Research Article

Yagya Therapy as adjunct care tended to normalized level of thyroid hormones in 18 thyroid patients after 40 days of treatment

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Abstract

Yagya Therapy is an ancient Vedic therapy. Using specific herbs for management of the disease, this novel approach can provide a supportive care in various conditions. Besides, it involves a holistic approach with pulmonary inhalation of herbal vapors through Pranayama. In the thyroid condition, hyper and hypo thyroid, there is imbalance of the T3, T4 and TSH hormones along with complains in associated with quality of life. The present study evaluated thyroid hormonal levels and quality of life in 18 thyroid patient after giving 40 days of Yagya Therapy with application of herbal mixtures for hormonal balance as supportive care. Patients were without any change in the drug and dose in past 6 months. The pre and post evaluation after Yagya Therapy revealed that in just 40 days of Yagya Therapy as supportive care, it helped to achieve the desired pattern in the hyperthyroid patients. In hypothyroid patients (n=9), pattern of increase in the T4 and T3 levels and decrease in TSH level and in the hyperthyroid patients (n=3), decrease in the T4 and T3 level and increase in TSH level were observed (p=0.06). In addition patients reported significant improvement in quality of life in physical weakness (p-value 0.0078), breathing issues (p-value 0.0078), sleep issues (p-value 0.0176), stress (p-value 0.002), indicating the potential of Yagya Therapy in treating and managing Thyroid condition. Yagya Therapy has great potential for management of chronic condition of Thyroid through both balancing thyroid hormones as well as by improving quality of life.

Keywords. Yagya Therapy, Hormonal Balance, Thyroid, Herbs, Hyperthyroidism, Hypothyroidism

Introduction

Yagya Therapy is an ancient Indian Vedic therapeutic model. It is a holistic healing model involving pulmonary inhalation of herbal vapors through Pranayama. Yagya also includes Vedic mantra chanting and oblation in the sacred fire with the message of living a selfless life. Besides inhalation of specific herbal fumes are helpful for a specific disease. This holistic approach can help in improving the quality of life in patients (1). Herbal inhalation in Ayurveda has been applied in various diseases (2). In Yagya Therapy disease specific herbs are used for treatment for various diseases. Previously, Yagya Therapy has been shown effective in various diseases such as Diabetes (3-4), Thyroid (5), Epilepsy (6-7), Cancer (8), Crohn's Disease (9), Arthritis (10), etc.

Hyperthyroidism is a pathological condition in which excess thyroid hormone is secreted. It is characterized by the low serum thyroid-stimulating hormone (TSH) concentrations and high serum concentrations of thyroid hormones: thyroxine (T_4), tri-iodothyronine (T_3), or both (11). Hypothyroidism is a pathological condition of thyroid hormone deficiency. It is defined as thyroid-stimulating hormone (TSH) concentrations above the reference range and free thyroxine concentrations below the reference range (12). There are three options for treating patients with hyperthyroidism which are antithyroid drugs (ATDs), radioactive iodine ablation, and surgery (11). Hypothyroidism is mainly treated with levothyroxine monotherapy (13).

In the present paper, 18 patients suffering from either hyper or hypothyroid disease took Yagya Therapy for around 40 days as an additional treatment for their disease. They were evaluated for changes in the thyroid hormone level and quality of life before and after 40 days.

Methods

Patient history and course of treatment

The study was conducted at 4 different places and 18 patients participated (18 case studies), who were suffering from thyroid disease. Their age, gender, type of thyroid conditions, and duration of disease were mentioned in Table 1. They had been continuously taking allopathic medication for Thyroid since the detection, at least for more than 1 year. All of the patients had not changed the dose and course of medication in the past 6 months before the start of the Yagya Therapy. In the present study, participated patients were advised to take Yagya Therapy as an add-on therapy. Therefore, the patients continued with the prescribed allopathic medication and took Yagya Therapy for 40 days as an add-on therapy.

Procedure of Yagya and herbal preparation intake

Patients were guided by Dev Sanskriti Vishwavidyalaya, Haridwar to follow the standard protocol of Yagya. Briefly, the procedure included doing Shatkarma (Pavitrikaran, Achaman, Shikhavandan, Nasya, PrithviPujan) (i.e., spiritual practices for purification), Chandan-dharan, Guru-avahan, 24 oblations of the herbal mixture (hawansamagri) in the fire along with the chanting of Gayatri Mantra, followed by Pranayama for 15 minutes (15-16).

Patients used copper/iron pot (in which the fire is generated), mango sticks and/or cow dung petties (for generating the fire), ghee (clarified butter made from cow's milk), and herbal preparation (hawansamagri) prescribed by Department of Ayurveda and Holistic Health.

The patients were informed to mostly use mango sticks and commercially available ghee. Room size was around 12X12 feet or mentioned in the Table 2. Patients performed Yagya daily in the morning duration (Table 2). Subsequently, they continued to sit in the same room atleast for another 15 minutes.

Herbal mixture (hawansamagri) preparation

For the past several years, the Department of Ayurveda and Holistic Health, Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand has been prescribing Yagya Therapy (Yagyopathy), wherein different herbal preparations of Ayurvedic plant medicines (hawansamagri) have been made in-house for various diseases. With regards to the present study, DAHH prescribed a hawansamagri for thyroid treatment, which consists of more than 12 herbs No metal was used in the herbal preparation. All ingredients were well identified by taxonomist were non-toxic, and could be useful in the management of thyroid disease, and the associated disorders (15,17,19-21).

Some of the herbs whose effectiveness in the management of hypothyroidism and hyperthyroidism, and associated disorders, has been demonstrated in the open literature include Kachnar (bauhiniavariegata) (19), Ashwagandha (Withaniasomnifera) (20), Giloy (tinsopora), Shatavar (asporagus), Kayphal (myricaesculenta), Punarnava (Boerhaviadiffusa) (15,21). Along with the hawansamagri for thyroid, common purpose havansamagri had to be mixed in a 3:1 ratio, and then the oblations had to be made in the fire with this mixture.

Patient Evaluation & Statistical Analysis

Patients was asked to check the blood level of T3, T4, and TSH at their local pathology lab 1-2 weeks before the start of the Yagya Therapy. Yagya Therapy was given for 40 days and after 1-2 weeks of completing Yagya-Therapy, post-data (T3, T4, and TSH) were recorded. Additionally, 10-point questionnaire of quality of life was self-filled by the patient. Before the start of the therapy, informed consent was taken from the patients. Patients' prior consent was taken to use their medical records data for research publication, without revealing their identity. Statistical Analysis was performed for Wilcoxon matched-pairs signed rank test using Graphpad Prism 7.3 Software.

Yagya Therapy		Total days	Room Size	Samidha	HawanSamagri used/Yagya	Yagya Time	State	City	Patients
Start	End								
30/01/2020	09/03/2020	40	12X12	Mango wood Cow dung	40 gm	Morning	Maharashtra	Nagpur Place 1	Pt1-Pt6
11/03/2020	27/04/2020	47	12X14	Mango wood + Cow dung	60 gm	Morning	Maharashtra	Nagpur Place 2	Pt7-Pt8
12/08/2019	22/09/2019	41	12X12	Mango wood	30 gm	Morning	Gujarat	Surat Place 2	Pt9-12
22/08/2020	10/10/2020	49	10X10	Mango wood	40 gm	Morning	Gujarat	Surat Place 2	Pt13-17
24/05/2020	11/07/2020	48	12X12	Mango wood + locally available	40 gm	Morning	Maharashtra	Mumbai	Pt18

Table 1. Details of places where Yagya Therapy taken by thyroid patients

Patient ID	Gender	Age	Thyroid Type
Pt1	M	47	Hyper
Pt2	F	58	Hypo
Pt3	F	55	Hyper
Pt4	F	51	Hypo
Pt5	F	48	Hypo
Pt6	F	47	Hypo
Pt7	F	80	Hypo
Pt8	M	64	Hypo
Pt9	F	32	Hypo
Pt10	F	53	Hypo
Pt11	M	61	Hyper
Pt12	F	50	Not known
Pt13	F	44	Hypo
Pt14	F	32	Not Known
Pt15	F	54	Hyper
Pt16	M	62	Hypo
Pt17	F	30	Hypo
Pt18	F	49	Hyper

Table 2. Demographic details of thyroid patients who took Yagya Therapy as supportive care; Pt denotes Patient.

Results

Effect of Yagya Therapy on the thyroid hormone levels

A total of 18 patients were evaluated before and after Yagya Therapy for thyroid hormone levels. Only 9 hypothyroid patients' and 3 hyperthyroid patients' blood reports for thyroid hormones were available. Tables 3 and 4 described the statistical changes in thyroid hormone levels in hypo and hyperthyroid patients taking Yagya Therapy as supportive care respectively. In Figure 1 the changes are depicted with a graphical view for changes for each patient after taking Yagya Therapy as supportive care for 40 days.

In the hypothyroid patients, median level of T3 increased from 96.37 to 112.2 ng/dL (p-value 0.2129) and for T4 level increased from 9.06 to 9.76 ng/dL (p-value 0.0371), while TSH level was decreased from 4.58 to 3.46 ng/dL (p-value 0.0645) (Table 3). There was a significant increase in the T4 level (Figure 1B) as the p-value was below 0.05. A similar pattern was also observed for the T3 level (Figure 1A); however, the p-value was only 0.2 indicating only the trend. Besides, the increase in TSH level in hypothyroid patients was also observed (Figure 1C). It is desired in hypothyroid patients that treatment should increase T3 and T4 levels which are usually low and treatment should decrease TSH levels which are usually high. It is noteworthy to mention that Yagya Therapy as an aid helped to achieve the desired pattern in a hypothyroid patient.

For the participated patients, though the median level of T3 and T4 were in the normal range before the start of the Yagya Therapy, it was noteworthy that the median level of TSH was above the upper reference limit (0.3 µIU/mL-4.5 µIU/mL) which was brought down within normal range (below 4.5 unit) after just 40 days of Yagya Therapy as supportive care.

In the hyperthyroid patients, median level of T3 decreased from 86 to 71 ng/dL (p-value 0.125) and median level of T4 also decreased from 9.83 to 8.07 ng/dL (p-value 0.125), while median TSH level was increased from 0.008 to 0.02 ng/dL (p-value 0.0625) (Table 4). There was a trend of a decrease in T3 and T4 levels (Figure D-E). Besides the increase in TSH level in hyperthyroid patients was also observed (Figure 1C). It is desired in hyperthyroid patients that treatment should decrease T3 and T4 levels which are usually high and treatment should increase TSH levels which are usually low. It is noteworthy to mention that Yagya Therapy as an aid helped to achieve the desired pattern in the hyperthyroid patient (Figure 1D-F).

Yagya Therapy (40 days) - Hypothyroid patients						
Significance	Before	After	Before	After	Before	After
	T3	T3	T4	T4	TSH	TSH
Median	96.37	112.2	9.06	9.76	4.58	3.46
25% Percentile	83.99	83.98	7.94	8.547	3.52	0.205
75% Percentile	111.5	129.4	9.56	11.12	7.38	4.748
Total patients (n)	9		9		9	
p value	0.2129		0.0371*		0.0645	

Table 1: Thyroid hormone levels in hyperthyroid patients taking Yagya Therapy as supportive care

Yagya Therapy (40 days) - Hyperthyroid patients						
	Before	After	Before	After	Before	After
	T3	T3	T4	T4	TSH	TSH
Median	86	71	9.83	8.07	0.008	0.02
25% Percentile	4.25	2.26	1.3	1.2	0.00175	0.00525
75% Percentile	242.3	178.6	14.56	13.12	0.212	1.78
Patients (n)	3		3		3	
p value	0.125		0.125		0.0625	

Table 4. Thyroid hormone levels in hypothyroid patients taking Yagya Therapy as supportive care.

Effect of Yagya Therapy on the quality of life on the Thyroid patients

Among 18 patients a total of 17 patients' questionnaire with before and after Yagya Therapy evaluations were available for quality of life. Table 5 represents a descriptive statistical analysis of quality of life in thyroid patients after taking Yagya Therapy as supportive care for 40 days. Figures 2 and 3 depicted a graphical view for the changes in quality of life for each patient after taking Yagya Therapy as supportive care for 40 days.

In the thyroid patients, as per the self-reported scale, after 40 days Yagya Therapy reduced intensity of body ache (p-value 0.0703) and weakness (p-value 0.0078) from 25 points to 0 points (Figure 2A, Table 5), while there was no complaint in the loss of appetite and constipation before Yagya Therapy (Figure 2B, Table 5).

The median of breathing issues, sleep issues, stress and sadness, concentration issues, and problem-solving was 25 points. After 40 days of Yagya Therapy as supportive care, there was significant relief in breathing issues (p-value 0.0078), sleep issues (p-value 0.0176), stress (p-value 0.002), while the trend observed in the relief from unhappiness (p-value 0.0859) (Figure 3A). However, 40 days of the aid of Yagya Therapy did not impact the status of concentration issues (p-value >0.9999) and problem-solving (p-value 0.7266) (Figure 3B).

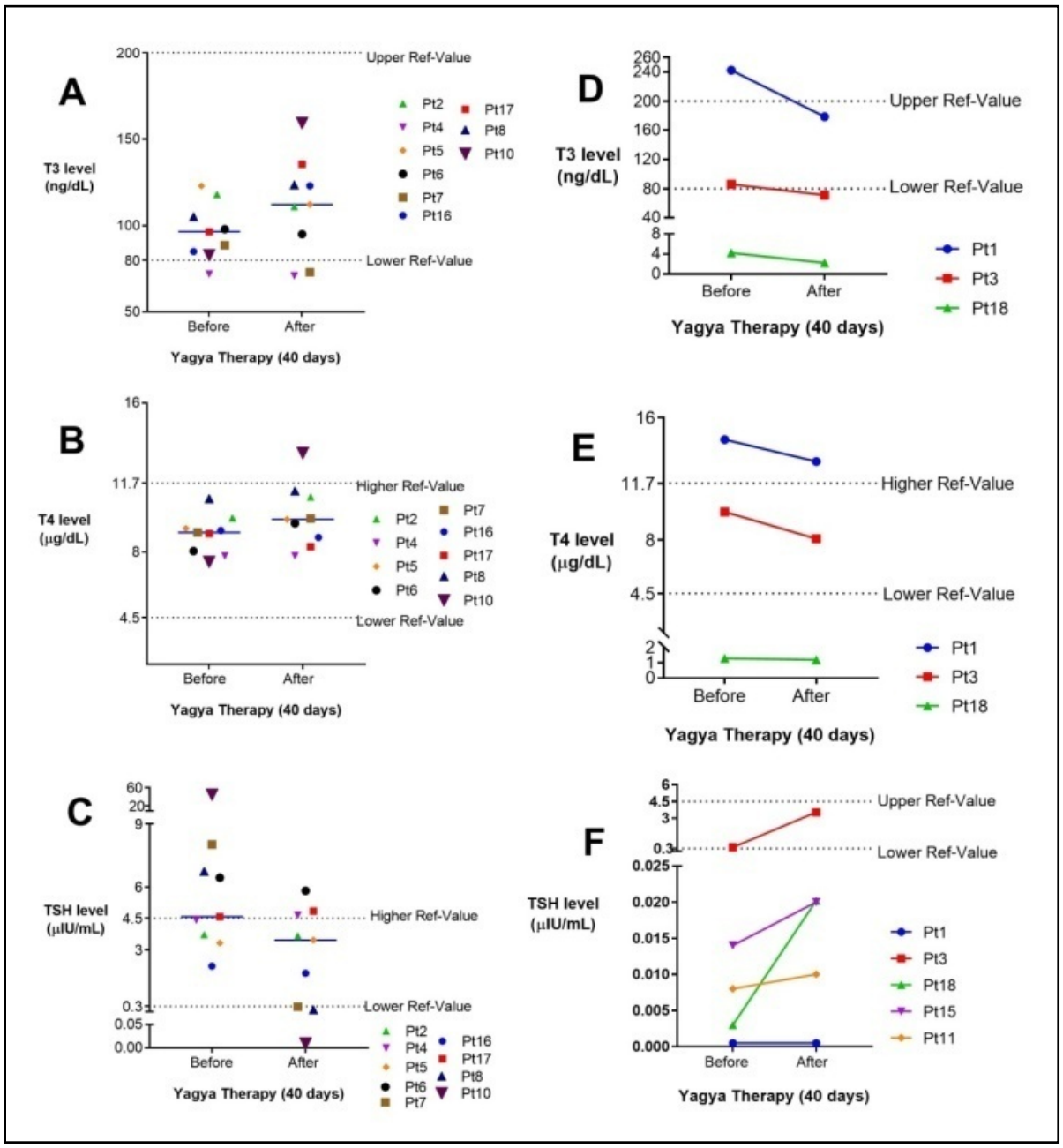

Figure 1. Changes in the blood level of the thyroid hormones in hypothyroid (A-C) and hyperthyroid (D-F) patients after taking Yagya Therapy as supportive care for 40 days. Pt indicates patients. *For Pt18 vales were for free T3 and free T4, while for rest of patients they were total T3 and total T4.

In past two weeks…	Median			P value	P value summary	Significant (P < 0.05)?
	Before Yagya	After Yagya	n			
Did you have body ache?	25	0	17	0.0703	ns	No
Did you feel weakness?	25	0	17	0.0078	**	Yes
Did you lose your appetite?	0	0	17	0.1094	ns	No
Did you have constipation?	0	0	17	>0.9999	ns	No
Did you have trouble breathing?	25	0	17	0.0078	**	Yes
Did you have disturbed sleep?	25	0	17	0.0176	*	Yes
Did you feel stressed?	25	0	17	0.002	**	Yes
Did you feel unhappy?	25	0	16	0.0859	ns	No
Were you able to focus on the work you are doing?	25	25	16	>0.9999	ns	No
Could you face your problems?	25	25	16	0.7266	ns	No

Table 5. Statistical analysis of quality of life in thyroid patients after taking Yagya Therapy as supportive care for 40 days

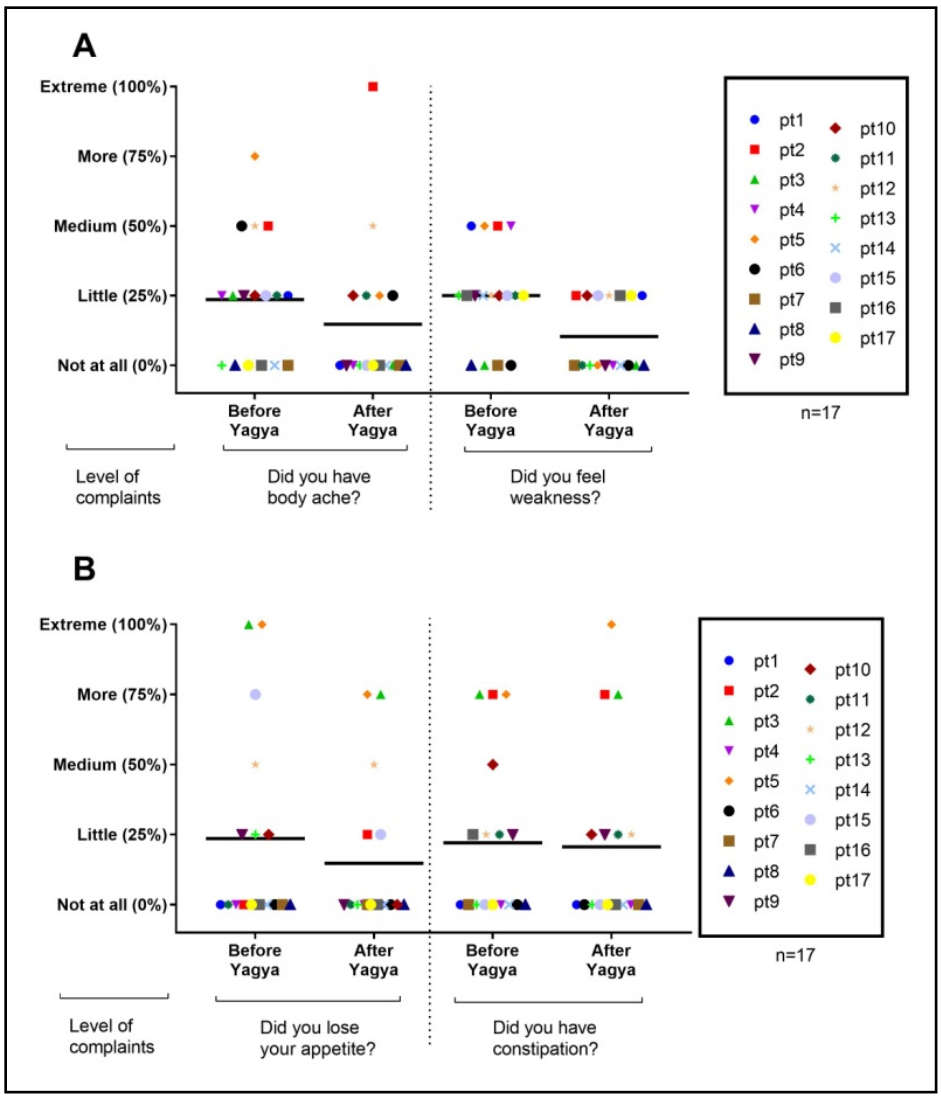

Figure 2. Quality of life in hyper and hypo thyroid patients after taking Yagya Therapy as supportive care for 40 days. A represents whole body ache and physical weakness, B represents appetite and constipation

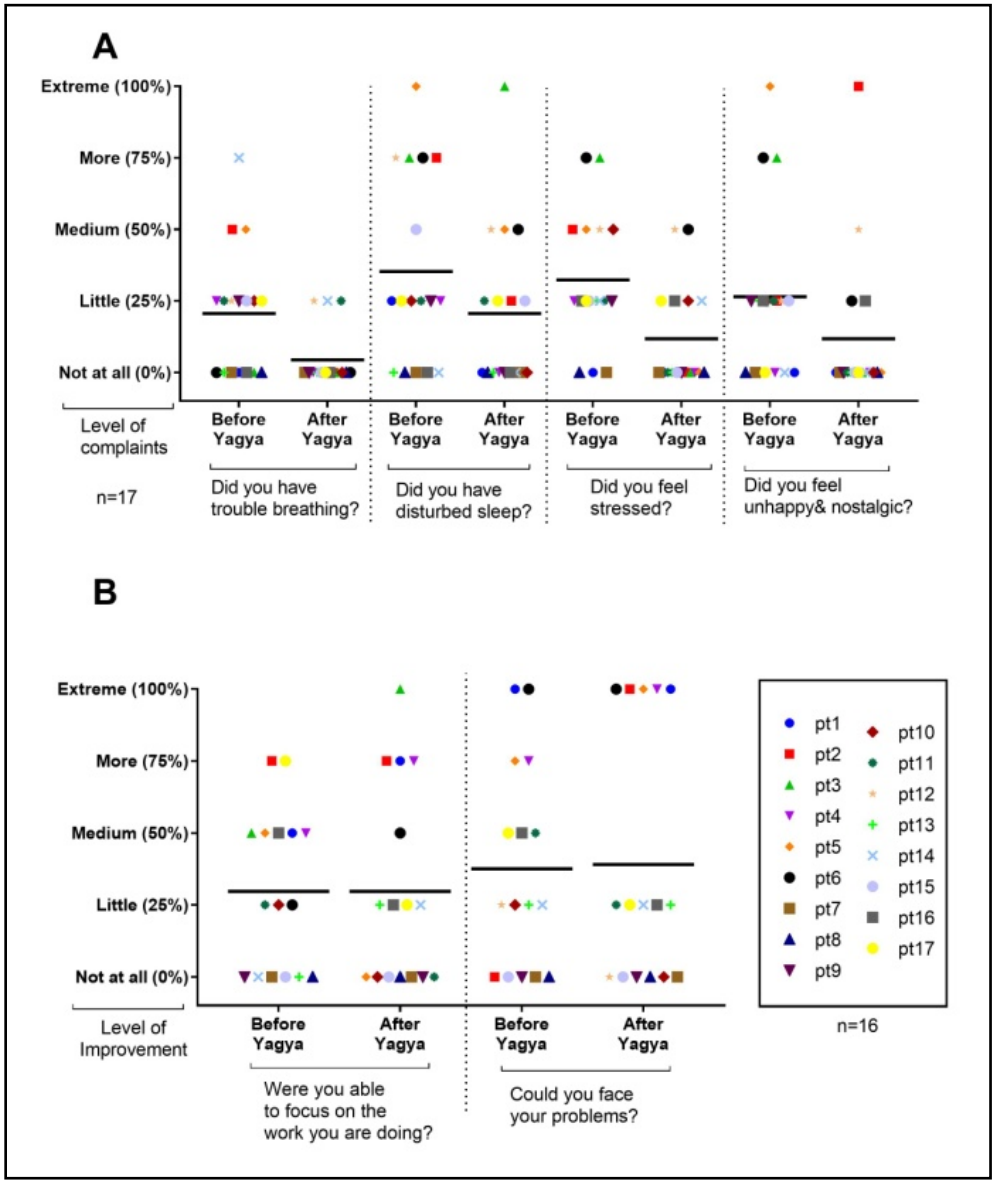

Figure3. Quality of life in hyper and hypo thyroid patients after taking Yagya Therapy as supportive care for 40 days. A represents breathing issues, sleep, stress and sadness, B represents concentration and problem solving.

Discussion

Yagya Therapy as supportive care induced changes in thyroid hormones and aid to trend levels in the normal range (Figure 1 and Table 3-4) in 40 days. In hypothyroid condition, after 40 days of supportive care, the median of TSH brought down into normal range and it was statistically sound (p0.0645). Also in Hyperthyroid condition, it increased TSH level which was also statistically very sound (p=0.0625) (Table 3 & 4; Figure 1-2). Clearly, the trend of hormonal balance was observed in in both hyper and hypothyroid patients that after 40 days of Yagya Therapy as supportive care. These patients had not changed any medication or doses for at least six months before the start

of the Yagya Therapy treatment. Hence, the impact on the pattern observed could had been resulted from Yagya Therapy. However, these changes need to be evaluated concerning the other patients who were only on allopathy treatment to find the pattern observed in the thyroid level had what level of contribution from Yagya Therapy.

Previously published case study on hypothyroid patient using Yagya Therapy also had observed the similar results (15). Ayurvedic treatment using TriphaladyaGuggulu along with PunarnavadiKashaya have also been studied for for thyroid conditions (22).

In addition, in the present study, Yagya Therapy as supportive care improved quality of life concerning physical pain (Figure 2A) and breathing, sleeping related issues along with stress (Figure 3A) (Table 5). Stress and breathing issues are associated with sleeping issues (23). Besides, there were significant improvements in pain, stress-related issues. Previously it has been shown that Yagya reduced stress in healthy individuals (24). In our study, we find that in thyroid patients Yagya therapy as supportive care reduced this line of the problem. In summary, Yagya Therapy has great potential for management of chronic condition of Thyroid through both balancing thyroid hormones as well as by improving quality of life.

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