



VOLUME 10 ISSUE 1 2019

e ISSN 2350-0204

ijapc

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**Greentree Group
Publishers**



Research Updates on *Varti Kalpana*

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ABSTRACT

Introduction

Varti kalpana is a derivative of *vati kalpana* explained in Ayurvedic Pharmaceutics. These are meant for local application and helps in expelling the accumulated doshas from the applied area. There are different types of *varti* based on its use and indication like *yoni*, *guda*, *shishna*, *netra*, *dhumra*, *nasa* and *vrana varti*.

Methods

An extensive search for published review and research articles on *varti kalpana* was done in both print and digital versions of indexed peer reviewed journals.

Observation and Results

It was found that eleven research works and two review articles have been published in the field of *Varti kalpana*. Among them three were analytical studies, one SOP, one in vitro study, one case report and five clinical studies.

Discussion

It is seen that *Pippalyadi Varti* is effective in *Kaphaja Yoni vyapath*, *Panchavalkaladi* and *Dhatakyadi varti* in *Upaplutha yoni vyapath*, *Nimbadi varti* in *Shweta pradara*, *Peelu taila varti* in *Arshas*, *Shwitrahara varti* in *Shwitra*. The analytical study was about generation of preliminary standards. The trend of research in *Varti kalpana* is seen more in *Prasuti tantra* and *Streeroga* followed by *Shalaky tantra*, *Shalya tantra* speciality. Further clinical study is required on *Pathyadi*, *Darvyadi*, *Chandrodaya* and *Vimala varti* to substantiate its efficacy.

Conclusion

Varti kalpana has a wider application in various branches of ayurveda. Hence an attempt has been made to review different research works on *varti kalpana* and could trace out eleven research works and two review articles that are published. It is also noted that wide field of research area is vacant in *Varti kalpana*.

KEYWORDS *Varti*, *Yoni vyapath*, Research work



Greentree Group Publishers

[Received 19/11/18](#) [Accepted 12/12/18](#) [Published 10/01/19](#)



INTRODUCTION

Varti Kalpana is a derivative of *vati Kalpana*¹. It is defined as a solid medicated preparation, shaped for ready introduction into one of the orifices of the body like rectum, vagina, urethra etc². Based on the site of application and action they are categorized as *Yoni Varti*, *Guda Varti*, *Netra Varti*, *Dhumra Varti*, *Nasa Varti*, *Vrana Varti*, and *Shishna Varti*.³ The *Varti* are co related to suppositories the word derived from latin word Suppositorium which means to be placed underneath⁴.

Mainly two methods are employed for the preparation of *Varti*, they are⁵:

Bhavana method – The fine powders of ingredients are triturated along with liquids mentioned and different sized *Varti* are prepared based on site of insertion.

Paka method – Here, jaggery/sugar is heated along with water till 2-3 thread consistency, then fine powders of ingredients are added little by little, stirred well and different sized *Varti* are prepared.

Though there are lots of references on *Varti* in authentic literatures, there is a need to prove the quality, safety and efficacy of this dosage form in order to standardize them and bring into market. So in this article an attempt has been made to review the research works on *Varti Kalpana* which

highlights the quality, safety and efficacy protocol for the same.

MATERIALS AND METHODS

An extensive search was done for published review articles, research works on *Varti Kalpana* in both print and digital media. Dissertation works done on *Varti Kalpana* at Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan and at IPGT&RA, Jamnagar were also referred.

OBSERVATION AND RESULTS

In total thirteen works were found, out of which three were analytical, one related to generation of SOP (Standard operating procedure), one was combined Analytical and in-vitro study, one case report on Adverse Drug Reaction (ADR), five were clinical studies and two review articles.

ANALYTICAL WORKS

A preliminary Pharmacognostical and Physicochemical works on *Darvyadi yoni Varti*⁶, *Pathyadi yoni Varti*⁷ and *Vimala Varti*⁸ were done where in the raw drugs and final finished products were analysed as per the standard protocol to reveal the quality and genuiness of all the constituents of the individual *Varti*. The results of the above works are tabulated in Table1.



Table 1 Results of Analytical works

PARAMETERS	DARVYADI VARTI ⁶	PATHYADI VARTI ⁷	VIMALA VARTI ⁸
LOSS ON DRYING	71.73%	8.69%	3%
WATER SOLUBLE EXTRACT	23.3%	17.20%	22.41%
ALCOHOL SOLUBLE EXTRACT	8.7%	14.60%	22.1%
ASH VALUE	5.16%	7.88%	18%
Ph	5.0	4.0	7.0
HPTLC	10 spots at 254nm 3 spots at 366nm	9 spots at 254nm 10 spots at 366nm	9 spots at 254nm 6 spots at 366nm

GENERATION OF SOP

The study was done to standardize and validate the method of preparation of *Chandrodaya Varti*⁹. *Varti* was prepared as per the reference of *Sharangadhara samhita*. The procedure involved shodhana of *Manashila* and *Shankanabhi*, other drugs were pounded well and sieved through mesh no.200, and the drugs were levigated

with goat milk for 4 hours and *Varti* were prepared in five batches, in which each batch having fine powder of raw drugs weighing 500gm. An average size of 441.4gm finished product was obtained with a standard deviation of 4.025 (permissible limit) and loss of 11.04%.

The details are shown in Table 2.

Table2: *Chandrodaya Varti* preparation⁹

INGREDIENTS	BATCH					AVG
	I	II	III	IV	V	
Weight of ingredients(g)	500	500	500	500	500	500
Quantity of <i>Bhavana</i> dravya(ml)	1000	1000	1000	1000	1000	1000
Duration of <i>Bhavana</i> (hr.)	4	4	4	4	4	4
Final weight of product(g)	425	445	451	443	445	441.8
Colour of final product	Brown	Brown	Brown	Brown	Brown	Brown

CASE REPORT ON ADR

Shwitrahara Varti is an effective *Kalpana* in management of *Shwitra*¹⁰, which contains *Bakuchi* and *Ashuddha Haratala*. A case of 58yrs old male patient diagnosed with *shwitra* was advised to apply thin layers of *shwitrahara Varti* by giving *bhavana* with *gomutra*. After three consecutive topical applications, patient developed blisters, pain and mild

inflammation which further became extensive, dark red in colour with purple margins and bursted giving watery discharge.

Even though appearance of blisters is a common phenomenon in the treatment of *Shwitra* because of psoralen present in *Bakuchi*, the extensive lesions seen in the present case was considered as ADR. The ADR of *Shwitrahara Varti* was effectively



managed with *Sarjarasa malahara* and other treatments¹¹

ANALYTICAL AND INVITRO STUDY

A Pharmaceutico-analytical study on *Pippalyadi Varti*¹² was done. The *Varti* was prepared by three different methods and in vitro anti fungal study was carried on *Candida Albicans*. Observations of this work is as under

- The *Varti* was prepared in three methods (*Bhavana* method- Sample1, *Paka* method- Sample2, Modified method using starch as a binding agent- Sample 3)
- The analytical parameters showed that sample 2 had least disintegration time.

- The in vitro study against *Candida Albicans* did not show any sensitivity against MTCC strain whereas in patients smear the drug showed sensitivity at a concentration of 4, 8, 16 and 32mg/dl.

CLINICAL STUDIES

➤ Clinical studies were done on *Dhatakyadi Varti*¹³, *Nimbadi Varti*¹⁴, *Pippalyadi Varti*¹⁵ and *Panchavalkaladi Varti*¹⁶ at various institutions. The *Varti* were prepared as per standard formula of suppositories and assessed as per standard protocol. Clinical studies of these *Varti* were conducted to evaluate the efficacy in Yoni vyapath. The results of the works were as shown in Table 3.

Table 3 Results of clinical works

PARAMETERS	DHATAKYADI ¹³ (n=46)	NIMBADI ¹⁴ (n=104)	PIPPALYADI ¹⁵ (n=30)	PANCHA VALKALADI ¹⁶ (n=29)
YONI SRAVA	87.5%	94.57%	83%	76.9%
YONI KANDU	91.07%	93.47%	75%	82.6%
YONI VEDANA	87.88%	96.29%	80.21%	100%
YONI DAHA	84.61%			100%
DOURGANDHYA	90%	97.53%		86.66%
FUNGAL HYPHAE	78.12%		77.26%	66.66%
VULVITIS		86.12%		69.56%
VAGINITIS		90.29%		80%
LOCAL TENDERNESS		90.77%	65.56%	
COMPLETE REMISSION	34.88%	4%		25%
MARKED REMISSION	34.88%	78%	66.8%	33.33%
MODERATE REMISSION	18.60%	18%	16.7%	8.33%
MILD REMISSION	9.30%		16.7%	25%
NO CHANGE	2.32%			8.33%

In another study - A comparative study of *Peelu Taila Varti* and *Kaseesadi Taila Varti*¹⁷ in the management of *Abyantara*

Arshas was done on 15 patients each and observed for changes in signs and symptoms. The results are given in Table 4.



Table 4 Results of Peelu Taila and Kaseesadi Taila *Varti*¹⁷

PARAMETERS	PEELUTAILA VARTI (n=15)	KASEESADI TAILA VARTI (n=15)
BLEEDING PER RECTUM	82.35%	74.12%
SIZE OF PILE MASS	62.13%	45.32%

DISCUSSION

After reviewing the articles, it was seen that the analytical profile of *Darvyadi Varti*, *Pathyadi Varti* and *Vimala Varti* shows that the parameters are within the standard range. *Pippalyadi Varti* is effective in *Kaphaja Yoni Vyapath*, *Panchavalkaladi* and *Dhatakyadi Varti* in *Upapluta yoni Vyapath*, *Nimbadi Varti* in *Shwetapradara*, *Peelu taila Varti* in *Arshas*. The trend of research in *Varti Kalpana* is seen more in *Prasuti tantra* and *Streeroga* speciality followed by *Shalakyia tantra* speciality and *Shalya tantra* speciality. A further clinical study is required on *Darvyadi*, *Pathyadi*, *Vimala*, and *chandrodaya Varti* to substantiate their efficacy.

In a review article on Ayurvedic suppositories (*Varti Kalpana*)¹⁸, there are around 18 different *Varti* mentioned like *Pipplayadi yoni Varti*, *Shyamaphaladi guda Varti*, *Shodana vrana Varti*, *Sukhavati netra Varti*, *Nadivrana nashaka Varti*, *Kamsyadi Varti*, *Naktamaladi Varti* etc, there are also numerous other *Varti kalpana* found in authentic literatures. Out of these, research work is available only for

Pippalyadi yoni Varti thus giving a scope for research on other *Varti* mentioned.

CONCLUSION

Varti Kalpana has a wider application in various branches of ayurveda. All the above works show that a standard protocol is being followed in its preparation and were assessed for its quality, safety and efficacy. There might be other works which are yet to be published or are unpublished and apart from the above mentioned *Varti*, numerous other *Varti* are available in authentic literatures of Ayurveda. This gives a vast scope for researches in Standardisation, Development of SOP, Analytical, Experimental and Clinical studies of *Varti Kalpana*.



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