



Case Study

KANDUGHNA GANA VARTI IN VULVO VAGINAL CANDIDIASIS - A CASE SERIES

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ABSTRACT

Vulvovaginal candidiasis is an infection caused by yeast like micro organisms called candida albicans. It is the second most common cause of vaginitis affecting women of reproductive age group. It is most distressing and irritating to women, hampers their day to day life and makes them irritable, depressed, anxious and disturbs their interpersonal relationships including marital life. In vulvovaginal candidiasis patients complain of vaginal discharge with intense vulvovaginal pruritus. The pruritus is out of proportion to the discharge. The symptoms of vulvovaginal candidiasis appear similar to the symptoms of *Slaishmiki yoni vyapath* mentioned in Ayurvedic classics. It is due to the vitiation of *Kapha* caused by usage of *Abishyandi aharas* and has symptoms like *Pichila yonisrava*, *Kandu*, *Alpa vedhana* or *Avedhana* in *Yoni*. Topical treatments have great importance in the treatment of several gynecological conditions (*Yoni vyapaths*). *Yoni varti* or vaginal pessary is used to cleanse the vaginal walls and make the local environment more healthy. It acts directly on the vaginal mucosa and enables easier and target specific action. They are also hygroscopic in property and act in accordance with the drugs they contain. *Kandughna gana varti* have *Tiktha*, *Kashaya rasa*, *Laghu*, *Ruksha guna*, *Krimighna*, *Kandughna* and *Kaphaghna* properties and all the ingredients have potent antifungal action also. This facilitates faster absorption of drugs through vaginal mucosa and relieves the symptoms more quickly. A pilot study was conducted in 5 cases to assess the effect of *Kandughna gana varti* in vulvovaginal candidiasis. It was found to be effective in vaginal discharge and vulvovaginal pruritus.

INTRODUCTION

Vulvovaginal candidiasis is one of the most common mucosal infection of the lower female genital tract caused by *Candida* species, most commonly *Candida albicans*. *Candida albicans* is a member of normal vaginal microflora, it can become an opportunistic pathogen and causative agent of Vulvovaginal candidiasis when the body lacks its protective immunity. Approximately 70-75% of women in childbearing age will have atleast one episode of vulvovaginal candidiasis in their life time^[1].

In vulvovaginal candidiasis, patients complain of vaginal discharge with intense vulvo vaginal pruritus. The pruritus is most often not related to amount of discharge. The discharge is thick curdy white and cheesy, forming plaques which are tightly adherent to the vaginal wall^[2]. The symptoms of vulvovaginal candidiasis can be correlated with the symptoms of *Slaishmiki yoni vyapath*, which is one among the *Vimsati yoni vyapath* mentioned in ayurvedic classics. In *Slaishmiki yoni vyapath*, vitiated *Kapha* reaches the *Yoni Pradesa* and causes *Pichila*, *Seeta*, *Pandu varna yonisrava* (slimy mucoid discharge), *Yoni kandu* (itching in vulva and vagina) and *Alpa vedhana* or *Avedhana* in *Yoni*^[3,4].

As this is a *Kaphaja vyadhi*, *Kaphahara chikitsa* with *Ruksha* and *Ushna guna dravyas* are helpful. *Sthanika chikitsa* (local treatment) also has an important role in the management of *Slaishmiki yoni vyapath*. *Yoni varti* is one among such treatment

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modality where medicines are prepared in *Varti* form and applied intravaginally. Vagina acts as a potential route of drug administration for local and systemic absorption of variety of therapeutic agents. Vaginal wall absorbs water, electrolytes and substances of low molecular weight. This property of vagina is utilized when therapeutic agents are administered locally^[5]. *Kandughna gana yoni varti* includes 10 drugs namely, *Chandhana, Nalada, Aragwadha, Karanja, Nimba, Madhuka, Sarshapa, Kutaja, Daruharidra* and *Musta*^[6]. *Krimighna, Kandughna* and *Kaphaghna* properties of *Kandughna gana* combats the *Lakshanas* of *Slaishmiki yonivyapath* and candidiasis effectively.

A pilot study was conducted with 5 patients in the Government Ayurveda College, Tripunithura to study the effect of *Kandughna gana yoni varti* in Vulvovaginal candidiasis.

METHODOLOGY

Name and details of the drug: *Kandughna gana varti*

Table 1: Name and Details of the Drug

S.No	Drug	Botanical name	Family
1	<i>Chandana</i>	<i>Santalum album</i>	Santalaceae
2	<i>Nalada</i>	<i>Nardostachys jatamamsi</i>	Valerianaceae
3	<i>Kritamala</i>	<i>Cassia fistula</i>	Caesalpinaceae
4	<i>Nakthamala</i>	<i>Pongamia pinnata</i>	Fabaceae
5	<i>Nimba</i>	<i>Azadirachta indica</i>	Meliaceae
6	<i>Kutaja</i>	<i>Holarrhena antidysentrica</i>	Apocyanaceae
7	<i>Sarshapa</i>	<i>Brassica nigra</i>	Cruciferae
8	<i>Madhuka</i>	<i>Glycyrrhiza glabra</i>	Fabaceae
9	<i>Daruharidra</i>	<i>Berberis aristata</i>	Berberidaceae
10	<i>Musta</i>	<i>Cyperus rotundus</i>	Cyperaceae

Route of Administration: Intra vaginally

Duration: 7days

Follow up: Follow up was done after one month

Assessment: Assessment was taken on 0th day, 8th day and follow up on 30th day.

Outcome Variables

Efficacy Parameters

Subjective parameters: Assessed by Likert scale

- Vaginal discharge
- Vulvo vaginal pruritus

Objective parameters

- Wet mount test - KOH Preparation

Table 2: Likert scale

Grade1	Grade 2	Grade 3	Grade 4	Grade 5
Never	Rarely	Sometimes	Often	Always

Table 3: Yeast cell concentration grading in wet mount microscopy

Grade 0	Absent	No yeast elements
Grade 1	Mild	Yeast elements <30
Grade 2	Moderate	Yeast elements 30-60
Grade 3	Severe	Yeast elements >60

Case Series

Case 1: A woman aged 43 years reported at the OPD, complained of whitish discharge per vagina associated with itching. The complaints started gradually 2 months ago, she took some allopathic medicines and got relief. But the symptoms recurred after stopping medication. Her complaints aggravated since 1 week and the discharge was curdy white in colour. On per speculum examination, moderate curdy white discharge present, cervix was healthy and no other abnormalities were noted.

Case 2: A woman aged 25 years reported at the OPD, presenting with complaint of excessive curdy white discharge per vagina associated with itching for past 1 year. She had not taken proper medication and gradually symptoms aggravated. No other systemic illness was present. Per speculum examination revealed moderate discharge, hypertrophied cervix and eroded lower lip.

Case 3: A woman aged 45 years reported at the OPD, complained of excessive curdy white discharge per vagina associated with itching since 7 months. On per speculum examination, thick whitish discharge was present and cervix was healthy.

Case 4: A woman aged 45 years reported at the OPD, complained of curdy white discharge per vagina associated with itching since 1 week. No other systemic illness was present. On per speculum examination, moderate discharge was present and cervix was healthy.

Case 5: A woman aged 40 years reported at the OPD, complained of curdy white discharge per vagina associated with itching since 2 months. No other systemic illness was present. On per speculum examination, moderate discharge was present, cervix was hypertrophied and lower lip was eroded.

Observation and results

Data related to vaginal discharge

Table 4: Percentage distribution on the severity of vaginal discharge

Vaginal discharge	BT		AT		AF	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Never	0	0	0	0	2	40
Rarely	0	0	5	100	3	60
Sometimes	0	0	0	0	0	0
Often	5	100	0	0	0	0
Always	0	0	0	0	0	0
Total	5	100	5	100	5	100

Data related to vulvovaginal pruritus

Table 5: Percentage distribution on the severity of vulvovaginal pruritus

Pruritus	BT		AT		AF	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Never	0	0	3	60	4	80
Rarely	0	0	2	40	1	20
Sometimes	2	40	0	0	0	0
Often	3	60	0	0	0	0
Always	0	0	0	0	0	0
Total	5	100	5	100	5	100

Data related to yeast cell concentration grading

Table 6: Percentage distribution on yeast cell concentration grading

Wet mount test	BT		AT		AF	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Grade 0	0	0	1	20	1	20
Grade 1	1	20	4	80	4	80
Grade 2	4	80	0	0	0	0
Grade 3	0	0	0	0	0	0
Total	5	100	5	100	5	100

Table 7: Assessment of vaginal discharge, vulvovaginal pruritus and yeast cell concentration grading between treatment stages

Parameter	Case 1			Case 2			Case 3			Case 4			Case 5		
	BT	AT	AF												
Vaginal discharge	4	2	2	4	2	1	4	2	1	4	2	2	4	2	2
Vulvovaginal Pruritus	4	2	1	3	1	1	4	2	2	3	1	1	4	1	1
Wet mount	2	1	1	2	1	1	2	1	1	2	1	1	1	0	0

DISCUSSION

Sthanika chikitsa or local treatment helps to relieve local vitiation of *Doshas*. *Yoni varti* is one among the *Sthanika chikitsa*, where medicines are prepared in *Varti* form and applied transvaginally. Vagina not only secretes, but also absorbs water, electrolytes and substances of low molecular weight^[7]. This property of vagina is utilized when therapeutic agents are administered locally. Absorption is believed to occur mainly in the lateral recess of vaginal canal. The topical application of medicines helps to provide better availability and quicker target oriented action. Drugs administered through intravaginal route have a higher bioavailability compared to the oral route as it bypasses the hepatic circulation^[8]. The high vascularity of vaginal wall and the pelvic tissues enables faster absorption of drugs than oral administration. *Rugae* present in vagina increases the surface area of vaginal wall. This also helps in easier absorption of drugs through vaginal route.

Kadughna gana varti is a vaginal pessary made with 10 anti-pruritic drugs. *Yoni varti* acts as a hygroscopic substance, which absorbs discharges and thereby provides quick relief in symptoms. The *Varti* was made in *Tarjani pramana*^[9] (size of index finger), which facilitated maximum contact of *Varti* with the walls of vagina both in terms of length and surface area.

Moreover almost all drugs in *Kandughna gana* have *Tiktha kashaya rasa*. Both *Tiktha* and *Kashaya rasas* have *Laghu*, *Ruksha guna* which are opposite to the qualities of *Kapha*. *Tiktha rasa* also have *Krimighna*, *Kandughna*, *Lekhana*, *Sodhana* and *Kleda meda vasa puya* and *Kapha upasoshana* properties. The *Lekhana*, *Sodhana* and *Upasoshana* properties, *Tiktha rasa* helps to clear the vagina from its discharges. *Krimighna* property of *Tiktha rasa* inhibits the growth of micro organisms. *Kashaya rasa* is has *Lekhana*, *Soshana*, *Ropana*, *Sthambana* and *Kleda upasoshana* properties. By virtue of *Lekhana*, *Sthambana* and *Upasoshana* properties *Kashaya rasa* also helps to clear the vagina from its discharges. Both *Tiktha* and *Kashaya rasas* are *kaphahara* in property. *Kandu* is one of the cardinal features present in *Slaishmiki* and *Kandu* does not occur without the involvement of *Kapha*. Most of the ingredients of *Kandughna gana* possess *Laghu* and *Ruksha guna*. *Laghu guna* is predominant of *Agni*, *Vayu* and *Akasha mahabhutas*. It is *Kapha samana*, *Lekhana*

and *Ropana* in action. *Ruksha guna* has the predominance of *Vayu* and *Agni*. It is also *Kapha Samana*, *Soshana* and *Sthambhana* in action^[10]. By virtue of these properties, this may also pacify vitiated *Kapha* and *Kleda*. Out of the 10 ingredients of *Kandughna gana*, 7 are of *Sita veerya*. *Sita veerya* is *Pitha samaka* in nature. This may have reduced the inflammatory changes present in candidiasis. *Sita veerya* also causes *Sthambhana* and in this way it restrains *Srava*. 8 drugs of the group have *Katu vipaka* and 2 have *Madhura vipaka*. *Katu vipaka* is *Kaphahara* in property and thereby it reduces *Kandu* and *Srava*. Majority of drugs in this *Gana* have *Kapha pitha samaka* property. *Krimighna*, *Kandughna* and *Kaphaghna* properties of *Kandughna gana* combats the *Lakshanas* of *Slaishmiki yoni vyapath* and candidiasis effectively.

Antimicrobial and antifungal property of most of drugs of *Kandughna gana* has been studied. Aqueous extract of leaf and stem of *Chandana* exhibits antimicrobial activity. *Santalum album* oil has demonstrated potent activity against many fungal dermatophytes and yeasts including *Candida albicans*^[11]. Hydroalcohol extracts of *Aragwadha* shows significant antifungal activities^[12]. Ethanolic root extract of *Jatamansi* showed antimicrobial activity^[13]. The essential oil from *Nakthamala* have mild antifungal activity. Chemical Constituents of *Nimba*, such as nimbidin and nimbolide possess antifungal property^[14]. Hexane and ethanol present in *Neem* are potent anticandidal agents^[15]. The alkaloid holoriffine 24-ol from the stem bark of *Kutaja* has antifungal activity^[16]. Aqueous extracts of *Sarshapa* contains antifungal constituents for the control of pathogenic fungi^[17]. Ethanolic extract of *Madhuka* has got very good anti mycotic activity against *Candida albicans*^[18]. Plant extract of *Daruharidra* exhibits antimicrobial activity against *Candida albicans*^[19]. Rhizomes and tubers of *Musta* has antifungal action^[20].

All the 10 drugs in *Kandughna gana* possess antifungal activity, among which 5 drugs are specifically anti-candidal.

CONCLUSION

Yoni varti is one among the *Sthanika chikita* (topical treatment) in which medicines are applied intravaginally. By this, the drugs come into direct contact with vaginal wall facilitating faster and

increased absorption of drugs through vaginal mucosa, so effectiveness obtained within a short period of time. Action of *Varti* depends upon the drugs it contain. The *Tiktha*, *Kashaya rasa*, *Laghu*, *Ruksha guna*, *Krimighna*, *Kandughna* and *kaphaghna* properties and antifungal action of ingredients in *Kandughna gana varti* may have helped in destroying the colonies of candida and reducing the vaginal discharge and vulvar pruritus.

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