A CLINICAL STUDY OF *MARICHA CHURNA* AND *PIPPALIMOOL CHURNA* IN THE MANAGEMENT OF *STANYAKSHAYA*

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ABSTRACT

Stanya is the Updhatu of Rasa dhatu. Ayurveda explain the importance of Stanya through its main function Pushti and Jeevan. Rasa DHATU is said to Addidhatu i.e. Prathamdhatu. If Rasa dhatu formation is disturbed, its Updhatu stanya is also get disturbed. In Stanyakshaya there is Kshaya due to Dhatukshaya and Dushti. **Aim:** To study, "effect of Maricha churna, Pippalimool churna on Sthanyakshaya'' has been designed by taking reference from Kashyapsamhita Ksheeroudpadya. The purpose is to analyse and evaluate the complete concept and its etiopathogenesis of Stanyakshaya. The aim is to study causes of Stanyakshaya which occurs with different reasons prescribed in Ayurveda like Krodha, Shoka. Bhaya, Avatsalya etc., and according to modern science stress, anaemia etc., and to determine the effectiveness of Maricha churna and Pippalimool churna on galactagogue, improve the detail study about Stanyakshya from Ayurvedic and modern text. **Materials and methods:** The drugs used for this clinical study are Maricha Churna, Pippalimool Churna. 60 patients clinically diagnosed as Stanyakshya patients were selected. Statistical analysis of the parameters: Socio-demographic profile, ejection breast milk, duration of breast feeding, according to Stanapurnatva, according to frequency of feeding, weight of infant, frequency of urine, sleep of infant was done. The drug "Maricha churna, Pippalimool churna" was given for 30 days. **Result:** Significant increase in parameter had been observed during the study. There was increase in Stanya after application of drug "Maricha churna, Pippalimool churna" given in Stanyakshaya. This treatment does not show any toxicity and no side effects were seen during the follow up. This remedy is economical and easy to use, store and carry.

KEYWORDS: *Maricha Churna, Pippalimool churna, Stanyakshaya.*

INTRODUCTION

Sthanya is the Updhatu of Rasadhatu. Ayurveda explain the importance of Sthanya through its main function Pushti and Jeevan. Rasa Dhatu is said to Addidhatu i.e., Prathamdhatu. If Rasa dhatu formation is disturbed, its Updhatusthanya is also get disturbed. The abnormalities of Sthanyas are Sthanyakshaya, Sthanyavriddhi, Sthanyadushti, Sthanyakshaya is one of the Vikruti of Sthanya. In Stanyakshaya there is Kshaya due to Dhatukshaya and Dushti. Exclusive breast milk is the ideal form of nourishment in neonates and infant till 6month. Adequate lactation has been defined as secretion of 300 ml daily by 5th day and 480 ml by 10th day, if this amount is not achieved, a baby of normal weight will not be adequately fed and such a situation is termed clinically as lactation deficiency.

In Asian and Tropical countries like India, prevalence of lactational deficiency may be 30-40%.[1] Breast milk is composed of immunoglobulin IgA, Fat, Proteins Carbohydrates, Minerals, Digestive enzymes, Antibodies so breast milk is the best than any other type or feeding.[2] Breast feeding promotes close physical and emotional bonding between mother and child leading to better parent - child adjustment. It is clean, uncontaminated, contains several anti-infective factors that protect baby from infection. Enhance development and intelligence, social and psychomotor capabilities. Evaluate this topic because only Shatavari is popular Ayurvedic drug for Stanyakshaya and has satisfactory results. But in Ayurvedic samhitas many galactogouges drugs are described. As no other milk can be compare with the mother milk, mother milk for the proper growth and development of the baby, who has also recommended that breast milk is the best milk for the growth of the baby. In a poor socio economic, illiterate community of India, there is feeding can be make the difference between the life and death of baby. The

infection rate is high in top feed (bottle feed) babes.

In these circumstances, galactagogue drugs can play very valuable role in medicine field. This dissertation will include complete review of Ayurvedic literature, modern literature, materials, methods adopted for the clinical study; observation and result follow by discussion as well as summary and conclusion of present work. Thus, it is hope that on the basis of clinical study, specific treatment for the *Stanyakshya* will be established certainly and it will surely help for effective management.

AIM
1) To study causes of *Stanyakshaya* which occurs with different reasons prescribed in Ayurveda like (*Krodha*, *Shoka, Bhaya, Irsha, Avastsalyatwa*[3] and according to modern science stress, anaemia, poor economic status,) Hyperthyroid, PCOS, medication and to determine the effectiveness of *Maricha churna and Pippalimool churna* on galactagogue.
2) To improve the detail study about *Stanyakshya* from Ayurvedic and modern text.

OBJECTIVE
1) To review the literature about *Stanyakshaya* in different Samhitas.
2) To determine the efficacy of *Maricha Churna*[4] *and Pippalimool Churna*[5] in management of *Stanyakshaya*.

MATERIAL AND METHODS
A) Material Selection
The aim is to collect and study detailed clinical pattern of the cases of *Stanyakhaya*. The drugs used for this clinical study are *Maricha Churna and Pippalimool Churna* tried to cover both Ayurvedic and modern parameters. Besides, the results of clinical study have also been scrutinized from both Ayurvedic as well as modern functional and medical point of view to arrive at important conclusion.

1) **Patients** Total 60 patients clinically diagnosed as *Stanyakshya* patients were selected. During trial, patients were assessed with Ayurvedic and modern parameter.

2) **Drug**
- *Maricha Churna,*
- *Pippalimool churna.*[6]

Raw material was collected from the standard Ayurved shop in market.

3) Preparation of *Churna Kalpana*[7]
Powder of dried *dravya* with or without any addition of liquid is called as *Churna. Churna* is any dry substance is bruised and made into fine powder by *vastra-galan* i.e. poured by clothes. Powder can be made by disintegrator also.

Synonyms: - *Rajah, Kshods*

Matra: - 1 *Karsh.*

Equipments:- Cleaned and dried drug, mortar and pestle.

Process of *Churna* Preparation
The ingredient of *churna*, were purchased from local trustworthy vendor. Then by grinding these drugs, both *churna* were prepared and standardization was done in Research laboratory of *Ayurved* College.

Storage:- stored in tight glass container for future use

Follow up- 0, 7th, 15th, 30th day.

B) Methodology Selection
1) Criteria Inclusion criteria
1) Age of Patient reproductive age 18 -35years
2) Post-partum 3rd day of delivery
3) Patient with a previous history of lactational deficiency.

2) Exclusion criteria
1) Patient with congenital anomalies, breast atrophy, cancers, mastitis, previous menstrual disorder are excluded from the study.
2) Patient with history of alcoholism, infection and systemic diseases.
3) Patient with history of PPH.
4) Mother taking high doses of Anti-epileptic, Anti-psychotic and Anti-cancer drug.
5) Lactose intolerance in infants.
6) Patient of HIV, HBsAg

3) Assessment Criteria
Criteria for scoring the parameters are-
1) Feeding frequency of baby per day

9 to 10 Times per day	1
7 to 8 times per Day	2
5 to 6 times per Day	3

2) Urine frequency of in baby

3 to 4 Times per Day	1
5 to 6 times per Day	2
7 to 8 times per Day	3

3) Sleep of baby

9 to 10 Times per day	1
7 to 8 times per Day	2
5 to 6 times per Day	3

4) Stanya Pravartan

9 to 10 Times per day	1
7 to 8 times per Day	2
5 to 6 times per Day	3

OBSERVATION AND STATISTICAL ANALYSIS OF DIFFERENT PARAMETERS

A) Observation

1) Distribution of Age of mother

Sr. No.	Age Group	No. of patients	
		Count	%
1.	18 – 20	00	00.00%
2.	21 – 23	12	20.00%
3.	24 – 26	16	26.67%
4.	27 – 29	17	28.33%
5.	30 – 32	14	23.33%
6.	33 – 35	01	01.67%
Total		**60**	**100%**

Out of 60 mothers, 12patients (20%) were with age between 21–23 years, 16 mothers (27%) were with age between 24–26 years, 17 mothers were with age between 27 – 29 years, 14 mothers (23%) were with age 30 – 32 years while remaining 1 patient (2%) was with age between33–35years.

2) Incidence of sex of infant

Sr. No	Sex	Count	%
1	Male	27	45.00%
2	Female	33	55.00%
Total		**60**	**100.00%**

Out of 60 patients, 27 infants (45%) were male while 33 infants (55%) were female.

3) Incidence of Occupation

Sr. No	Occupation	Count	%
1	Farmer	19	31.67%
2	Housewife	27	45.00%
3	Worker	14	23.33%
Total		**60**	**100.00%**

Out of 60 mothers, 19 mothers (32%) were farmers, 27 mothers (45%) were housewives while 14 mothers (23%) were workers.

4) Incidence of Parity

Sr. No	Parity	Count	%
1	G1P1	32	53.33%
2	G2P1	02	03.33%
3	G2P2	14	23.33%
4	G3P1	01	01.67%
5	G3P2	06	10.00%
6	G4P1	03	05.00%
7	G4P2	02	03.33%
Total		**60**	**100.00%**

Out of 60 patients, 32 patients (53%) were with parity G1P1, 2 patients (3%) were with parity G2P1, 14 patients (23%) were with parity G2P2, 1 patient (2%) was with parity G3P1, 6 patients (10%) were with parity G3P2, 3 patients (5%) were with parity G4P1 while 2 patients (3%) were with parity G4P2.

5) Incidence of mode of delivery

Sr. No	Mode of delivery	Count	%
1	FTND	41	68.33%
2	LSCS	19	31.67%
Total		**60**	**100.00%**

Out of 60 patients, 41 patients (68%) were with FTND while 19 patients (32%) were with LSCS.

B) Statistical analysis of different parameters[8]

As grading used for some of the signs and symptoms were ordinal in nature and normality was not followed, "Wilcoxon Signed Rank test" is used for intra-group comparison. (i.e., before and after treatment of a group).

For quantitative parameter, "paired t test" is used. For dichotomous variables, McNemar chi-square test is used. Findings are presented along with appropriate summary statistics like mean, median, IQR (Interquartile range) and graphical methods like -bar diagrams and pie chart. Level of significance has been kept at 5%.

1) Ejection Breast milk

Breast milk quantity	Mean score	Medin score	Medin diff.	IQR of diff. (Q3– Q1)	n	Wicoxon Signed rank test (T)	P- Value (one –tailed)
Before treatment	1.68	2	1	0(1–1)	60	1431	< 0.001
After treatment	2.75	3					

The difference between breast milk quantity before treatment and after treatment (Mdn = 1, IQR = 0) was significant at 5% level of significance (P-value < 0.001).

Therefore, it can be said that, there is increase in breast milk after treatment.

2) Duration of breastfeeding

Duration of Breast Feeding	Mean score	Median score	Median diff.	IQR of diff. (Q3–Q1)	n	Wicoxon Signed rank test (T)	P- Value (one –tailed)
Before treatment	1.85	2	1	1 (1 –0)	60	946	0.001
After treatment	2.62	3					

The difference between duration of breast feeding before treatment and after treatment (Mdn = 1, IQR = 1) was significant at 5% level of significance (P-value < 0.001). Therefore, it can be said that, there is increase in

duration of breast feeding after treatment.

3) *Stanapurnatva*

Before treatment	After treatment		d.f.	Chi Squared (McNemar)	p-value
	Absent	Present			
Absent	6	52	1	50.019	< 0.001
Present	0	2			

Out of 60 patients, 52 patients (86.67%) were such that they were not having *Stanapurnatva* before treatment and were observed with *Stanapurnatva* after treatment. As McNemar's Chi-squared test[9] at 5% level of significance suggests this change in distribution is significant (P- value < 0.001), it can be said that treatment is significant effective in *Stanapurnatva*.

Frequency of feeding	Mean Score	Median score	Median diff.	IQR of diff. (Q3–Q1)	n	Wicoxon Signed rank test (T)	P- Value (one–tailed)
Before treatment	1.63	2	3	2 (4 – 2)	60	1540	< 0.001
After treatment	4.40	5					

The difference between frequency of feeding before treatment and after treatment (Mdn = 3, IQR = 2) was significant at 5% level of significance (P-value < 0.001). Therefore, it can be said that, there is increase in frequency of feeding after treatment.

4) Weight of infant Increase in weight (gm)

Parameter	Mean Score			n	SD	SE (±)	aired "t"	"p-value" (One tailed)
	B.T.	A.T.	Diff.					
Weight	2724.67	2835.42	110.75	60	114.78	14.82	7.474	< 0.001

Using paired t test[10], p – value is less than 0.001 i.e. the difference between mean weight before and after treatment is significant at 5% level of significance. i.e. we can say that There is increase in weight for after treatment.

5) Frequency of urine

Frequency of Urine	Mean score	Median score	Median diff.	IQR of diff. (Q3 –Q1)		n	Wicoxon Signed rank test (T)	P-Value (one – tailed)
Before treatment	1.68	2	3	1(32)	–	60	1482	<0.001
After treatment	4.25	4						

The difference between frequency of urine before treatment and after treatment (Mdn = 3, IQR = 1) was significant at 5% level of significance (P-value < 0.001). Therefore, it can be said that, there is increase in frequency of urine after treatment.

6) Sleep of Infant

Before treatment	After treatment		d.f.	Chi squared test (McNemar)	p-value
	Absent	Present			
Absent	18	41	1	39.024	< 0.001
Present	00	01			

Out of 60 patients, 41 infants (68.33%) were such that they were not having proper sleep before treatment and were observed with proper sleep after treatment. As McNemar's Chi-squared test at 5% level of significance suggests this change in distribution is significant (P-value < 0.001), it can be said that treatment is significant effective in sleep of infant.

Recent improvement in various signs and symptoms

Parameters		% Improvement	Remark
Mother parameter	Breast milk (ml)	37.78%	Significant
	Duration of Breast feeding	26.39%	Significant
	Stanapurnatva	89.66%	Significant
baby parameters	Frequency of feeding	58.53%	Significant
	weight of infant	3.79%	Significant

	Frequency of urine	55.17%	Significant
	Sleep of infant	69.49%	Significant

Overall Effect of Therapy

All 7 assessment parameters were considered while evaluating overall efficacy of treatment. The criteria for assessment of overall effect of therapy are:

Overall Effect (patient wise)	Criteria
Unchanged	Improvement in 0 – 1 parameter
Mild improvement	Improvement in 2 – 3 parameters
Moderate improvement	Improvement in 4 – 5 parameters
Marked improvement	Improvement in 6 – 7 parameters

RESULT AND DISCUSSSION

A) Result

Distribution of patients according to relief

Overall Effect (patient wise)	No. of patients	
	Count	%
Unchanged	05	08.33%
Mild improvement	02	03.33%
Moderate improvement	09	15.00%
Marked improvement	44	73.33%

Out of 60 patients, 44 patients (73%) were Markedly improved, 9 patients (15%) had moderate improvement, 2 patients (3%) were observed with mild improvement while 5 patients (8%) were unchanged.

B) DISCUSSION

As per the research design data has been collected, presented in tabular form in chapter no 6 and data analyzed statistically. Statistical analysis gave the proper findings and conclusion thoroughly which is discussed as follows. The data is discussed into two parts.

Socio-demographic profile

Out of 60 respondents, 78 percent respondents are in the age group 24 to 32 years. While discussing sex of infant we found that 55 percent are female and 45 percent are male which is in proportion 9:11. While studying, it is observed that 31 percent were farmer, 45percent were house wives' 23.33 percent were workers. While discussing the parity it is observed 53.33 percent were primi and 23.23 percent were second gravida. Mode of delivery of the respondents it is observed that 68.33percent respondents were full term normal delivery and rest 31.67percent were L.S.C.S.

Ejection Breast Milk

After analysis it was found that the difference between mean ejection of breast milk is 1.68ml before treatment and after treatment, mean ejection breast milk is 37.61 ml percent. The percent of increase ejection breast milk is 37.78 percent. This was proved by one tailed Wilcoxon Sign Rank test significantly and conclude that there is a significant increase in ejection breast milk after the treatment.

Duration of Breast feeding

After analysis it was found that the difference between mean score of duration of breast feeding before treatment is 1.85min and after treatment mean of duration of breast feeding is 2.62min. The percent of increase duration of breast feeding is 26.39min percent. This is proved with one tailed Wilcoxon Sign Rank test significantly and conclude that there is significant increase in duration of breastfeeding.

According to *Stanapurnatva*

After analysis it was found that before treatment no *Sranapurnatva*, observe but after treatment *Stanapurnatva* was observe. The percentage of increasing *Stanapurnatva* is 89.66 percent. The percent of increasing *Stanapurnatva* was proved with McNemar test significantly and concluded that there is significant increase *Stanapurnatva* after the treatment.

According to Frequency of Feeding

It is found that the difference between mean frequency of feeding before treatment is 1.63 times and after treatment mean frequency of feeding is 4.40times. The percentage of increase frequency of feeding 58.53 percent. This was proved with one tailed Wilcoxon Signed Rank test significantly and concluded that there is a significant increasing that there is significant increase frequency of feeding after treatment.

Weight of infant

After analysis it was found that the difference between mean weight before treatment is 2.72467kg and after treatment weight has been increased to mean weight 2.83542. The percentage of increase in weight is 3.79 percent. This was proved with paired t test significantly and conclude that there is significant increase in weight of infant after treatment.

Frequency of Urine

After analysis it was found that the difference between mean frequency of urine before treatment is 1.68 times and after treatment mean frequency of urine 4.25 times. The percentage of increase of frequency of urine is 55.17 percent. This was proved with one tailed Wilcoxan Signed Rank test significantly and concluded that there is significant increase in frequency of urine after treatment.

Sleep of infant

It is found that the infant was not sleeping well before treatment and he slept well after the treatment. The

percent of increase in sleep of infant is 69.49 percent. This was proved with Mc Nemar test significantly and conclude that there is significant increase in infant.

CONCLUSION

On research problem of "Role of *Maricha churna, PippaliMool Churna* In *Stanya Kshaya''* for 60patients selected Ayurvedic medical college. For the patient, drug "*Maricha churna, pippalimool churna*" is given for 30 days. Significant increase in parameter had been observed during the study.

Since in all the symptoms, after treatment given to respondents shows better results. We conclude that there is increase in *Stanya* after application of drug "*Maricha churna, pippalimool churna"* given in *Stanyakshaya.* This treatment does not show any toxicity. This drug does not show any side effects during the follow up. This remedy is economical and easy to use, store and carry. This can easily be used by poor class women also. Results of this study are very encouraging. As per study, there is significant increase in, Feeding frequency of baby per day, Urine frequency of baby, Sleep of baby, *Stanya Pravantan a*fter the treatment of drug "*Maricha churna, pippalimool churna*".

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