



Review Article

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Conceptual study of Vishnukranti Kalka in the management of Parinama shula

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ABSTRACT

Parinama shula is a disease of *Annavaha Srotas* characterized by pain during digestion of food, predominantly disturbing the daily life. This arise because of the faulty diet and habits. *Parinama shula* is a *Tridoshaja vyadhi* and out of *tridosha*, *Vata dosha* is most powerful and omnipotent and mobiliser of other *dosha*. Aggravated *Vata* either gets *Avarana* by *Kapha*, *Pitta* or combines with *Kapha pitta* to produce *Shula* in the abdominal region. Pain in *Parinama shula* is relieved by vomiting, immediately after intake of food and after complete digestion of food. Seven types of *Parinama shula* are mentioned in Ayurveda texts according to vitiated *dosha*. *Vishnukranti kalka* is mentioned in Sharangadhara Samhita as a treatment for *Parinama shula* and it contains dry powder of the whole plant of *Evolvulus alsinoides* L. with cow ghee, bee honey and common sugar (1:2:2:1 w/w). *Vishnukranti kalka* can comment as a strong and safe medicine with scientific evidences of ulcer healing property by in experimental and clinical studies for *Parinama shula*.

Keywords: *Evolvulus alsinoides* L., *Vishnukranti kalka*, *Parinama shula*.

INTRODUCTION

Parinama shula has direct relation with the process of digestion and a pain dominant disease - wide distribution of age with peak incidence in middle age ^[1]. Many patients with chronic pain undergo a progressive debility caused by *Nidra nasha* - disturbance in sleep, *Aruchi* - loss of appetite, *Shula* - pain and *Arati* - decrease in physical activity. *Parinama shula* is mentioned in later Ayurvedic texts and researches are found to be correlated with peptic ulcer disease in modern medicine ^[2]. Among the diseases in *Annavaha srotas*, *Parinama shula* predominantly disturbs the daily life. Acharya Sushruta described different types of *Shula* in *Uttara-tantra* as a chief complication of "*Gulma*" and a special chapter on *Shula* was firstly described in Madhava Nidana ^[3]. *Parinama shula* is mentioned as a separate disease by Acarya Madhava in 26th chapter of Madhava Nidana; not mentioned in three classical texts (*Vruhatrayi*) or in antient *samhitas*. Later, *Parinama shula* was widely described in the texts: Chakradatta ^[4], Sharangadhara Samhita ^[5], Bhavaprakasha ^[6], Yogaratnakara^[7] and Ayurveda vignana ^[8].

In term *Parinama shula*, the word *Parinama* is derived from the root of "*nam*" which means bend down. Its implication became varied after it is linked with the "*pari*". In Nigantus following different implications can be seen for "*Parinama*": i. alteration or change, ii. alteration of food digestion (*Ahara parinama kala*) in Caraka Sharirasthana, iii. maturities, iv. old age v. evolution ^[9].

In Caraka Samhita the word "*Parinam*" has giving two meanings in *Sharirasthana* (6th Chapter) and *Sutrasthana* (11th Chapter) ^[10]. One is "time" and other one is "digestion". The words "time" and "digestion" have been used to express "*pacana*" or digestive process.

Shula is derived from the root of "*shul*" which means pain. *Shula* has been defined as; i. a sharp piercing pain, as pierced by a sharp nail - Uttarasthana in Susruta samhita ¹¹, ii. Pain as pierced by trident "*trishula sambhawan chainan shulamahu*" - Yogaratnakara *Shula nidana* ^[7], iii. In Ashtahgahrida Nidanasthana, this sharp pain is described as pierced by needle where the patient feel difficulty in breathing due to the pain ^[12]. For all types of "*shula*", "*Vata dosha*" has a predominant role ^[7]. Madhava nidana defines *Parinama shula* as "*Bhukte jeeryati yat shulam tadeva parinamajam*" ^[3] and in Ashtangahrida, treatments said for *Shula* which arises soon after meals, severe pain after meals and severe pain after the digestion ^[12]. When considering about the treatment for *Parinama shula*, *Vishnukranti kalka* is mentioned in Sharangadhara Samhita. It is an effective palatable paste with easy preparation and for the justification of its use as a *Parinama shula* healing medication in Ayurvedic medicine. *Vishnukranti* powder which is the only plant material contain in *Vishnukranti kalka* is also has strong and safe ulcer healing property and it is better to *Parinama shula* patients with *Madhumeha* ^[20].

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Aim: Conceptual study of the role of *Vishnukranti Kalka* in the management of *Parinama shula*

Objectives

- To study the role of vitiation of *dosha* on *Parinama shula*
- To explain the efficacy of *Vishnukranti Kalka* on *Parinama shula* using pharmaco-dynamic properties and other scientific backgrounds

MATERIALS AND METHODS

All collected references regarding *Parinama shula* are from *Laghutrayi*. Concept of using *Vishnukranti Kalka* to manage *Parinama shula* are studied in detail. Collection of all the references and correlation between the data are done logically.

Disease Review

Etiological factors of *Parinama shula*

Parinama shula is a *Tridoshaja vyadhi* and out of *tridosha*, *Vata dosha* is most powerful and omnipotent and mobiliser of other *dosha*. Though, Acharya Madhava has not directly mentioned the causative factors for *Parinama shula*, it is clear that the *Vata dosha* is directly responsible for the disease.

“*Svair nidana prakupito vayu sannihitastada – Kapha pitte samavrutya shulakari bhaved bali*” [3].

Intake of *Ruksha anna* (*Yava, Sushka Saka, Jangala Mamsa*), *Vishamasana* and *Langhana* directly aggravate *Vata dosha*, followed by involvement of *Pitta* and *Kapha*. The word “*sannihitastada*” means nearby. The provoked *Vayu* encompasses *Kapha* and *Pitta* and which denotes proper and all round obstruction. So the word “*Samavrutya*” has been used. *Vayu* gets obstruct the proper functions of *Kapha* and *Pitta* to a great extent. As the *Kapha* and *Pitta* are reduced, the provoked of *Vata* leads to *Shula* and it stated as “*Shulakari bhaved bali*”.

Samprapti of *Parinama shula* (Pathogenesis)

As mentioned by Ayurveda *Kriya sharira* in *Ashtangahrida* sutrasthana, *Amashaya* is the site of *Pacaka Pitta*, *Kledaka Kapha* and *Samana Vata* [12]. *Kledaka Kapha* protects the *Amashaya* from ill effects of *Pacaka Pitta*. *Samana Vata* stimulates the activities of *Pacaka Pitta* and help to retain the activities of *Kledaka Kapha* in normal levels. According to this mechanism, the eroding effect of the *Sleshmadhara kala* (mucous membrane) in *Amashaya* is counteracted by *Kapha*. Among *Tridosha*, *Vayu* is the most power and it encompasses *Kapha* and *Pitta*. Aggravated *Vata* (by the virtue of *Shoshna* property) decreases *Pitta* and *Kapha*. When *Vayu* deranged on accounts of its specific etiological factors, get localized and getting enveloped by *Kapha* and *Pitta* which causes *Vata dosha* more powerful and it produces colicky pain explain as: “*Kapha pitte samavritya Shoolakari Bhaved Bali*”. This colic occurs during the digestion and therefore, it is called *Parinamaja shula*. Pain during digestion is the salient feature of this disease (*Bhukte jeeryati yat shulam tadeva parinamajam*) [3, 7].

It is clear that the *Vata dosha* vitiated factors are the most predominant and most potent etiological factors in the pathogenesis of *Parinama*

shula. Following authentic statements made by Madhava Acarya gives the role of *Kapha* in the occurrence of *Parinama shula*.

Other than that, *Yogaratanakara* explained that “*Balasa prachyutak sthanat pittena saha murchitak*” [7]. Here, *Balasa* means *Sleshma* or *Kapha*. The words *Prachutah* is fallen down from its own place and *Murchitah* means does not do it proper functions. In normal conditions, *Kapha* protects the *Sleshmadhara kala* of *Amashaya* from the eroding effect done by *Pacaka Pitta*. *Kapha* contains *Snigdha, Sheeta, Guru, Manda* and *Picchila* properties. These properties counteract with the *Balasa* or *Kapha* and removes from its own place. Therefore, do not continue the defense mechanism at the site of *Shleshmadhara kala* of *Amashaya* and *Grahani pradesha*. As *Kapha* combines with provoked *Pitta, Vayu* produces *Shula* during the period of digestion.

Sub types of *Parinama shula* with common symptoms

In *Parinama shula*, mainly associate *dosha* are *Vata, Pitta* and *Kapha* and *Dushya* are *Rasa, Rakta* and *Mamsa*. Initially, symptoms present directly relate to *Annavaha srotas* and when the disease become chronic, *Raktavaha sroto dushti* symptoms are also present. The main *Srotas* connected with *Parinama shula* is *Annavaha srotas*. According to *Caraka Chikitsa sthana*, the symptoms of *Annavaha sroto dushti* are *aruchi, adhmata, chardi, ajeerna, udara shula, anna dvesaha* and *pipasa*. However, these symptoms are depend on the *Amshamsha Kalpana* of vitiated *dosha* in the disease. Sub types and symptoms according to vitiated *dosha* of *Parinama shula* are in Table 1.

Table 1: Sub types and symptoms according to vitiated *dosha* of *Parinama shula*

Subtypes	Symptoms
<i>Vataja parinama shula</i>	<i>Adhmata</i> (flatulence of abdomen)
	<i>Atopa</i> (borborygmic)
	<i>Vidvibandha</i> (constipation)
	<i>Mutravibandha</i> (Retention of urine)
	<i>Arati</i> (restlessness)
	<i>Vepana</i> (tremors)
	<i>Ushna shamana</i> (subside after hot fomentation)
<i>Pittaja parinama shula</i>	<i>Sneha shamana</i> (pain subside after fatty diet)
	<i>Thrishna</i> (thirst)
	<i>Daha</i> (burning)
	<i>Katu rasanat vridhhi</i> (pain aggravated by spicy foods)
	<i>Amla rasanat vridhhi</i> (pain aggravated by acidic foods)
	<i>Arati</i> (restlessness)
<i>Kaphaja parinama shula</i>	<i>Sweda</i> (sweating)
	<i>Sheeta shamana</i> (pain subside after cold food)
	<i>Chardi</i> (vomiting)
	<i>Hrillasa</i> (nausea)
	<i>Sammoha</i> (semi-conscious)
	<i>Tikta rasanat shamana</i> (pain subside by bitter taste)
<i>Vata Pittaja parinama shula</i>	<i>Swalpa ruk</i> (mild pain)
	<i>Deergasantati ruk</i> (prolong persisting pain)
	Symptoms depend according to <i>dosha</i>
<i>Vata Kaphaja parinama shula</i>	Symptoms of all three <i>dosha</i> are present
<i>Pitta Kaphaja parinama shula</i>	
<i>Sannipataja parinama shula</i>	

Upashaya and Anupashaya (Relieving and Aggravating factors)

Relieving factors for *Parinama shula* are: immediately after intake food, following vomiting, on completion of *digestion*. Properties of food which help to relieve the pain are: *Vataja Parinama shula* by *Shingdha*, *ushna annapana*, *Pittaja Parinama shula* by *Sita annapana*, and *Kaphaja Parinama shula* by *Katu*, *tikta annapana*. The aggravating factors for *Parinama shula* are: *Pachyamana avastha of ahara pachana*, *Sastika Shali*, *Vrihi odana*, *Pittaja parinama shula* aggravate with *Katu*, *Amla*, *lavana Ahara*.

Upadrava of Parinama shula (Complications)

Ten complications of *Parinama shula* were mentioned in Yogaratnakara as

“*Anaho gavravam chardi bramatrishnajvaroruchir*

Krushatvambalahanish ca vedanatipravartate” [7].

Sadyasadyata of *Parinama shula* has not been clearly mentioned in the texts.

Review of Vishnukranti kalka

Vishnukranti kalka is mentioned in *Madya kandha* of Sharanadhara samhita⁵. *Vishnukranti kalka* contains dry powder of the whole plant of *Evolvulus alsinoides* L. (*E. alsinoides*) with cow ghee, bee honey and common sugar (1:2:2:1 w/w). *E. alsinoides* L. (Family: Convolvulaceae) is a common weed that grows in open and grassy places in tropical and subtropical countries including India and Sri Lanka. In Sri Lanka, this

plant is widely distributed in dry and sandy grounds in low country. It is a perennial herb with small woody-branched roots with simple and alternate leaves. It's stem usually wiry with long spreading hair. Flowers are regular, bisexual, bright blue in colour, solitary or paired with short filiform peduncle. Petals 5, fused into a nearly rotate corolla about 9mm in diameter. Flowers occur throughout the year [13].

The bitter tonic of this plant can be used for the disorders of *Annava srotas* such as dysentery [14] and diarrhea, anti phlogistic, vitiated conditions of *Pitta*, general debility and also a is sovereign remedy in bowel diseases such as ulcers and worms [15].

According to Bhagavandash 1994, the pharmaco-dynamic properties of *Vishnukranti* are *Katu*, *tikta*, *Kashaya rasa*, *Ushna*, *Sara guna*, *Ushna virya* and *Katu vipaka*.

Makshika or Bee's honey is a another ingredient which help to cure the *Chardi*, *Krimi*, *Atisara* and *Vruna shodana* and *Ropana* properties of *Annava srotas*. It has *Madhura* and *Kashaya rasa*, *Ruksha*, *Shita* and *Laghu guna*, *Ushna virya* and *Katu vipaka*.

In cow's ghee, it helps to promote *Agni*, *Vruna ropana*, *Shula hara* or reduce colic pains and cure the diseases with *Vata* and *Pitta* vitiation. Intake of ghee in *Pitta* diseases has been discussed in detail by Chakrapani commentary of Caraka Samhita. Ghee has *Madhura rasa*, *Snigdha* and *Guru guna*, *Shita virya* and *Mmadhura vipaka* [16]. The ingredient sugar is help to cure bleeding diseases and burning sensation. Sugar alleviate *Vata* and *Pitta dosha*. Sugar has *Madhura rasa*, *Guru* and *Snigdha guna*, *Shita virya* and *Madhura vipaka* [17]. Ingredients and their Pharmaco dyanamic properties of *Vishnukranti Kalka* are in Table 2.

Table 2: Ingredients and Pharmaco dyanamic properties of *Vishnukranti Kalka*

Material	Rasa	Guna	Veerya	Vipaka	Other
Vishnukranti	<i>Katu</i> <i>Tikta</i> <i>Kashaya</i>	<i>Sara</i> <i>Ushna</i> <i>Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vata Kapha shamaka</i> , <i>Vruna ropana</i> , <i>Krimigna</i>
Cows'ghee	<i>Madhura</i> <i>Kashaya</i>	<i>Sheeta</i> <i>Guru</i> <i>Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Vata Pitta shamaka</i> <i>Agni deepana</i>
Bees'honey	<i>Madhura</i> <i>Kashaya</i>	<i>Sheeta</i> , <i>Laghu</i> , <i>Rooksha</i> , <i>Vishada</i>	<i>Sheeta</i>	<i>katu</i>	<i>Kapha Pitta shamaka</i> , <i>Vruna ropana</i> , <i>Krimigna</i> , <i>Agni deepana</i>
Sugar	<i>Madhura</i>	<i>Guru</i> , <i>Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Vata Pitta shamaka</i>

DISCUSSION

The knowledge of pathogenic process is important to break the *Sammurchana of Dosha and Dushya*. Along with *Dosha* and *Dushya*, *Samprapti ghatakas* like *Agni*, *Ama*, *Srotas*, etc. also have a role in the manifestation and progress of the disease. For the breakdown of the *Samprapti*, a knowledge about various *Ghatakas* is necessary. Known authentic pharmoco dynamic properties of the medicinal preparations help to cure the diseases.

In *Parinama shula*, pain is the predominant symptom and *Vata dosha* has a major role in all types of *Shula* [7]. *Shula* or the pain in *Parinama shula* arises due to presence of ulcer in the area of duodenum in *Annava srotas* and vitiation of *Samana vata*. *Amlodgara*, *Daha* and *Adhmana* can occur due to *Vidagdha Pitta* in *Amashaya* and obstructs the functions of *Samana Vata*.

Vishnukranti kalka contains dry powder of the whole *Evolvulus alsinoides* L. (*E. alsinoides*) plant, cow's ghee, bee's honey and common sugar. The properties of ingredients help to reduce the symptoms of

Parinama shula. Though *Vishnukranti* has the properties of *Katu*, *Tikta* and *Kashaya rasa* and *Katu vipaka*, *Vishnukranti kalka* reduced the pain in the patients with *Parinama shula as the Madhura, Tikta, Kashaya rasa* and *Madhura vipaka* of *Kalka*. This action also may be due to *Prabhava* and *Vruna ropana* property of *Vishnukranti*, as it helps to relieve the pain due to healing of ulcer/ulcers. Further, *Madhura, Tikta* and *Kashaya rasa* of *Vishnukranti kalka* helps to reduced vitiated *Pacaka Pitta*. In addition, *Katu, Tikta, Kashaya rasa* and *Ushna guna, Ushna veerya* reduce and normalize the functions and amount of *Kapha dosha* [10]. Similarly, vitiated *Kapha* and *Pitta dosha* obstruct the activity of *Samana vayu* and they would alleviate by the *Tikta* and *Kashaya* properties of *Vishnukranti kalka*.

Ama pacana and *Agni deepana* properties of *Vishnukranti kalka* help to reduce *Ama* and help in pain relief [3]. *Sheeta, Snigdha* and *Vata Pitta nashaka* properties of *Vishnukranti kalka* help to reduce the burning pain. *Sara guna* of *Vishnukranti* directly do the *Vata anulomana* and *Mrudu Virecana*. It helps to expel the vitiated *Pitta* from *Annavaha srotas*. The properties: *Madhura rasa, Sheeta guna, Sheeta veerya* and *Madhura vipaka* consist in the materials of *Vishnukranti kalka* help reducing the heart burn quickly.

These potentials of *Vishnukranti kalka* and *Vishnukranti powder* were proven by the scientific evidences related to *Parinama shula*. An experimental study was shown the strong and safe gastroprotective activity of *Vishnukranti powder* [18] and *Vishnukranti kalka* [19] by increasing the pH in gastric juice and its mucus carbohydrate content. *Vishnukranti kalka* has shown strong, dose-depended gastroprotective activity with safe results even in chronic administration [19]. Patients with *Parinama shula* and *Annadrava shula* were treated, following the oral administration of *Vishnukranti kalka* and *Vishnukranti powder* using the doses of 15g and 2.5 g respectively, and results showed statistically significant ulcer healing property. The clinical study of *Vishnukranti kalka* showed a statistically significant effect by reducing the symptoms of *Shula, Daha, Amlodgara, Chardi* and *Adhmana* [20]. *Vishnukranti kalka* possessed a strong oral gastroprotective activity in terms of length and number of macroscopic mucosal haemorrhagic lesions in rats [19]. In Ayurveda, *Parinama shula* corelates with Peptic ulcer disease and according to the modern scientific view, infection caused by *Helicobacter pylori* (*H. pylori*) is one of the causative factors for it. *E. alsinoides* extract showed moderate and promising bactericidal activity against *H. pylori* [21]. According to these scientific findings, it can be concluded that *Vishnukranti kalka* can use to manage the *Parinama shula* as recommended in Ayurveda medicine [7].

CONCLUSION

Vishnukranti kalka has significant gastroprotective activity and can prepare easily using the freely available ingredients and can be used as a successful treatment for *Parinama shula*.

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