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Role of *Nimbadi Yoni Varti* for Management of *Shwetapradar* (Leucorrhoea)

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ABSTRACT

Background: Leucorrhoea is a thick, whitish or yellowish vaginal discharge. There are many causes of leucorrhoea, the usual one being oestrogen. This discharge can keep occurring for years, in which case it becomes more yellow and foul-smelling with increase in amount may due to vaginal infection or STDs. Approximately 40% of women with vaginal symptoms will have some type of vaginitis and it may disappear and reappear from time to time. **Aim:** To evaluate the efficacy of the *Nimbadi Yoni Varti* on *Shwetapradara* (Leucorrhoea). **Materials & Methods:** For the clinical study, 58 patients who fulfilled the criteria for selection were included from the O.P.D. of *Stree Roga & Prasooti Tantra*, I.P.G.T. & R.A. Jamnagar. They were treated with *Nimbadi Yoni Varti* (1 *Varti* of 3 gm at bed time) for duration of 7 days and follow up after 1 month. The effect of therapy were assessed on the basis of relief in signs and symptoms for which special scoring pattern was made. **Results:** Out of 58 patients which were treated by *Nimbadi Yoni Varti*, 51 patients (87.93%) got complete remission and 7 patients (12.07%) were found markedly improvement. **Conclusion:** The result shows that *Nimbadi Yoni Varti* is highly effective for the management of *Shwetapradara*, and more convenient with no apparent evidence of complications.

KEYWORDS

Shwetapradara, *Vaginitis*, *Nimbadi Yoni Varti*



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INTRODUCTION

Leucorrhoea is a thick, whitish or yellowish vaginal discharge¹⁻³. This discharge can keep occurring for years, in which case it becomes more yellow and foul-smelling with increase in amount may due to vaginal infection or STDs. The most common causes of vaginitis are Bacterial Vaginitis (BV), candida albicans and trichomonal vaginalis⁴.

Leucorrhoea is difficult condition to treat satisfactorily in view of its uncertain etiologic. Approximately, 40% of women with vaginal symptoms will have some type of vaginitis⁵. It also can be due to vulvovaginitis, chronic cervicitis, cervical dysplasia, malignancy, or due to senile vaginitis. chronic illness, fatigue, malnutrition, emotional disturbances, chronic retroverted uterus, lesions of the vaginal wall and uterine cervix has all been associated with leucorrhoea.⁶

Leucorrhoea is an abnormal excessive vaginal discharge often associated with irritation and pruritus. Concerning the solemnity of the disease it neither causes mortality nor morbidity however it create the some problem in sexual life. But sometimes it can give rise to fear of cancer and of sexually transmitted diseases.⁷

In our ancient science brief description given about conceptual of *Shwetapradara*

(Leucorrhoea) but many systemic and local preparations have been mentioned for the management of *Shwetapradara*. Out of them *Nimbadi Yoni Varti* which converted into modern dosage form was selected for the present clinical study due to *Tridoshashamaka, Stambhana, Shoshana, Samgrahi, Kaphaghna, Kledaghna, Krimighna, Kandughna, Putihara, Vranasodhan, and Vranaropana* property.

AIMS AND OBJECTIVES:

- To evaluate the efficacy of the selected drugs on *Shwetapradara* (Leucorrhoea).

SELECTION OF PATIENTS:

For the clinical study, Patients were selected from the O.P.D. of the department of *Stree Roga & Prasooti Tantra*, I.P.G.T. & R.A. Jamnagar, fulfilling the criteria for selection were included into the study irrespective of caste, religion etc. A detailed history was filled up in specially prepared proforma on Ayurvedic guidelines.

Criteria for selection of patient

Inclusion criteria of patient

- Only married women were taken for the study.
- The patients having clinical signs & symptoms of *Shwetapradara* (Leucorrhoea).



- The patients who satisfied the diagnostic criteria of *Shwetapradara*.

Exclusion criteria of patient

- Unmarried women were excluded.
- Pregnant women were excluded.
- Patients suffering from Tuberculosis, Sexually Transmitted Diseases like VDRL, HIV, Gonorrhoea, etc. and Genital malignancy, Congenital and any other pathologies of reproductive tract were excluded.

Criteria for diagnosis:

- Patients were selected on the basis of wet vaginal smear.
- If any one of Trichomonas Vaginalis &/or Fungal Hyphae &/or pus cells was present in the wet vaginal smear then those patients were registered.

General investigations:

Table 1 Contents of *Nimbadi Yoga*

No.	Drug	Latin Name	Family	Part used
1.	<i>Nimba</i> ⁸	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Leaf
2.	<i>Amalaki</i> ⁹	<i>Emblica officinalis</i> Linn.	Euphorbiaceae	Fruit
3.	<i>Haritaki</i> ¹⁰	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit
4.	<i>Bibhitaki</i> ¹¹	<i>Terminalia bellirica</i> Roxb.	Combretaceae	Fruit
5.	<i>Madhu</i> ¹²	<i>Apis cerana Fabr</i> (source)	Apidae	-
6.	<i>Sphatika</i> ¹³	-	-	-

Preparation of Drugs:

Nimbadi Yoni Varti :

Ref.: *Anubhutayoga*¹⁴

Nimbadi Varti formula was made after many trials from various formulations.

Ingredients:

Table 2

- Routine Hb, T.L.C., D.L.C. & ESR - in all the patients before & after treatment.
- Urine Routine and Microscopic - in all the patients before & after treatment.

Biochemical test:

- VDRL – in all patients before starting of the treatment.
- HIV - if clinical correlation was found.
- R.B.S., F.B.S. & PP₂BS - if required.

Specific investigations:

- Vaginal wet smear and vaginal pH test- in all the patients before & after treatment.
- Vaginal swab culture- if required.
- Ultra sonography for uterine and adnexal study- if required.

Contents of *Nimbadi Yoga* Table 1

Weight: About 3 gm.

Shape: Oviform shape.

Size: About 1.5" x 0.5"

Table 2 Ingredients of *Nimbadi Yoni Varti*

	Ingredients	For 1 tab. of 3 gm.
1.	Dry extracts of <i>Nimba</i> and <i>Triphala</i>	1.5gm
2.	<i>Madhu</i>	0.06ml



3.	<i>Su. Sphatika</i>	0.1gm
4.	Gelatin powder	0.9gm
5.	Glycerin	2.4ml
6.	Distilled water	0.5ml
7.	Propyl Para Ben Sodium Salt	0.01gm
8.	Paraffin Liquid	as lubricant

Method of Research:

Table 3 Posology

Drug	Method	Route	Dose	Duration
<i>Nimbadi Yoga</i>	<i>Yoni Varti</i>	Vaginal	1 tab. of 3gm	7 days

Method of administration of *Yoni Varti*:

- Patient was advised to empty the bladder
- Then asked to lie on her back with thighs flexed and *Yoni Varti* was inserted deep in vagina (Posterior fornix).

Advice:

- To avoid intercourse during the course of treatment.
- To avoid spicy, fried, bakery items and fermented items and over eating.
- To avoid mental stress.
- To take green leafy vegetables, simple food and milk.

Criteria for assessment

Subjective criteria:

- The improvement in the patient was assessed mainly on the basis of relief in the signs and symptoms of the disease. To assess the effect of therapy all the signs and symptoms were given scoring depending upon their severity.

The method adopted in present study is open randomized clinical trial.

The study had a due clearance from the Institutional Ethical Committee.

Total 58 patients were registered in present clinical study.

Treatment protocol: Table: 3

Objective criteria:

- Assessment of the therapy was also carried out by comparing the B.T. and A.T., values of Routine Haematological and Routine & Microscopic Urine investigation.
- **Wet Vaginal smear reading** pattern was not available in any textbook. However, suitable scoring pattern was prepared to assess the effect of therapy as follows:**Table: 4**

Table 4 Wet vaginal smear reading score pattern

1. Based on cellular (Pus cell / Epithelial cell)	
0-5 pus/hpf	0
6-25 pus/hpf	1
26-50 pus/hpf	2
51-100 pus/hpf	3
>100 pus/hpf	4
2. Based on fungal hyphae	
Occasional	0
Few	1
Many	2
Plenty	3
3. Based on Trichomonas vaginalis organism	
No organism seen/field	0
1-5 organisms seen/field	1
5-10 organisms seen/field	2
More than 10 organisms seen/field	3

Criteria for the assessment of overall effect of the therapy:



The total effect of treatment was assessed in the terms of completely cured-- 76-100% relief in the signs and symptoms, moderate improvement--51-75% relief in the signs and symptoms, mild improvement -- 26-50% relief in the signs and symptoms and no change -- <25% changes in the signs and symptoms.

Follow up:

After completion of course patients were advised to report every 15 days for follow up study which was carried out for 1 month. During the follow up study further recurrence in the signs & symptoms were recorded.

OBSERVATION & RESULTS

58 patients of *Shwetapradara* were registered and all completed the course of the treatment with follow up.

In present study among 58 patients, 55.17% patients belonged to age group of 20-30 years. The remaining 36.21% belonged to age group 31-40 years and 8.62% of patients belonged to age group 41-50 years. Education wise distribution of patients shows that 27.59 % patients were educated up to higher secondary while 24.14% patients secondary educated; remaining 22.41% patients were primary educated and 18.97% patients were educated up to graduation while 6.90% were uneducated.

Out of 58 patients the study revealed that the maximum number of patients i.e. 58.62% were belonging to middle class followed by lower middle class 32.76% and upper middle class 8.62%.

According to habitat wise distribution of patients shows that maximum numbers of patients i.e. 94.83% were from the urban habitat while 5.17% patients were from rural habitat.

Distribution of patients based upon *Yonitah Shwetasrava* and *Yonigata Lakshanas* showed that *Pandu Pichchhila Srava* (75.86%), *Pooyabha Srava* (79.31%), *Dadhivata Srava* (39.66%) and *Jaliya Srava* (12.07%) with *Yoni Kandu* (100%), *Yoni Daurgandhya* (100%), mild *Yoni Vedana* (29.31%), *Yoni Pichchhilata* (12.07%), *Yoni Shitalata* (0.00%), *Yoni Daha* (15.52%) and severe *Yoni Vedana* (0.00%). Also, most of the patients complained of *Katishoola* (91.38%), *Udarshoola* (63.79%), *Angamarda* (39.66%), *Mutradaha* (31.03%), *Daurbalyata* (18.97%), *Panduta* (5.17%) and *Bhrama* (3.45%). While maximum patients had chronicity of 1-6 months (56.89%) and (93.10%) had gradual onset with previous history of consuming modern medicine orally (60.34%) and using vaginal suppository or cream
Observation according to the regularity of menstrual cycle obvious that 86.21% were



having regular menstrual cycle, while rest of patients 10.34% were having irregular menstrual cycle.

Out of 58 patients the study shown that, 58.62% of the patients were multiparous, while equal 20.69% were patients found parous and nulliparous.

On considering the data of sexual history about intercourse frequency, it shows that majority of the patients 87.93% had frequency of intercourse more than 4 times/week, while 6.90% had 3-4 times/week and 1.72% had once a month and once a week of intercourse frequency.

The data of use of contraceptive devices shows that maximum number of patients i.e. 55.17% were not using any type of

contraceptive devices, while 18.97% of the patients had undergone tubal ligation, 13.79% of the patients were using condoms, 8.62% using copper-T, and 3.45% were taking oral contraceptive pills. While during **per speculum examination** maximum patients had fiery red appearance of vaginal wall (94.83%), cervicitis (86.21%) and cervical erosion (18.97%).

Wet vaginal smear examination showed that maximum patients were having pus cells (100%), fungal hyphae (87.93%) and Trichomonas vaginalis (3.45%) in wet vaginal smear. Vaginal pH examination revealed that maximum patients had vaginal pH 4 (20.69%).

Effect of therapy: Table 5 – 12

Table 5 Effect of *Nimbadi Yoni Varti* on *Yonitah Lakshana* of 58 patients of *Shwetapradara*.

'n'	<i>Yonitah Lakshana</i>	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
58	<i>Yonitah Srava</i>	2.52	0.17	93.15	0.51	0.067	34.69	<0.001
58	<i>Yoni Daurgandhya</i>	2.05	0.02	99.16	0.37	0.048	41.53	<0.001
58	<i>Srava Consistency</i>	2.14	0.07	96.77	0.37	0.048	42.80	<0.001
58	<i>Yoni Kandua</i>	2.03	0.10	94.92	0.41	0.054	35.60	<0.001
9	<i>Yoni Daha</i>	1	0	100.00	0	0	-	-
17	<i>Yoni Vedana</i>	1	0	100.00	0	0	-	-

Table 6 Effect of *Nimbadi Yoni Varti* on associated symptom of 58 patients of *Shwetapradara*.

'n'	Associated symptoms	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
53	<i>Katishoola</i>	1.73	0.58	66.30	0.46	0.063	18.39	<0.001
37	<i>Udarashoola</i>	1.12	0.32	70.73	0.48	0.079	9.60	<0.001
19	<i>Mutradaha</i>	1.16	0.37	68.18	0.54	0.122	6.43	<0.001

Table 7 Effect of *Nimbadi Yoni Varti* on gynecological examination finding of 58 patients of *Shwetapradara*

'n'	Gynaecological examination	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
7	Vulvitis	1	0	100.00	0	0	-	-
55	Vaginitis	1.38	0.04	97.37	0.48	0.06	20.79	<0.001
51	Cervicitis	1.20	0	100.00	0.40	0.06	21.30	<0.001
36	Local Tenderness	0.7	00	100.00	0.71	0.094	7.90	<0.001

**Table 8** Effect of *Nimbadi Yoni Varti* on wet vaginal smear finding of 58 patients of *Shwetapradara*

'n'	Investigation	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
2	Trichomonas Vaginalis	2	0	100.00	0	0	-	
50	Fungal Hyphae	1.98	0.06	96.67	0.44	0.06	30.54	<0.001
58	Pus cells	2.09	0.14	93.39	1.05	0.14	14.13	<0.001
3	Epithelium cells	3.67	3.66	00	00	00	-	
58	Vaginal pH	4.96	4.03	18.75	1.67	0.22	4.24	<0.001

Table 9 Effect of *Nimbadi Yoni Varti* on routine hematological investigations of 58 patients of *Shwetapradara*

'n'	Investigation	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
58	Hb%	11.62	11.54	0.5	0.54	0.07	0.83	>0.05
58	TLC	7263.79	7348.28	-1.16	1156.04	151.80	-0.56	>0.05
58	N	60.07	61.95	-3.13	7.25	0.95	-1.97	>0.05
58	L	33.12	31.31	5.47	6.70	0.88	2.06	>0.05
58	E	3.95	3.86	2.18	1.89	0.25	0.35	>0.05
58	M	3	2.97	1.15	1.08	0.14	0.24	>0.05
58	ESR	27.26	26.36	5.31	17.12	2.25	0.64	>0.05

Table 10 Effect of *Nimbadi Yoni Varti* on routine urine investigations of 58 patients of *Shwetapradara*

'n'	Investigation	Mean Score		% of relief	S.D. (±)	S.E. (±)	't'	P
		B.T.	A.T.					
17	Urine albumin	0.71	0.53	25	0.95	0.23	0.77	>0.05
55	Urine pus cell	5.93	2.38	59.81	12.3	1.65	2.14	<0.01
56	Epi. Cell	1.73	1.63	6.19	1.36	0.18	0.59	>0.05
9	RBC	0.89	0.67	25	1.56	0.52	0.43	>0.05
12	Cal. Oxlate	2.33	2.17	7.14	3.21	0.92	0.18	>0.05
5	Granuloma cast	0	1	-	0	0	-	-

Table 11 Overall effect of therapies on 58 patients of *Shwetapradara*

Status	<i>Nimbadi Yoni Varti</i>	
	No. of patients	%
Complete remission	51	87.93
Markedly Improved	07	12.07
Improved	00	00.00
Unchanged	00	00.00

Table: 12 ADR during course of treatment on 58 patients of *Shwetapradara*

ADR	Number of patients	%
Burning sensation in vagina	02	1.87

DISCUSSION

Leucorrhoea (*Shwetapradara*) is the most common complaint in day to day practise of gynaecologist and it is difficult to treat satisfactorily in view of its uncertain etiologic. The management of leucorrhoea

should be conducted according to the causative factors. Physiological leucorrhoea needs no treatment but only proper counselling.

In *Ayurveda* many pharmaceutical preparations have been mentioned for the



treatment of *Shwetapradara*. *Acharya Charaka* has mentioned to use *Madhuyukta Varti* of *Kashaya Rasa Dravyas* in *Shwetapradara Chikitsa*¹⁵. For the treatment of *Shwetapradara* many *Kashaya* drugs are available in classics.

From such recipes, *Nimbadi Varti* has been selected *due to its Tridoshashamaka, Krimighna, Kandughna, Stambhana, Shoshana, Samgrahi, Kledaghna, Kaphaghna, Putihara, Vranasodhana, Vranaropana, Rasayana* as well as antimicrobial, antifungal, antibacterial, antiviral, antioxidant, Immunomodulator properties. Purpose behind the selection of *Yoni Varti* was, it does not need any special precautionary measures for its administration. Even patient can administer it by herself. This makes it widely acceptable by the modern world.

EFFECT OF THERAPY:

Nimbadi Yoni Varti showed statistically highly significant ($P < 0.001$) result on *Yonigata* and associated symptoms. Also, statistically highly significant ($P < 0.001$) results were observed on vaginitis, cervicitis and local tenderness in vagina. While 100% result was found on relieving vulvitis.

Nimbadi Yoni Varti provided 100% relief in *Trichomonas vaginalis* while statistically highly significant ($P < 0.001$) results was found in fungal hyphae and pus cells in wet

vaginal smear examination. While insignificant result ($P > 0.05$) was found on vaginal pH.

The overall effect of the therapy on 58 patients of *Shwetapradara* shows 51 patients (87.93%) got complete remission and 7 patients (12.07%) were markedly improvement.

During follow up study no patient had complaint of recurrence of symptoms within 1 month.

No major adverse effects was reported, however, only 2 patients out of 58 had slight burning sensation in vagina for few minutes after insertion of *Nimbadi Varti*.

PROBABLE MODE OF ACTION OF NIMBADI YOGA:

- *Yoni Shodhan*- Clean the vagina- by *Vrana Shodhana* Property
- Restrain *Srava* - *Kashaya, Tikta* and *Katu Rasa* property *Laghu* and *Ruksha Guna*.
- Kill causative microorganism - *Krimighna*, antimicrobial, antibacterial, anti fungal, antiviral properties
- Rejuvenate the epithelium – *Rasayana Prabhava*, antioxidant and *Madhura Rasa* property like *Prinana, Jivana* etc.
- Improving the body defense system - Immunomodulator property



CONCLUSION

Leucorrhoea is common gynaecological problems faced by the gynaecologist and are often difficult to treat. About 10% to 41% of women had Leucorrhoea at least once in their life. *Nimbadi* Yoga was selected for its *Tridoshashamaka*, *Krimighna*, *Kandughna*, *Stambhana* as well as antimicrobial, antifungal, antibacterial property. *Nimbadi Yoni Varti* is highly effective modalities for the management of *Shwetapradara* and more convenient with no apparent evidence of complications. Hence further more work should be carried out to develop a more stable and convenient form.



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