

Critical Review of *Lepa Kalpana* w.s.r. to *Shvitrahara* Formulations

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ABSTRACT

Introduction

Drugs in wet form are to be crushed to fine paste form. If the drugs are in dry form then they should be converted in to paste by adding specified in required amount of liquid. This paste is to be applied externally and is known as *Lepa*. *Lepa* are semi-solid preparations intended for external application to the skin or certain mucous membranes for emollient, protective, therapeutic or prophylactic purposes where a degree of occlusion is desired.

Method - The classical texts of Rasashastra and BhaishajyaKalpana has been reviewed for the review of *Lepa Kalpana*. Special reference of *Shvitrahara* formulations has been collected and analyzed.

Discussion-Ayurvedic therapy suggests that *Lepa* should be gently rubbed in an upward or reverse direction of the hairs over the skin to make the action of application more quick and effective. Because of this, the drug enters into the *Romakupa* and further gets absorbed through *Swedavahi Srotas* and *Siramukha* leading to quicker absorption of medicament.

Conclusion

Acharya Sharangadhara has classified the *Lepa Kalpana* based on their therapeutic potentials. *Lepa* can be used in *Shopha*, *Daha*, *Visarpa*, *Dustha Vrana*, *Vyanga*, *Arunshika*, *Darunaka*, *Indralupta*, *Palita*, *Shvitra*, *Siddhma*, *Netraroga*, *Kandu-Dadru*, *VataRakta*, *Shiroroga*, *Udarashula*, *GandaGala*, *Gradhasi*.

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KEYWORDS: *Lepa*, *Kalpana*, *Shvitrahara*, *Vitiligo*

INTRODUCTION

Ayurveda focuses on preventive as well as curative aspects in a comprehensive way. To achieve their fundamental aspects; ancient seers used different natural resources like herbal, mineral, metal and their compound formulations. All these compound formulations were categorized into three based upon their mode of utilization in therapeutics viz. *Antahparimarjana* (drugs for internal administration), *Bahirparimarjana* (drugs for topical application) and *Shastrapranidhana* (surgical treatment).¹ The drugs under *Bahirparimarjana* have their own beneficial effects in comparison to the former category. A number of formulations can be traced out from Ayurvedic classics under this category.

Advantages:

- It can be directly applied at the site of action.
- It can be easily removed if any irritation exists

- Mode of application is easy.
- Easy to dispense.
- Suitable for self-medication.
- Instant effect is expected.
- Can avoid gastro-intestinal incompatibility.

Disadvantages:

- Drugs of larger particle size are not easy to absorb through the skin.
- *Lepa* material should be extremely fine. That are extremely tough drugs like *Rakta Chandana* (*Pterocarpus santalinus* Linn.), *Shweta Chandana* (*Santalum album* Linn.), *Khadira Bark* (*Acacia catechu* Willd.) etc. are very difficult to get powdered.
- Applying certain *Lepas* in presence of *Gomutra* (Cow's urine), *Kanji* (Gruel) etc. may be inconvenient to some individuals.

- Application of *Lepa* restricts patients from free movement, sometimes restricting social interactions.
- Application of *Lepa* (*Mukha Lepa*) gives the person an awkward look.

Method - The classical texts of Rasashastra and BhaishajyaKalpana has been reviewed for the review of *Lepa Kalpana*. Special reference of *Shvitrahara* formulations has been collected and analyzed.

Definition

Drugs in wet form are to be crushed to fine paste form. If the drugs are in dry form then they should be converted in to paste by adding specified in required amount of liquid. This paste is to be applied externally and is known as *Lepa*.²

From pharmaceutical point of view, *Lepa Kalpana* is a form of *Kalka Kalpana*. *Kalka* and *Lepa* both are the same. The purpose for which it is used decides its nomenclature. *Lepa* may be equated with paste or plaster, though these words are not competent to explain *Lepa* in all its aspects elaborately.

Lepa are semi-solid preparations intended for external application to the skin or certain mucous membranes for emollient, protective, therapeutic or prophylactic purposes where a degree of occlusion is desired. They usually consist of solutions or dispersions of one or more medicaments in suitable bases.³

Synonyms: *Lipta, Lepa, Lepana, Alepa*.⁴

Importance of *Lepa Kalpana*

As the fire gets extinguished immediately with the action of water; in similar manner, *Lepa* pacifies the provoked local *Doshas* by *Pralhadana, Shodhana, Sopha Harana*.⁵ Hence, *Lepa* are to be mandatory be preferred in addition to oral drugs while treating skin lesions.

Classification

- In Charaka Samhita different types of *Lepa* have been described. They are divided into two as per its cool and hot effect on skin i.e. (1) *Daha Kruta Lepa*, (2) *Sheeta Kruta Lepa*.⁶
- Acharya Sushruta has described three types of *Lepa* i.e. *Pralepa, Pradeha* and *Alepa*.⁷

Pralepa: This type of *Lepa* possess cooling property (*Shita Guna*), and should be applied in very thin layers, may or may not be dry and indicated in *Pitta Dosh Pradhana Twak Rogas*.⁸

Pradeha: This type of *Lepa* could be applied, with the material which is lukewarm or cold, thick or thin and useful in *Vata* and *Kapha Doshaja Twak Rogas*.⁹ While Acharya Sharangadhara opines that *Pradeha* is always applied in warm conditions and should be

thick. The application should remain moist for a long time.¹⁰

Alepa: The action, thickness etc. of this *Lepa* will be moderate. It is useful in *Rakta* and *Pitta Dosh Pradhana Twak Rogas*.¹¹

- Asthanga Samgraha has given 10 types of *Alepa*:¹²

1. **Snaihika:** Used in *Vatika Shopha*.
2. **Nirvapana:** Used in *Pitta, Visha, Kshara* and *Agnijanya Vranas*.
3. **Prasadana:** Used to *Rakta dushti*.
4. **Sthambhana:** Used for *Raktha Sthambhana*.
5. **Vilayana:** Used in *Kapha* and *Medo* vitiated *Shopha*.
6. **Pachana:** *Lepa* of *Sheeta* and *Ruksha Dravyas* in *Pakva Shopha*.
7. **Peedana:** *Lepa* of *Ruksha* and *Pichila Dravyas*.
8. **Shodhana:** Used for the *Shodana* of *Vranas*.
9. **Ropana:** Used in *Shuddha Vrana*.
10. **Savarnikarana:** Used to regain the normal texture of skin.

Acharya Vagbhata has given different types of *Mukha Lepa* according to seasons.¹³ He explained about three types: *Doshgna, Vishagna* and *Varnya*.¹⁴

- Acharya Sharangadhara has classified the *Lepa Kalpana* based on their therapeutic uses:¹⁵

Doshaghna Lepa: This variety of *Lepa* includes such drugs, which exerts their alleviatory action directly on the aggravated local *Doshas*. eg. *Punarnavadi Lepa*.¹⁶

Vishaghna Lepa: This kind of *Lepa* includes the drugs that nullifies poisons directly at local level after their application. The drugs used in this *Lepa* are potent than those in *Doshaghna Lepa*. eg. *Dashanga Lepa*.¹⁷

Varnya Lepa: This is cosmetic application over the face, which improves colour and complexion. *Chandana, Manjistha, Ushira, Shalmali, Sariva, Masoora* etc. are some of the drugs that are attributed with *Varnya* property. Most of the *Varnya* drugs are *Madhura Rasatmaka* and *Shita, Guru, Snighdha, Mrudu Gunatmaka; Shita Viryatmaka*. They alleviates *Pitta* and *Vata*. Milk, Butter, Ghee, Oil and other unctuous stuffs are used as bases to prepare *Varnya Lepa*. eg. *Mukha Kantikara Lepa*.¹⁸

General Method of Preparation

If the drug used for *Lepa* is fresh, then simple grinding using stone or electrical grinder may be used

to prepare *Lepa*. If it is dried then has to be added with suitable liquid media as a base (*Drava Dravya*). Selection of base is very important in the preparation of *Lepa*.

Bases used in *Lepa Kalpana*

Base for *Lepa Kalpana* is very important; selection of an optimum base for the preparation of *Lepa* is extremely essential as it provides a suitable and easier access to the active principles of the drugs up to the deepest stratum of skin besides their effect over the morbid local *Doshas*. *Gomutra*¹⁹ (Cows urine), *Aja Dugdha*²⁰ (Goat's urine), *Kanji*²¹ (Gruel), *Snuhi Ksheera*²² (Latex of *Euphorbia nerifolia* Linn.), *Arka Ksheera*²³ (Latex of *Calotropis gigantea* Linn.), *Sarshapa Taila*²⁴ (Mustard oil), *Go-pitta*,²⁵ Cow's Blood,²⁶ Goat's urine,²⁷ Elephant's Urine²⁸ etc., materials can be used as bases in *Lepa Kalpana*.

Discussion

Mode of application of *Lepa*

Ayurvedic therapy suggests that *Lepa* should be gently rubbed in an upward or reverse direction of the hairs over the skin to make the action of application more quick and effective. Because of this, the drug enters into the *Romakupa* and further gets absorbed through *Swedavahi Srotas* and *Siramukha* leading to quicker absorption of medicament and desired effects.²⁹ This method of rubbing increases the skin temperature which might be hastening the pilosebaceous uptake and skin permeation of the drug.

Thickness of *Lepa*

Acharya Sharangadhara advocated one fourth, one third and half *Anguli* thickness of application for *Doshaghna*, *Vishaghna* and *Varnya Lepa* respectively.³⁰ One *Angula* is equal 1.95 cm so *Doshaghna*, *Vishaghna* and *Varnya Lepa*'s thickness should be 0.48 cm, 0.65 cm, and 0.97 cm respectively.³¹

While Acharya Sushruta opined that the thickness of *Lepa* application should be equal to the thickness of a buffalo's skin.³² The thickness of buffalo's skin is 4-5 mm approximately. Hence *Lepa* having thickness less than 4-5 mm should be considered as 'Thin *Lepa*' and greater should be considered as 'Thick *Lepa*'.

Acharya Charaka has stated that when *Daha* (rubefacient) action of a drug is expected; the application should be uniform and thick over the effected part. But when *Sheeta* (softening and soothing) action is to be elicited, the application should be thin and uniform over the skin.³³ In fact; this statement interprets the mode of application of a drug as per the requirement and not the properties of the mentioned drugs.

Modern pharmaceuticals have not laid down any such norms. It recommends only a uniform application over the affected area.

Time of Application of *Lepa*

Alepa should not be applied at night nor be allowed to stay after it dries up. Heat of the body comes out through the skin pores at night normally, if medicinal applications are done at night, the skin pores gets blocked and obstruct the transfer of body heat. That is why topical applications should not be done at night.³⁴

Contraindications for application of *Lepa*:³⁵

- *Lepa* should not be followed by another *Lepa*, because the density and compactness of material increases, which causes rise in local temperature, burning sensation and pain.
- If *Lepa* is dried once, should not be reused by mixing it with other solvents.
- Once the *Lepa* is dried, it should be removed and another thin *Lepa* should be applied on that surface without cleaning the surface.

Shelf life of *Lepa*

Lepa Churna of vegetable origin can be preserved for 30 days, if kept in air tight container. If a *Lepa* is made up of mineral or metallic substances, it may not have any expiry period. Hence it depends totally upon the basic composition of the *Lepa*.

Rule 161-B of Drugs and Cosmetics Rule, 1945 said that shelf life period of *Lepa Churna* is 1 year, *Lepa Malahar* is 2 years, and *Lepa Gutti* is 3 years.³⁶ The Gazette of India mentions the Shelf life for *Lepa* as 3 yr.

Uses

Lepa can be used in *Shopha*,³⁷ *Daha*,³⁸ *Visarpa*,³⁹ *Dustha Vrana*,⁴⁰ *Vyanga*,⁴¹ *Arunshika*,⁴² *Darunaka*,⁴³ *Indralupta*,⁴⁴ *Palita*,⁴⁵ *Shvitra*,⁴⁶ *Siddhma*,⁴⁷ *Netraroga*,⁴⁸ *Kandu-Dadru*,⁴⁹ *VataRakta*,⁵⁰ *Shiroroga*,⁵¹ *Udarashula*,⁵² *GandaGala*,⁵³ *Gradhasi*⁵⁴ etc

Examples

1. Apamarga Kshara Yoga *Lepa*⁵⁵
2. Savarnakara *Lepa*⁵⁶
3. Dashanga *Lepa*^{57,58}
4. Doshaghna *Lepa*⁵⁹
5. Mukhakraantiprada *Lepa*⁶⁰
6. Keshavardhaka *Lepa*⁶¹
7. Hastidantamasi *Lepa*⁶²

Shvitrahara formulations in various classics:**(1) Bhavaprakasha:****Table 2.2.1: Shvitrahara formulations in Bhavaprakasha**

Sr No	Formulation	Ref.	Kalpana	No. of Ing.	Names of Ing.	Main Ing.	Base
1	Pathyadi Lepa	B.P.M. 54/54	Lepa	8	Pathya, Karanj, Nisha, Sidhdharth, Avalguja, Saindhava, Vidanga, Gaumutra	Pathya	Gomutra
2	Bakuchyadi Lepa	B.P.M.54/155	Lepa	6	Bakuchi, Haratala, Manhashila, Gunjafala, Chitraka, Gaumutra	Bakuchi	Gomutra
3	Somaraji Churna	B.P.M.54/55	Udvartana	2	Somaraji Churna, Shringvera Rasa	Somaraji Churna	Shringvera Rasa
4	Panchanimbaka Avaleha	B.P.M.54/	Avaleha	12	Nimbapanchaga Churna, Bhringraja Churna, Trifala, Trikatu, Brahmi, Gaukshur, Bhallataka, Chitraka	Nimba	
5	Amritbhallatakai Avaleha	B.P.M.54/77-86	Avaleha	33	Bhallataka, Ghrita, Dugdha, Guduchi, Bilva, Ativisha, Amrita, Bakuchi, Dadrughna, Pichumarda, Trifala, Manjishtha, Trikatu, Yavani, Saindhava etc	Bhallataka	Sharkara, Godugdha
6	Mahabhallataka Avaleha	B.P.M.54/	Avaleha	57	Bhallataka, Guda, Nimba, Gopa, Aruna, Katvi, Trayanti, Trifala, Trikatu, Ghana, Parpata, Avalguja, Ananta etc	Bhallataka	Guda
7	Swambhu Guggalu	B.P.M.54/	Guggalu	4	Shashilekha, Shilajita, Guggalu, Tapyra	Shashilekha	
8	Bibhitaka Twak Kwatha	B.P.M.54/	Kwatha	4	Bibhitaka Twak Kwatha, Malayu Jata, Guda, Avalguja Beeja	Bibhitaka Twak	Jala
9	Dhatri Khadira Kwatha	B.P.M.54/	Kwatha	2	Dhatri, Khadi	Dhatri	Jala
10	Laghumarichyadi Taila	B.P.M.54/111-115	Sneha	16	Maricha, Trivrut, Musta, Haratala, Manhashila, Devadaru, Haridra Dwaya, Gomutra, Sarshapa Taila, Gomaya, Vishala etc	Maricha	Sarshapa Taila
11	Somaraji Ghrita	B.P.M.54/159-161	Sneha	12	Somaraji, Khadira, Patola Moola, Trifala, Trayamana, Duralabha, Katuki, Guduchi, Sarpi	Somaraji	Ghrita

(1) Yogaratakara:

Table 2.2.1: *Shvitrahara* formulations in Yogaratakara

Sr No	Formulation	Ref.	Kalpana	No. of Ing.	Names of ing.	Main ing.	Base
1	<i>Bhallatakavleha</i>	<i>Kushtha:</i> 1-15	<i>Avaleha</i>	50	<i>Nimba, Gopa, Aruna,</i>		
2	<i>Laghumarichyadi Tailam</i>	<i>Kushtha:</i> 1-2	<i>Sneha</i>	14	<i>Maricha, Hartala, Manhashila, Musta, Arka, Trivrita, Shakridarasa</i>		
3	<i>Balyadi Lepa</i>	<i>Kushtha:</i> 4	<i>Lepa</i>	8	<i>Gandhaka, Vidanga, Chita, Bhallataka, Danti, Amaltasa, Nimba Twak, Kanji</i>	<i>Gandhaka</i>	<i>Kanji</i>
4	<i>Khadirambu Yavanna and Malayurasa Saguda</i>	<i>Kushtha:</i> 1					
5	<i>Khadiradi Kashaya</i>	<i>Kushtha:</i> 2	<i>Kwatha</i>	3	<i>Khadira, Amla, Bakuchi</i>	<i>Khadira</i>	<i>Jala</i>
6	<i>Shiladi Lepa</i>	<i>Kushtha:</i> 3	<i>Lepa</i>	3	<i>Manahashila, Apamarga, Khadira Twak</i>	<i>Manahashila</i>	<i>Jala</i>
7	<i>Trifaladi Lepa</i>	<i>Kushtha:</i> 4	<i>Lepa</i>	9	<i>Trifala, Nilini Patra, Lauha Churna, Rasanjana, Shveta Gunja, Danti Bhasma, Tuttha, Markava, Meshidugdha</i>	<i>Trifala</i>	<i>Meshi Dugdha</i>
8	<i>Ayorajadi Lepa</i>	<i>Kushtha:</i> 5	<i>Lepa</i>	6	<i>Ayoraja, Krishna Tila, Rasanjana, Bakuchi, Amla, Bhringraja</i>	<i>Ayoraja</i>	<i>Bhringaraja Swarasa</i>
9	<i>Visha Taila</i>	<i>Kushtha:</i> 1-4	<i>Sneha</i>	17	<i>Visha, Karanja, Haridradwaya, Arka, Tagara, Sarshapa Taila, Gomutra, Vacha, Kushtha, Rakta Chandana etc</i>	<i>Visha</i>	<i>Sarshapa Taila, Gomutra</i>
10	<i>Jyotishmati Taila</i>	<i>Kushtha:</i> 1	<i>Sneha</i>	2	<i>Jyotishmati, Apamarga Ksharodaka</i>	<i>Jyotishmati</i>	<i>Ksharodaka</i>
11	<i>Shashilekha Vati</i>	<i>Kushtha:</i> 1-2	<i>Vati</i>	4	<i>Shuddha Suta, Shuddha Parada, Shuddha Tamra, Bakuchi Kwatha, Madhu</i>	<i>Shudhdha Suta</i>	<i>Bakuchi Kwatha</i>

(1) Sharangadhara Samhita Uttara Tantra 11th Chapter:

Table 2.2.1: Shvitrahara formulations in Sha. Sa. U. 11

Sr No	Formulation	Ref.	Kalpana	No. of Ing.	Name of ingredients	Main. Ing	Base
1.	Swarnapushpi Lepa	Sha. U. 11/40	Lepa	6	Swarnapushpi, Kasisa, Vidanga, Manahashila, Rochana, Saindhava	Swarna Pushpi	Jala
2.	Vayasyadi Lepa	Sha. U. 11/41	Lepa	5	Vayasya, Edgaja, Kushtha, Krushna, Basta Mutra	Vayasya	Basta Mutra
3.	Talaka Lepa	Sha. U. 11/42	Lepa	2	Talaka, Bakuchi, Gomutra	Talaka	Gomutra
4.	Bakuchi Lepa	Sha. U. 11/43	Lepa	8	Bakuchi, Vetasa, Laksha, Kakodumbarika, Kana, Rasanjana, Ayaschurna, Krushna Tila,	Bakuchi	
5.	Gopitta	Sha. U.11/44	Lepa				
6.	Dhatri Khadira Kwatha		Kwatha	2	Dhatri, Khadira		

(1) Chakradatta:

Table 2.2.1: Shvitrahara formulations in Chakradatta

Sr No	Formulation	Ref.	Kalpana	No. of Ing.	Name of Ing.	Main Ing.	Base
1	Vayasyadi Gutika	C.D. 50/66	Gutika	5	Vayasya, Edgaja, Kushtha, Krushna, Basta Mutra	Vayasya	Basta Mutra
2	Putikadi Lepa	C.D. 50/67	Lepa	6	Putika, Arka, Snuhi, Narendra, Saumana Pallava, Gomutra	Putika	Gomutra
3	Gajadicharma Masi Lepa	C.D. 50/68	Lepa	3	Gaja, Chitra Vyaghra Charma, Taila	Gaja	Taila
4	Avalguja Lepa	C.D. 50/69	Lepa	3	Avalguja, Haratala, Gomutra	Avalguja	Gomutra
5	Dhatri Khadira Kwatha	C.D. 50/70	Kwatha	2	Dhatri, Khadir	Dhatri	Jala
6	Avalgujadi Gutika	C.D. 50/71-72	Gutika	2	Gajasy lida, mutra, Kshara, Avalguja	Avalguja	Gaja Mutra
7	Shweta Jayanti Kalka	C.D. 50/73	Kalka	2	Shweta Jayanti Kalka, Godugdha	Jayanti Kalka	Godugdha
8	Panchanimba Churna	C.D. 50/74-81	Churna		Nimba Panchanga, Trifala, Trayushna, Brahmi, Shvadranshta, Arushkar, Agnika, Vidanga, Varahi, Lauhachurna, Amruta, Haridradwaya, Bakuchi, Vyadhughata, Amaltasa, Sharkara		

Conclusion

Acharya Sharangadhara has classified the *Lepa Kalpana* based on their therapeutic potentials. *Lepa* can be used in *Shopha*, *Daha*, *Visarpa*, *Dustha Vrana*, *Vyanga*, *Arunshika*, *Darunaka*, *Indralupta*, *Palita*, *Shvitra*, *Siddhma*, *Netraroga*, *Kandu-Dadru*, *VataRakta*, *Shiroroga*, *Udarashula*, *GandaGala*,

Gradhasi Rule 161-B of Drugs and Cosmetics Rule, 1945 said that shelf life period of *Lepa Churna* is 1 year, *Lepa Malahar* is 2 years, and *Lepa Guti* is 3 years.⁶³ The Gazette of India mentions the Shelf life for *Lepa* as 3 yr.

References:

- [1] Acharya Jadavji Trikamji, editor. Charak Samhita of Agnivesha with Ayurveda Dipika commentary of Chakrapanidatta, Sutra Sthana. Ch.11, Verse. 55, Reprint edition. Varanasi: Chaukhambha Prakashan; 2011.
- [2] Acharya Jadavji Trikamji, editor, Dravyaguna Vigyanam, Chap 2/105, Shree Baidyanath Ayurveda Bhavana Limited, Kolkatta, 1st edition. 1953.
- [3] The Ayurvedic Pharmacopoeia of India, Reprinted 1st ed, Govt. of India: Ministry of Health and Family Welfare; Part II, Vol. I, 2008: Monographs, Pg. 184
- [4] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.1; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013; Pg355
- [5] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Chikitsa Sthana*, 1/15, P.398
- [6] Acharya Jadavji Trikamji, editor. Charak Samhita of Agnivesha with Ayurveda Dipika commentary of Chakrapanidatta, Chikitsa Sthana. Ch.30, Ver.304, Reprint edition. Varanasi: Chaukhambha Prakashan; 2011.
- [7] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/6, P.85
- [8] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/6, P.85
- [9] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/6, P.85
- [10] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.73; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013; Pg362
- [11] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/6, P. 85.
- [12] Vridha Vagbhata, Ashtanga Samgraha (Shashilekha commentary of Indu), Vol-2, Prof. K. R. Shrikantha Murthy (2005), Varanasi, Chaukhambha orientalia, *Uttara sthana*, 30/8.
- [13] Paradkar HS, editor. Astanga Hridaya of Vagbhatta with Sarvangasundra commentary of Arunadatta & Ayurvedarasayana of Hemadri, Sutra sthana. Ch.22, Ver.19-21, 6th ed., Varansi: Chaukhambha Surbharati Prakashan; 2014.
- [14] Ibd 22/14
- [15] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.01; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [16] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.03; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [17] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.06; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [18] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.10; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [19] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with

- Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.17; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [20] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.23; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [21] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.8; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [22] Vridha Vagbhata, Ashtanga Samgraha (Shashilekha commentary of Indu), Vol-2, Prof. K. R. Shrikantha Murthy (2005), Varanasi, Chaukhambha orientalia, *Chikitsa sthana*, 22/23.
- [23] Ibd Chikitsa Sthana 22/23
- [24] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Chikitsa Sthana*, 9/23-24.
- [25] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Chikitsa Sthana*, 9/25-26.
- [26] Prof KR Shrikantha Vridha Vagbhata, Shashilekha commentary of Indu on Ashtanga Samgraha, Vol-2, reprint 2005, Varanasi, Chaukhambha orientalia, *Uttarasthana*, 30/8,
- [27] Acharya Jadavji Trikamji, editor. Charak Samhita of Agnivesha with Ayurveda Dipika commentary of Chakrapanidatta, Chikitsa Sthana. Ch.23, Verse. 70-76, Reprint edition. Varanasi: Chaukhambha Prakashan; 2011.
- [28] Paradkar HS, editor. Astanga Hridaya of Vagbhata with Sarvangasundra commentary of Arunadatta & Ayurvedarasayana of Hemadri, Chikitsa sthana. Ch.20, Ver.14-15, 6th ed., Varansi: Chaukhambha Surbharati Prakashan; 2014.
- [29] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/4,
- [30] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.02; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [31] Ahalya S, Shalini T V. A review on *Upanaha*: an Ayurvedic topical application. Int. J. Res. Ayurveda Pharm. 7(5), Sep – Oct 2016.
- [32] Acharya, Yadavji Trikamji & Acharya, Narayana Ram Kavyatirtha, (1998), *Nibandha sangraha* commentary of Dalhana and *Nyayachandrika* Commentary by Sri Gayadasacharya on Sushruta Samhita of Sushruta, reprint 2014, Varanasi, Chaukhambha Sanskrit Samsthan, *Sutra Sthana*, 18/11,
- [33] Acharya Jadavji Trikamji, editor. Charak Samhita of Agnivesha with Ayurveda Dipika commentary of Chakrapanidatta, Chikitsa Sthana. Ch.30, Verse.324-332, Reprint edition. Varanasi: Chaukhambha Prakashan; 2011.
- [34] Prof. KR Shrikantha, Shashilekha commentary of Indu, on Ashtanga Samgraha by Vridha Vagbhata, Reprint 2005 Vol-2, Prof. K. R. Shrikantha Murthy (2005), Varanasi, Chaukhambha orientalia, *Uttara sthana*, 30/10
- [35] Acharya Jadavji Trikamji, editor. Charak Samhita of Agnivesha with Ayurveda Dipika commentary of Chakrapanidatta, Chikitsa Sthana. Ch.21, Verse.98-104, Reprint edition. Varanasi: Chaukhambha Prakashan; 2011.
- [36] Law Relating to Drug and Cosmetics. Act 1940, Rules.1945. Vijay Malik, Eastern Book Company Lucknow.
- [37] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.03; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [38] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap

- 11, Ver.04; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [39] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.4-6; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [40] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.06; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [41] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.12; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [42] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver 16-17; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [43] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.18-19; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [44] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.20-25; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [45] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.26-34; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [46] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.40-44; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [47] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver 45-47; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [48] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.48-49; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [49] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.50-56; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [50] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver60-61; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [51] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.62-70; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [52] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.92; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [53] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.97-100; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [54] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.101-102; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [55] Acharya Sadanada Sharma, Rasa Tarangini, Translated by Shri Kashinatha Shastri, 11th Edition, Reprint 2004, Motilala Banarsidas, New Delhi, 14th Taranga/71.

- [56] Paradkar HS, editor. Astanga Hridaya of Vagbhatta with Sarvangasundra commentary of Arunadatta & Ayurvedarasayana of Hemadri, Chikitsa sthana. Ch.20, Ver.13, 6th ed., Varansi: Chaukhambha Surbharati Prakashan; 2014.
- [57] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.4-6; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [58] Acharya Siddhi nandan Mishra editor Bhaishajya Ratnavali of Sri Govinddas sena Siddhiprada commentary, edition 2015 Visarpadhikara 57/18, Chaukhambha Surbharati Prakashana Varanasi.
- [59] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.3; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013;
- [60] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.9; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [61] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Ver.22-23; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013
- [62] Pt. Parashuram Shastri Vidyasagar editor, Sharangadhara Samhita of Pt. Sharangdhra with Ashamalla Dipika and Gudhartha Dipika commentary of Kashiram, Uttara Khand chap 11, Verse 23-24; 1st ed, Chaukhambha Surbharati Prakashan, Varanasi 2013.
- [63] Law Relating to Drug and Cosmetics. Act 1940, Rules.1945. Vijay Malik, Eastern Book Company Lucknow.

