

A Clinical Study to See the Effect of Thyroidinum, a Homoeopathic Preparation on Thyroid Peroxidase Antibody in Subclinical Hypothyroidism of Age Group between 18-70 Years

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ABSTRACT

A clinical study was conducted to assess the effect of Thyroidinum on thyroid peroxidase antibody in cases diagnosed with subclinical hypothyroidism. A total number of 42 patients were enrolled in the study, out of which 37 patients were diagnosed with sub-clinical hypothyroidism. 35 patients consented to participate in the study out of which 5 were dropped out. The objective of the study was to see the effect of Thyroidinum on TPO levels in SCH and prevent patients from progression to overt hypothyroidism. All patients were prescribed Thyroidinum 3X for 3 months and anti TPO titre were done before and after the course of administration of the drug. Results showed significant difference in the anti TPO titres at baseline and after treatment. At baseline the mean TPO Ab was 582.7 IU/ml which decreased to 308.6 IU/ml ($p < 0.0001$). Hence, it concluded that Thyroidinum 3X has effect on anti TPO Ab titres and prevents progression to overt hypothyroidism.

Keywords: Subclinical hypothyroidism, Thyroidinum 3X, anti TPO Ab titres, Homoeopathy.

INTRODUCTION

Subclinical hypothyroidism is seen in around 8% - 11% of population. More prevalence is seen in women population. And it increases with increasing age. It is usually seen in young adults as it a primary stage of primary hypothyroidism. In this condition the T3 and T4 levels remains unchanged while the TSH levels are mildly elevated. Subclinical hypothyroidism is defined as serum TSH levels above the upper limit of normal despite normal levels of serum thyroxin. [1-10] In early 1970's, it was first identified. Number of patients are directly diagnosed with primary hypothyroidism, this is due to lack of awareness, if proper screening is done in

early stage where the T3 and T4 levels are normal and elevated TSH, medications are administered considering this as subclinical hypothyroidism, then it can prevent patients from progressing towards overt or primary hypothyroidism. On the basis of previous studies it is known that 80% of subclinical hypothyroidism cases have TSH levels less than 10 IU/ml. Subclinical hypothyroidism can be diagnosed with the help of screening, for screening TPO Ab test is done. [11-20] TPO Ab test is also a diagnostic test for subclinical hypothyroidism. There is paucity of scientific evidence regarding subclinical hypothyroidism, its screening and diagnosis. It is found that Indians are at higher prevalence of round 53% in individuals.

Populations with lower prevalence are those with iodine deficiency and iodine supplementation. [21-25] Prevalence in Maharashtra – 32%. Prevalence in Pune – 5-6%. Thyroindinum is potentized form of homoeopathic medicine, prepared from thyroid gland of a sheep. This remedy was proved by Dr. George Murray, in 1981 using double blind method. Thyroindinum has showed positive results so far in cases of thyroid disorders presenting with amenorrhea, sleeplessness, constipation, puffiness of face, weight gain, palpitation. It as also shown results in few cases of myxoedema. [25-27]

METHODOLOGY

The study was conducted at Bharati Vidyapeeth's Homoeopathic Hospital, Pune. 30 cases diagnosed with subclinical hypothyroidism were enrolled in the study. This study was conducted between July 2018 – October 2019. Minimum 5 follow-ups of such patients were taken. Anti TPO titre was done before the study and after the study. The cases were taken from OPD, IPD and mobile clinics conducted by Bharati Vidyapeeth's Homoeopathic Hospital, Pune.

Inclusion criteria:

1. All the patients fulfilling case definition.
2. All the patients presenting with symptoms of subclinical hypothyroidism.
3. Patients of both sexes & age group between 18-70 yrs.
4. The ability to give informed consent & comply with study procedures.
5. Patients with serum TSH below 10 IU/ml.
6. Patients with anti TPO titer less than 1000 IU/ml.

Exclusion criteria:

1. The patients not fulfilling the case definition.
2. Patients who require emergency medical intervention.
3. Patient without written consent.
4. Patients with any systemic illness.
5. Patient who is pregnant or lactating mother.

6. Patients on antihistamine treatment & on immunotherapy.
7. Subclinical hypothyroidism associated with other illnesses.

Data analysis:

The statistical data was done using Anlystat v 1.6.50. The outcome of the study was measured by comparing pre & post TSH and TPO Ab values using paired t test. The $p < 0.05$ is considered statistically significant.

RESULTS

Out of 43 patients, 30 participated and consented in the research. At baseline, 10% of patients were asymptomatic, as shown in (Table 1) Few of these patients were asymptomatic, others presented with dryness of skin, intolerance to cold, hoarseness of voice, weakness, hair fall, weight gain,, menstrual irregularity, etc.

Table 1 – Presentation of symptoms of patients

Symptoms	No. of patients (n = 48)	%age
Asymptomatic (no complaints)	05	10.41
Dryness of skin	05	10.41
Intolerance to cold	02	04.16
Constipation	01	02.08
Voice hoarseness	06	12.5
Fatigue	09	18.75
Forgetfulness	01	02.08
Hair fall	09	18.75
Weight gain	06	12.5
Menstrual irregularity	04	08.33

According to the demographic presentation it can be seen that most of the patients were from the age group of 39 – 48 years (30%). Other age groups showed data as follows, age group 18 – 28 (23.33%), age group 29 – 38 (26.66%), age group 59 – 70 (13.33%)

Table 2 – Age-wise distribution

Age Group	% age
18 – 28	23.33%
29 – 38	26.66%
39 – 48	30%
49 – 58	7.68%
59 – 70	13.33%

Sex ratio is as follows; demographically it can be observed that females were more affected than males. 56.66% females were found affected while 43.33% males were affected. Hence, M: F ratio = 1:2

Table 3 – Sex Preponderance

Sex	%age
Male	43.33%
Females	56.66%

OUTCOME MEASURES:

Out of 30 cases, around 96.66% cases TPO Ab levels showed significant difference ($P < 0.0001$). While there is no significant difference seen in TSH values as such.

Table 4 - Comparison between Pre-treatment & post-treatment

Measure	Pre-treatment	Post-treatment
Mean	582.7	308.6
SD	100.3	77.1
SEM	18.3	14.08
N	30	30

At baseline, the mean of TPO Ab titer was 582.7 IU/ml and it was decreased to 308.6 IU/ml ($P < 0.0001$). The median TPO Ab titer of 590 IU/ml reduced to 315 IU/ml. (Table – 4)

Table 5 – Change in anti TPO Ab titer on time scale

Time scale	Mean	P value
Baseline	582.7	0.9698
After 3 months	308.6	0.0001

Table 5 shows the difference between anti TPO Ab titer at baseline and after 3 months, i.e., after completion of 5 follow-ups per patients.

DISCUSSION

The patient's who were diagnosed with subclinical hypothyroidism without any complications were enrolled in this study. Out of 48 screened patients, 30 were recruited who fulfilled the all the case definition, inclusion & exclusion criteria. Demographic data revealed that most of the patients were in age group of 39 - 48 years ($n=9$; 30%). Others were in the age group of 29 - 38 years ($n=5$; 16.6%), 18 - 28 years ($n=7$; 23.33%) & 49 - 58 years ($n=5$; 16.6%), 59 - 70 years ($n = 4$; 13.33%). Male : Female ratio is 1:2. As observed in this study females are predominately affected than male population. Majority of the patients complained of hoarseness of voice (18.75%), fatigue (18.75%), hoarseness of voice (12.6%), dryness of skin

(10.41%), menstrual irregularity (8.33%), etc. In the present study, we reported that the effectiveness of Thyroindinum 3X on anti TPO Ab titer. In 16% of cases had a family history of hypothyroidism. During the study, there was significant difference seen in anti TPO Ab titers, while there was no change in TSH values. Thyroindinum 3X showed marked difference in general well-being of the patient's health along with giving relief to symptoms due of subclinical hypothyroidism. With these observations it indicates to be effective in lowering the anti TPO Ab titers.

CONCLUSION

Significant decline in the anti TPO Ab titers indicate that homoeopathic Thyroindinum 3X has potential to treat subclinical hypothyroidism and may prevent patients from progressing to overt hypothyroidism.

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Conflict Of Interest:

The authors declare they have no conflict of interest.

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