



CONCEPT OF PATHOGENESIS OF DHATVAGNIVIKARA W.S.R. TO HYPOTHYROIDISM AND THERAPEUTIC EVALUATION OF TRIKATU CHURNA AND KANCHANARA KWATHA

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ABSTRACT

Hypothyroidism refers to the under activity of thyroid gland resulting into deficiency of thyroid hormone which may be considered as malfunctioning of agni (pitta). In india 42 million people are suffering from thyroid disorders out of which hypothyroidism is most common with prevalence of 5.4% Sixty uncomplicated cases of hypothyroidism were selected randomly irrespective of their age, sex, education etc. from O.P.D. and I.P.D. of Arogyashala, National Institute of Ayurveda, Jaipur. Inclusion criteria age 18 to 80years, either sex, TSH value more than normal value. Exclusion criteria patient with major psychosis and other critical illness pregnant women, psychiatric illness Diagnostic Criteria – Weakness, Tiredness, Drowsiness, Weight, Deepened gruff voice, swelling neck, Aches and pains muscle stiffness and muscle pain, Dry/Rough Skin. Investigation- CBC, LFT, RFT, LIPID PROFILE, Sr.TSH, Sr.T4, Sr.T3. Group-A -30 patient recommended for Trikatu churna(3gm bd) and kanchnara kwatha(40ml bd) for 12 weeks Group B, 30 patient recommended Tab Thyroxine sodium as prescribed by physician. clinical recovery in 30 patient treated with Trikatu churna and kanchnara kwatha (group A) Weakness p= 0.005121, Tiredness p = 0.014956, Drowsiness p = 0.000202, Weight p = 0.036787, Deepened gruff voice p = 0.014956, Neck swelling p = 0.023856, Aches and pain p = 0.023856, muscle stiffness p= 0.024846, Dry/rough skin p =0.024846, Swelling all over body p = 0.036787, Constipation p = 0.000959, cold intolerance p = 0.001323, Breathlessness p = 0.000136, In group B clinical recovery Weakness p =0.00034, Tiredness p = < 0.0001, Drowsiness p =0.00037, Weight p= 0.00017, Deepened gruff voice p = 0.01070, Neck swelling p = 0.00311, Aches and pain p = 0.00311, muscle stiffness p = 0.00109, Dry/rough skin p = 0.00377, swelling all over body p = 0.00946, highly significant in group B significant in group A. **Discussion-** While assessing the clinical recovery in all the patients of Hypothyroidism of two groups it was observed that the patients receiving only allopathic drug i.e. Tab Thyroxine showed some amount of growing feeling of wellbeing after the therapy. And those patients who were put on purely Ayurvedic drug also witnessed a significant feeling of well-being the percentage of improvement was maximum in group B (HS) and significant in group A.

KEYWORDS: Hypothyroidism, agni.

INTRODUCTION

In India, 42 million people are suffering from thyroid disorder, out of which hypothyroidism is most common. Hypothyroidism is pathological condition of thyroid gland producing deficiency of thyroid hormones. It is usually primary disease of thyroid but may be secondary due to disturbances of hypothalamic pituitary axis. As every cell in the body has receptors for thyroid hormones, Hypothyroidism has wide range of manifestation involving every organ system in the body. It makes the affected person to remain dependent on hormonal supplement till the end of life. Studies showed that HRT (levothyroxine sodium) only increase the level of thyroid hormones in the blood but they do not treat

root cause of the disease i.e. inflammation and autoimmunity. In spite of many advances, the modern management of Hypothyroidism still remains unsatisfactory. Excessive thyroid hormone replacement carries the potential for serious long-term metabolic complication (e.g. accelerated osteoporosis, drug intolerance, hypersensitivity, the danger of acute and chronic complication). The more important to search out safe, effective and cheaper remedies in *Ayurveda*. Though any disease condition is not described in *Ayurveda* which is similar to Hypothyroidism yet, several references are scattered in various texts. Eight types of Nindita Purushas (*Ch.su.21*) and Avarana (*Ch.chi.28*) can be described on the basis of various

hormonal disorders. If we try to have a keen insight to the pathogenesis of hypothyroidism according to the principles of *Ayurveda*, we find that it is basically caused due to dysfunctioning of the *Agni*. Hypofunctioning of *Jatharagni*, which in turn, affects *Dhatvagni*, eventually, brings out pathological sequence & ultimately, the diseased condition developed

Aims and Objectives of the study

1. Conceptual and comparative study of *Dhatvagnivikar* in context of hypothyroidism.
2. Therapeutic evaluation of *Trikatu churna* and *Kanchanar Kwatha* in the management of *Dhatvagnivikar* and Hypothyroidism.

Materials and Methods

The study will be carried out in two phases-

Phase I: Conceptual study

Hypothyroidism both *Ayurvedic* & Allopathic perspective.

Phase II: *Upshayatmaka* (clinical) study

60 Patients identified as suffering from hypothyroidism and willing to participate in the *upshayatmaka* trial will be selected for the *upshayatmaka* study after due process of Informed consent. These Patients will be randomly divided into 2 groups as per standard control designs respectively –

Group A

- *Trikatu churna*(3gm BD) & *Kanchanar kwatha*(40ml bd for 3 month)
- *Trikatu churna*,(*Pippali +marich+sunthi*).
- In *Agnimandya* it work as *Dipana*. *Bhavaprakash shlok* no.62, 63.
- *Kanchanar kwath*: The bark of *kanchanara* pounded with rice-water and mixed with *sunthi* should be taken. *Cakradatta chi*. 41/17

Group B

Thyroxine sodium OD. Dose as described by physician.

Follow up: Six follow ups at an interval of 15 days.

OBSERVATIONS AND RESULTS

Table 1: Showing the clinical recovery of 30 patients of Hypothyroidism treated with *Trikatu churna* and *kanchanara kwatha*.

Group A	BT	AT	Diff	Diff%	SD	SEM	(-W)	P value	Sig
Weakness	2.1	1.5	0.6	28.57	0.516	0.163	300	<0.0001	S
Tiredness	2.2	1.7	0.5	22.73	0.527	0.166	253	0.0149	S
Drowsiness	2.2	1.4	0.8	36.36	0.421	0.133	276	0.00020	HS
Weight	2.5	2.1	0.4	16	0.516398	0.163	153	0.0367	S
Deepened Gruf Voice	2.3	1.8	0.5	21.74	0.527	0.166	153	0.0149	S
Swelling Neck	2.6	2	0.6	23.08	0.699	0.221	209	0.0238	S
Aches and pains	2.1	1.5	0.6	28.57	0.699	0.221108	152	0.0238	S
Muscle stiffness	2.3	1.6	0.7	30.43	0.823	0.260	79	0.0248	S
Dry/Rough Skin	2.3	1.6	0.7	30.43	0.823	0.260	55	0.0248	S
Swelling all over body	2.2	1.4	0.8	36.36	1.032	0.326	66	0.0367	S
Constipation	2	0.8	1.2	60	0.788	0.249	190	0.0009	HS
Cold intolerance	2.6	1.9	0.7	26.92	0.483	0.152	30	0.010	S
Breathlessness	2.7	1.3	1.4	51.85	0.699	0.221	213	0.0001	HS
Puffiness of Face	2.6	2	0.6	23.08	0.699	0.221	209	0.0238	S
Muscle Cramp	2.2	1.4	0.8	36.36	1.032	0.326	66	0.0367	S
Appetite	2.5	2.1	0.4	16	0.516398	0.163	153	0.0367	S

Table 2: Showing the clinical recovery of 30 patients of Hypothyroidism treated with Thyroxine sodium.

Group B	BT	AT	Diff	Diff%	SD	SEM	(-W)	Pvalue	Sig
Weakness	2.4	0.9	1.5	62.5	0.849	0.268	378	0.000342	HS
Tiredness	2.4	0.3	2.1	87.5	0.994	0.314	407	<0.0001	HS
Drowsiness	2.4	0.6	1.8	75	1.032	0.326	435	0.000375	HS
Weight	2.8	1.7	1.1	39.28	0.567	0.179	351	0.000173	HS
Deepened Gruf Voice	2.6	1.8	0.8	30.77	0.788	0.249	171	0.010708	S
Swelling Neck	1.9	1.1	0.8	42.11	0.632	0.2	136	0.00311	S
Aches and pains	2	1.2	0.8	40	0.632	0.2	190	0.00311	S
Muscle stiffness	2.7	1.6	1.1	40.74	0.738	0.233	153	0.001098	S
Dry/Rough Skin	2.6	1.6	1	38.46	0.816	0.258	325	0.003772	S
Swelling all over body	2.2	0.9	1.3	59.09	1.251	0.395	210	0.009463	S

Constipation	2.2	0.7	1.5	68.18	0.849	0.268	276	0.000342	HS
Cold intolerance	2.6	1.4	1.2	46.15385	0.918937	0.290593	253	0.002561	S
Breathlessness	2.7	1.3	1.4	51.85185	0.699206	0.221108	231	0.000136	HS
Puffiness of Face	1.9	1.1	0.8	42.11	0.632	0.2	136	0.00311	S
Muscle Cramp	2.6	1.6	1	38.46	0.816	0.258	325	0.003772	S
Appetite	2.6	1.6	1	38.46	0.816	0.258	325	0.003772	S

Table 3: Showing the clinical recovery of 30 patients of Hypothyroidism treated with Trikatu churna and kanchanara kwatha.

Group A	BT	AT	Diff	Diff %	SD	SEM	T Value	P value	Sig
Hb	9.15	9.68	0.53	5.79	0.680	0.215	0.4056	0.036	S
TLC	6741.9	6899.1	157.2	2.33	362.054	114.492	0.7283	0.203	NS
Blood Urea	24.7	24.4	0.3	1.21	1.059	0.335	1.1166	0.394	NS
Sr. Creatinine	1.02	1.07	0.05	4.90	0.108	0.034	0.683	0.177	NS
Sr. Cholesterol	143.6	138.3	5.3	3.69	7.917	2.504	0.4723	0.063	NS
Sr. Triglyceride	114.6	114	0.6	0.52	0.843	0.267	0.4444	0.051	NS
SGOT	26.7	26.1	0.6	2.25	0.966	0.306	0.509175	0.081	NS
SGPT	37	36.5	0.5	1.35	0.707	0.224	0.4472	0.052	NS
Total S. Bilirubin	0.92	0.55	0.37	40.22	0.236	0.075	0.201	0.001	S
Sr. T3	1.52	1.6	0.08	5.263	0.598	0.1890	2.362	0.6821	NS
Sr. T4	12.1	11.8	0.3	2.479	1.494	0.4726	1.575	0.5414	NS
Sr. TSH	6.58	5.67	0.91	13.830	0.713	0.2253	0.247	0.0029	S

Table 4: Showing the clinical recovery of 30 patients of Hypothyroidism treated with Tab. Thyroxine sodium.

Group B	BT	AT	Diff	Diff %	SD	SEM	T Value	P value	Sig
Hb	9.18	9.5	0.32	3.49	0.336	0.106	0.332	0.015	S
TLC	7730	7340	390	5.05	321.282	101.598	-0.261	0.004	S
Blood Urea	37.3	35.1	2.2	5.90	0.422	0.133	0.061	0.0001	HS
Sr. Creatinine	0.96	0.86	0.1	10.42	0.236	0.075	0.745	0.213	NS
Sr. Cholesterol	198.5	178	20.5	10.33	10.659	3.371	0.164	0.000	HS
Sr. Triglyceride	114.4	112.1	2.3	2.01	4.715	1.491	0.648	0.157	NS
SGOT	24.6	24.9	0.3	1.22	3.433	1.086	3.619	0.789	NS
SGPT	39.7	40	0.3	0.76	5.397	1.707	5.688	0.864	NS
Total S. Bilirubin	0.75	0.62	0.13	17.33	0.327	0.103	0.795	0.240	NS
Sr. T3	1.21	1.38	0.17	14.05	0.312872	0.098939	0.582	0.119877	NS
Sr. T4	10.2	12.5	2.3	22.55	1.766981	0.558768	0.243	0.002613	NS
Sr. TSH	6.74	4.55	2.19	32.49	0.3755	0.118743	0.054	<0.0001	HS

DISCUSSION

Deficiency of thyroid hormones is called hypothyroidism, and this can affect the function of virtually every system in the body. Thyroxine- An iodine-containing hormone secreted by the thyroid gland that increases the rate of cell metabolism and regulates growth. Iodine can be considered as *Tejomahabhutamsha* and its main content of thyroid hormones. So it can be said that thyroid hormones have *Agni Amsha*. Without thyroid hormones from thyroid gland, almost all the chemical reactions of the body would become sluggish. So they can be considered as part of *Kayagni* on which the entire metabolic activities depend on. More over the functions of the *Agni* are *Dahana*, *Pachana* and *Satmikarana* which can be correlated with metabolic activities in the body. Thyroid hormones control all metabolic activities of the body. Every cell in the body has receptors for thyroid hormone. Hence thyroid hormones can be considered as *Kayagni Amsha*.

Sr. T3: In Group A 5.26% improvement T value is 2.36 and P value is 0.6821 non-significant. In Group B 14.05% improvement, T value is 0.58 and P value is 0.11 non significant.

Sr. T4: In Group A 2.47% improvement T value is 1.575 and P value is 0.5414 non significant. In Group B 22.5% improvement T value is 0.23 and P value is 0.002613 non significant.

Sr. TSH: In Group A 13.830% improvement and T value is 0.247, P value is 0.0029 significant. In Group B 32.49% improvement T value is 0.054 and P value is <0.0001 Highly significant.

CONCLUSION

Trikatu churna and kanchanara kwatha Highly significant in weakness and drowsiness non significant in Sr. T3, Sr. T4 and significant in Sr. TSH, tiredness, weight

reduction, swelling all over body, dry/rough skin ,muscle stiffness, aches and pain, deepend gruff voice, neck swelling, Thyroxine sodium Highly significant in Sr. TSH, weakness, Tiredness, Drowsiness, Weight reduction, Significant in Deepened gruff voice, Neck swelling, Aches and pain, Muscle stiffness, Dry/Rough skin, Swelling all over body, Non-significant in Sr.T3, Sr.T4.

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