

Homoeopathy for Anti- Thyroid Peroxidase Antibody Titer in Hashimoto's Thyroiditis- a Clinical Study

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ABSTRACT

Hashimoto's thyroiditis (HT) is the most common organ-specific autoimmune disorder which causes destruction of the thyroid gland. The incidence of HT seems to be increasing which has been linked to excess iodine intake particularly in coastal areas. This study is put forward to describe the potentiality of individualized homeopathic treatment of HT in female adults by observing changes in anti- TPO Ab titer in 30 patients presented with symptoms of hypothyroidism along with elevated anti- TPO Ab titer follow ups were done for 6 months in Sarada Krishna Homoeopathic Medical Collegiate Hospital, Kanniyakumari. Effectiveness of the treatment is determined by comparing the before and after treatment of Zuwelski score and anti-TPO Ab titer were statistical analyzed by using Paired 't' test, the calculated value of 't' for anti-TPO Ab titer is 23.80212. The value of p is < 0.00001. Thus, individualized homeopathic medicine was found effective in reducing the level of anti- TPO Ab titer in the treatment of HT among which Natrium muriaticum was prescribed in most of the cases.

KEYWORDS: Autoimmune thyroiditis, Hashimoto thyroiditis, Homeopathy, Natrum muriaticum, TPO Ab.

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INTRODUCTION

Hashimoto's thyroiditis (HT) is the utmost common organ-specific autoimmune disorder. It causes destruction of the thyroid gland^[1]. On an average about 42 million people in India are suffering from thyroid diseases due to various causes^[2]. A cross-sectional population survey conducted among the residents of coastal area of central Kerala in south India, states that anti-Thyroid peroxidase antibody (anti- TPO Ab) titer was elevated in 46.3% of those with thyroid

dysfunction^[3]. Therefore, HT is the leading cause of hypothyroidism in the iodine-sufficient areas of the world^[4] due to excess iodine intake particularly in coastal areas^[5]. The diagnosis of HT depends on the level of circulating antibodies mainly Anti-Thyroid Peroxidase antibody contributes for about 90% sensitivity to diagnose autoimmune thyroiditis^[4], Anti- Thyroglobulin antibody, reduced echogenicity is seen in thyroid sonogram^[6], Hurthle cells are seen in FNAC smears^[5]. In HT thyroid follicular destruction takes place as a result of lymphocytic infiltration which leads to gradual loss of function due to atrophy and fibrosis of thyroid gland^[4]. Women were most affected with male-to-female ratio is 1:10. Conventional treatment is comprised of levothyroxine at the recommended dose help in conversion of T4 to T3. However, excessive supplementation gives rise to morbid effects, such as arrhythmias and osteoporosis^[7]. Chauhan *et al.*, has showed significant reduction in TSH and anti- TPO Ab in children with Homeopathic treatment^[8]. A case report by Krishneswari *et al.*, showed significant reduction in anti- TPO Ab titers after homoeopathic treatment^[9]. Similar study done by Ghare *et al.*, in 30 patients showed significant difference in the anti- TPO Ab titers has concluded that Homoeopathic specific medicine Thyroidinum 3X has effect on anti- TPO Ab titers and prevents progression to overt hypothyroidism^[10]. For further validation of individualized homeopathic treatment of HT on anti- TPO Ab titers in adult female this clinical study has been put forth.

MATERIALS AND METHODS

Prospective observational clinical study of 30 cases presenting with symptoms of hypothyroidism were screened for elevated anti- TPO titer, females patients within 18 to 60 years of age who fulfilled diagnostic criteria of Hashimoto's thyroiditis from the OPD and Peripheral health centers of Sarada Krishna Homoeopathic Medical Collegiate (SKHMC) Hospital, Kanyakumari, south India. Patients who gave written consent were included in the study with ethical clearance (EC/ 106/ 2017 approved on 13/ 7/ 2017) and is conducted within the study duration of July 2017 to January 2019. Pregnant or lactating women and patients diagnosed with other autoimmune disease or systemic illness excluded from the study. Detailed case history collected and recorded in standardized chronic case record format of SKHMC. Prescription for each case was done after proper individualization and repertorization using complete repertory and follow-up on monthly basis for 6 months. Effectiveness of the treatment

is determined by comparing the pre and post intervention assessment of Zulewski ^[11] for symptomatic relief and anti- TPO Ab titer after the 6 months of study period.

RESULTS AND DISCUSSION

Symptoms observed were tiredness of whole body was seen in 30 cases (100%) before and 19 cases after, slowness of movements seen in 26 cases (86%) before and 12 cases after, weight gain seen in 20 cases (66%) before and 11 cases after, constipation was seen in 19 cases (63%) before and 6 cases after, hoarseness of voice seen in 18 cases (60%) before and 10 cases after, dry skin seen in 14 cases (46%) before and 8 cases after, peri-orbital puffiness was seen in 8 cases (26%) before and 5 cases after, coarse skin was found in 11 cases (36%) before and 8 cases after, cold skin seen in 16 cases (53%) before and 6 cases after, least percentage was seen for diminished sweating 7 cases (23%) before and 4 cases after and paresthesia 7 cases (23%) before and after 5 cases had that symptom.

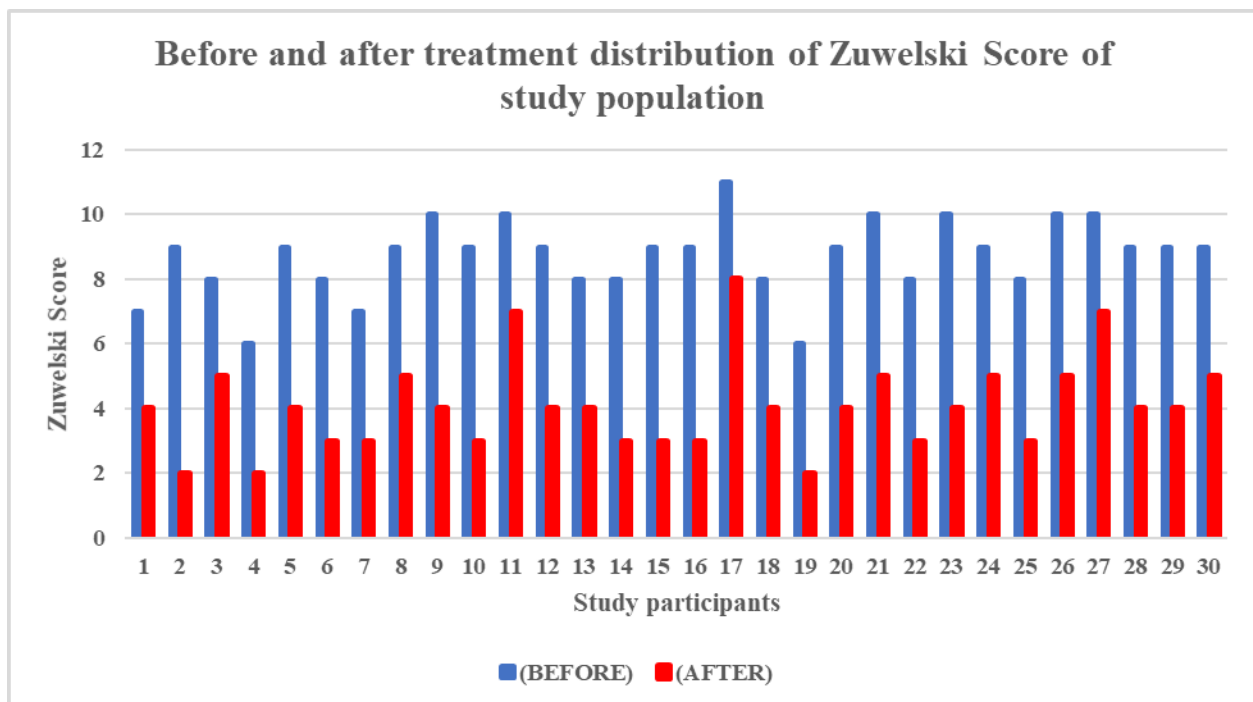


Fig. 1: Showing before and after treatment distribution of Improvement score of study population (Zulewski Score).

From the observation of Zulewski before score ranges from 7 – 11. After treatment, 11

cases (36%) showed score <4, 10 cases (33.33%) showed 4, 6 cases (20%) showed in between 4-6 and 3 cases (10%) showed 6- 8. There is considerable improvement in most of the cases, these results were shown in Fig. 1. There is observable reduction in the intensity of the symptoms in study population. Zulewski score before and after treatment t – value is 13.655. The p- value is < 0.00001. The result is significant at $p < 0.05$ in comparison with the tabled t- value 2.045.

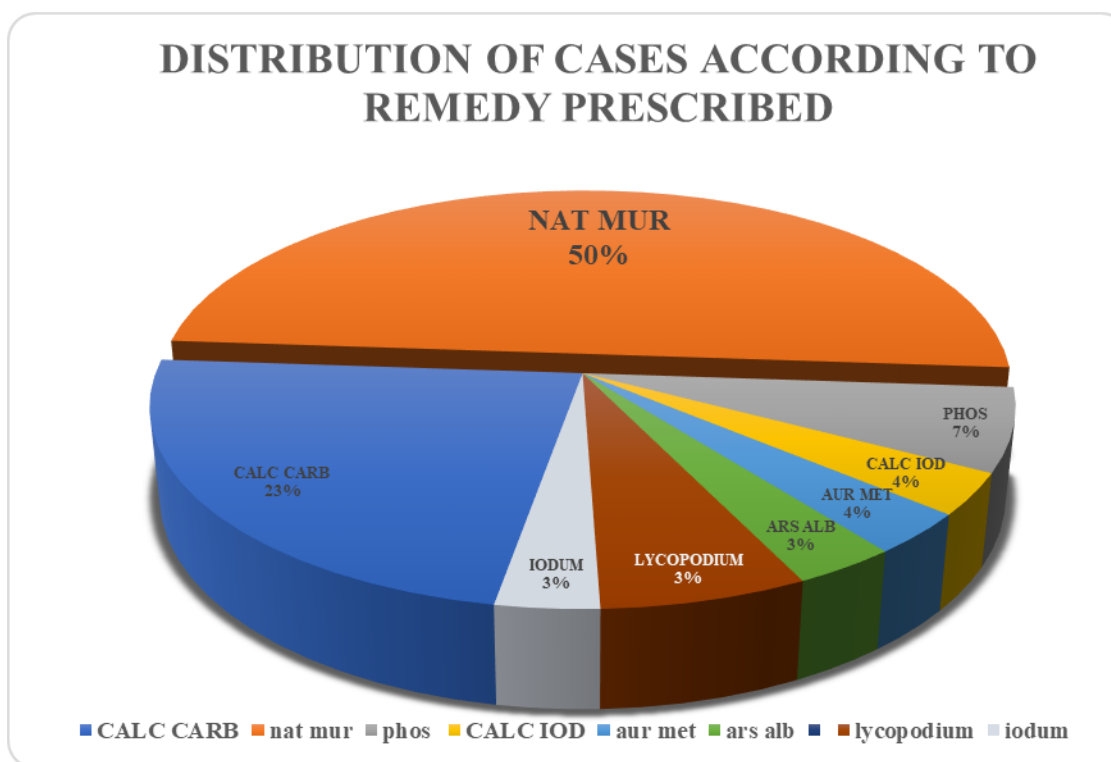


Fig.2: Distribution of Cases According To Remedy Prescribed

Natrium muriaticum covers maximum number of 15 cases (50%), Calcarea carbonica showed effective in 7 cases (23%), Phosphorus suits for 2 cases (6%), the remaining cases there were individual remedies which represents each case, they are Calcarea iodatum, Aurum metallicum, Lapis alba, Lycopodium, Arsenicum album and Iodum which constitute (3.3%) [Fig. 2.].

The Distribution of potencies used in is 15 cases (50%) 50 Millesimal or LM potency in which the original substance is diluted 1: 50000 has given good improvement, in remaining 15 cases centesimal potency (C potency) in which the original substance is diluted more than

10000th dilutions is also found to have good results, among the centesimal potency 1M potency observed to have better outcome.

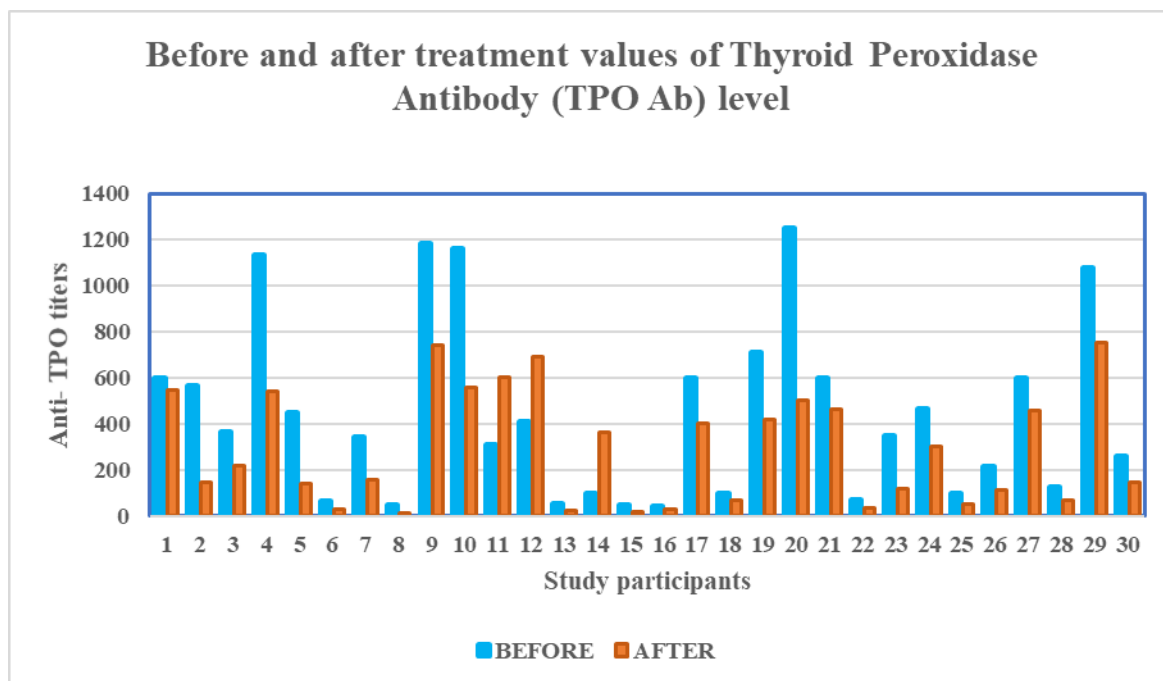


Fig. 3: Showing before and after treatment values of Thyroid Peroxidase Antibody (TPO Ab) level

From the Fig. 3 it's clear that, in cases where there was symptomatic improvement along with that anti- TPO Ab titer also reduced. In 3 cases the patient had symptomatic relief but they had an increase in their anti- TPO Ab titer. The exact cause of exacerbation is unknown.

Anti- TPO Ab titer before and after treatment, the calculated value of “t” is 23.80212. The value of p is < 0.00001. This critical ratio, t follows a distribution with n-1 degrees of freedom, therefore the both the Zuwelski score and Anti- TPO Ab titer comparison is statistically significant.

Among the 30 female cases selected for the study was within age of 18-60 years maximum number of cases comes under the age group of 40-45 years (23%). A review article published by Mincer *et al.*, stated that even though few sources cite that the incidence increases with age and more common incidence seen in 5th decade, most women diagnosed between 30- 50

years of age^[7].

This study showed more incidence seen in lower socio-economic people 15 cases (50%). A study on Residual goiter by Marwaha *et al.*, mentioned that subjects belonging to poor socio-economic strata had significantly higher goiter prevalence^[12].

Significant improvement Zulewski score before and after treatment is in line with the study done by Meier *et al.*, in L-thyroxine treatment for subclinical hypothyroidism^[13]. It is effective tool in identifying clinical hypothyroidism^[14].

Thyroid autoantibodies in serum are definite indicator for HT^[15]. Major finding of this study is that Homoeopathic medicine has a potential to reduce the Anti- TPO Ab titers along with symptomatic improvement in the HT. A similar study done in 30 patient by Prajakta Ghare *et al.*, showed significant difference in the Anti- TPO Ab titers, from mean Anti- TPO Ab titers 582.7 IU/ml decreased to 308.6 IU/ml and concluded that Thyroidinum 3X has effect on Anti- TPO Ab titers^[10]. In current study individualized homoeopathic medicine showed statistically significant result at 95% confidence interval in reduction of Anti TPO Ab titers by using paired ‘t’ test. Commonly prescribed remedies of my study coincide with the randomized control study conducted by Chauhan *et al.*, in the both the studies Natrum muriaticum is most frequently indicated^[8].

CONCLUSION

Among 30 female patients within 18 to 60 of age with symptoms of hypothyroidism and elevated anti- TPO Ab titre, all the cases except one case showed that the patients with the Hashimoto’s thyroiditis had history of mental stress like grief, anger, anxiety or fear before the onset of thyroid disorder^[16, 17]. As emotional stressors are underlining cause for development of HT holistic approach of individualized Homeopathic medicine may be indispensable in the management of HT. In this study, there is significant reduction in the Zulewski scores and Anti- TPO Ab titer after giving individualized homoeopathic medicines for HT, among which Natrum muriaticum frequently indicated, it needs further study in various research designs with control group.

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