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# Clinical Study to evaluate the concept of Samanyam Vriddhi Karanam with reference to Jeevanti in Stanya Kshaya

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# ABSTRACT

Breast milk is the best nutrition a mother can give to her child. Feeding the child is the most fulfilling and gratifying experience for a mother. The child should be breastfed exclusively for first six months after birth. But when amount of breast milk decreases or is inadequate, it becomes very worrying. Ayurveda describes decreased breast milk as 'Stanya Kshaya'. Adequate lactation is being defined as secretion of 300 ml daily by 5th day and 480 ml by 10th day, if this amount are not achieved, a baby of normal weight will not be adequately fed and such a situation is termed clinically as 'Agalactia' or 'Agalactorrhoea'. In Asian and tropical countries like India, prevalence of lactational deficiency may be 30 - 40%. Hence a clinical study has been designed to evaluate the Stanya Janana action of Jeevanti based on the principle of Samanyam Vruddhi Karanam. Randomized single blind standard controlled clinical study was conducted in 60 patients attending OPD of Department of Prasuti & Stree Roga, BLDEA's AVS Ayurveda Mahavidyalaya Hospital & Research Centre, Vijayapur, Karnataka, and grouped into two. Group A patients were administered with Jeevanti Churna 6 gms bd orally with Ushna Jala for 30 days and Group B patients were administered with Shatavari Churna 6 gms bd orally with Ushna Jala for 30 days. The patients were followed up for 15 days, 51 patients had completed the treatment and no adverse effects were reported during the treatment. Both groups had improved in the clinical symptoms and overall statistical significance was observed.

Key words: Samanya, Jeevanti Churna, Shatavari Churna, Stanya Kshaya, Agalactorrhoea.

# **INTRODUCTION**

Breast milk provides the primary source of nutrition for newborns and it is the ideal form of feeding in neonates. Breast milk is composed of Immunoglobin

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IgA, Proteins, Fat, Carbohydrates, Minerals, Digestive enzymes, Antibodies and Lymphocytes. So breast milk is best than any other type of feeding. Exclusive breast milk is the ideal form of nourishment in neonates and infants till 6 months. According to Ayurveda breast milk is the essence of Rasadhatu which is formed from the digested food circulating in the whole body, when its gets collected in breast it is formed as "Stanya", as it is formed by *Prasada* of *Ahara Rasa* it contains best of all nutrients needed for the child. Adequate lactation is being defined as secretion of 300 ml daily by 5<sup>th</sup> day and 480 ml by 10<sup>th</sup> day, if this amount are not achieved, a baby of normal weight will not be adequately fed and such a situation is termed clinically as 'Agalactia' or 'Agalactorrhoea'. In Asian and Tropical countries like India, prevalence of lactational deficiency may be 30 - 40%. [1] Artificial ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2018

feeding exposes the infants to GI infections like diarrhea, vomiting, sometimes allergic reactions or fever and results in over millions deaths annually due to its all ill effects.<sup>[2]</sup>

According the *Sushruta* the cause of *Stanya Kshaya* includes psychological conditions of mother (*Krodha, Shoka, Bhaya, Irsha, Avatsalyatvat*), diet regime and physiological conditions (means having not affection towards the child) which can be compared same in Modern Prolactin Reflex i.e., Milk secretion and Oxytocine Reflex i.e., Milk Ejection respectively.<sup>[3]</sup> Hence, *Stanya Kshaya* is associated with *Rasadhatu Kshaya*.<sup>[4]</sup>

Samanya and Vishesha are among the Shadpadartha on which the principles of Ayurveda Nidana and management has been designed. Samanyata is said to be cause for Vriddhi, Visheshata leads to Kshaya. This Vriddhi is attained by the application of Samana Dravya, Guna and Karma. Hence for nourishment of Rasa Dhatu and its Upadhatu Stanya, the drugs having Samana Dravya, Samana Guna or Samana Karma is choosen i.e., Jeevanthi the synonym of Leptadenia Reticulata.

Among the Kakolyadi Gana, Sushruta has mentioned Jeevanthi as one of the drug<sup>[7]</sup> as Jeevanthi, possesses Madhura Rasa, Sheeta Virya, Madhura Vipaka, Laghu, Snigdha, Sara, Chakshushya, Vrishya, Brimhaniya and is Vata Pittahara. Stanya is also attributed with Madhura Rasa, Sheeta Virya, Madhura Vipaka, Guru, Snighda, Vrishya, Dhatuvardhana, Ojusya, Sleshmala properties. It can be observed that the Jeevanthi and Stanya contain similar properties. Hence the drug is supposed to cause increase of the Breast Milk secretion due to the identical properties existing in both Stanya and Jeevanthi.

Therefore owing to its *Soumya Guna, Madhura Rasa, Sheeta Virya, Madhura Vipaka* hypothesis is designed as it should increase *Stanya* due to the *Samana Guna*.

So the present study clinical study to evaluate the

So the present study clinical study to evaluate the concept of *Samanyam Vriddhi Karanam* with reference to *Jeevanti* in *Stanya Kshaya* has been selected to study the concept of *Samanyam Vriddhi Kaaranam* in detail and whole aspect according to Ayurveda.

### **OBJECTIVES OF THE STUDY**

To evaluate the concept of *Samanyam Vriddhi Karanam* with reference to *Jeevanti* in *Stanya Kshaya*.

### **MATERIALS AND METHODS**

#### Study design and patient selection

This was a randomized single blind standard controlled clinical study. Female patients within one year of Post Partum period attending the OPD & IPD from BLDEA's AVS Ayurveda Mahavidyalaya Hospital were screened for the complaint of *Stanya Kshaya*.

A special proforma was prepared with details of history, physical signs and symptoms mentioned for the *Stanya Kshaya*. Patients were analyzed and selected accordingly. A viable and indigenously designed method was used to assess the parameters of signs and symptoms.

#### Inclusion and exclusion criteria

Age group between 18 to 35 years irrespective to religion, socio-economic status and food habits, patients from 5<sup>th</sup> day of delivery, patients with previous history of lactational deficiency, breast feeding frequency less than 4 to 5 times per day were included in the study. Patients below age 18 and above 35 years, infants with cleft palate and improper latch technique were excluded from the study.

#### **Grouping**

A total of 60 patients fulfilling he inclusion criteria were enrolled in the study. 51 patients completed study and 9 patients were discontinued. 30 patients were registered in Group A, among them 26 patients completed the treatment and 4 patients discontinued the treatment, where as in Group B total 30 patients were registered amongst them 25 patients completed the treatment and 5 patients discontinued the treatment.

## Trial drug and posology

1. Group A: 30 selected patients of *Stanya Kshaya* were placed in this group and were administered with *Jeevanti Churna* in the dose of 6 grams twice a day after food along with hot water as *Anupana*.

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2. Group B: In this group, 30 selected patients of Stanya Kshaya were administered with Shatavari Churna in the dose of 6 grams twice daily after food along with hot water as Anupana.

# **Duration of treatment: 30 days**

**Follow-up:** After completion of the drug administration, the mothers will be asked to attend the OPD at the interval of seven days for a period of 15 days to know whether the effect provided by the drug is sustained or not.

# **CRITERIA FOR ASSESSMENT**

#### **Subjective Parameter**

1.	Stana Mlanata	Scores		
a.	Adhika	1		
b.	Madhyama	2		
C.	Alpa	3		

2.	Stana Pidana (Breast Engorgement)	Scores		
a.	Mild	1		
b.	Moderate	2		
C.	Severe	3		

3.	Stanya Pramana (Milk Ejection)	Scores			
a.	No	0			
b.	Drop by drop	1			
c.	With stream	2			
d.	With force	3			

# **Objective Parameter**

1.	Weight of the Baby (Shareera Bhara)	Scores		
a.	Kshaya	1		
b.	Madhyama	2		

C.	Prakrutha	3
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2.	Mala Pariksha	Scores
a.	Prakrutha	1
b.	Drava Malapravritti	2
C.	Malabaddhata	3

3.	Rodana (Cry)	Scores
a.	Prakrutha	1
b.	Muhurmuhu	2
c.	Nitya	3

4.	Dehydration	Scores
a.	Mild	1
b.	Moderate	2
c.	Severe	3

5.	Nidra (Sleep)	Scores
a.	Prakrutha	1
b.	Alpa	2
c.	Adhika	3

#### **OBSERVATIONS AND RESULTS**

# Incidence of age in 60 cases of Stanya Kshaya

Age wise distribution of patients showed that maximum 43% in the Age Group of 24 - 29 yrs, followed by 42% were in the Age Group of 18 - 23 years and 15% were in the Age Group of 30 - 35 years.

### Incidence of Nidana in 60 cases of Stanya Kshaya

Distribution of *Nidanas* in patients shows that maximum of 70% had *Kroda* followed by 67% had *Ayasa*, 65% had *Rukshannapana Sevana*, 58% had *Karshana*, 43% had *Upavasa*, 40% had *Bhaya*, 18%

were having *Shoka*, 12% has *Ushna Ahara*, 10% were having *Ratri Jagarana*, 5% having *Ati Apatarpana* and 2% each having *Agni Sevana* and *Punaha Garbhadharana*.

Table 1: Effect of *Jeevanti Churna* on Subjective Parameters

S N	Sympto ms			% of increa	S.D of mea	S.E of mea	t	р
		ВТ	ΑT	mean score	n (±)	n (±)		
1	Stana Mlanat a	3	1.2 3	58.97	0.42 9	0.08 4	20.9 9	<0.0 01
2	Stana Peedan a	2.7 6	1	63.88	0.42 9	0.08 4	20.9 9	<0.0 01
3	Stanya Praman a	2.7 6	1	63.88	0.42 9	0.08 4	20.9 9	<0.0 01

Table 2: Effect of *Jeevanti Churna* on Objective Parameters

S N	Sympto ms	Mea score		% of increa	S.D S.E of of me me	t	р	
		ВТ	AT	mean score	an (±)	an (±)		
1	Shareera Bhara	2.7 6	1	63.88	0.42 9	0.08 4	20. 99	<0.0 01
2	Mala Pariksha	2	1.0 7	46.15	0.39	0.07 6	12	<0.0 01
3	Rodana (Cry)	2.1 9	1	54.38	0.40	0.07 8	15. 12	<0.0 01
4	Dehydrat ion	2	0.9 6	51.92	0.19	0.03 8	27	<0.0 01
5	<i>Nidra</i> (Sleep)	2.0 3	1	50.94	0.19	0.03 8	27	<0.0 01

Table 3: Effect of *Shatavari Churna* on Subjective Parameters

S N	Sympto ms	Mea score		% of increa	S.D of	S.E of	t	р
		ВТ	AT	se in mean score	mea n (±)	mea n (±)		
1	Stana Mlanata	3	1.0 4	65.33	0.2	0.04	4 9	<0.00 1
2	Stana Peedana	2.9 6	1	66.21	0.2	0.04	4 9	<0.00 1
3	Stanya Praman a	2.9 6	1	66.21	0.2	0.04	4 9	<0.00 1

Table 4: Effect of *Shatavari Churna* on Objective Parameters

S N	Sympto ms	Mean score		% of increa	S.D of	S.E of	t	р
		ВТ	AT	se in mean score	me an (±)	me an (±)		
1	Shareera Bhara	2.9 2	1	65.75	0.27	0.05	34. 67	<0.0 01
2	Mala Pariksha	1.9 2	0.9 6	50	0.2	0.04	24	<0.0 01
3	Rodana (Cry)	1.9 2	0.9 6	48.07	0.27	0.05	17. 32	<0.0 01
4	Dehydrat ion	1.9 2	0.9 6	50	0.2	0.04	24	<0.0 01
5	<i>Nidra</i> (Sleep)	1.9 2	0.9 6	50	0.2	0.04	24	<0.0 01

Table 5: Comparison of Improvement in the Subjective Parameters of both the Groups

Percentage	Group A	Group B		
of relief	AT % improvement	AT % improvement		
Stana Mlanata	58.97	65.33		
Stana Peedana	63.88	66.21		
Stanya Pramana	63.88	66.21		

Table 6: Comparison of Improvement in the Objective Parameters of both the Groups

Percentage	Group A	Group B		
of relief	AT % improvement	AT % improvement		
Shareera Bhara	63.88	65.75		
Mala Pariksha	46.15	50		
Rodana	54.38	48.07		
Dehydration	51.92	50		
Nidra	50.94	50		

Table 7: Over all percentage of improvement in the patients of Group A and Group B

Over all improvement /	Group A		Group B	
relief	AT	%	AT	%
Marked relief	00	00	00	00
Moderate relief	00	00	00	00
Mild relief	20	76.92	24	96
Unchanged	06	23.07	01	04

In Group A, mild relief was observed in 76.92% of patients, while in Group B 96% of patients were got mild relief and in Group A, 23.07% of patients were unchanged while in Group B 4% were unchanged.

# **DISCUSSION**

As evident, Jeevanti has been used for the present study as the drug is known to inherently possess the Stanya Janana Property. Apart from the classical reference of the drug possessing Stanyajanana Karma, on a general sense the Samanyata between the drug and the Stanya is established based on the similarities the above two share - Apya Dravya, Madhura Rasa, Shita Guna, Snigdha Guna, Pichhila Guna. The above two elements also share the similar properties like Santarpana and Balya. With the available data, the above study is thus carried out to assess the Vriddhi caused by the drug Jeevanti in Stanya Kshaya.

The objective of the study is to assess the *Stanya Janana* action of the drug *Jeevanti* based on the principle of *Samanya Siddhanta*. Here the drug

Jeevanti is taken as Karana and the Stanya Vriddhi as the Karya. As the Vriddhi of the Karya is intended in the above study, the Samanya Siddhanta is applied in relation to the Karya i.e., Samanya causes Vriddhi, thus the Vriddhi of Stanya is ascertained under the domains of Dravya, Guna and Karma.

Acharya Charaka illustrates the fifty Mahakashaya i.e., 50 important varieties of decoctives. Each Kashaya Varga there after consists of 10 drugs each. The ten drugs termed as Dashemani are grouped as they are oriented to a particular target action either leading to an increase or its palliation. Based on the Samanya principle of Ayurveda, increase is caused by the use of similar substances. Thus one such drug from a desired group is chosen to study the principle of Samanya through a clinical interventional study. The Kashaya Varga chosen for the present study is the Stanyajanana Kashaya Varga and the drug chosen is Jeevanti. Hence the research question has been to study the effect of Jeevanti as Samanyam Vriddhi Karanam in the context of Stanyajanana. As the Samanya ia applied with regard to its three Bhava or domains namely Dravya Samanya, Guna Samanya and Karma Samanya, there the present study also includes the study of the Samanya under the above 3 domains.

#### Probable mode of action of drug Jeevanti

The probable mode of action is discussed in relation to its effect on the three domains,

**Dravya** - This domain constitutes the quantitative increase of the *Stanya*.

- The increase in Stanya is attributed to the increase of the Rasa Dhatu which consequently leads to the increase of Stanya which is the Upa Dhatu of the Rasa Dhatu.
- Considering the Panchaboutika composition of the two, the drug is said to grow only in marshy lands by which it can be substantiated that it is an Apya Dravya. On the other hand, the Stanya is also an Apya Amsha that is produced in the body. Thus on the grounds of pharmacodynamics, both the drug and the Stanya can be considered as Apya Dravya and hence the cause for its increase

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is attributed to the similarity in the *Panchabautika* composition between the two.

- Sapta Dhatu Poshaka property of the drug. As the Rasa does the Poshana of all the other Dhatus their by this fact reveals the direct increase on the Rasa Dhatu and their by Stanya as the latter is Upa Dhatu of the former.
- Ruchya property of the drug their by leading to adequate consumption of the Ahara. This in turn results in the adequate production of the Rasa thus contributing in the formation of Stanya.

**Guna** - This domain constitutes the qualitative improvement of the *Stanya*.

- On the grounds of pharmacodynamics, this is effected by the similar properties of the drug with that of the Stanya like Madhura Rasa, Snigdha Guna, Picchila Guna, Sheeta Virya.
- In addition the Vatahara property of the drug has caused the disappearances of the Vata Vriddhi Lakshanas like floating in water.
- In addition to the above mentioned qualities, the properties like Santarpana, Balya of the drug may also have effected the corresponding components of the breast milk and there by causing a significant change especially in the solid not fat constituent of the breast milk. As discussed before, the SNF consists of proteins, lactose and other micro nutrients. They perform a variety of functions in living organisms ranging from providing structure to reproduction. Thus from this explanation a relation can be drawn between the properties of the protein constituents of the breast milk and those with that of the drug like Dhatu Vardhana, Balya. The relation can also be drawn between the protein content and the breast milk proper. The breast milk is said to possess qualities like Shareera Upachaya, Balya, Ayushya, Dhatu Vardhana, Jeevana and Shishu Anapattihi. As discussed these properties seem to correspond with the properties of the proteins as well. Hence an overall improvement in the quality

of the milk can also be appreciated for its role in increasing the SNF concentration.

**Karma** - This domain constitutes the improvement in the activities of the infant as a consequence of qualitative improvement in the *Stanya*.

- This can be attributed to the quantitative increase in the breast feeds there by the Stanya leading to the Apyayana or nourishment in the infant there by leading to an increased weight.
- The adequacy achieved in the breast feeding is thus consequently able to improve the frequency of the urine and the stool output of the infant suggesting an adequate intake influencing on the adequacy in the elimination pattern.
- On the other hand the qualitative improvement in the breast milk with regards to the *Upa Snehana* property along with the *Snigdha Guna* and *Picchila Guna* may have a role in leading to easy and regular evacuation of the stools. The *Upakleda* property on the other hand may play a role in frequency of the urine output. The *Nidrakara* property may play a role in increasing the duration of sleep.

### **CONCLUSION**

The drug Jeevanti (Leptadenia reticulate) is known to possess the qualities of Stanya Janana and others like Madhura Rasa, Shita Virya, Snigdha Guna, Picchila Guna, Santarpana, Balya. All these qualities are similar to the qualities of the Rasa Dhatu and its Upa Dhatu i.e. the Stanya. The data from the following observations like economic status, irregularity in dietary habits, sleep satisfaction, mental stress, top feeds are shown to have obtained an upper hand which suggests the probable aeitiology for Stanya Kshaya in the present sample. As all the above listed factors are known to influence on the Rasa Dhatu, hence the role of Rasa Dhatu on causing Stanya Kshaya is also evident. On regrouping the parameters as Dravya, Guna and Karma for the purpose of assessment of Vruddhi in the above lines, it was observed that Vruddhi was appreciated well in all the three domains of Dravya, Guna and Karma. The ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2018

Dravyata Vruddhi or the quantitative increase in the Stanya thus established is attributed to the increase in the Rasa Dhatu thereby effecting an increase in the Stanya which is the Upadhatu of the latter. This is attributed to the Samanyata in the Panchabhautik composition in the two and other properties like Dhatuvardhana, Madhura Rasa, Snigdha Guna, Picchila Guna, Sheeta Virya and Santarpana which is observed in both the Stanya and the drug alike. The Gunata Vruddhi or the qualitative improvement that has effected in the Stanya in particular is attributed to the properties like Guru Guna, Vatahara Karma, Snigdha, Madhura Rasa in the drug. Also the production of Guna Yukta Kshira has taken place with regard to an increase in the SNF with specific reference to protein. This is because the properties of the drug Jeevanti such as Dhatuvardhana, Santarpana and Jivana are also identified with the properties of the proteins in specific. Hence the increase of the latter is well-substantiated. The Karmata Vruddhi or the improvement of the infant activities as a consequence of qualitative improvement in the Stanya is attributed to the properties like Nidrakara, Santarpana, Upakleda, Upasneha, Prahlada Karma in the drug besides the quantitative satisfaction in the breast feeding. The above mentioned properties remarkably exist in the Stanya too. In this way, it can be understood that the drug Jeevanti has caused Vruddhi in all the three domains of Dravya, Guna and Karma. Thus it is concluded that the drug Jeevanti is studied for its *Vruddhi* in conditions of *Stanya Kshaya*. By this the Stanyajanana action of the drug has become well established with scientific evidence.

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