



Review Article

A CONCEPTUAL ANALYSIS AND IMPORTANCE OF KALKA DRAVYA IN PREPARATION OF NIRUHA BASTI

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ABSTRACT

Basti chikitsa is unique therapeutic procedure of *Panchakarma* (fivefold therapy) used in the management of *Vatavyadhi*. It is also considered as *Ardhachikitsa*. It is important to know the rationality behind the mixing of *Basti* ingredients before administration of *Basti* to the patients. *Niruha Basti* is a mixture of *Makshika* (honey), *Lavana* (salt), *Kwaath* (decoction) *Kalka* (fine paste obtained after wet grinding of the plant material) *Kwaatha* (decoction) and *Avapa dravyas* (additional ingredients). These ingredients are immiscible with each other. The question that comes to our mind is addition of which ingredient makes *Vasti dravya* homogenous mixture? As in principle homogeneity of the whole contents is mandatory before administration of *Basti*. *Kalka* is a form of paste made out of a green drug or a dry drug by rubbing on a stone by adding sufficient quantity of water to make a consistency of bolus. Some opinion that *Kalka* is the drug which gives potency to the whole combination of *Niruha Basti*. *Kalka Dravya* perhaps could act like a catalyst agent which improves the potency of *Basti*. But the primary role of *Kalka dravya* in the *Basti* seems to be to help in mixing both hydrophilic and lipophilic substances to make it a proper emulsion. The emulsion nature of the *basti dravya* has got both cleansing, healing effect. In a way it has got multi-dimensional therapeutic effect. The present article is an attempt to understand the importance of *Kalka dravya* in *Niruha basti*, different combinations of *Kalka* are mentioned in *Brihatrayi* in different *Basti yogas* and possible mechanism of action of *Kalka* in *Niruhabasti* preparation has been theoretically analysed.

INTRODUCTION

The basic contents of *Niruha Basti* are *Makshika*, *Lavana*, *Sneha*, *Kalka*, *Kwatha* and *Avapadravya*. Rationality behind mixing of the contents of the *Niruha vasti* is explained by Acharya Charaka [3] and Kshyapa. *Makshika* poured first as it is being auspicious. *Saindhava* added next to the *Makshika*, *Saindhava* disintegrates by its *Tikshna guna*, it breaks down the *Picchilya* and *Bahula guna* of *Makshika*. *Sneha* and *Kalka* are added and mixed till the mixture becomes homogeneous, “कल्कः संसृज्यते च आशु”

Kalka will ease the *basti pratyagamana*. Finally, *Kashaya* is added to it and mixed well.^[1]

पिण्डो रसपिष्टानां स कल्कः परिकीर्तितः *Kalka* is a drug grinded with some liquid made into a “कल्को दृषदि पेषितः” paste or bolus form.^[2] The consistency of the final product i.e., it should be neither too liquid nor too dry to make a perfect bolus form.

द्रव्यमार्द्रं शिलापिष्टं शुष्कं वा सजलं भवेत् ।
प्रक्षेपावापकल्कास्ते तन्मानं कर्षसंमितम् ॥

A green drug converted into a paste by rubbing it on a stone if the drug is dry add a little quantity of water to make *Kalka*. *Prakshepa*, *Avapa* Both this is the synonym of *Kalka dravya*.^[3] If the herb is fresh and soft, it can be pounded and made into paste easily. If the herb is dry then it has to be soaked in water for some time to allow it to absorb water and make it soft. Then the wet herb is grounded in a mortar and pestle to obtain fine paste.

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Kalka is the *Pradhana dravya* of *Basti*. *Kalka* gives life to *Basti*.

शताहवा कटुका तिक्ता स्निग्धोष्णा श्लेष्मवातजित्
ज्वरनेत्रव्रणान् हन्ति बस्तिकर्माणि शस्यते।

“*Shatahva*” is the most commonly used drug as *Kalka* in *Basti yogas*.^[4]

Putoyavanyadi kalka is mentioned in *Charaka Samhita* and *Ashtanga Hrudaya* is used as common *Kalka dravyas*. *Putoyavanyadi kalka* consist of *Yavani*,

Madanaphal, *Bilwa*, *Kushta*, *Vacha*, *Satahva*, *Musta* and *Pippali*.^[5] Each of these drugs are to be taken in equal quantity i.e., one *Tola*, thus making total quantity of one *Prasrutha*. If *Kalka Dravya* has not been mentioned in *Basti* then *Putoyavanyadi Kalka* can be taken as universal *Kalka*.^[6] It is having *Vata-kaphahara*, *Vatanulomana*, *Malanulomana*, *Deepana*, *Pachana*, *Srotoshodhana* properties.

Table 1: Ingredients of Putoyavanyadi kalka dravya

Name of drug	Botanical Name	Parts used
<i>Puto Yavani</i>	<i>Tachyspermum ammi</i>	Seeds
<i>Madanaphala</i>	<i>Randia Duamtorum</i>	Whole dried fruit
<i>Bilva</i>	<i>Aegle marmaleos</i>	Root
<i>Kushta</i>	<i>Sasuaurea Lappa</i>	Root
<i>Vacha</i>	<i>Acorus calomus</i>	Rhizome
<i>Shatapushpa</i>	<i>Anethum Graveolense</i>	Seeds
<i>Musta</i>	<i>Cypurus rotundus</i>	Tuber
<i>Pippali</i>	<i>Piper longum</i>	Dried seeds

Dose of Kalka

- *Charak* has not mentioned the dose of *Kalka*.^[5]
- *Sushruta* mentions it as one *Prasrita*
- According to *Vridha Vagbhata*, 1/8th of 12 *Prasrita* = 1.5 *Prasrita*
- *Jatukarna*, *Vrinda Madhava*, *Chakrapani* told two *Pala*.^[5]

सर्वेषु चाष्टमो भागः कल्कानां (Su.Ch.38/30)

Kalka should measure eight parts (of the entire quantity of *Basti Dravya*) in *Niruha Vasti*. *Cakradatta* mentioned 100 grams of *Kalka* for *Niruha*. But in our practice we are using 40-50 grams of *Kalka* because more *Kalka* increases the *Sandrata* (viscosity) of the solution and causes dehydration.

Utility of Kalka

- *Kalka* confers viscosity (*Sandrata*) to the *Basti dravya*.
- *Kalka* helps in retention of enema.
- *Basti pratyagamana* (return) *Kala* depends on the quantity of *Kalka* added.

- Prevents *Ayoga* (insufficient action), *Adhmana* (flatulence), and *Upadrava*.
- *Kalka* drug enhances the action of *Kwatha dravya*.^[5]

Kalka used as *Prakshepa dravya* in *Anuvasana Vasti*. *Saindhava* and *Shatahva* may be added to the oil of *Anuvasana* because they facilitate the easily evacuation of *Anuvasana vasti*.^[7] The quantity of powder of *Shatahva* and *Saindhava* to be added to *Anuvasana vasti* is *Uttama* - 6 *Masha*, *Madhyama* - 4 *Masha*, *Avara* - 2 *Masha pramana*.

MATERIAL AND METHODS

1. Conceptual and scientific method of categorization and prioritization of *Kala dravya* used in *Niruha basti karma*.
2. Different combinations of *Kalka* are mentioned in *Brihatrayi* in different *Basti yogas*.
3. *Kalka dravyas* are selected based on *Dosha*, *Dushya*, *Srothas* etc involved in particular *Vyadhi* so their main action is *Samparpti vighatana*.

Table 2: Kalka dravya mentioned in different Niruhabasti of Brihatrayi

S.No	Name of Vasti	Kalka Dravya
Sushruta Samhita Chi.38 chapter		
1.	<i>Shampakadi Niruha Vasti (Su.Chi.38/43-46)</i>	<i>Magadhika Pippali, Musta, Hapusha, Mishi, Shatahva, Priyangu, Vacha, Yasti, Rasanjana.</i>
2.	<i>Guduchyadi Niruha Vasti (Vatahara Vasti) (Su.Chi.38/47-50)</i>	<i>Priyangu, Musta, Shatahva, Vacha, Kustha, Yavani, Bilva (each 1 Tola) Madanaphala ½ Pala</i>
3.	<i>Kushadi Panchamula Niruha Vasti (Su.Chi.38/51-54)</i>	<i>Shringataka, Atmagupta, Kesara, Agar, Chandana, Vidari, Mishi, Manjista, Shyama, Indrayava, Saindhava, Padmaka, and Yasti</i>

4.	<i>Lodhradi Niruha Vasti (Pittahara Vasti) (Su.Chi.38/55-59)</i>	<i>Jivaka, Kakoli, Vrddhi, Yasti, Utpala, Prapoundarika, Jivanti, Meda, Renu, Parusaka, Satavari, Shatahva, Saindhava, Indravyava, Ushira, Padmaka, Kasheru, Sarkara</i>
5.	<i>Bhadranimbadi Niruha Vasti (Kaphahara Vasti) (Su.Chi.38/60-63)</i>	<i>Vaca, Madanaphala, Sarshapa, Saindhava, Kustha, Ela, Pippali, Bilva, Nagara</i>
6.	<i>Dashmuladi Niruha Vasti (Su.Chi.38/64-66)</i>	<i>Musta, Saindhava, Devadaru, Patha, Pippali and Indrayava</i>
7.	<i>Vrshadi Niruha Vasti (Su.Chi.38/67-70)</i>	<i>Madana, Yasti, Vaca, Devadaru, Sarshapa, Pippalimula, Saindhava, Yavani, Misi, Vatsaka</i>
8.	<i>Rasnadi Niruha Vasti (Su.Chi.38/71-76)</i>	<i>Madana fruit, Yastimadhu, Misi, Saindhava, Priyangu Indrayava and Rasanjana</i>
9.	<i>Vata Nashaka Niruha (Su.Chi.38/77)</i>	<i>Saindhava and Trivriith</i>
10.	<i>Pitta Nashaka Niruha (Su.Chi.38/78)</i>	<i>Sugar, Kakolyadi Gana Dravya</i>
11.	<i>Kapha Nashaka Niruha (Su.Chi.38/79)</i>	<i>Pippalyadi Gana Dravya</i>
12.	<i>Rakta Nashaka Niruha (Su.Chi.38/80)</i>	<i>Sugar</i>
13.	<i>Shodhana Vasti (Su.Chi.38/81)</i>	<i>Same Shodhana group of drugs</i>
14.	<i>Lakhana Vasti (Su.Chi.38/82)</i>	<i>Ushakadi Gana Dravya</i>
15.	<i>Brimhana Vasti (Su.Chi.38/83)</i>	<i>Madhura (Kakolyadi Gana Dravya)</i>
16.	<i>Vajikara Vasti (Su.Chi.38/84)</i>	<i>Kapikacchu, Sugar</i>
17.	<i>Picchila Vasti (Su.Chi.38/85-86)</i>	<i>Rakta</i>
18.	<i>Grahi Vasti (Su.Chi.38/87)</i>	<i>Ambastadi Gana Dravya</i>
19.	<i>Utkleshana Vasti (Su.Chi.38/93)</i>	<i>Madhuka, Pippali, Saindhava, Vacha, Hapusha, Madanaphala</i>
20.	<i>Doshahara (Shodhana) Vasti (Su.Chi.38/ 94)</i>	<i>Madanaphala</i>
21.	<i>Shamana Vasti (Su.Chi.38/95)</i>	<i>Madhuka, Musta, Rasanjana</i>
22.	<i>Madhutilika Vasti (Su.Chi.38/96-101)</i>	<i>Shatapushpa ½ Pala</i>
23.	<i>Yuktaratha Vasti (Su.Chi.38/102)</i>	<i>Pippali, Madanaphala</i>
24.	<i>Panchamula Kashaya Vasti (Su.Chi.38/ 104)</i>	<i>Shatahva</i>
25.	<i>Sidda Vasti (Su.Chi.38/105)</i>	<i>Pippali, Yastimadhu</i>
26.	<i>Mustadi Yapana Vasti (Su.Chi.38/106-111)</i>	<i>Shatahva, Priyangu, Yastimadhu, Vatsaka, Rasanjana</i>
	Charaka Samhita, Siddistana	
27.	<i>Stiradi Niruha Vasti (Ch.Si.3/36, 37)</i>	<i>Pippali</i>
28.	<i>Erandamooladi Niruha (Ch.Si.3/38-42)</i>	<i>Shatapushpa, Pippali, Yashtimadhu</i>
29.	<i>Ajamamsa Rasa Prayoga (Ch.Si.3/43)</i>	<i>Madana Phala, Bilwa, Kushtha, Vacha, Pippali, Shatapushpa</i>
30.	<i>Palashabasti Prayoga (Ch.Si.3/44,45)</i>	<i>Vacha, Pippali, Shatapushpa</i>
31.	<i>Yashtyavhadi Niruha (Ch.Si.3/46)</i>	<i>Shatapushpa, Madanphala, Pippali</i>
32.	<i>Chandanadi Niruha (Ch.Si.3/48-52)</i>	<i>Yashtimadhu</i>
33.	<i>Drakshadi Niruha (Ch.Si.3/53-55)</i>	<i>Atmagupta, Yashtimadhu, Godhuma Churna</i>
34.	<i>Koshatakadi Niruha (Ch.Si.3/56-58)</i>	<i>Sarshapa, Madanphala, Kushtha</i>
35.	<i>Patoladi Niruha (Ch.Si.3/58)</i>	<i>Sarshapa, Madanphala, Kushtha</i>
36.	<i>Panchamooladi Niruha (Ch.Si.3/59, 60)</i>	<i>Madanaphala</i>
37.	<i>Rasnadi Niruha (Ch.Si.3/61-64)</i>	<i>Madanaphala, Yashtimadhu, Pippali, Shatapushpa, Vacha</i>
38.	<i>Punarnavadi Niruha (Ch.Si.3/65-68)</i>	<i>Vacha, Shatavha, Kushtha, Yashti, Sarshapa, Pippali, Madanaphala</i>
39.	<i>ChatuhPrasrutika (or) Bhedana Vasti (Ch.Si.8/12)</i>	<i>Hapusha</i>
40.	<i>Panchaprasrutika (Ch.Si.8/8)</i>	<i>Sarshapa</i>
41.	<i>Shat Prasrutika (or) Vidangadi Niruha Vasti (Ch.Si.8/9,10)</i>	<i>Pippali</i>

42.	<i>Sapta Prasrutika (or) Vrishatva Niruha Vasti (Ch.Si.8/11)</i>	<i>Pippali</i>
43.	<i>Mutrakrichrahara Vasti (Ch. Si. 8/13)</i>	<i>Yastimadhu, Kaunti, Magadhika, Sita</i>
44.	<i>Guda dahahara vasti (Ch. Si. 8/16-17)</i>	<i>Trivrith</i>
Yapana Vasti		
45.	<i>Mustadi Yapana Vasti (Ch. Si.12/16-1)</i>	<i>Shatahva, Priyangu, Yastimadhu, Vatsaka, Rasanjana</i>
46.	<i>Eranda Muladi Yapana Vasti (Ch. Si.12/16-2)</i>	<i>Shatahva, Kushta, Musta, Pippali, Hapusha, Bilva, Vacha, Priyangu, Yastimadhu, Vatsaka, Rasanjana, Yavani</i>
47.	<i>Sahacharadya Yapana Vasti (Ch. Si.12/16-3)</i>	<i>Shatahva, Kushta, Musta, Pippali, Hapusha, Bilva, Vacha, Priyangu, Yastimadhu, Vatsaka, Rasanjana, Yavani</i>
48.	<i>Brihatyadi Yapana Vasti (Ch. Si.12/16-4)</i>	<i>Madhuka, Madana, Pippali</i>
49.	<i>Prathama Baladi Yapana Vasti (Ch. Si.12/16-5)</i>	<i>Madhuka, Madana</i>
50.	<i>Dwithiya Baladi Yapana Vasti (Ch. Si.12/16-6)</i>	<i>Madhuka, Madana, Shatapushpa, Kushta, Pippali, Vacha, Vatsaka, Rasanjana, Priyangu, Yavani</i>
51.	<i>Laghupanchmuladi Yapana Vasti (Ch. Si.12/16-8)</i>	<i>Pippali, Madhuka, Madana</i>
52.	<i>Tritiya Baladi Yapana Vasti (Ch. Si.12/16-9)</i>	<i>Madhuka, Madana</i>
53.	<i>Chaturtha Baladi Yapana Vasti (Ch. Si.12/16-10)</i>	<i>Madhuka, Madana</i>
54.	<i>Shaliparnyadi Yapana Vasti (Ch. Si.12/16-11)</i>	<i>Pippali, Madhuka, Utpala</i>
55.	<i>Sthiradi Yapana Vasti (Ch. Si.12/17)</i>	
56.	<i>Tittiradhya Yapana Vasti (Ch. Si.12/18-1)</i>	<i>Shatapushpa, Madhuka, Rasna, Kutaja, Madanaphala, Pippali</i>
57.	<i>Dwi-Panchamuladi Yapana Vasti (Ch. Si.12/18-2)</i>	<i>Pippali, Madhuka, Rasna, Madanaphala</i>
58.	<i>Mayuradhya Yapana Vasti (Ch. Si.12/18-3)</i>	<i>Shatapushpa, Madhuka, Vidari, Madanaphala, Pippali</i>
59.	<i>Godhadya Yapana Vasti (Ch. Si.12/18-5)</i>	<i>Pippali, Madanaphala</i>
60.	<i>Kurmadhya yapana Vasti (Ch. Si.12/18-6)</i>	<i>Ikshuraka, Atmagupta</i>
61.	<i>Go-Vrusadhya Yapana Vasti (Ch. Si.12/18-8)</i>	<i>Ucchata, Ikshuraka, Atmagupta</i>
62.	<i>Dashamuladhya Yapana Vasti (Ch.Si.12/18-9,10)</i>	<i>Shatapushpa, Musta, Hapusha</i>
63.	<i>Madhvadya Yapana Vasti (Ch. Si.12/18-11)</i>	<i>Shatapushpa</i>
64.	<i>Sadya-Ghritadya Yapana Vasti (Ch. Si.12/18-12)</i>	<i>Hapusha</i>
65.	<i>Madhu Tailadhya Yapana Vasti (Ch. Si.12/18-13)</i>	<i>Shatapushpa</i>
66.	<i>Madhu Ghritadya Yapana Vasti I (Ch.Si.12/18-14)</i>	<i>Shatapushpa</i>
67.	<i>Madhu Ghritadya Yapana Vasti II (Ch. Si.12/18-15)</i>	<i>Musta</i>
68.	<i>Suradya yapana Vasti (Ch. Si.12/18-16)</i>	<i>Shatapushpa, Musta</i>
69.	<i>Dwi panchamuladhya Yapana Vasti</i>	<i>Kutaja, Madanaphala, Musta, Patha</i>
Sneha Vasti		
70.	<i>Shatavaryadi Sneha Vasti (Ch.Si.12/19-1)</i>	<i>Jivaka, Rshabhaka, Meda, Maha-meda, Tvak- kshiri (Vamsa-locana), Shrngataka, Madhulika, Madhuka, Uccata, Pippali, seeds of Puskara, Nilotpala, flower of Kadamba, Pundarika and Kesara.</i>
71.	<i>Baldya Sneha Vasti (Ch.Si.12/19-2)</i>	<i>Candana, Madhuka, Madhulika, Tvak-kshiri (Vamsa-locana), Bisa, Mrnala, Nilotpala, Patola, Atma- gupta, Anna-paki (Odana-paki), Tala-mastaka, Kharjura, Mrdvika, Tamalaki,</i>

		Kantakari, Jivaka, Rshabhaka, Kshudra-saha (Mudga-parni), Maha-saha (Masha-parni), Satavari, Meda, Pippali, Hribera, Tvak and Patra.
72.	Sahacharadya Sneha Vasti (Ch.Si.12/19-3)	Bala, Madhuka, Madhuka, Candana, Madhulika, Sariva, Meda, Maha-meda, Kakoli, Kshira-kakoli, Payasya, Aguru, Manjishtha, Vyaghra-nakha, Sati, Sahacara, Sahasra-viryaa (Durva), Varanga (Guda-tvak) and Lodhra,
Astanga Hridaya		
73.	Bala Guduchyadi Vasti (A.H.K. 4/1-3)	Yavani, Madanaphala, Bilva, Kushta, Vacha, Shtahva, Ghana (Musta), Pippali
74.	Dwipanchamula Vasti (A.H.K. 4/4)	Yavani, Madanaphala, Bilva, Kushta, Vacha, Shtahva, Ghana (Musta), Pippali
75.	Balapatolyadi Vasti (A.H.K. 4/5-6)	Priyangu, Krishna, Ghana
76.	Erandamuladi Niruha Vasti (A.H.K. 4/7-10)	Vacha, Shatahva, Hapusha, Priyangu, Yasti, Kana, Vatsaka Beeja, Musta
77.	Yastyahwadi Vasti (A.H.K. 4/11)	Sharkara
78.	Rasnadi Niruha Vasti (Pittahara Vasti) (A.H.K. 4/12-16)	Jivanthi, Medha, Vidari, Veera, Kakoli, Ksheera Kakoli, Kaseruka, Sitopala, Jeevaka, Padmaranu, Prapoundarika, Utpala, Pundarika, Lodhra, Atmagupta, Madhuyasti
79.	Koashataka Niruha Vasti (Kaphahara Vasti) (A.H.K. 4/17-18)	Sarshapa, Kushta, Madana
80.	Madhutailika Vasti (A.H.K. 4/21-25)	Shatapushpa
81.	Chakshushya Vasti (A.H.K. 4/27)	Shatahwa, Yastimadhu
82.	Erandamuladi Yapana vasti (Yuktaratha vasti) (A.H.K. 4/31)	Vacha, Pippali, Madanaphala
83.	Dwipanchamuladi Vasti (A.H.K. 4/34-36)	Patha, Vatsaka
84.	Mustadi Yapana Vasti ((A.H.K. 4/37-42)	Yastimadhu, Mishi, Shyama, Kalingaka, Rasanjana
85.	Ativrishya Yapana Vasti (A.H.K. 4/43-44)	Hapushadi kalka
86.	Mayuraam Vasti (A.H.K. 4/45-46)	Vidari, Kana, Yastimadhu, Shatahwa, Madanaphala
87.	Godadya Vasti (A.H.K. 4/49-52)	Madanaphala, Kana, Saindhava, Souvarcha lavana
88.	Kshara Vasti (Chakradatta)	Shatapushpa

Table 3: Frequency of usage of Kalka dravya used in Niruha Basti

S.No	Name of the drug	Frequency
1	Pippali	34
2	Shatapushpa	26
3	Madanaphala	18
4	Yastimadhu	16
5	Musta	13
6	Vacha	13

Possible mechanism of action of Kalka Dravya

1. Kalka dravyas are selected based on Dosha, Dushya, Kala, Srothas etc involved in particular Vyadhi so their main action is Samparpti vighatana. Kalka Dravya serves the function of Utklesana or Doshaharana or Samshamana drugs (Dravya) are selected according to the necessity and property.^[8]

Table 4: Kalkadravya used based on function of Basti

S.No	Type of Basti	Kalka dravya
1	Utkleshanabasti	Madhuka, Pippali, Saindhava, Vacha, Hapusha
2	Doshaharabasti (Shodhana)	Yastimadhu, Kutajabeeja, Madanaphala, Kanjika, and Gomutra
3	Samshamana	Madhuka, Musta, Rasanjana and Ksheera

2. *Kalka Dravya* is possibly helps in binding both hydrophilic and lipophilic ends of *Basti dravya* and helps in making of a homogenous colloid of both *Sneha dravya* and *Kashaya Dravya*.

These are few finding observed at Dr. BRKR. Govt. Ayurvedic Medical College & Hospital on *Kalka dravya* in *Niruha basti* preparation.

Basti Dravya with Kalka

Basti Dravya without adding Kalka



Not following the sequence of Mixing



3. *Kalka* - Main drug which gives potency to the whole combination.^[9]

Kalka gives required thickness to the *Basti* material. Less quantity of *Kalka* makes the *Basti dravya* thin which comes out immediately after administration. Excess quantity of the *Kalka* makes the *Basti dravya* thick (*Sandrata*) and difficult for administration and may not come out within the stipulated time. *Kalka Dravya* acts as a catalyst agent which improves the potency of *Basti*.^[10]

4. *Niruha basti* is used mostly for *Shodhana* purpose. *Kalka dravyas* are having the property to act upon the *Vata stana* i.e., *Pakwashaya* (colon) region and must be acting in the following two possible pathways.

- Some of the *Kalka dravya* helps in expelling the *Doshas* through the anal route due to their *Ushna*, *Teekshna* properties e.g. *Vacha* (*Acorus calamus*), *Kushtha* (*Saussuria lappa*), *Sarshapa* (*Brassica nigra*), *Madanaphala* (*Randia dumetorum*).^[11]
- Some *Kalka dravya* pacify the irritation caused by the *Niruha* drugs while acting on the *Pakwashaya*; e.g.-*Yashtimadhu* (*Glycerrhiza glabra*), *Bilwa* (*Aegle marmelos*), *Trivrutta* (*Operculina*

turpethum), *Vatsaka phala* (*Holarrhena pubescens*).^[11]

5. *Kalka* used in the *Basti dravya* has got irritant property along with other ingredients which may induce colonic distension. The distension stimulates pressure which produces evacuator reflex. It is observed that sign of dehydration occurs if quantity of *Kalka* is increased. The *Kalka* which has got irritant properties along with other ingredients may induce colonic distension. This distension stimulates pressure which produces evacuatory reflex.^[12]

6. *Kalka* may enhance the bio availability of the formulation of *Niruha vasti*. *Niruha basti* is a homogeneous water-in-oil type of emulsion. Action of *Niruha vasti* depends on bio availability of rectally administered drugs.^[13]

7. After adding the *Kalka* to the *Basti* it forms a colloidal solution, it increases the surface area and accelerates the absorption of *Basti*.^[14]

CONCLUSION

In the present conceptual study, an effort has been made to identify various *Kalka dravyas* used in different formulations of *Basti*. The frequency of usage

of *Kalka dravyas* has revealed that the order of usage of *Kalka dravyas* in *Basti* preparation is *Pippali, Shatapushpa, Madana phala, Yasti, Musta* and *Vacha*.

- *Basti* formulation – A colloid system, a general but more appropriate as it contains, *Makshika, Lavana, Sneha, Kalka, Kashaya* and *Avapa dravyas*.
- A stabilizing agent is required to suspend all ingredients of formulation/*Kalpana* homogeneously.
- Uniform distribution of drugs provides maximum absorption to the lumen of intestine.
- *Kalka* provides a more viscosity which helps in long time retention of drugs into the intestines.
- After adding the *Kalka* to the *Basti* it forms a colloidal solution, it increases the surface area and accelerates the absorption of *Basti*.

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