Pitta and Rakta predominant diseases	Virechana and Raktamokshana.
Kapha predominant diseases	Vamana, Nashya, Tikshna Nashya

### Specific indications of Panchakarma in Various disease of Urdhwajatru

Out of the 76- *Netra roga*, 52 diseases are *Sadhya*; *Vata* and *Pitta* predominant disease are 10 each, *Kapha, Rakta* and *Sannipataja* disease are 13, 16 and 25 respectively<sup>[7]</sup>. Hence, based on the *Dosha, Dushya/Dhatu* and chronicity of the disease the treatment protocols are recommended. *Netra* is the *Pitta* predominant organ as *Alochaka-Pitta* seats on the *Netra* <sup>[8]</sup>. Therefore, while considering the treatment protocol the *Virechana, Rakta Mokshyana* and *Snehana Karma* are to be considered as a prime treatment. However, based on the *Dosha* predominant the other *Panchakarma* therapies are also recommended. *Karna* (ear) is *Vata* Predominant <sup>[9]</sup>, so the *Snehana (Ghrita pana), Swedana* and *Rasayana karma* are considered first. *Tikshna-Nashya, Vamana, Dhoomapana, Kavala* and *Gandusha* are primarily considered in *Nasa Roga* because of its *Kapha* predominance. Most of the *Dantamoola-gata roga* are *Kapha-Rakta* predominant, hence the treatment protocol followed are *Raktamokshana, Kavala, Gandusha, Dhoomapana, Nashya* etc. *Talu* and *Kantha Roga* are *Kapha* and *Rakta* predominant and among them, most of the diseases are *Asadhya*. The procedures adopted are *Raktamokshana, Kavala, Gandusha, Dhoomapana* and *Tikshna-Nashya*. *Danta Roga* are *Vata* predominant and the treatment protocol adopted are *Sneha Kavala, Gandusha* and *Snehika Dhoomapana* etc. In *Jihwa-roga*, the treatments followed are *Raktamokshana, Kavala* and *Gandusha* etc.

### Vamana-Karma (Emesis Therapy)

*Vamana* is a process in which vitiated *Dosha* are expelled out through the upper route, through mouth<sup>[10]</sup> and it is the principal treatment in *Kaphaja* disease<sup>[11]</sup>. *Vamana* must not be advised before ten and seventy-years of age group<sup>[12]</sup>. In *Vamanakarma*, the *Apakwa Pitta Dosha* and *Kapha* are forcibly expelled out through the oral route <sup>[13]</sup>. In *Vamana Karma* the *Kapha* followed by *Pitta Dosha* is expelled out through oral route<sup>[14]</sup>.

**Table 2: The Vamana Protocol**

Duration	Event
Day 1-3	Deepana/Pachana
4-7 <sup>th</sup> Day	Snehapana <sup>[2]</sup>
1 day gap may be provided and on this day <i>Kaphakara Ahara</i> along with <i>Abhyanga</i> and <i>Swedana</i> (day 8) is recommended.	
Day 8	<i>Kaphakara Ahara, Abhyanga</i> and <i>Swedana</i> <sup>[2]</sup>
Day9	( <i>Brahmya-Mhurta</i> ) <i>Vamana Karma</i> followed by <i>Dhoomapana</i> ( <i>Snehika,</i>

Dawn)	<i>Vairechanika, Prayogika</i> <sup>[15]</sup>
<i>Samsarjana Krama/ Ahara Vidhi</i>	<i>Peya, Vilepi, Akruta-Yusha, Kruta-Yusha, Akruta-Mamsa Rasa and Kruta-Mamsa Rasa</i> <sup>[2]</sup> are recommende respectively

### Specific indication of Vamana with their Specific yoga in Shalaky Tantra

**Netra-roga-** In *Kukunaka*, a disease of infant, *Vamanakarma* is done with *Pippali, Saindhava, Yasthimadhu* and *Sarsapa Kalka*<sup>[18]</sup>. Common protocol in *Poorvakarma* of *Vartma Lekhana* is *Snehana* followed by *Vamana* and *Virechana*<sup>[19]</sup>. In *Pakshmosata*, *Vamana* is indicated with *Ksheera* and *Ikshu rasa*<sup>[18]</sup>

**Karna-Roga-** If there is *Kapha* predominance in *Karnanada* and *Badhirya* then *Vamana* followed by *Dhoomapana* and *Nashya* are recommended<sup>[21]</sup>. In *Karna Kandu*, *Vamana* is probably due to *Kapha* predominance<sup>[25]</sup>. Similarly, in *Kaphaja Karnasoola*, *Vamana karma* is indicated after *Snehapana* with *Pippali* and *Ghrita*<sup>[26]</sup>.

**Nasa-Roga-** *Vamanakarma* is indicated in *Nasaroga*, having *Kapha* predominant. (Table No. 3.)

**Kantha-Roga-** *Vamana* is one of the treatment protocols in *Rohini*<sup>[34]</sup> and in *Kaphaja Galaganda*<sup>[35]</sup>

**Mukha-Roga-** In *Pooti-Mukha*<sup>[38]</sup>, *Vamana* is advised as *Samanya Chikitsa Upakrama*.

**Siro/Kapala-Roga-** *Tikshna Vamana* is indicated in *Kaphaja-Siro Roga*<sup>[39]</sup> and also in *Khalita, Palita*<sup>[40]</sup>

Other disease of *Urdhwajatrugata roga*, where *Vamana* is indicated is mentioned in Table No. 3.

**Table 3: Vamana-Karma in Shalakyatantra**

Name of Procedure	Roga Adhithana/ Gata Roga	Name of Disease or Procedure
<b>Vamana</b>	<b>Netra- Eye</b>	<i>Pilla Roga</i> <sup>[16]</sup> <i>Sasofa and Asofa Akshipaka</i> <sup>[17]</sup> <i>Kukunaka and Pakshmosata</i> <sup>[18]</sup> <i>Vartma Lekhana</i> <sup>[19]</sup>
	<b>Karna- Ear</b>	<i>Karna Vidradhi</i> <sup>[20]</sup> <i>Karna Vidradhi</i> <sup>[20]</sup> <i>Karna nada and Badhirya</i> <sup>[21]</sup> <i>Krimi karna</i> <sup>[22]</sup> <i>Karna Kandu, Kaphaja Karnasoola, Pooti Karna</i> <sup>[23]</sup> <i>Karna Sotha and in Karna Kleda</i> <sup>[24]</sup> <i>Kapha predominance in Karna nada and Badhirya</i> <sup>[21]</sup> <i>Karna Kandu, Vamana is probably due to Kapha predominance</i> <sup>[25]</sup> . <i>Kaphaja Karnasoola</i> <sup>[26]</sup>
	<b>Nasa-Roga</b>	<i>Apeenasa and Pootinasa</i> <sup>[27, 28]</sup> <i>Urdhwaga Raktapitta</i> <sup>[29]</sup> <i>Pooya Sonita</i> <sup>[30]</sup> <i>Pratishyaya</i> <sup>[31, 32]</sup> <i>Kaphaja Pratishyaya</i> <sup>[33]</sup>
	<b>Kantha-Roga</b>	<i>Rohini</i> <sup>[34]</sup> <i>Kaphaja Galaganda</i> <sup>[35]</sup>
	<b>Mukha-Roga</b>	<i>Pittaja and Kaphaja Sarvasara Mukha Roga and in Pittaja Mukhapaka</i> <sup>[37]</sup> <i>Upakusha</i> <sup>[36]</sup> <i>Pooti-Mukha</i> <sup>[38]</sup>
	<b>Siro/Kapala-Roga</b>	<i>Kaphaja-Siro-Roga</i> <sup>[39]</sup> <i>Khalita, Palita</i> <sup>[40]</sup> <i>Suryavarta and in Ardhavavedaka</i> <sup>[41]</sup> <i>Indralupta and Arunshika</i> <sup>[42]</sup>

**Virechana (Purgation Therapy)**

*Virechana* is a process in which aggravated *Dosha* are expelled out through anal canal, the lower route or through both upper and lower route<sup>[10]</sup>. The medicines by which the digested or indigested parts are made to come out through the anal canal, is known as *Virechaka* medicine<sup>[13]</sup> *VirechanaKarma* is indicated in between ten to seventy year age group<sup>[12]</sup>. It is the principal treatment in *Pittaja* disease<sup>[11]</sup>. The *Virechana* Protocol is mentioned in Table 4.

**Table 4: Virechana Protocol**

Duration	Event
Day 1-3	<i>Deepana/Pachana</i>
4-7 <sup>th</sup> Day	<i>Snehapana</i> <sup>[2]</sup>
Day 8-9	Diet like <i>JangalaPradesha sneha</i> with <i>Mamsa rasa</i> , or <i>Sneha</i> with <i>Yusha</i> , that never induces <i>Kapha</i> , <i>Abhyanga</i> and <i>Swedana</i> <sup>[2]</sup>
Day 10	<i>Virechana Karma</i>
<i>Samsarjana Krama/Ahara Vidhi</i>	<i>Peya</i> , <i>Vilepi</i> , <i>Kruta-Yusha</i> , <i>Akruta-Yusha</i> , <i>Kruta-Mamsa Rasa</i> and <i>Kruta-Mamsa Rasa</i> are recommended respectively

*Samsarjana Krama* was carried out according to the number of *Vega*. In this procedure the *Mala*, *Pitta* and *Kapha* are expelled out respectively<sup>[14]</sup>. Then normal diet should be allowed.

**Specific indication of Virechana with their Specific Yoga in Shalakyta Tantra. (Table -5)**

**Netra roga-** In *Vataja-Abhisyanda* and *Adhimantha Snehana* and *Virechana* followed by *Basti* is indicated<sup>[46]</sup>. In *Poorva karma* of *Tarpana* and *Pootapaka*, *Virechana* is indicated as *Sodhanakarma*<sup>[50]</sup>. In *Sasofa* and *Asofa Akshipaka*, *Virechana* is indicated with the decoction prepared from *Drakshya*, *Haritaki* and *Trivrut*<sup>[53,17]</sup>.

**Karna-Roga-** *Sneha-Virechana* with *Eranda Taila* is indicated in *Karna Soola*, *Karna Nada* or *Karna Pranada*, *Khweda* and *Badhirya*<sup>[54]</sup>.

**Nasa-Roga-** *Virechana* is indicated in *Pittaja*, *Raktaja*, *Sannipataja* and in the other *Nasaroga* (Table 5)

**Mukha-Roga-** *Virechana* is indicated in *Pittaja* and *Kaphaja Sarvasara Mukha Roga*<sup>[37]</sup>, *Upakusha*<sup>[37]</sup> and in *Pittaja Mukhapaka*.

**Siro/Kapala-Roga-** *Virechana* is indicated in *Tridoshaja*, *Pittaja* and *Raktaja Siro* and *Kapalagata Roga*.

**Table 5: Virechana in Shalakyatantra**

Name of Procedure	Roga Adhithana/ Gata Roga	Name of Disease or Procedure
<b>Virechana-Purgation Therapy</b>	<b>Netra- Eye</b>	<i>Timira</i> , <i>Kacha</i> and in <i>Abhisyanda</i> <sup>[43]</sup> . <i>Pilla Roga</i> <sup>[44]</sup> <i>Dhoomara</i> or <i>Dhooma Darshi</i> , <i>Amla-vidagdha</i> , <i>Pitta-Vidagdha</i> and <i>Ushna-vidagdha Drishti</i> <sup>[45]</sup> <i>Vataja-Abhisyanda</i> and <i>Adhimantha</i> <sup>[46]</sup> <i>Raktaja-Abhisyanda</i> and <i>Adhimantha</i> <sup>[47]</sup> <i>Pittaja Abhisyanda</i> and <i>Adhimantha</i> <sup>[48]</sup> <i>Suktika</i> <sup>[49]</sup> <i>Poorva karma</i> of <i>Tarpana</i> and <i>Pootapaka</i> <sup>[50]</sup> <i>Vartma Lekhana</i> <sup>[19]</sup> <i>Kukunaka</i> <sup>[51]</sup> <i>Balagrathita</i> <sup>[52]</sup> <i>Sasofa</i> and <i>Asofa Akshipaka</i> , <i>Virechana</i> <sup>[53, 17]</sup> .
	<b>Karna- Ear</b>	<i>Karna Soola</i> , <i>Karna Nada</i> or <i>Karna Pranada</i> , <i>Khweda</i> , <i>Badhirya</i> <sup>[54]</sup> <i>Vataja-Karna Soola</i> <sup>[54]</sup> <i>Pittaja-Karnasoola</i> <sup>[26]</sup>
	<b>Nasa-Roga- Nose</b>	<i>Apeenasa</i> , <i>Pootinasa</i> <sup>[55]</sup> <i>Urdhwaga Raktapitta</i> <sup>[29]</sup> <i>Pittaja Pratishyaya</i> <sup>[56]</sup>

		<i>Pakwa-Pratishyaya</i> [31]
<b>Mukha-Roga-Oro-Dental</b>		<i>Pittaja and Kaphaja Sarvasara Mukha Roga</i> [37] <i>Upakusha</i> [37] <i>Pittaja Mukhapaka</i> [37]
<b>Siro/Kapala-Roga-Scalp</b>		<i>Suryavarta, Anantabata and Ardhavavedaka</i> [57, 58] <i>Kaphaja- Siro Roga</i> [59] <i>Indralupta, Arunshika</i> [60] <i>Khalita and Palita</i> [41]

### Basti

*Basti* is a procedure of introducing *Sneha, Kashaya, Ksheera* or *Ksheerapaka* etc. to the rectum or colon through anus. It is an Ayurvedic therapy having curative, preventive and promotive action. *Basti* is the principal treatment in *Vataja* disease [11] and is considered as the *Ardha Chikitsa* [61]. It is not merely the enema, rather it is a highly complex, sophisticated and systemic therapy having wider range of action and indication. It may be *Asthapana, Niruha, Matra, Kala* and *Yoga Basti*. The patients who are undergone proper *Vamana, Virechana* and *Samsarjanakarma*, can take *Snehapana* and *Basti* on ninth day. In *Kapha, Pitta* and *Vata* predominant diseases, *Basti* is indicated for one or three, five or seven and nine or eleven days respectively [2].

### Specific indication of Basti with their Specific Yoga in Shalaky Tantra (Table: 6)

**Netra-Roga-** In *Vataja-Abhisyanada* and *Adhimantha, Snehana* and *Virechana* are indicated followed by *Basti* [46]. *Basti* is indicated in *Timira* according to *Dosha* predominant [62].

**Siro/Kapala-Roga-** *Virechaka Basti* is given in *Pittaja Siro Roga* [64]. *Anuvasana* and *Asthapana Basti* are followed in *Pittaja* and *Raktaja Siro Roga* [39]. *Bala Taila* and *Trivrut Sneha Basti* is followed in *Vatika Siro Roga* [65].

**Table: 6 Basti Indications**

Name of Procedure	Roga Adhithana/ Gata Roga	Name of Disease or Procedure
<b>Basti</b>	<b>Netra- Eye</b>	<i>Abhisyanada</i> and <i>Adhimantha</i> [46] <i>Timira</i> [62]
	<b>Nasa-Roga- Nose</b>	<i>Pakwa Pratishyaya</i> [31]
	<b>Siro/Kapala-Roga- Scalp</b>	<i>Ardhavavedaka, Suryavarta, Anantabata, Vatika, Pittaja</i> and <i>Raktaja Siro Roga</i> [63, 57] <i>Pittaja Siro Roga</i> [64] <i>Pittaja and Raktaja Siro Roga</i> [39] <i>Vatika Siro Roga</i> [65]

### Nashya (Table: 7)

The *Nashya* procedure is an integral part of *Shalakyatantra*. It is a process of instilling *Taila, Ghrita, Kashaya, Swarasa, Churna, Dhooma* etc. to the nasal cavity. The aggravated *Dosha*, situated in the *Siro*, are eliminated by this procedure. It may be *Rechaka, Tarpaka, Shamana* or *Navana, Avapida, Dhmapana, Dhooma* and *Pratimarsha Nashya* [66]. *Nashyakarma* is indicated in between seven to eighty years of age [12] and *Sirovirechana* must not be advised before ten and beyond seventy-year age group [12]. In our OPD, we are following *Mukha-Abhyanga* then *Swedana* followed by *Nashya karma* as *Pradhana-karma*. In *Paschat-karma Dhoomapana* followed by *Gandusha* is advised with lukewarm water of *Saindhava*.

### Specific indication of Nashya with their Specific Yoga in Shalaky Tantra. (Table: 7)

**Netra-Roga-** *Anutaila nashya* is advised in *Sushkakshipaka* [67] and *Marsha Nashya* is advised in *Avrana Sukla*. [68]

In *Savrana sukla*, the depression caused by the *Vrana* can be recovered by *Nashya karma* [70]. *Madhura* and *Sheetala Dravya* processed *Ghrita-Nashya* is indicated in *Pakshmosata* [71]. *Nashya* is indicated by processed *Ghrita* of *Meda, Sabar-Iodha, Sariba, Manjistha, Daruharidra, Yasthimadhu* and *Ksheera* in *Dhoomara, Amla-Vidagha, Pitta-Vidagha, Ushna-Vidagha Drishti*. [72] *Tikshna Nashya* is indicated in *Balasagrathita*[52] and *Poorva Roopa* of *Abhisyanada* and *Adhimantha* except *Vataja* type[46,73]. *Avapida Nashya* is advised on the third day of *Vartma Lekhana karma* [74].

**Karna-Roga-** *Sata-Paki Bala Taila Nashya* is indicated in *Karna Soola*[75]. In *Nasa-Arsha, Sikhari Taila* and *Taila* processed with *Gruhadhooma, Pippali, Devadaru, Karanja, yava Kshara, Saindhava* and *Apamarga* is used as *Nashya*. [76] *Tikshna Nashya* is indicted in *Karna Kandu*[25]. In *Unmatha*, the disease of ear pinna, *Tikshna Nashya* is

indicated with *Katphala Twak Churna* [77]. *Sirovirechana* is indicated in *Karna Srava*, *Pooti karna* and *Krimi karna* [78].

**Nasa Roga-** In *Apeenasa* and *Pootinasa*, *Vamana* followed by *Nashya* is done with *Taila* prepared with the paste and decoction of *Lakha*, *Karanja-Beeja*, *Maricha*, *Baya Bidanga*, *Hingu*, *Pippali*, *Guda* (Jaggery) mixed with sheep urine and *Shigru*, *Kantakari*, *Danti Beeja*, *Trikatu*, *Saindhava*, *Baya Bidanga* and *Tulsi*[27]. In *Nasanaha* and in *Nasa Sosha Bala Taila*[27] and *Anutaila*[79] *Nashya* is indicated. In *Kshyavathu*, *Bhramshathu* or in *Bhrushakshyavo*, *Siro Virechaka*, *Tikshna Pradhamana Nashya* with *Sunthi*, *Kha*, *Pippali*, *Bidang*, *Drakshya*, *Siddha ghrita* or *Taila Nashya* [27,79] are advised. *Vamana* followed by *Avapida Nashya* is indicated in *Pooya Sonita* [79]. The *Tikshna Avapida* and *Pradhamana Nashya* is indicated in *Nasa Parisrava* [79]. In *Pakwa-Pratishyaya* and in *Pratishyaya*, *Nashya* and *Avapida Nashya* is adopted [80]. *Avapida Nashya* is indicated in *Urdhwaga Raktapitta* [29].

**Kantha Roga-** *Nashya* is indicated in *Samanya Rohini Chikitsa* [34]. *Pancha moola* processed oil as *Nashya* is indicated in *Vataja Rohini* [81]. *Taila* processed with *Apamarga*, *Danti*, *Saindhava*, *Bidanga*, and *Sweta-aparajita* is indicated in *Kaphaja Rohini* as *Nashya* [82]. The *Kaphahara Nashya* is indicated in *Kaphaja Galaganda* [35].

**Mukha Roga-** *Anu Taila Nashya* is indicated in *Sheetada* [85]. In *Vataja Osthara roga*; with *Vatahara Siddha Taila* [86], in *Kaphaja Osthara Roga*; *Kaphahara Nashya* is opted [85,86]. *Kaphahara Nashya* is indicated in *Galasundhika* [87]. In *Sheetada*; *Triphala*, *Yasthimadhu*, *Kamala* and *Padmakhya* [86] processed oil *Nashya* is indicated. In *Danta Besta*; with *Kakalyadi Gana* with oil *Dravya* and *Ksheera* [86] is opted. In *Soushira*; oil processed with, *Yasthimadhu*, *Lodhra*, *Kamala*, *Krishna-Sariba*, *Sweta Sariba*, *Agaru*, *Chandana*, *Gairika* and *Mishri*, is used as *Nashya* [88] and in this condition, *Nashya* with processed *Ghritha* of *Sariba*, *Kamala*, *Yasthimadhu*, *Lodhra*, *Agaru*, *Chandana*, and *Ksheera* is indicated [36]. *Sirovirechana* is a treatment protocol in *Upakusha*, with *Madhuragana* processed *Ghritha* [36]. *Avapida Nashya* is indicated in *Krimi Danta* [84]. In *Gala Sundhika* and *Adhrusha*; *Kapha hara* and *Kashaya rasa Pradhana Nashya* are advised [87]. In *Vataja Mukha paka*; *Nashya* is advised with processed oil of *Vatahara-Dravya* [90, 91].

**Siro/Kapala-Roga-** *Nasa* is the gateway of *Siro*[92, 93, 94], so the *Nashya* is the prime treatment protocol in *Siro Roga*. In *Samanya Siro Roga Chikitsa Upakrama*; *Nashya* is given with *Sirovirechaka Churna*, *Ghritha* and *Madhu* followed by *Sarsapa Taila Nashya* is indicated. However, this is not followed in *Kshayaja* and *Krimija Siro Roga* [95]. In *Vataja Siro Roga*; *Varunadi Ghritha* [96], in *Pittaja*; *Jeevaneeya gana*, *Ksheera siddha Ghritha Nashya*[96], in *Kaphaja*; *Tikshna Nashya* with *Kathafala Churna*[59] and in *Raktaja Siro Roga*; *Nashya* is indicated with processed *Ghritha* of *Keshara* and *Sarkara*[96]. In *Krimija-Siroroga*; *Rakta Nashya*, *Siro Virechaka (Bidanga, Maricha, Apamarga, Shigru etc.)* [97] and in *Kshayaja-Siroroga*; *Nashya* is indicated with ghee prepared with *Madhura Dravya Oushadhi* [97]. *Nashya* is indicated in *Suryavarta*, *Anantabata*, the *Bacha*, *Pippali churna Nashya* in *Ardhavavedaka*[58, 98] and in *Sankhaka*, *Nashya* with *Ksheera* and *Sharpi* is recommended [98]. In *Darunaka Snigdha Nashya*[42], in *Palita*, *Nili Taila nashya* is opted. In *Khalita* and *Palita*, *Sirovirechaka Nashya* is followed by *Siro Abhyanga*, *Nimba Taila nashya* with *Ksheera* pana for one month and *Nashya* with processed *Taila* of *Bruhatyadigana* and *Jeevaneeya gana* are indicated [41].

**Table 7: Nashya Indications**

Name of Procedure	Roga Adhithana/ Gata Roga	Name of Disease or Procedure
Nashya	Netra- Eye	<i>Sushkakshipaka</i> [67] <i>Avrana Sukla</i> [68] <i>Pilla roga</i> [69] <i>Sasofa-Asofa-akshipaka</i> [17] <i>Timira</i> [62] <i>Savrana sukla</i> [70] <i>Pakshmosata</i> [71] <i>Dhoomara</i> , <i>Amla-vidagdha</i> , <i>Pitta-Vidagdha</i> , <i>Ushna-vidagdha</i> <i>Drishti</i> [72] <i>Balagrathita</i> [52] In <i>Poorva Roopa</i> of <i>Abhisyanda</i> and <i>Adhimantha</i> except <i>Vataja</i> type [46, 73] On the third day of <i>Vartma Lekhana karma</i> [74]
	Karna- Ear	<i>Karna Soola</i> [75] <i>Nasa-Arsha</i> [76] <i>Karna Kandu</i> [25] <i>Unmatha</i> , [77] <i>Karna Srava</i> , <i>Pooti Karna</i> , <i>Krimi Karna</i> [78].

	<b>Nasa-Roga</b>	<i>Apeenasa and Pootinasa</i> <sup>[27]</sup> <i>Nasanaha and in Nasa Sosha</i> <sup>[27, 79]</sup> <i>Kshyavathu, Bhramshathu or in Bhrushakshyavo</i> <sup>[27, 79]</sup> <i>Pooya Sonita</i> <sup>[79]</sup> <i>Parisrava</i> <sup>[79]</sup> <i>Pakwa-Pratishyaya and in Pratishyaya</i> <sup>[80]</sup> <i>Urdhwaga Raktapitta</i> <sup>[29]</sup>
	<b>Kantha-Roga</b>	<i>Samanya Rohini Chikitsa</i> <sup>[34]</sup> <i>Vataja Rohini</i> <sup>[81]</sup> <i>Kaphaja Rohini</i> <sup>[82]</sup> <i>Kaphaja Galaganda</i> <sup>[35]</sup>
	<b>Mukha-Roga</b>	<i>Paitika Jihwa Kantaka</i> <sup>[83]</sup> <i>Danta Harsha, Danta Sarkara</i> <sup>[84]</sup> <i>Talu Sosha</i> <sup>[81]</sup> <i>Sheetada</i> <sup>[85]</sup> <i>Vataja Ostha roga,</i> <sup>[86]</sup> <i>Kaphaja Ostha Roga</i> <sup>[85, 86]</sup> <i>Galasundhika</i> <sup>[87]</sup> <i>Sheetada</i> <sup>[86]</sup> <i>Danta Besta</i> <sup>[86]</sup> <i>Soushira</i> <sup>[88, 36]</sup> <i>Upakusha</i> <sup>[36]</sup> <i>Upajihwa</i> <sup>[83]</sup> <i>Adhimamsa</i> <sup>[89]</sup> <i>Acute (new) Jihwa Alasa</i> <sup>[87]</sup> <i>Danta Puppataka</i> <sup>[86]</sup> <i>Krimi Danta</i> <sup>[84]</sup> <i>Gala Sundhika and Adhrusha</i> <sup>[87]</sup> <i>Vataja Mukha paka</i> <sup>[90, 91]</sup>
	<b>Siro/Kapala-Roga</b>	<i>Samanya Siro Roga</i> <sup>[95]</sup> <i>Vataja Siro Roga</i> <sup>[96]</sup> <i>Pittaja</i> <sup>[96]</sup> <i>Kaphaja</i> <sup>[59]</sup> <i>Raktaja Siro Roga</i> <sup>[96]</sup> <i>Krimija-Siroroga</i> <sup>[97]</sup> <i>Kshayaja-Siroroga</i> <sup>[97]</sup> <i>Suryavarta, Anantabata, Ardhavedaka</i> <sup>[58, 98]</sup> <i>Sankhaka</i> <sup>[98]</sup> <i>Darunaka</i> <sup>[42]</sup> <i>Khalita and Palita</i> <sup>[41]</sup>

### Rakta Mokshana (Table 8)

*Rakta-Mokshana* is considered as the *Ardha chikitsa* in *Shalya-tantra*. In this process the aggravated *Rakta* or vitiated *Rakta* is let out of the lesion. This procedure should be applied within sixteen to seventy years of age <sup>[99]</sup>. It is done through *Jalauka* (leech), *Alabu*, *Prachhana-karma* and *Shringa* <sup>[100]</sup> etc. In *Raktaja*, *Pittaja*, *Kaphaja*, *Kapha-Raktaja* and *Tridoshaja Urdhwajatrugata Roga*, *Mukhagata*, *Netraroga*, *Siroroga* <sup>[99]</sup>, it is considered as one of the essential treatment protocol. In *Siro-Kapalagata Roga*, it is an effective treatment. Prior to *Siraveda*, the *Yantrana-Bidhi* must be followed, to engorge the veins of oral cavity and head, to identify appropriate vein and to carried out proper vein puncture <sup>[101]</sup>. The *Matra* of *Raktamokshana* is one *Prastha* <sup>[102]</sup>. In *Paschat karma*, application of *Raktastambhaka* is recommended. For *Raktastambhaka* purpose tying of tourniquet as mechanical pressure or *Sandhana* (application of tight bandage with medicated paste), *Skandana* (coagulation by application of *Sheeta dravya*), *Dahana* (cauterization) and *Pachana* (application of *Bhasma*)<sup>[103]</sup> are recommended according to their

need. Another puncture may be done 3-4 *Angula* above the first puncture point to cease the bleeding. The appropriate diet must be followed until the *Dosha* is balanced [102].

**Specific indication of Raktamokshana with their Specific Yoga in Shalaky Tantra (Table 8)**

**Netra-Roga-** There are fifteen types of eye diseases, which are *Bedhana Sadhya*. Those are *Puyalasa, Siratpata, Siraharsha, Sasofa* and *Asofa Akshipaka, Anyotavata, Vataparyaya, Vata, Pitta, Kapha, Raktaja* type of *Abhisyanda* and *Adhimantha*[104]. *Jalaukavacharana* is indicated in *Pakshmosata* over the lid margin at the lash-root [71], in *Savrana Sukla*[111], *Pillaroga* [112] and in *Timira roga* associated with *Raaga*[113].

**Karna Roga-** In functionally damaged ear or in *Badhirya* (loss of hearing), *Siraveda* is done near ear[24]. In *Raktaja Karnasoola*, if *Shoola* is not subsiding then *Siraveda* is performed[114]. In *Utpata (Karna Paali Roga)*, *Jalaukavacharana* followed by *Sheetala Oushadha lepa* is indicated[77].

**Kantha-Roga-** In *Pittaja Rohini, Rakta visravana* is done by *Lekhana karma* followed by *Pratisarana*[82]. In *Vataja* and *Kaphaja Galaganda, Swedana* followed by *Raktavisravana* with *Upanaha karma* is indicated.

**Mukha-Roga-** Frequent *Rakta visravana* is advised in *Mukha, Dantamoola* and *Kantha roga*[115]. In *Sheetada, Raktamokshana* is recommended followed by *Gandusha*[86]. In *Dantabesta, Raktamokshana* followed by *Pratisarana* is indicated[86]. In *Upajihwa, Raktasravana* is done with *Anguli-Yantra* followed by *Pratisarana* with *Javakshara*[116].

**Siro-Kapala-Roga-** *Siraveda* is followed in *Samanya Siro Roga Chikitsa*[94]. In *Pittaja Siroroga, Snehana* followed by *Siraveda*[96] and in *Arunshika, Jalaukavacharana* is recommended[96]. And in *Darunaka, Siraveda* is recommended at *Lalata Pradesha* (forehead). [40].

**Table 8- Rakta Mokshyana**

Name of Procedure	Roga Adhithana/ Gata Roga	Name of Disease or Procedure
<b>Rakta Mokshyana</b>	<b>Netra- Eye</b>	<i>Puyalasa, Siratpata, Siraharsha, Sasofa</i> and <i>Asofa Akshipaka, Anyotavata, Vataparyaya, Vata, Pitta, Kapha, Raktaja</i> type of <i>Abhisyanda</i> and <i>Adhimantha</i> [104] <i>Arjuna</i> [105] <i>Ajakajata</i> [68] <i>Sasofa, Asofa Akshipaka</i> [53, 17] <i>Timira</i> and <i>Yapya Timira</i> [62, 106] <i>Vataja Abhisyanda and Adhimantha</i> [46] <i>Pittaja Abhisyanda and Adhimantha</i> [107] <i>Kaphaja Abhisyanda and Adhimantha</i> [108] <i>Raktaja Abhisyanda and Adhimantha</i> [47] <i>Puyalasa</i> [109, 110] <i>Jalaukavacharana</i> is indicated in <i>Pakshmosata</i> over the lid margin at the lash-root [71] <i>Savrana sukla</i> [111] <i>Pillaroga</i> [112] <i>Timira</i> associated with <i>Raaga</i> [113]
	<b>Karna- Ear</b>	In functionally damaged ear or in <i>Badhirya</i> (loss of hearing), <i>Siraveda</i> is done near ear[24] <i>Raktaja Karnasoola</i> [114] <i>Utpata (Karna Paali Roga)</i> [77]
	<b>Nasa-Roga</b>	<i>Nasapaka</i> [30]
	<b>Kantha-Roga</b>	<i>Rohini, Eka-Vrinda, Kantha-Saluka</i> [34] <i>Pittaja Rohini</i> [82] <i>Vataja</i> and <i>Kaphaja Galaganda, Medoja-Galaganda Siraveda</i> [82]



	<b>Mukha-Roga</b>	<i>Mukha, Dantamoola and Kantha roga</i> <sup>[115]</sup> <i>Pittaja, Raktaja, Abhighataja Otha Roga</i> <sup>[86]</sup> <i>Krimi Danta</i> <sup>[84]</sup> <i>Soushira</i> <sup>[86]</sup> <i>Upakusha</i> <sup>[36]</sup> <i>Sheetada</i> <sup>[86]</sup> <i>Dantabesta</i> <sup>[86]</sup> <i>Upajihwa</i> <sup>[116]</sup>
	<b>Siro/Kapala-Roga</b>	<i>Samanya Siro Roga Chikitsa</i> <sup>[94]</sup> <i>Pittaja Siroroga</i> <sup>[96]</sup> <i>Arunshika</i> <sup>[96]</sup> <i>Suryavarta, Anantabata, Ardhavavedaka</i> <sup>[57]</sup> <i>Indralupta</i> <sup>[40]</sup> <i>Darunaka-at Lalata Pradesha (Forehead).</i> <sup>[40]</sup>

**General Facts on Panchakarma and Disease of Urdhwajatru-** *Snehana* and *Swedana* are done as the *Poorva karma* of *Panchakarma* and *Karnapoorana* except *Jalaukavacharana*. *Tila Taila Sechana* is indicated as post-operative procedure in *Sandhana-Karma* of *Nasa, Karna* and *Ostha*<sup>[117]</sup>. In chronic diseases, *Sodhana* produces better result as compared to *Shamana Chikitsa*. *Raktamokshana* is one of the best treatment modality in *Rakta-Avarana*. *Deha Sodhana* that is *Vamana* and *Virechana Karma* is indicated prior to *Mudhni Taila*<sup>[118]</sup>. *Kaya Sodhana* or *Siro Sodhana* are indicated prior to *Tarpana Karma*. *Ubatana* with *Sirovirechaka-Dhoomapana* are indicated after *Tarpana* procedure<sup>[119]</sup>.

## DISCUSSION

The term “*Panchakarma*” includes the *Vamana, Virechana, Nashya, Basti* and *Raktamokshana*. The *Karmukata* or mechanisms of action of the *Panchakarma* therapy are explained below.

### Mechanism of Action

#### Pradhana Karma

*Vamana, Virechana, Basti, Nashya, Raktamokshana* are applied as *Pradhanakarma* in Ayurved. In practice the patient, who undergoes *Panchakarma* or *Sodhana Chikitsa* as *Pradhana karma* or as *Poorvakarma* shows better result than the patient treated without *Sodhanakarma*. The disease treated with *Panchakarma* or *Sodhana Chikitsa* as *Pradhana karma* or as *Poorvakarma*, never reoccurs and show better result than the patient treated without *Sodhana Karma*. <sup>[5,6]</sup> *Panchakarma* is nothing but the *Sodhana Chikitsa*, as it removes the impurities out of the body. It clears the blocked channels of body and cleans *Indriya*<sup>[2]</sup>. From these statements we can conclude that *Panchakarma* therapy detoxify the body and provides a platform for effective drug absorption and action.

**Vamana and Virechana**<sup>[10]</sup>- Drugs, which are *Ushna, Tikshna, Sukshma, Vyavayi* and *Vikashi*, by virtue of their potency, they reach the *Hridaya* (heart) and

circulated or distributed all over through the Arteries or vessels. They liquefy adhere morbid *Dosha* by the predominance of *Agni Mahabhoota*. Because of the *Tikshna* property, they separate the adhere *Doshas* located in the gross and subtle channels of the entire body. Because of the tendency of the drug to move through subtle channels and to flow, this morbid material reaches the stomach and propelled by *Udana-Vayu*.

*Vamana* protocol mainly adopted to remove the aggravated *Kapha* out of the body and it balances the *Kapha Dosha*. In *Urdhwajatrugata Roga, Vamana Karma* is one of the treatment protocols in case of aggravated *Kaphaja diseases* and in other chronic disease<sup>[43]</sup>. Main function of *Vamana* (emesis) is to reduce the *Kapha* or balancing the *Kapha Dosha*. In this procedure the *Dosha* that is *Kapha, Pitta* and *Vata* expelled out of the body respectively. It clears the blocked channels of *Siro* and *Indriya*.<sup>[2]</sup> Because of the specific actions of moving upward, the predominant *Agni* and *Vayu Mahabhoota*, the morbid materials are expelled out through the oral route.

*Virechana* alleviates the *Pitta* and also balances it. There is a chance of electrolytic imbalance because of the induced emesis or purgation. However, it usually does not occur as the *Poorvakarma* of those procedures involved in *Snehana (Sneha pana)*. It clears the blocked channels of body and cleans *Indriya*<sup>[2]</sup>. The predominance of the *Prithvi* and *Jala Mahabhoota* and because of their specific actions, they move downwards to expel the morbid materials through the anus. The purgative or laxative drug induces low grade inflammation of the small and large intestine to promote accumulation of water, electrolytes and stimulate intestinal motility. Likewise the *Virechana Dravya* also causes irritation and inflammation of intestinal mucosa. Thus the mucosal permeability changes and those substances come out to the lumen. The induced inflammation facilitates quick absorption

of active principles of the drug in early stage. Later on it facilitate the excretion of the morbid matters through the mucosa of gut. It is possible only because of inflammation increases the permeability of the capillaries, which in turn allow the absorption as well as excretion of such substances<sup>[120]</sup>.

**Basti-** *Basti* is a procedure used to alleviate and balance *Vata Dosha*. It also stimulates the enteric nervous system, provides nutrition and strengthen the nerves. *Niruha Basti*, increases the *Jatharagni*, memory, voice, cures all types of diseases and expelled the vitiated *Tridosha* out of the body. The *Anuvasana Basti* improves *Bala*, *Varna*, *Virya*, *Jatharagni* and promotes a proper health. In patients with improper functioning *Indriya* (senses), it provides effective results. The *Basti dravya* reaches the *Nabhi*, *Kati*, *Parswa-pradesha*, large and small intestine, there it churns the accumulated *Dosha*, *Mala*, spreads the unctuousness all over the body and comes out along with the *Purisha* and *Dosha*<sup>[121]</sup>.

The Sodium ion ( $\text{Na}^+$ ) present in the *Basti Dravya* in the form of *Saindhava Lavana* reach the colon and absorbed through the  $\text{Na}^+$  channel. The drug *Madhu* is the best among the drug vehicles<sup>[122]</sup>. The *Sneha* present in the *Basti Dravya*, destroy the compact *Mala*, and removes the obstruction in the channels<sup>[2]</sup>. The *Sneha* increases the permeability of cell membrane and become helpful in eliminating the *Dosha* and *Mala*. *Basti Dravya* provides enteral nutrition. Enteral nutrition is the preferred route because it sustains the digestive, absorptive and immunologic barrier functions of the GIT. There is absorption of usual and unusual substances from the mucosa of the colon under the effect of medication. It eliminates the waste products from the colon. The water-soluble substances may be easily absorbed as the water molecule can move easily in both directions across the mucosal membrane of small and large intestine. The short chain fatty acid also absorbed from the colon, so the fat or lipid of the *Basti dravya* also absorbed<sup>[123]</sup>.

**Nashya-** The used drugs of *Nashya* are in the form of liquid or powder (*Kashaya*, *Swarasa*, *Choorna* and *Dhooma*). The administered drugs reaches the *Shringataka Marma*, distributed in the *Siro* and in the vessels of eye, ear, nose and throat or oral cavity. It scratches the morbid *Dosha* from supra clavicular region completely<sup>[124, 125]</sup>. The drugs absorbed through the nasal mucosa, stimulates the *Nervi Terminalis* and olfactory nerve-endings of the nasal cavity. *Nashya* expels the *Dosha* out of the *Urdhwajatra* through nasal cavity. Thus, alleviate and balance the *Dosha*.

**Raktamokshana-** It balances the *Rakta Dosha*, it also removes the *Avarana*, balance the *Tridosha*, helpful in chronic diseases and helpful, where other treatment

failed to cure or reduce the symptom of the disease. This procedure also helps in healing the chronic ulcer or *Vrana*. In *Shalaky tantra* mainly the *Jalauka* (leech therapy) and *Siraveda* technique is considered.

*Raktamokshana* removes the impure blood. It balances the aggravated *Pitta-Dosha* as *Rakta* is the seat of *Pitta-Dosha*. It stimulates the liver and spleen as it reduces their work load. It removes the old and damaged blood cells and stimulates their production. It reduces blood pressure and viscosity, reduces stress, and pain. It is very helpful in chronic pain, in *Avarana*, allergy.

**Jalaukavacharana** is an essential parasurgical procedure in *Shalaky Tantra*. Leech sucks morbid factors out of the pathogenic area. The saliva of leech contains enzyme *Hirudin*, which act like an anticoagulant and diuretic. It also has *Calin*, which prevents blood coagulation. *Eglin*, *hyaluronidase* of Leech saliva act as antithrombin, antitrypsin and antichymotrypsin. Thus the swelling and pain reduces. Leech application induces irritant effect on the lesion, which creates new cellular division and removes dead cell layer. Ultimately result in reduction of local swelling and lichenification. It normalizes and improves the capillary circulation. It also acts as immunomodulant, anti-inflammatory, anti-stress, bactericidal, reduces blood pressure and improves endocellular exchange. Hence it enhances the wound healing. Therefore, it is very helpful in chronic wounds<sup>[126]</sup> and chronic diseases.

## CONCLUSION

*Shalakyatantra* deals with the sense organs of body except the skin. The *Doshik* Imbalance produces the abnormality in those sense organs. In this condition, *Panchakarma* therapy is a choice to eliminate and balance the *Dosha*. After *Dosha* balance, the *Shamana* and *Brihmana Chikitsa* show proper and effective response. Most of the successful *Shalaki* or Ayurveda physician follows this principle. So increasing and mainstreaming the *Panchakarma* procedure in *Shalaky Tantra* will definitely provide an effective and satisfactory result in *Urdhwajatrugata* disorders.

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