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Evaluation of Biofield Energy Healing Based Test Formulation on Thyroid Biomarkers in Vitamin D_3 Deficiency Diet (VDD) Induced Animal Model

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Abstract

This present study evaluated the impact of Consciousness Energy Healing Treatment (the Trivedi Effect) on a novel test formulation in male *Sprague Dawley* (SD) rats, fed with vitamin D_3 deficiency diet (VDD) for the estimation of thyroid biomarkers such as calcitonin, parathyroid (PTH), thyroid stimulating hormone (TSH), and thyroxine (T4). A novel proprietary test formulation was formulated including minerals (magnesium, zinc, copper, calcium, selenium, and iron), vitamins (ascorbic acid, pyridoxine HCl, alpha tocopherol, cyanocobalamin, and cholecalciferol), *Panax ginseng* extract, β-carotene, and cannabidiol isolate. The novel test formulation was divided into two parts; one part was defined as untreated test formulation, while the other of test formulation and the three group of animals received Biofield Energy Healing Treatment by a renowned Biofield Energy Healer, Mr. Mahendra Kumar Trivedi. The level of calcitonin (pg/mL) was significantly increased by 22.7%, 4.2%, 44.9%, 72%, and 67.7% ($p \leq 0.01$) in the Biofield Energy Treated test formulation group (G5), Biofield Energy Treatment *per se* (G6), 15 days pre-treatment of Biofield Energy Treated test formulation (G7), 15 days pre-treatment of Biofield Energy Treated test formulation to the Biofield Energy Treated animals (G8), and Untreated test formulation to the Biofield Energy Treated animals (G9) groups, respectively as compared with the untreated group (G4).

However, the level of TSH was reported to be decreased by 23.3%, 20.4%, and 37.3% in the G7, G8, and G9 respectively as compared with the G4. The level of PTH was decreased by 30.6% and 10.9% in the G6 and G9, respectively, while it was increased by 9.7% in the G5 as compared with the G4. Similarly, the level of T4 was increased by 40.5%, 20.7%, and 20.8% in the G5, G7, and G8 groups respectively as compared with the G4. In conclusion, the Biofield Treated test formulation and Biofield Energy Treatment *per se* significantly improved the thyroid biomarkers in serum that can be used against many thyroid disorders such hyperthyroidism, goitre, thyroid nodules, thyroid cancer, thyroid hormone resistance, Hashimoto's thyroiditis, and many more. Overall, the results showed the significant slowdown the disease progression and disease-related all other complications/symptoms in the preventive Biofield Energy Treatment group *per se* and/or Biofield Energy Treated Test formulation groups (*viz.* G6, G7, G8, and G9) compared with the disease control group.

Keywords: Biofield Treatment; Thyroid Biomarkers; The Trivedi Effect; Thyroxine; Vitamin D_3 deficiency diet; PTH; Thyroid Disorders

Introduction

Some common functional disorders in humans related to thyroid such as, hypothyroidism and hyperthyroidism and, in many cases, they need to be managed by the primary care providers. Although, in some cases these disorders are diagnosed easily, however, there are many patients who considered a problem in their thyroid status and seek evaluation due to variety of other relatable complaints including mood changes, obesity, hair loss, and fatigue, etc. [1]. Triiodothyronine (T3) is the main metabolic active thyroid hormone, and its intracellular availability depends on its transport from circulation as well as the intracellular de-iodination of thyroxine (T4). The reason behind it is that, in normal subjects, thyroid gland secreted 100% of T4, while approximately 20% of T3 is only secreted; and therefore approximately 80% of T3 is available in the body from the conversion of T4 to T3 in extrathyroidal peripheral tissues [2,3].

The status of thyroid in body could be estimated by three important biochemical *i.e.,* thyroid stimulating hormone (TSH), free thyroxine (free T4), and anti-thyroid peroxidase antibodies (anti-TPO ABs). TSH is produced by the pituitary gland and it plays main role in the body to regulate the production of thyroid

hormones T4 and T3 by the thyroid gland. There were increased levels of TSH observed in the body when the thyroid gland could not produce the required number of thyroid hormones; while the low TSH levels indicated the increased levels of thyroid hormones, known as hyperthyroidism. There is another hormone, calcitonin that is also produced by thyroid gland. Therefore, the circulating TSH controls the secretion of T3 and T4, while the secretion of calcitonin as well as parathyroid hormone (PTH) is controlled by calcium ions.

It is reported that calcitonin does not pose any impact on the metabolic turnover; however, it interferes with the metabolism of calcium and phosphate ions, and thus ultimately affect the stability of membrane potential. Besides, parathormone (PTH) is a linear polypeptide consisting of 84 amino acids and it increases the levels of ionized calcium in blood by affecting the bones, kidneys, and intestine [4]. Among endocrine tumours, thyroid cancer is occurring most frequently as the studies reported its incidence to be significantly increasing in many countries. Nowadays, the scientists put their effort using the markers of thyroid function/autoimmunity to predict the risk of thyroid cancer. Some research studies reported the link between the higher levels of TSH and its association with the increased risk of thyroid malignancy, as TSH might play its role in stimulating angiogenesis or by affecting the thyroid cell differentiation and proliferation [5].

Thus, to regulates the thyroid biomarkers, novel test formulation was designed which was the combination of different minerals (selenium, zinc, iron, calcium, copper, and magnesium), vitamins (cyanocobalamin, ascorbic acid, pyridoxine HCl, alpha tocopherol, and cholecalciferol), cannabidiol isolate, and *Panax ginseng* extract. All the minerals and vitamins used in the test formulation have significant functional role to provide vital physiological role [6-8]. Cannabidiol has itself vital biological importance and was reported to role in different disorders [9], while ginseng extract is regarded as the one of the best immune boosters for overall immunity [10,11].

The novel test formulation was studies for thyroid biomarkers in presence of VDD diet and test formulation was treated with Biofield Energy Treatment (a Complementary and Alternative Medicine, CAM) by a renowned Biofield Energy Healer. Biofield Energy Healing approach has been reported to be significant useful method against various pathological conditions [12,13], which is accepted worldwide. National Center for Complementary/Alternative Medicine (NCCAM) recommended the Energy Healing Treatment as the CAM in varous complementary health approach [14]. CAM has several advantages instead of the current preferred treatment approach [15].

Biofield Energy Healing as a CAM health care approach in addition to other therapies, medicines and practices such as deep breathing, natural products, Tai Chi, yoga, therapeutic touch, Qi Gong, Johrei, Reiki, polarity therapy, panic healing, chiropractic/osteopathic manipulation, guided imagery, meditation, massage, homeopathy, hypnotherapy, progressive relaxation, special diets, relaxation techniques, movement therapy, Pilates, mindfulness, Ayurvedic medicine, traditional Chinese herbs and medicines in biological systems [16,17].

The Trivedi Effect®-Consciousness Energy Healing therapy has been widely accepted worldwide in non-living materials and living organisms. The Trivedi Effect® has been scientifically studies on various models in the materials science, agriculture science, microbiology, biotechnology, and improved bioavailability of various compounds, skin health, nutraceuticals, cancer research, bone health [18-33], overall human health, and wellness. In this study, the authors sought to study the impact of the Biofield Energy Treatment (the Trivedi Effect®) on the given novel test formulation and Biofield Energy Treatment *per se* to the animals, which might improve the thyroid biomarkers using ELISA assays.

Materials and Methods

Chemicals and Reagents

Pyridoxine hydrochloride (vitamin B_6), calcitriol, zinc chloride, magnesium (II) gluconate, and β-carotene (retinol, provit A) were purchased from TCI, Japan. Copper chloride, cyanocobalamin (vitamin B_{12}), calcium chloride, vitamin E (Alpha-Tocopherol), cholecalciferol (vitamin D_3), iron (II) sulfate, and sodium carboxymethyl cellulose (Na-CMC) were procured from Sigma-Aldrich, USA. Ascorbic acid (vitamin C) and sodium selenate were obtained from Alfa Aesar, India. Cannabidiol isolate and *Panax ginseng* extract were obtained from Panacea Phytoextracts, India and Standard Hemp Company, USA, respectively. For the estimation of thyroid biomarkers, specific ELISA kits were used such as for detection such as TSH and thyroxine was estimated using CUSABIO, USA, while parathyroid and calcitonin was estimated using Cloud-Clone, USA.

Maintenance of Animal

Randomly breed male *Sprague Dawley* (SD) rats with body weight ranges from 200 to 300 gm were used in this study. The animals were purchased from M/s. Vivo Bio Tech, Hyderabad, India. Animals were randomly divided into nine groups based on their body weights consist of 6 animals of each group. They were kept individually in sterilized polypropylene cages with stainless steel top grill having provision for holding pellet feed and drinking water bottle fitted with stainless steel sipper tube. The animals were maintained as per standard protocol throughout the experiment.

Consciousness Energy Healing Strategies

Each ingredient of the novel test formulation was divided into two parts. One part of the test compound was not received any sort of treatment and were defined as the untreated or control sample. The second part of the test formulation was treated with the Trivedi Effect®-Energy of Consciousness Healing Treatment (Biofield Energy Treatment) by a renowned Biofield Energy

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Healer, Mr. Mahendra Kumar Trivedi under laboratory conditions for ~3 minutes. Besides, three group of animals also received Biofield Energy Healing Treatment by Mr. Trivedi under similar laboratory conditions for ~3 minutes. The blessing/treatment was given to the test items remotely without touching in the laboratory of Dabur Research Foundation, near New Delhi, India. After that, the Biofield Energy Treated samples was kept in the similar sealed condition and used as per the study plan. In the same manner, the control test formulation group was subjected to "sham" healer for ~3 minutes energy treatment, under the same laboratory conditions. The "sham" healer did not have any knowledge about the Biofield Energy Treatment. The Biofield Energy Treated animals were also taken back to experimental room for further proceedings.

Experimental Procedure

Seven days after acclimatization, animals were randomized and grouped based on the body weight. Dosing for groups G7 and G8 were initiated on day -15 and continued till end of the experiment. However, G1 to G6 and G9 groups were dosed from day 1 till the end of experiment. All the animals except G1 group received vitamin D_3 deficient diet (VDD) daily to the end of the experiment. Three weeks after the initiation of induction of VDD, all the groups were dose with the respective formulations.

Estimation of Thyroid Hormone Biomarkers

After completion of the experiment and dosing with test formulation in different groups, blood was collected from all the animals and serum was separated for biomarker estimation such as calcitonin, parathyroid, TSH, and thyroxine (T4). All the serum was subjected for the thyroid biomarker's estimation using ELISA method as per manufacturer's recommended standard procedure. This was a quantitative method, and the principle was based on the quantitative method.

Statistical Analysis

The data were represented as mean ± standard error of mean (SEM) and subjected to statistical analysis using Sigma-Plot statistical software (Version 11.0). For multiple comparison One-way analysis of variance (ANOVA) followed by post-hoc analysis by Dunnett's test and for between two groups comparison Student's *t*-test was performed. The $p \leq 0.05$ was considered as statistically significant.

Results and Discussion

Effect of Test Formulation in Calcitonin Level in the Serum

The results of calcitonin in different groups are presented in Figure 1. Calcitonin level in the serum with vitamin D_3 deficient diet (G2) was 35.27 ± 3.79 pg/mL, significantly decreased by 37.5% as compared to the normal control (G1, 56.43 ± 6.12 pg/mL). Calcitriol treatment (G3) significantly increased the serum calcitonin level (98.83 ± 9.87 pg/mL) by 180.3% as compared to the G2. The test formulation to the animals (G4) significantly increased serum calcitonin level (98.56 ± 8.73 pg/mL) by 179.4% as compared to the G2. Biofield Energy Treated test formulation to the untreated animals (G5) decreased the serum calcitonin level (120.92 ± 12.37 pg/mL) by 22.7% as compared to the G4. Biofield Energy Treatment *per se* (G6) significantly increased the serum calcitonin level (102.73 ± 7.82 pg/mL) by 4.2% as compared to G4.

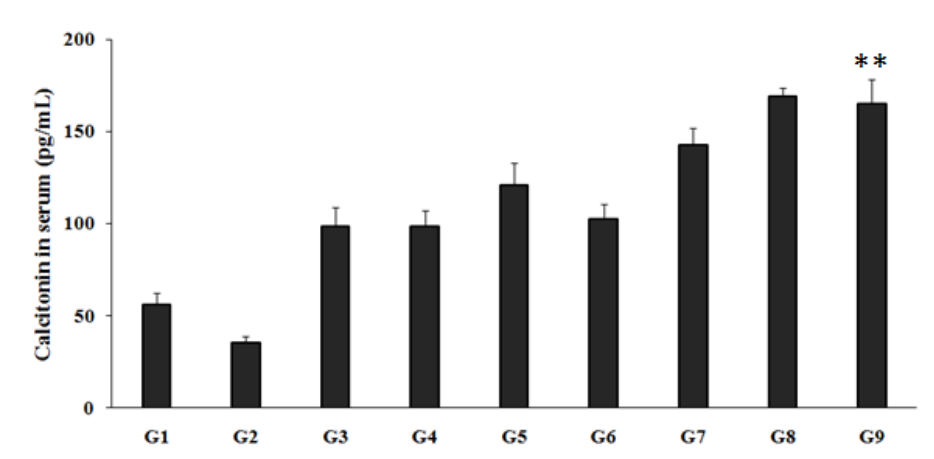

Figure 1: Effect of the test formulation on the level of calcitonin in serum of Sprague Dawley rats. G: Group; G1: Normal control (0.5% CMC); G2: Disease control (VDD: Vitamin D3 deficient diet + 0.5% CMC); G3: Reference item (VDD + Calcitriol); G4: (VDD + untreated test formulation); G5: (VDD + Biofield Energy Treated test formulation); G6: (VDD + Biofield Energy Treatment *per se* to animals from day -15; G7: (VDD + Biofield Energy Treated test formulation from day -15); G8: (VDD + Biofield Energy Treatment *per se* plus Biofield Energy Treated test formulation from day -15), and G9: (VDD + Biofield Energy Treatment *per se* animals plus untreated test formulation). Values are presented as mean ± SEM (n=6). ** $p \leq 0.01$ *vs*. G4.

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15 days pre-treatment of Biofield Energy Treated test formulation (G7) significantly increased the serum calcitonin level (142.83 ± 9.48 pg/mL) by 44.9% as compared to G4. 15 days pre-treatment of Biofield Energy Treated test formulation to the Biofield Energy Treated animals (G8), significantly increased the serum calcitonin level (169.51 ± 4.40 pg/mL) by 72% as compared to the G4. Untreated test formulation to the Biofield Energy Treated animals (G9), significantly increased (p<0.01) the serum calcitonin level (165.27 ± 13.37 pg/mL) by 67.7% as compared to the G4.

Calcitonin is also defined as thyrocalcitonin, which is produced in the thyroid gland and is regarded as one of the antagonists of PTH [34]. Elevated calcium level may stimulate the production and secretion of calcitonin and results in a reduction in the calcium concentration in the blood. Thus, calcitonin is indirectly responsible for increasing mineralisation and synthesis of bone matrix [35]. Our present experiment significantly improved the level of calcitonin in all the experimental groups, which suggested that Biofield Energy Treated Test formulation and Biofield Energy *per se* would be the best treatment strategy for improving the thyroid function.

Effect of Test formulation in TSH (Thyroid Stimulating Hormone) in the Serum

TSH from pituitary gland plays a major role in regulating the production of thyroid hormones thyroxine and triiodothyronine. However, increased levels of TSH occurred in case when thyroid hormones imbalance occurred, while hyperthyroidism results in low TSH levels. Vitamin D regulates the thyroid and TSH levels while its deficiency results in reduced thyroid hormones, which may result in autoimmune thyroid disease such as Graves' disease and Hashimoto's thyroiditis [36]. Vitamin D regulates the binding to vitamin D receptor (VDR), and activation of VDR-responsive genes that are associated with autoimmune thyroid diseases (AITDs) [37]. Thus, the level of TSH in all the experimental groups was measured in serum samples. The results of TSH in different groups are presented in Figure 2.

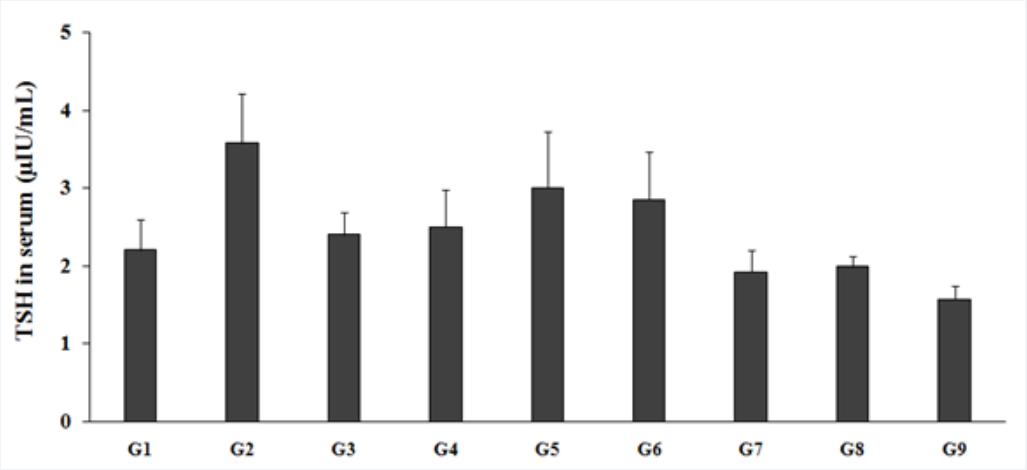

Figure 2: Effect of the test formulation on the level of TSH in serum of Sprague Dawley rats. G: Group; G1: Normal control (0.5% CMC); G2: Disease control (VDD: Vitamin D3 deficient diet + 0.5% CMC); G3: Reference item (VDD + Calcitriol); G4: (VDD + untreated test formulation); G5: (VDD + Biofield Energy Treated test formulation); G6: (VDD + Biofield Energy Treatment *per se* to animals from day -15; G7: (VDD + Biofield Energy Treated test formulation from day -15); G8: (VDD + Biofield Energy Treatment *per se* plus Biofield Energy Treated test formulation from day -15), and G9: (VDD + Biofield Energy Treatment *per se* animals plus untreated test formulation). Values are presented as mean ± SEM (n=6).

The level of TSH in the serum in the G2 (disease control, vitamin D_3 deficient) group was 3.58 ± 0.63 µIU/mL, reported to be increased by 62.1% as compared to the normal control (G1, 2.21 ± 0.39 µIU/mL). However, calcitriol treatment (G3) showed significantly decreased serum TSH level (2.40 ± 0.28 µIU/mL) by 32.9% as compared to the G2. The experimental G4 (untreated test formulation) group showed significantly decreased the serum TSH level (2.51 ± 0.48 µIU/mL) by 30% as compared to the G2. Biofield Energy Treated test formulation to the untreated animals (G5) showed significantly decreased the serum TSH level (3.01 ± 0.72 µIU/mL) by 16% as compared to the G2, while TSH level was significantly reduced by 20.1% as compared to the G4. Biofield Energy Treatment per se to the animals (G6) showed significantly decreased the serum TSH level by 20.4% and 13.8% as compared to the G2 and G4, respectively.

15 days pre-treatment of Biofield Energy Treated test formulation (G7) showed significantly decreased the serum TSH level (1.92 ± 0.28 µIU/mL) by 46.4% and 23.3% as compared to the G2 and G4 groups, respectively. 15 days pre-treatment of Biofield Energy Treated test formulation to the Biofield Energy Treated animals (G8) showed significantly decreased the serum

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TSH level (1.99 ± 0.13 µIU/mL) by 44.3% and 20.4% as compared to the G2 and G4 groups, respectively [38]. Similarly, the untreated test formulation to the Biofield Energy Treated animals (G9) showed significantly decreased the serum TSH level (1.57 ± 0.17 µIU/mL) by 56.1% and 37.3% as compared to the G2 and G4 groups, respectively. Thus, the level of TSH in all the experimental groups was significantly maintained in serum after treatment with the Biofield Energy Treatment *per se*.

Effect of Test formulation in Parathyroid level in the Serum

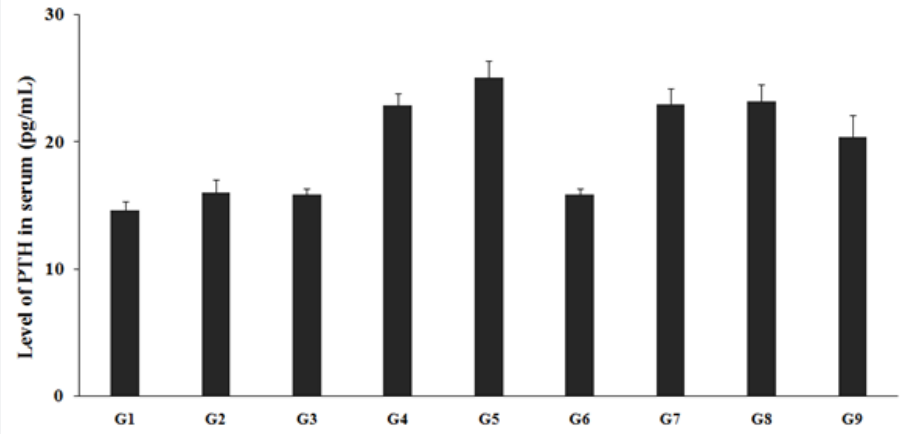

Figure 3: Effect of the test formulation on the level of PTH in serum of Sprague Dawley rats. G: Group; G1: Normal control (0.5% CMC); G2: Disease control (VDD: Vitamin D3 deficient diet + 0.5% CMC); G3: Reference item (VDD + Calcitriol); G4: (VDD + untreated test formulation); G5: (VDD + Biofield Energy Treated test formulation); G6: (VDD + Biofield Energy Treatment *per se* to animals from day -15; G7: (VDD + Biofield Energy Treated test formulation from day -15); G8: (VDD + Biofield Energy Treatment *per se* plus Biofield Energy Treated test formulation from day -15), and G9: (VDD + Biofield Energy Treatment *per se* animals plus untreated test formulation). Values are presented as mean ± SEM (n=6).

PTH (a peptide hormone) from parathyroid glands plays a vital role in maintaining the calcium level and actively worked in case of low calcium level. Osteoclast's formation was also maintained by the PTH in bone matrix that improves bone resorption. PTH also responsible for mobilizing the phosphorus and calcium in bone by increasing the phosphate excretion that leads to decreased phosphate concentrations in the bloodstream [39]. The present experiment results in estimation of PTH in serum and the results are presented in Figure 3.

Parathyroid level in the serum of rats fed with vitamin D_3 deficient diet (G2) was 16.02 ± 0.84 pg/mL results in significantly increased level by 9.6% as compared to the normal control (G1, 14.62 ± 1.00 pg/mL). However, calcitriol treatment (G3) showed decreased the serum parathyroid level (15.88 ± 0.43pg/mL) by 0.9% as compared to the G2. The untreated test formulation to the untreated animals (G4) significantly increased the serum parathyroid level (22.86 ± 0.98 pg/mL) by 42.6% as compared to the G2. Biofield Energy Treated test formulation to the untreated animals (G5) significantly increased the serum parathyroid level (25.08 ± 1.30 pg/mL) by 56.5% and 9.7% as compared to the G2 and G4, respectively.

Biofield Energy Treatment *per se* to the animals (G6) significantly decreased the serum parathyroid level (15.87 ± 0.43 pg/mL) by 30.6% as compared to the G4. 15 days pre-treatment of Biofield Energy Treated test formulation (G7), significantly increased the serum parathyroid level (22.97 ± 1.18 pg/mL) by 43.4% as compared with G2. 15 days pre-treatment of Biofield Energy Treated test formulation to the Biofield Energy Treated animals (G8) significantly increased the serum parathyroid level (23.16 ± 1.32 pg/mL) by 44.5% as compared to the G2. Similarly, untreated test formulation to the Biofield Energy Treated animals (G9) significantly increased the serum parathyroid level (20.36 ± 1.71 pg/mL) by 27.1% as compared to the G2.

Effect of Test Formulation on Serum Thyroxine (T4)

The main hormone of the thyroid gland is thyroxine (T4), it is in inactive form in bloodstream and would convert into active form known as triiodothyronine by organs such as the liver and kidneys. It regulates most of the body metabolic processes of heart and digestive functions, muscle control, brain development and maintenance of bones [40,41]. The present experiment deals with estimation of T4 levels measured in serum (Figure 4). However, our results revealed statistically significant change in the level compared with controls. T4 level in the serum in G2 group was 41.25 ± 2.36 ng/mL, significantly decreased by 20.7% as compared to the G1, 51.99 ± 3.37 ng/mL

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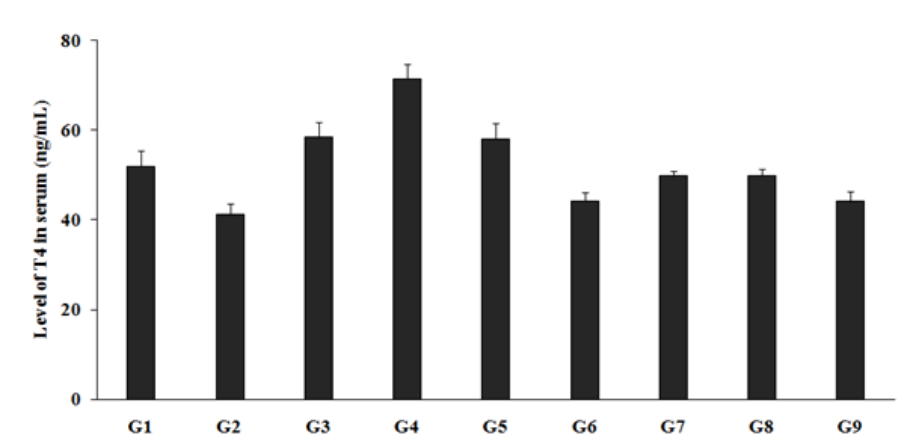

Figure 4: Effect of the test formulation on the level of T4 in serum of Sprague Dawley rats. G: Group; G1: Normal control (0.5% CMC); G2: Disease control (VDD: Vitamin D3 deficient diet + 0.5% CMC); G3: Reference item (VDD + Calcitriol); G4: (VDD + untreated test formulation); G5: (VDD + Biofield Energy Treated test formulation); G6: (VDD + Biofield Energy Treatment *per se* to animals from day -15; G7: (VDD + Biofield Energy Treated test formulation from day -15); G8: (VDD + Biofield Energy Treatment *per se* plus Biofield Energy Treated test formulation from day -15), and G9: (VDD + Biofield Energy Treatment *per se* animals plus untreated test formulation). Values are presented as mean ± SEM (n=6).

Calcitriol treatment (G3) showed significant increased level of T4 (58.42 ± 3.43 ng/mL) by 41.6% as compared to the G2. The untreated test formulation to the untreated animals (G4) significantly increased the serum T4 level (71.45 ± 3.26 ng/mL) by 73.2% as compared to G2. Biofield Energy Treated test formulation to the untreated animals (G5) showed significantly increased the serum T4 level (57.96 ± 3.60 ng/mL) by 40.5% as compared to the G2. G6, G7, G8, and G8 groups also reported with increased T4 level by 7.4%, 20.7%, 20.8%, and 7.1% respectively as compared with G2. The decreased level of thyroxine might result in symptoms such as fatigue, intolerance of cold temperatures, low heart rate, weight gain, reduced appetite, poor memory, depression, stiffness of the muscles and reduced fertility. The data suggest that Biofield Energy Treated test formulation and Biofield Energy *per se* results in improved level of T4.

Thus, the present research plan defined four groups, which were considered as preventive maintenance groups *viz.* G6, G7, G8, and G9, where the Biofield Energy Treatment per se and/or Biofield Energy Treated Test formulation in combination was used as preventive maintenance group with respect to improved thyroid profile. The results showed the significant slowdown of the disease progression, disease-related all other complications and reduced the chances of disease susceptibility in these groups. Based on the overall data, it suggests that the Biofield Energy Healing Therapy was found to be most effective and benefited to prevent and protect from the occurrence of any type of bone-related diseases in rat model. It indicated that Biofield Energy Treatment can act as a preventive maintenance therapy to slowdown the disease progression and disease related complications of the existing aliments that will ultimately improve the overall health and quality of life in human.

Conclusion

The present animal experimental study revealed the significance of Biofield Energy Treated test formulation and Biofield Energy *per se* on thyroid biomarkers tested in serum. Calcitonin (pg/mL) level in serum of animals were significantly increased by 22.7%, 4.2%, 44.9%, 72%, and 67.7% in the Biofield Energy Treated test formulation group (G5), Biofield Energy Treatment *per se* (G6), 15 days pre-treatment of Biofield Energy Treated test formulation (G7), 15 days pre-treatment of Biofield Energy Treated test formulation to the Biofield Energy Treated animals (G8), and Untreated test formulation to the Biofield Energy Treated animals (G9) groups, respectively as compared with the untreated group (G4). However, the serum TSH level was reported to be decreased by 23.3%, 20.4%, and 37.3% in the G7, G8, and G9 respectively as compared with the G4. The level of PTH was decreased by 30.6% and 10.9% in the G6 and G9, respectively, while it was increased by 9.7% in the G5 group as compared with the G4. Similarly, the level of T4 was increased by 40.5%, 20.7%, and 20.8% in the G5, G7, and G8 groups respectively as compared with the G4.

In conclusion, the Biofield Treated test formulation and Biofield Energy Treatment *per se* significantly improved the thyroid biomarkers in serum that can be used against many thyroid disorders such hyperthyroidism, goiter, thyroid nodules, thyroid cancer, thyroid hormone resistance, Hashimoto's thyroiditis, anaplastic thyroid cancer, hypothyroidism, De Quervain's thyroiditis, medullary thyroid cancer, follicular thyroid cancer, papillary thyroid cancer, silent thyroiditis, Graves' disease, thyroid cancer, Hurthle cell thyroid cancer, and thyroiditis. Overall, it can be concluded Biofield Energy Healing Treatment (the Trivedi Effect®) *per se* showed best results with respect to different efficacy and

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biomarker parameters in the preventive treatment approach (-15 days) as compared to the other preventive maintenance groups (G7, G8, and G9) in rat model study. It also helped to slow down the disease progression and disease related complications of the overall animal's health. This test formulation also can be used against fibromyalgia, Addison disease, multiple sclerosis, myasthenia gravis, aplastic anemia, psoriasis, rheumatoid arthritis, Crohn's disease, vitiligo, chronic fatigue syndrome and alopecia areata, as well as various inflammatory disorders such as ulcerative colitis, dermatitis, hepatitis, diverticulitis, mental disorders, Parkinson's and other movement disorders, stroke and transient ischemic attack (TIA), and in the improvement of overall health and quality of life.

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