

EFFECT OF VAMANA KARMA IN THE MANAGEMENT OF HYPOTHYROIDISM

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ABSTRACT

Hypothyroidism is a clinical syndrome due to deficiency of thyroid hormones. The prevalence of Hypothyroidism is high in India, affecting approximately one in 10 adults in the study population. The prevalence of subclinical hypothyroidism was also high in study, the value being 9.4%. Hypothyroidism as such is not mentioned in *Ayurveda*, but with the clinical presentation and *Dosha Dushya Siddhanta* of *Ayurveda* showed that *Kapha Dosha* plays major role and *Vata dosha* due to *Margavarana* (Channel obstruction) is also there with the involvement of *Rasa dhatu dushti*. Hypothyroidism is also correlated with *Kaphaj Nanatmaja Vikara*. The study was carried to see the effect of *Vamana* in the management of Hypothyroidism. The study was conducted on 31 patients of Hypothyroidism, who were taking levothyroxine and almost having normal thyroid profile but still they have some sign and symptoms. Patients were selected according to inclusion and exclusion criteria. Efficacy of the study was evaluated on the basis of subjective and objective criteria. Clinical study was conducted on two Groups. In Group A (n = 15) *Vamana karma* was administered to the patients followed by *Samsarjana Krama* and Placebo was given for 4 weeks. In group-B (n = 15) Placebo was given to the patients for 6 weeks. During trial Levothyroxine was continued in both Group. It was found that *Vamana Karma* has given better relief than Placebo Group. It will be helpful in management of Hypothyroidism.

Keywords: Hypothyroidism, *Vamana*, Placebo.

INTRODUCTION

Panchakarma is the prime branch of *Ayurveda*. Among five *Karmanas*, *Vamana* has been considered as the best line of treatment for the *Kaphaja* disorders.¹ In India, 42 million people are suffering from thyroid disorders, out of which hypothyroidism is most common.² Hypothyroidism is a clinical syndrome resulting from a deficiency of thyroid hormones³, which results in a generalized slowing down of metabolic processes. Hypothyroidism is associated with typical symptoms and signs such as the Puffiness

of face & eye lids, Bilateral Peripheral Oedma, Dry & Coarse skin, Breathlessness, Cold intolerance, Hoarseness of voice, Weight Gain, Constipation, Weakness, Lethargy, Fatigue, Muscle ache, Loss of initiation.⁴

The analysis of the symptomatology of Hypothyroidism in the light of *Ayurveda* showed that in this disease the dominance of *Kapha* with vitiation of *Vayu* due to *Margavarana* and predominantly *Annavaha*, *Rasavaha* and *Medovaha* *Srotodushti* with the *dushti* of *Rasa*, *Medo*

Dhatu can be considered as one of the causes of disease.

It is chronic in nature and difficult to manage. Considering all the facts present study has been planned to assess the effect of *Vamana Karma* in the management of Hypothyroidism and to trace out *Nidana Panchaka* & *Dosha Dushya* involvement according to *Ayurvedic* classics.

Material and method:

Study Design

It was randomized, parallel, and interventional clinical trial. In this study 31 patients of hypothyroidism were registered. Patients with sign & symptoms of Hypothyroidism without complication were selected from O.P.D. and I.P.D. of Govt. Akhandanand Ayurved College and Hospital, Ahmedabad & Govt. Maniben Ayurved Hospital, Ahmedabad. The research protocol was approved by Institutional Ethics. Placebo made up with Godhum has been prepared in the Govt, Ayurvedic pharmacy, Rajpipala.

CRITERIA FOR DIAGNOSIS:

Criteria for the diagnosis of hypothyroidism in a person are the values of Thyroid profile (serum T₃, serum T₄, serum TSH), Lipid Profile, *Dosha-Dushya* involvement & also symptomatology of the patient has been kept in mind. An elaborate proforma has been filled containing data viz. complete history, *Dashvidh*

Pariksha etc. & analyzed statistically later on.

Inclusion Criteria

- Patients having general symptoms of Hypothyroidism as described in modern medicine such as the Puffiness of face & eye lids, Bilateral Peripheral Oedma, Dry & Coarse skin, Breathlessness, Cold intolerance, Hoarseness of voice, Weight Gain, Constipation, Weakness, Lethargy, Fatigue, Muscle ache, Loss of initiation.
- Age Group between 40 and 60 was included.
- *Vaman Yogya* as per classical text.⁵

Exclusion Criteria

- Patients having age below 20 years and more than 60 years. Patients having any other major complicated diseases like Cardiac diseases, Diabetes Mellitus, Cancer, AIDS, Tuberculosis, Leprosy & other systemic disorders which leads fatal condition for patient.
- *Vaman Ayogya* as per classical text was excluded for the study.⁶

Study design and duration

After the diagnosis, the patients were randomly categorized into two groups viz *Vamana* with Placebo and Placebo group.

Group A 16 patients were taken for study in this group in which only one patient was drop out.

Group A: <i>Vamana Karma</i> Followed By Placebo	Drug & dose	Duration
<i>Deepana&Pachana</i>	<i>Trikatu Churna</i> (Equal quantity of <i>Shunthi</i> i.e. <i>Zingiber officinale</i> , <i>Marich</i> i.e. <i>Piper nigrum</i> , <i>Pippali</i> i.e. <i>Piper longum</i>) 3 gm twice a day	3-5 days
<i>Snehapana</i>	<i>Go-ghrita</i>	3-7 days
<i>Abhyanga & Svedana</i>	<i>Tilataila</i>	2 day
<i>Vamana Karma</i>	<i>Madan Phala</i> i.e. <i>Randia dumetorum</i> (3 part), <i>Vachai</i> .e. <i>Acoruscalamus</i> (2 Part), <i>Saindhav</i> (1 part) & <i>Madhu</i> (Q.S.) ⁷	1 day

<i>Samsarjana Krama</i>	Diet as per <i>Shuddhi</i>	3-7 days
<i>Placebo (Go Dhumvati)</i>	2 tablets twice a day each of 500 mg	4 weeks

Group B: 15 patients were taken for study in this group

Group B:Placebo	Drug & dose	Duration
<i>Placebo (Go DhumVati)</i>	2 tablets twice a day each of 500 mg	6 weeks

Assessment of the effect of therapy:

Criteria for Assessment:

Clinical improvement in signs and symptoms of the disease and in Serum Cholesterol, T₃, T₄, TSH were observed before and after treatment. The results thus obtained have been tabulated statistically, analyzed by scientific critics.

OBSERVATION & RESULT

Observations

Maximum number of patients i.e. 41.93% belonged to age group of 16-30 and 31 – 45 year. Majority of patients were female (93.55%), 93.55% were married, 64.51% patients were housewives, 90.32% were having *Madhura Rasa Pradhana Ahara*. Maximum numbers of patient having *Mandagni* (64.52%), *Madhyama Abhyavara Shakti* (64.25%), *Avar Jarana Shakti* (74.19%). 58.06% patients were having the disease less than 1year. Most of the patients were found to be indulged in *Ajirna* (93.55%), *Akalebhojan* (70.97%) and *Pichhila* (80.64%), *Vishamasana* (67.74%), *Diwasvapa* (80.64%), *Vega.Sandharan*(87.09%)

With regards to the total amount of *Sneha* intake Maximum 40% of patients belonged to 400-600 ml group followed by 33.33% of patients to 200-400ml group (Table.1).

The analysis of 15 patients shows that in 40% of patients on 6th day *Samyak Snigdha Lakshan* were observed.(Table.2) On assessing the character of *Shuddhi* it was found that in 86.67% of patients *Madhya Vaigiki Shuddhi* was obtained and 66.67% of the patients shows *Pittanta Shuddhi*. All the patients of this group

showed the symptoms of *Samyak Yog* of *Vaman* (Table 4,5,6.).

GROUP - A

In Group – A This therapy provided highly significant relief in the symptoms of puffiness of Face & eye lid (70%), Bilateral Peripheral oedema (71.88%), Dry & coarse skin (87%), Breathlessness (77.78%), Constipation (93%), Weakness (70.73%), Lethargy (90.91%) and Fatigability (88.24%) and Muscle ache (82.14%). It also provided relief in cold intolerance (100%) and Loss of initiation (80%) (Table7). This therapy significantly reduced body weight and BMI (Table 8). It had significant effect on increment in Serum T₃ (16.80%) & T₄ (10.41%) level & decrease in Serum Cholesterol level (5.49%). It had also decrease Serum TSH (62.97%) but it was statistically insignificant (Table 13). This therapy also provided highly significant improvement in vitiation of *Vata* (77.22%) and *Kapha* (73.29%) (Table 11).

In Group – B, This therapy provided highly significant relief in the symptoms like puffiness of face and Eye lids (42.31%), Constipation (33.33%), Weakness (64.29%), Fatigue (47.06%) and Coarse & brittle hair (45%). There was significant relief in Bi-lateral peripheral oedema (46.15%), Dry & coarse skin (36.36%), Breathlessness (18.18%), Lethargy (36.36%) and Muscle ache (41.18%) (Table 9). It reduced Body weight and BMI highly significantly (Table 10). It significantly reduced Serum cholesterol (5.10%). There was reduction in Serum

TSH (36.70%) but it is statistically insignificant and significantly increased Serum T₃ (12.98%) and insignificantly increased serum T₄ (3.50%) (Table 14). This therapy also provided highly significant relief on the *Dushti* of *Kapha* (15.09%) and significantly relief in *Vata* (10.42%) (Table 12).

In Group – A, In this group of *Vamana* with Placebo marked improvement was found in 46.66% and moderate improvement was found in 40.00% while mild improvement was found in 13.33% of the patients. Complete remission was not found in any patient (Table 15).

In Group – B Consideration of overall effect of this group showed that 93.33% patients had mild improvement and 6.66% patients had no improvement but however complete remission was not found in any patient of group - B (Table 15).

Comparative study:

Comparison of overall results showed that *Vamana* with Placebo group (Group - A) provided better relief in comparison to the Placebo group (Group - B)

DISCUSSION

In the disease Hypothyroidism the main pathogenesis occurs due to the *Kapha Vridhi* and may be due to *Stroto avrodh*, *Prakopa* of *Vata* occurs⁸. There is also a symptom of *Rasvaha stroto dushti*.⁹ *Kapha* is also *mala* of *Rasa Dhatu*.¹⁰ Due to *Rasa Dhatvagni Mandya* there is also *vridhi of mala rupi Kapha*. So the line of treatment for this kind of *dushti* which will help eliminates *Mala rupa Kapha*. *Vamana* is best treatment for vitiated *Kapha*.¹¹ In Hypothyroidism *Rasadhatu dushti* also takes place. *Langhan* is a line of treatment of *Rasaj Vikara* and *Vamana* is a type of *Langhan* therefore *Vaman* pacifies the symptoms related to the *Rasa Dhatudushti*.¹² Hypothyroidism is a *Srotoavrodh pradhana vyadhi*, so here *Vamana* will help for *sroto vishodhan*.¹³ *Vamana* helps in

sroto vishodhan, so also helps in normalizing the *Pratiloma Gati* of *Vata* which relieving the *Vataj* symptoms e. g. Muscular Pain, Dry & Coarse skin. *Vamana* drugs due to its *Ushna*, *Tikshna*, *Sukshma Guna* reaches to heart by the virtue of their potency and thereby circulates all over the body. They liquefy the morbid *Dosha* and bring them up to the *Amashaya*.¹⁴ From here the morbid *Dosha* through oral route are expelled out called *Vamana*. It has direct effect on *Agnisthana* and thus also helpful to improves *Agni*.¹⁵ Thus, *Vamana* helps in *vighatana* of the *Samprapti* of disease.

CONCLUSION

Looking into symptoms of the disease on the basis of *Ayurvedic* fundamentals, it becomes evident that *Kapha* with vitiation of *Vayu* is the main event with vitiation of *Agni* and *Annavaha*, *Rasavaha* and *Medovaha Srotodushti* predominantly; where as in *Dushya*, *Rasa* and *Meda* are mainly involved. *Vamana* with HRT (levothyroxine) was found more effective than only HRT (levothyroxine) with Placebo in relieving the symptoms of the disease. In the present study no hazardous side effects were noticed during treatment period.

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Table – 1: Distribution of 15 Patients of Vamana According To Total Amount of AbhyantaraSnehapana

Total amount of <i>Abhyantara Snehapana</i>	No. of Patients	Percent
200-400 ml	5	33.33%
400-600 ml	6	40.00%
600-700 ml	4	26.66%

Table – 2: Distribution of 16 Patients of Vamana According To Days Required For Snehana

Days required for <i>Snehana</i>	No. of Patients	Percent
3 days	01	6.66%
4 days	04	26.66%
5 days	05	33.33%
6 days	06	40%

Table – 3: Distribution of 15 Patients of Vamana According To *Samyaka Snigdha Lakshana*

<i>Snehpana</i>	No. of Patients	Percentage(%)
<i>Agnidipti</i>	12	80
<i>SnehaUdwega</i>	15	100
<i>Anglaghav</i>	11	73.33
<i>Gatramardava</i>	11	73.33
<i>SigdhaPurisha</i>	15	100

<i>Vatanulomana</i>	15	100
<i>Klma</i>	08	53.33
<i>Twaka Snigdhatta</i>	15	100

Table – 4: Distribution of 15 Patients of *Vamana* According To *Vaigiki Shuddhi*

Type of <i>Shuddhi</i>	No. of Patients	Percent
<i>Uttama</i> (7-8)	02	13.33%
<i>Madhyama</i> (5-6)	13	86.67%
<i>Hina</i> (up to 04)	0	0%

Table – 5: Distribution of 16 Patients of *Vamana* According To *AntikiShuddhi*

<i>AntikiShuddhi</i>	No. of Patients	Percent
<i>Kaphanta</i>	05	33.33%
<i>Pitanta</i>	10	66.67%

Table – 6: Distribution of 15 Patients of *Vamana* According To *Laingiki Shuddhi*

<i>ShuddhiLakshana</i>	No. of Patients	Percent
<i>Kale Pravrti</i>	15	100%
<i>Pittantika</i>	08	53.33%
<i>SvayamAvasthana</i>	15	100%
<i>Indriyashudhi</i>	08	53.33%
<i>Laghuta</i>	14	93.33%
<i>Karsya</i>	12	80%
<i>Daurblayta</i>	15	100%
<i>Kanthshudhi</i>	09	60%
<i>KaphaSamsavasthiti</i>	15	100%
<i>AnatiMahatiVyatha</i>	13	86.66%

Table No- 7: Effect on signs & symptoms in Group – A (*Vamana*)

Main Symptoms	n	Mean Score		X	% RELIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
Puffiness of face & eye lid	13	2.31	0.69	1.62	70	0.87	0.24	6.70	< 0.001
Bilateral Peripheral oedema	14	2.29	0.64	1.64	71.88	0.84	0.23	7.30	< 0.001
Dry & Coarse skin	13	1.85	0.23	1.62	87	0.96	0.27	6.02	< 0.001
Breathlessness	15	2.40	0.53	1.87	77.78	0.99	0.26	7.30	< 0.001
Cold intolerance	3	1.33	0	1.33	100	0.58	0.33	4.00	< 0.10
Constipation	14	2.07	0.14	1.93	93	0.83	0.22	8.70	< 0.001
Weakness	15	2.73	0.80	1.93	70.73	1.13	0.29	6.83	< 0.001
Lethargy	15	2.20	0.20	2.00	90.91	0.85	0.22	9.17	< 0.001
Fatigue	14	2.43	0.29	2.14	88.24	1.17	0.31	6.87	< 0.001

Muscle ache	15	1.87	0.33	1.53	82.14	0.92	0.24	6.49	< 0.001
Loss of initiation	03	1.67	0.33	1.33	80.00	0.58	0.33	4.00	<0.10

Table – 8: Effect of Vamana Karma on Body Weight And Mass Index of 15 Patients Of Hypothyroidism

Weight Gain	n	Mean Score		X	% RELIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
Weight(in Kg)	15	72.93	70.30	2.63	3.61	1.49	0.39	6.83	< 0.001
Body Mass Index	15	30.95	29.84	1.11	3.59	0.64	0.17	6.74	< 0.001

Table No- 9: Effect on signs & symptoms in Group – B (Placebo)

Chief Complaints	n	Mean Score		X	% RE- LIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
Puffiness of face & eye lid	15	1.73	1.00	0.73	42.31	0.46	0.12	6.21	< 0.001
Bilateral Peripheral oedema	12	1.08	0.58	0.50	46.15	0.52	0.16	3.32	< 0.01
Dry & Coarse skin	12	1.83	1.17	0.67	36.36	0.65	0.19	3.55	< 0.01
Breathlessness	15	2.20	1.80	0.40	18.18	0.51	0.13	3.06	< 0.01
Constipation	13	1.85	1.23	0.62	33.33	0.51	0.14	4.38	< 0.001
Weakness	15	1.87	0.67	1.20	64.29	0.67	0.18	6.87	< 0.001
Lethargy	14	2.36	1.50	0.86	36.36	0.77	0.21	4.16	< 0.01
Fatigue	14	2.43	1.29	1.14	47.06	0.77	0.21	5.55	< 0.001
Muscle ache	11	1.55	0.91	0.64	41.18	0.92	0.28	2.28	< 0.05
Loss of initiative	04	1.75	1.00	0.75	42.86	0.50	0.25	1.00	>0.10

Table – 10: Effect Of Placebo on Body Weight And Mass Index of 15 Patients of Hypothyroidism

Weight Gain	n	Mean Score		X	% RELIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
Weight (in Kg)	15	71.0	70.47	0.53	0.75	0.48	0.12	4.30	< 0.001
Body Mass Index	15	29.56	29.33	0.23	0.78	0.20	0.05	4.37	< 0.001

Table No -11: Effect Of Vamana on Dosha Dushti of 15 Patients of Hypothyroidism

DoshaDushti	n	Mean Score		X	% RE- LIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
VataPrakop	15	60	13.67	46.33	77.22	15.42	3.98	11.64	< 0.001
KaphaPrakop	15	71.33	19.05	52.28	73.29	16.56	4.27	12.23	< 0.001

Table – 12: Effect Of Placebo on Dosha Dushti of 15 Patients of Hypothyroidism

DoshaDushti	n	Mean Score	X	% RE-	S.D.	S.E.	T	P
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		B.T.	A.T.		LIEF	±	±		
VataPrakop	15	71.11	63.70	7.41	10.42	9.07	2.34	3.16	< 0.01
KaphaPrakop	15	70.67	60.00	10.67	15.09	7.99	2.06	5.17	< 0.001

Table-13: Effect of Vamana on Biochemical Parameters of 15 Patients of Hypothyroidism

Biochemical Parameters	n	Mean Score		X	% RE-LIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
T ₃	15	0.98	1.14	0.16	16.80	0.17	0.04	3.71	< 0.01
T ₄	15	8.24	9.10	0.86	10.41	0.88	0.23	3.79	< 0.01
TSH	15	17.95	6.65	11.30	62.97	32.59	8.41	1.34	> 0.10
S. Cholestrol	15	206.6	195.27	11.33	5.49	7.64	1.97	5.75	< 0.001

Table-14: Effect of Placebo on Biochemical Parameters of 15 Patients of Hypothyroidism

Biochemical Parameters	n	Mean Score		X	% RE-LIEF	S.D. ±	S.E. ±	T	P
		B.T.	A.T.						
T ₃	15	1.03	1.17	0.13	12.98	0.16	0.04	3.71	< 0.01
T ₄	15	9.23	9.56	0.32	3.50	1.21	0.31	1.04	>0.10
TSH	15	9.30	5.89	3.41	36.70	10.16	2.62	1.30	>0.10
S. Cholestrol	15	214.04	203.13	10.91	5.10	7.86	2.03	5.38	<0.001

Table No – 15: Total effect of the therapy in both groups

Total Effect	Group A		Group B	
	No. of Patient	%	No. of Patient	%
Complete Remission	0	0	0	0%
Markedly improvement (76-100%)	07	46.66%	0	%
Moderate improvement (51-75%)	06	40%	0	%
Mild improvement (25-50%)	02	13.33%	14	93.33%
Unchanged	0	0%	1	6.66%

Table –16: Overall Effect of Therapy of 30 Patients of Hypothyroidism

	'n'	Mean score		X	% of Re-lief	S.D. ±	S.E. ±	't'	P
		B.T.	A.T.						
Group A	15	173.10	53.18	119.92	69.28	32.85	8.48	14.14	<0.001
Group B	15	253.99	224.27	29.72	11.70	17.79	4.60	6.47	<0.001

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