



Consciousness Energy Healing Treatment and Its Impact on the Structural Properties and Isotopic Abundance Ratios of Thiamine

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Research Article

Volume 4 Issue 1

Received Date: January 27, 2020

Published Date: February 10, 2020

DOI: 10.23880/macij-16000154

Abstract

Thiamine (vitamin B₁) is an essential water soluble vitamin required in all living cells for many cellular functions. The objective of the study was to investigate the impact of the Trivedi Effect®-Consciousness Energy Healing Treatment on the isotopic abundance ratios (P_{M+1}/P_M and P_{M+2}/P_M) and structural properties of thiamine hydrochloride using LC-MS, GC-MS, and NMR spectroscopy. Thiamine sample was divided into two parts, one part of the sample was termed as untreated/control thiamine, while the other part of the sample received the Trivedi Effect®-Biofield Energy Healing Treatment remotely by a renowned Biofield Energy Healer, Mr. Mahendra Kumar Trivedi and designated as Biofield Energy Treated thiamine. The LC-ESI-MS analysis of both the thiamine samples showed the mass of parent molecular ion at m/z 265.03 (calcd for $C_{12}H_{17}N_4OS^+$, 265.11) at the retention times (R_t) 1.51 minutes with similar fragmentation pattern. But, the relative peak intensities of the treated sample were significantly improved compared to the control sample. The isotopic abundance ratios of P_{M+1}/P_M ($^2H/^1H$ or $^{13}C/^12C$ or $^{15}N/^14N$ or $^{17}O/^16O$ or $^{33}S/^32S$) and P_{M+2}/P_M ($^{18}O/^16O$ or $^{34}S/^32S$) were significantly increased by 43.60% and 42.68%, respectively in the treated thiamine compared to the control sample. Therefore, 2H , ^{13}C , ^{15}N , ^{17}O , and ^{33}S contributions from $C_{12}H_{17}N_4OS^+$ to the isotopic m/z 266 and ^{18}O and ^{34}S contributions to the isotopic m/z 267 was significantly increased in the treated sample compared with the control sample. The GC-MS mass peak intensity of the treated sample (52940.7) was significantly increased by 131.01% compared to the control sample (22917.04). The proton and carbon signals for CH_3 , CH_2 , NH_2 , CH , $=C=$, and $C-OH$ groups in the 1H and ^{13}C NMR spectra of the control and treated samples were similar. The increased mass peak intensities and isotopic abundance ratios in thiamine might be due to the Trivedi Effect®-Consciousness Energy Healing Treatment *via* the possible mediation of neutrinos, which may change the intra-atomic bond strength, its physical stability, kinetic isotope effects of the treated thiamine. Thus, the Trivedi Effect®-Consciousness Energy Healing Treated thiamine would be advantageous for designing better nutraceuticals and pharmaceutical formulations which might provide better therapeutic response against vitamin B₁ deficiency and related disorders, including beriberi, Korsakoff's syndrome, Parkinson's and Alzheimer's diseases, maple syrup urine disease, Leigh's disease, optic neuropathy, alcoholism, and aging.

Keywords: Thiamine; The Trivedi Effect®; Energy of Consciousness Healing Treatment; LC-MS; Isotopic Abundance; Kinetic Isotope Effects; GC-MS

Abbreviations: ThMP: Thiamine Monophosphate; ThTP: Thiamine Triphosphate; ThDP/TPP: Thiamine Diphosphate/Thiamine Pyrophosphate; AThTP: Adenosine Thiamine Triphosphate; AThDP: Adenosine Thiamine Diphosphate; CAM: Complementary and Alternative Medicine; NCCIH: National Center of Complementary and Integrative Health; GC-MS: Gas Chromatography-Mass Spectrometry; LC-MS: Liquid Chromatography-Mass Spectrometry; PDA: Photo-Diode Array; APCI: Atmospheric Pressure Chemical Ionization; EI: Electron Impact; NMR: Nuclear Magnetic Resonance; R_i: Retention times; TIC: Total Ion Chromatograms.

Introduction

Vitamin B1 is a water-soluble vitamin, also known as thiamine (or thiamin). It is an essential nutrient; animals must obtain it from foods like yeast, cereal grains, nuts, beans, spinach, meat, and in the dietary supplements [1]. Phosphate derivatives of thiamine needed in all living cells for many cellular processes [2]. Naturally, thiamine has five known phosphate derivatives, i.e., thiamine monophosphate (ThMP), thiamine diphosphate/ thiamine pyrophosphate (ThDP/TPP), thiamine triphosphate (ThTP), adenosine thiamine triphosphate (AThTP), and adenosine thiamine diphosphate (AThDP) [3,4]. Thiamine acts as a coenzyme for the citric acid cycle, glycolytic pathway, pentose phosphate pathway, and degradation of branched-chain amino acids, helps change carbohydrates into energy in the cells of the body and strengthening the immune system, muscle contraction, functioning of the nervous system, heart, liver, and kidney [5-9]. It's supplement used for the prevention and treatment of thiamine deficiency and related disorders, including beriberi, Korsakoff's psychosis, Korsakoff's syndrome, maple syrup urine disease, Leigh's disease, optic neuropathy, Parkinson's and Alzheimer's diseases, alcoholism, and aging [10-12]. The side effects of thiamine include allergic reactions, i.e., anaphylaxis may occur [12]. Thiamine reported interacting with other medications like furosemide, 5-fluorouracil [13,14].

The Trivedi Effect®-Energy of Consciousness Healing Treatment significantly influenced the bioavailability of pharmaceutical/nutraceuticals compounds, i.e., resveratrol, berberine, and 25-hydroxyvitamin D₃ in Male *Sprague-Dawley* rats [15-17]. The Trivedi Effect® is a natural and only scientifically proven phenomenon in which a person can harness this inherently intelligent energy (Biofield Energy) and transmit it anywhere on the planet. Biofield Energy field is the electromagnetic field that exists around the human body [18,19]. Biofield based Energy Healing Therapies used against various human disease conditions and accepted in many countries [20,21]. Biofield Energy Healing therapy has been recognized worldwide as a Complementary and Alternative Medicine (CAM) health care approach by National Center of

Complementary and Integrative Health (NCCIH) with other therapies, medicines and practices such as traditional Chinese herbs and medicines, Ayurvedic medicine, aromatherapy, homeopathy, yoga, Qi Gong, Tai Chi, chiropractic/osteopathic manipulation, meditation, acupuncture, acupressure, naturopathy, healing touch, movement therapy, cranial sacral therapy, Reiki, hypnotherapy, etc [22,23]. The Trivedi Effect®-Energy of Consciousness Healing Treatment has astonishing ability to alter the characteristic properties of metals and ceramics [24,25], organic compounds [26,27], nutraceuticals/pharmaceuticals [28-30], crops [31,32], etc. The Trivedi Effect® proposed to act through the possible mediation of neutrinos [18] resulted in alteration of the isotopic abundance ratio of some of the organic compounds [33,34]. Study on the natural stable isotope required to understand the isotope effects resulting from the alterations of the isotopic composition, which have lots of applications in different fields of sciences [35-37]. Highly sophisticated Gas chromatography-mass spectrometry (GC-MS) and liquid chromatography-mass spectrometry (LC-MS) techniques are widely used for the study of isotope ratio analysis with sufficient precision [36]. Based on the various applications of the Trivedi Effect®-Consciousness Energy Healing Treatment the current study has been designed to perform the isotopic abundance ratio analysis of P_{M+1}/P_M (²H/¹H or ¹³C/¹²C or ¹⁵N/¹⁴N or ¹⁷O/¹⁶O or ³³S/³²S) and P_{M+2}/P_M (¹⁸O/¹⁶O or ³⁴S/³²S) in thiamine to evaluate the influence of the Trivedi Effect® on the isotopic abundance ratio and structural properties using LC-MS, GC-MS, and NMR (Nuclear Magnetic Resonance) techniques.

Materials and Methods

Chemicals and Reagents

Thiamine hydrochloride (≥99%) was purchased from Sigma-Aldrich, India. The HPLC grade acetonitrile and formic acid were purchased from Merck, India. Methanol was purchased from Advent, India and Milli Q® water was procured from Evoqua, India.

Consciousness Energy Healing Treatment Strategies

Thiamine powder sample was divided into two parts. One part of thiamine was considered as a control sample which was not subjected to the Biofield Energy Treatment. Whereas, the second part of thiamine sample was treated with the Trivedi Effect®-Energy of Consciousness Healing Treatment remotely under standard laboratory conditions for 3 minutes by a famous Biofield Energy Healer, Mr. Mahendra Kumar Trivedi (USA) and termed as the Biofield Energy Treated thiamine. Further, the control sample was treated with a "sham" healer who did not have any knowledge about the Biofield Energy Treatment. After all, both samples

of thiamine were kept in sealed conditions and characterized using LC-MS, GC-MS, and NMR techniques.

Characterization

Liquid Chromatography-Mass Spectrometry (LC-MS) Analysis and Calculation of Isotopic Abundance Ratio:

The LC-MS analysis of the thiamine was performed using LC-Dionex Ultimate 3000, MS-TSQ Endura, USA, equipped with a photo-diode array (PDA) detector connected with a triple-stage quadrupole mass spectrometer (Thermo Scientific TSQ Endura, USA) with a Thermo Scientific Ion Max NG source and atmospheric pressure chemical ionization (APCI). The analysis was performed on a reversed phase Zorbax SB-C18 100 × 4.6 mm, 3.5 μm in gradient mode in the liquid chromatograph. The mobile phase was 2mM ammonium formate and 0.5% formic acid in water (mobile phase A), and acetonitrile (mobile phase B) at a constant flow rate of 0.6 mL/min. The column temperature was kept constant at 40°C. The injection volume was 10 μL and the total run time was 45 minutes. Chromatographic separation was achieved using gradient condition as follow: 0 min-5%B, 5 min-5%B, 15 min-60%B, 25 min-95%B, 35 min-95%B, 40 min-5%B, and 45 min-5%B. Peaks were monitored using the PDA detector. The mass spectrometric analysis was performed under +ve ESI mode. The total ion chromatogram, peak area% and mass spectrum of the individual peak, which was appeared in LC along with the full scan, were recorded. The mass peak intensities of the mass spectrum of the individual peak were recorded.

The natural abundance of C, O, and H isotope can be predicted from the comparison of the relative abundance of the isotope peak with respect to the base peak. The values of the natural isotopic abundance of the common elements are obtained from the literature [37-40]. The % change in the isotopic abundance ratios (P_{M+1}/P_M and P_{M+2}/P_M) of the Biofield Energy Treated thiamine were calculated compared to the control sample using equation 1.

$$\% \text{ Change in isotopic abundance ratio} = \left[\frac{IAR_{\text{Treated}} - IAR_{\text{Control}}}{IAR_{\text{Control}}} \right] \times 100 \quad (1)$$

Where, IAR_{Treated} : Isotopic abundance ratio in the treated thiamine and IAR_{Control} : Isotopic abundance ratio in the control thiamine.

Gas Chromatography-Mass Spectrometry (GC-MS)

Analysis: The GC-MS analysis of the control and Biofield Energy Treated thiamine was performed using Agilent

7890B Gas chromatograph equipped with a silica capillary column HP-5 MS (30m x 0.25mm x 0.25μm) and coupled to a quadrupole detector with pre-filter (5977B, USA) was operated with electron impact (EI) ionization in positive ion mode at 70 eV. The oven temperature was programmed from 50°C (1min hold) to 150°C@20°C/min to 200°C (6min hold)@25°C/min to 280°C@20°C/min (12min hold). Temperatures of the injector, detector (FID), auxiliary, ion source, and quadrupole detector were 230, 250, 280, 230, and 150°C. Thiamine was dissolved in methanol, and 5.0 μL was splitlessly injected with helium as a carrier gas with a flow rate of 2.0 mL/min. Mass spectra were scanned from m/z 40 to 1050 at stability of ± 0.1 m/z mass accuracy over 48 hours and mass peak intensities of the mass spectrum of the individual peak were recorded.

The % change in peak intensity (I) was calculated using the following equation 2:

$$\% \text{ Change in peak intensity (I)} = \frac{[I_{\text{Treated}} - I_{\text{Control}}]}{I_{\text{Control}}} \times 100 \quad (2)$$

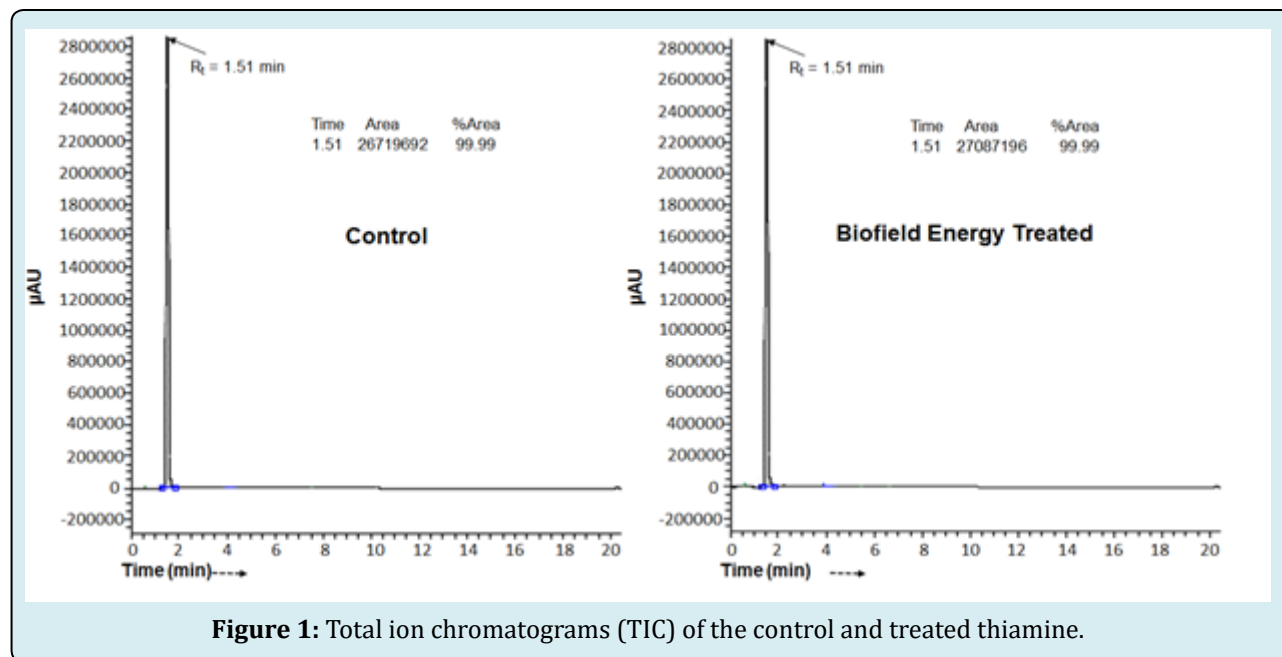
Where, I_{Control} and I_{Treated} are the peak intensity of the control, and Biofield Energy Treated samples, respectively.

Nuclear Magnetic Resonance (NMR) Analysis: ^1H NMR spectra of thiamine were recorded at 400 MHz on Agilent-MRDD2 FT-NMR. Approximately 3 mg of the sample was dissolved in DMSO- d_6 . Chemical shifts (δ) were in parts per million (ppm) relative to the solvent's residual proton chemical shift $\{(\text{CD}_3)_2\text{SO}, \delta = 2.5\}$. Similarly, ^{13}C NMR spectra of thiamine were measured at 100 MHz on Agilent-MRDD2 FT-NMR spectrometer at room temperature. Approximately 25 mg of the sample was dissolved in DMSO- d_6 . Chemical shifts (δ) were in parts per million (ppm) relative to the solvent's residual carbon chemical shift $\{(\text{CD}_3)_2\text{SO}, \delta = 39.52\}$.

Results and Discussion

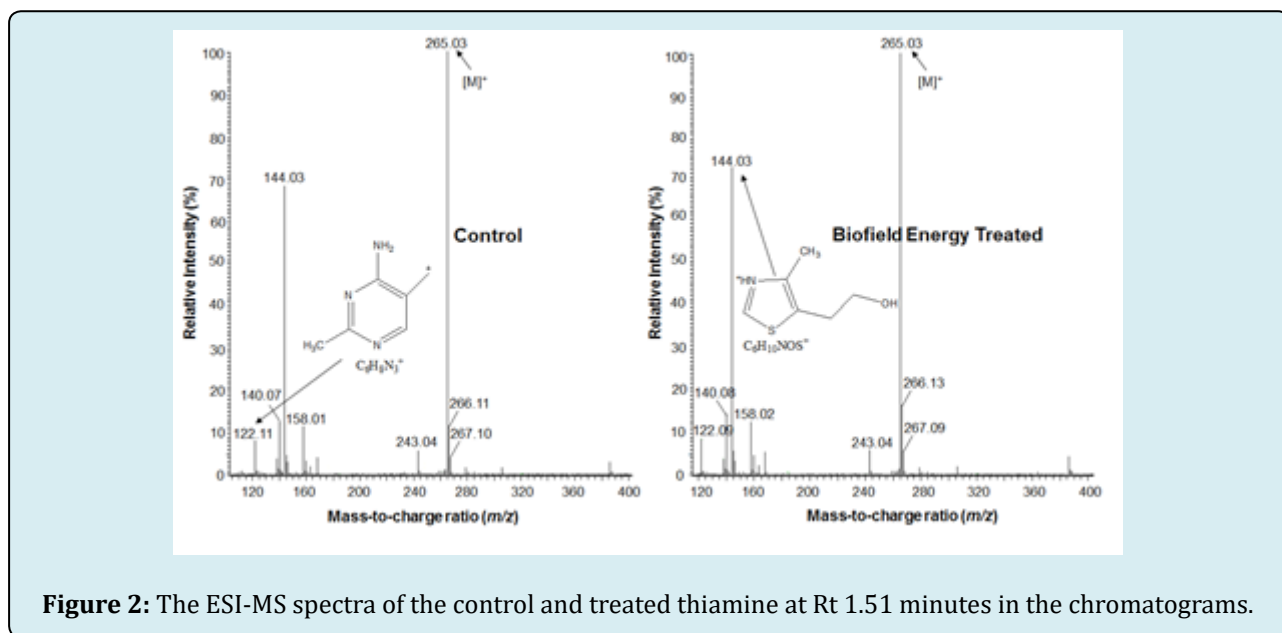
Liquid Chromatography-Mass Spectrometry (LC-MS) Analysis

The control and Biofield Energy Treated thiamine showed a clear and sharp chromatographic peak at retention times (R_t) 1.51 minutes in case of both the samples (Figure 1). The peak area% of the control and Biofield Energy Treated thiamine at R_t 1.51 minutes was 99.99 in both control and Biofield Energy Treated samples. The peak area% of the Biofield Energy Treated sample was similar to the control sample, which indicated that the polarity of both the samples remained similar.



The ESI-MS spectra of the control and Biofield Energy Treated samples exhibited the molecular ion peak (Figure 2) of thiamine at m/z 265.03 (calcd for $C_{12}H_{17}N_4OS^+$, 265.11). The other major fragmented mass peak of at m/z 144.03

(calcd for $C_6H_{10}NOS^+$, 144.05) and 122.11 (calcd for $C_6H_8N_3^+$, 122.07) both in the mass spectra of control and Biofield Energy Treated thiamine (Figure 2).



The parent mass peak at m/z 265.03 (calcd for $C_{12}H_{17}N_4OS^+$, 265.11) was the base peak which exhibited 100% relative peak intensity in both the spectra (Figure 2). From the mass spectra, the fragmentation patterns of the control and Biofield Energy Treated thiamine were the similar type (Figure 2). But, the relative peak intensities of

the other ion peaks in the treated thiamine were significantly altered compared to the control sample.

Isotopic Abundance Ratio Analysis

The control and treated samples of thiamine showed the

mass of molecular ion at m/z 265.03 (calcd for $C_{12}H_{17}N_4OS^+$, 265.11) with 100% relative abundance in the mass spectra. The theoretical calculation of isotopic peak $PM+1$ for the protonated thiamine presented below:

$$P(^{13}C) = [(12 \times 1.1\%) \times 100\% \text{ (the actual size of the } M^+ \text{ peak)}] / 100\% = 13.2\%$$

$$P(^2H) = [(17 \times 0.015\%) \times 100\%] / 100\% = 0.255\%$$

$$P(^{15}N) = [(4 \times 0.40\%) \times 100\%] / 100\% = 1.6\%$$

$$P(^{17}O) = [(1 \times 0.04\%) \times 100\%] / 100\% = 0.04\%$$

$$P(^{33}S) = [(1 \times 0.76\%) \times 100\%] / 100\% = 0.76\%$$

P_{M+1} i.e. ^{13}C , 2H , ^{15}N , ^{17}O , and ^{33}S contributions from $C_{12}H_{17}N_4OS^+$ to m/z 266 = 15.86%

Similarly, the theoretical calculation of isotopic peak $PM+2$ for the protonated thiamine presented below:

$$P(^{18}O) = [(1 \times 0.20\%) \times 100\%] / 100\% = 0.2\%$$

$$P(^{34}S) = [(1 \times 4.29\%) \times 100\%] / 100\% = 4.29\%$$

P_{M+2} of ^{18}O and ^{34}S contributions from $C_{12}H_{17}N_4OS^+$ to m/z 267 = 4.49%

The calculated isotopic abundance of P_{M+1} value 15.86% was little higher to the observed value (11.49%). But, the calculated P_{M+2} value 4.49% was very close to the observed value (3.96%) (Table 1). The probability of $A+1$ and $A+2$ elements having an isotope with one and two mass unit heavier, respectively than the most abundant isotope (i.e., ^{13}C , ^{15}N , ^{17}O , ^{18}O , and ^{33}S) contributions to the mass of the isotopic molecular ion $[M+1]^+$ and $[M+2]^+$. 2H did not contribute much any isotopic m/z ratios because of its less natural abundance compared to the abundances of C, N, O, and S isotopes [38-41]. But, the contributions of ^{13}C , ^{15}N , ^{17}O , ^{18}O , and ^{33}S were major from thiamine to the isotopic mass peak at m/z 266 and 277 confirmed from the calculations. Therefore, P_M , P_{M+1} , and P_{M+2} of the thiamine at m/z 265, 266, and 277 of the control and Biofield Energy Treated samples were obtained from the experimental relative abundance of M^+ , $(M+1)^+$, and $(M+2)^+$ peaks, respectively in the mass spectra (Figure 2 and Table 1).

Parameter	Control sample	Biofield Energy Treated sample
P_M at m/z 265 (%)	100	100
P_{M+1} at m/z 266 (%)	11.49	16.5
P_{M+1}/P_M	0.1149	0.165
% Change of isotopic abundance ratio (P_{M+1}/P_M) with respect to the control thiamine		43.6
P_{M+2} at m/z 267 (%)	3.96	5.65
P_{M+2}/P_M	0.0396	0.0565
% Change of isotopic abundance ratio (P_{M+2}/P_M) with respect to the control thiamine		42.68

Table 1: LC-ESI-MS isotopic abundance ratio analysis of control and treated thiamine.

PM = the relative peak intensity of the parent molecular ion M^+ ; P_{M+1} = the relative peak intensity of the isotopic molecular ion $[M+1]^+$, P_{M+2} = the relative peak intensity of the isotopic molecular ion $[M+2]^+$, and M = mass of the parent thiamine molecule.

The % change in the isotopic abundance ratios (P_{M+1}/P_M and P_{M+2}/P_M) in the Biofield Energy Treated thiamine compared to the control sample are shown in Table 1. The isotopic abundance ratio of P_{M+1}/P_M ($^2H/^1H$ or $^{13}C/^{12}C$ or $^{15}N/^{14}N$ or $^{17}O/^{16}O$ or $^{33}S/^{32}S$) in treated thiamine was significantly increased by 43.60% compared to the control sample (Table 1). This indicated that the 2H , ^{13}C , ^{15}N , ^{17}O , and ^{33}S contributions from $C_{12}H_{17}N_4OS^+$ to the isotopic m/z 266 in the Biofield Energy Treated thiamine sample were significantly increased compared to the control sample. Similarly, the isotopic abundance ratio of P_{M+2}/P_M ($^{18}O/^{16}O$ or $^{34}S/^{32}S$) in the Biofield Energy Treated thiamine also significantly increased by 42.68% compared to the control sample (Table 1). Therefore, the ^{18}O and ^{34}S contributions from $C_{12}H_{17}N_4OS^+$ to the isotopic m/z 267 in the Biofield Energy Treated thiamine was significantly increased compared to the control sample.

The neutrino is an electrically neutral elementary particle with very small mass, interacts only *via* the weak subatomic force and gravity [42,43]. The neutrino oscillations seem to give credence to the postulates of Mr. Mahendra Kumar Trivedi on the Trivedi Effect®. Alteration of the number of neutrons in an atom leads to the increased or decreased isotopic abundance of the compounds. Changes in atomic/molecular weights are postulated to the changes in atomic mass and charge through the possible mediation of neutrinos [18,44-46]. Neutrino travels straightly in any matter as if it is traveling in the vacuum and seldom interacts with matter. Thus, it can be assumed that the Trivedi Effect®-Consciousness Energy Healing Treatment might provide the necessary energy for the neutrino oscillations leads to the alteration of the fundamental properties of any object [18,33,34,47]. The change in the isotopic abundance ratios ($^2H/^1H$ or $^{13}C/^{12}C$ or $^{15}N/^{14}N$ or $^{17}O/^{16}O$ or $^{33}S/^{32}S$ or $^{18}O/^{16}O$

or $^{34}\text{S}/^{32}\text{S}$) may change the intra-atomic bond strength, its physical stability, kinetic isotope effects of the atoms/molecules, which is very useful to study the reaction mechanism, understand the enzymatic transition state, and enzyme mechanism that is supportive for designing effective and specific inhibitors, etc [37,48]. Thus, the Biofield Energy Treated thiamine with altered isotopic abundance ratio (P_{M+1}/P_M and P_{M+2}/P_M) was assumed to be more advantageous for the designing of better nutraceutical and pharmaceutical formulations.

Gas Chromatography-Mass Spectrometry (GC-MS) Analysis

The GC-MS of thiamine showed two clear chromatographic peaks in the chromatograms in case of both the samples (Figure 3). The two retention times were found at 6.9 and 16.7 minutes in both the chromatograms of control and Biofield Energy Treated samples. From the results, it was concluded that the polarity of the Biofield Energy Treated sample remained similar compared to the control sample. But, the GC chromatographic peak area% of Biofield Energy Treated thiamine (10.32%) was significantly decreased by 25.95% compared to the control sample (13.75%) (Table 2). This indicated that the solubility of Biofield Energy Treated thiamine decreased compared to the control sample.

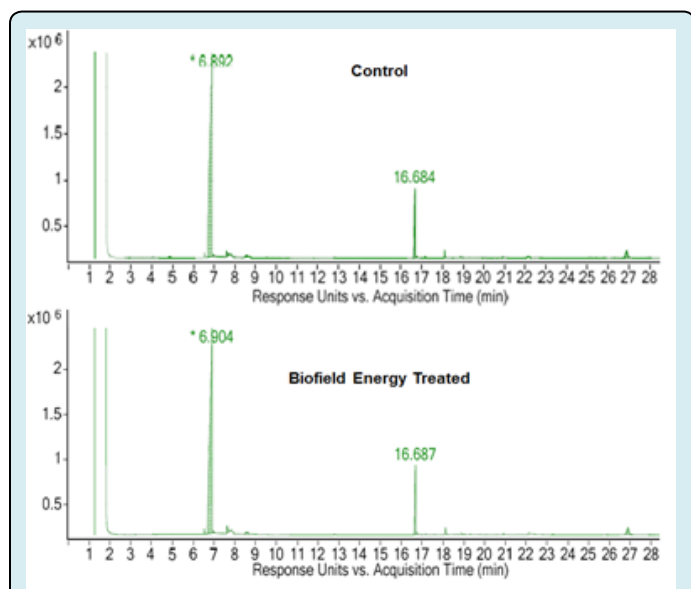


Figure 3: GC chromatograms of the control and treated thiamine.

The GC-MS spectra of the control and Biofield Energy Treated thiamine at R_t of 16.7 minutes exhibited the presence of the molecular ion (Figure 4) at m/z 264.1 (calcd for $\text{C}_{12}\text{H}_{16}\text{N}_4\text{OS}^+$, 264.1). The other mass fragmentation peak at lower m/z 122.1 (calcd for $\text{C}_6\text{H}_8\text{N}_3^+$, 122.07) and 138.1 (calcd for $\text{C}_7\text{H}_8\text{N}_3^+$, 138.04) in both control and Biofield

Energy Treated thiamine (Figure 4). The mass fragmentation pattern of both the samples of thiamine was similar. But the mass peak intensities of the Biofield Energy Treated thiamine were significantly altered compared to the control thiamine. The mass peak intensity of the control and Biofield Energy Treated thiamine were 22917.04 and 52940.7, respectively at R_t of 16.7 minutes. The mass peak intensity of the Biofield Energy Treated sample was significantly increased by 131.01% compared to the control sample (Table 2). The mass peak intensities were significantly increased which assumed to be the impact of the Trivedi Effect[®]-Consciousness Energy Healing Treatment.

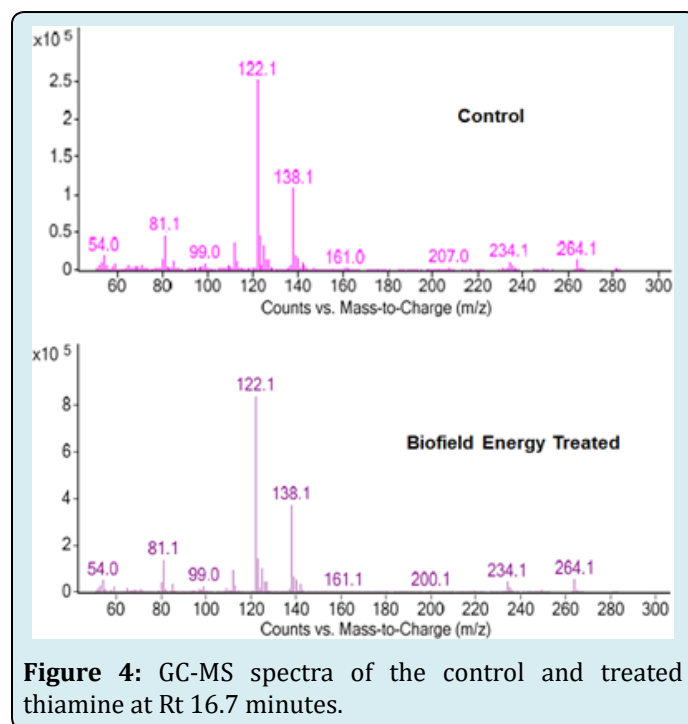


Figure 4: GC-MS spectra of the control and treated thiamine at R_t 16.7 minutes.

Parameters	Control sample	Biofield Energy Treated sample	% Change
Peak area%	13.75	10.32	-24.95
Mass peak ($m/z=264.1$) intensity	22917.04	52940.7	131.01

Table 2: GC-MS peak intensity analysis at R_t 16.7 minutes of the control and treated thiamine.

Nuclear Magnetic Resonance (NMR) Spectroscopy Analysis

The ^1H spectra of the control and Biofield Energy Treated thiamine are shown in Figure 5. The signals for the protons coupling of $_{\text{CH}_3}$, CH_2 , NH_2 , CH , and OH protons in both the ^1H NMR spectra of thiamine were in the range of δ 2.53 to 9.97 ppm (Figure 5 and Table 3). The ^1H signals for the control

and Biofield Energy Treated thiamine were very close to each other. Similarly, ^{13}C NMR spectra of the control and Biofield Energy Treated thiamine are shown in Figure 6. The carbon signals for CH_3 , CH_2 , CH , $=\text{C}$ -, and C-OH groups in both the control and Biofield Energy Treated ^{13}C NMR spectra were

in the range of 11.71-163.19 (Figure 6 and Table 3). The experimental data were closely matched to the published literature [49]. The NMR spectral data indicated that there was no structural modification of Biofield Energy Treated thiamine compared to the control sample.

^1H & ^{13}C S. No	^1H NMR d (ppm) & Multiplicity		^{13}C NMR d (ppm)	
	Untreated	Biofield Energy Treated	Untreated	Biofield Energy Treated
1	3.66 (t, $J = 12$ Hz, 2H)	3.66 (t, $J = 12$ Hz, 2H)	59.59	59.6
2	3.08 (t, $J = 12$ Hz, 2H)	3.08 (t, $J = 12$ Hz, 2H)	29.34	29.35
3	--	--	135.34	135.32
4	9.97 (S, 1H)	10.01 (S, 1H)	155.29	155.29
5	--	--	142.16	142.19
6	2.53 (S, 3H)	2.54 (S, 3H)	11.68	11.71
7	5.62 (S, 2H)	5.67 (S, 2H)	49.91	49.91
8	--	--	163.17	163.19
9	--	--	105.3	105.34
10	9.19 (S, 2H)	9.27 (S, 2H)	--	--
11	--	--	161.96	161.83
12	2.57 (S, 3H)	2.58 (S, 3H)	21.23	21.17
13	8.36 (S, 1H)	8.39 (S, 1H)	146.78	146.61

S- singlet and T-triplet.

Table 3: ^1H and ^{13}C NMR spectroscopic data of both the control and treated thiamine.

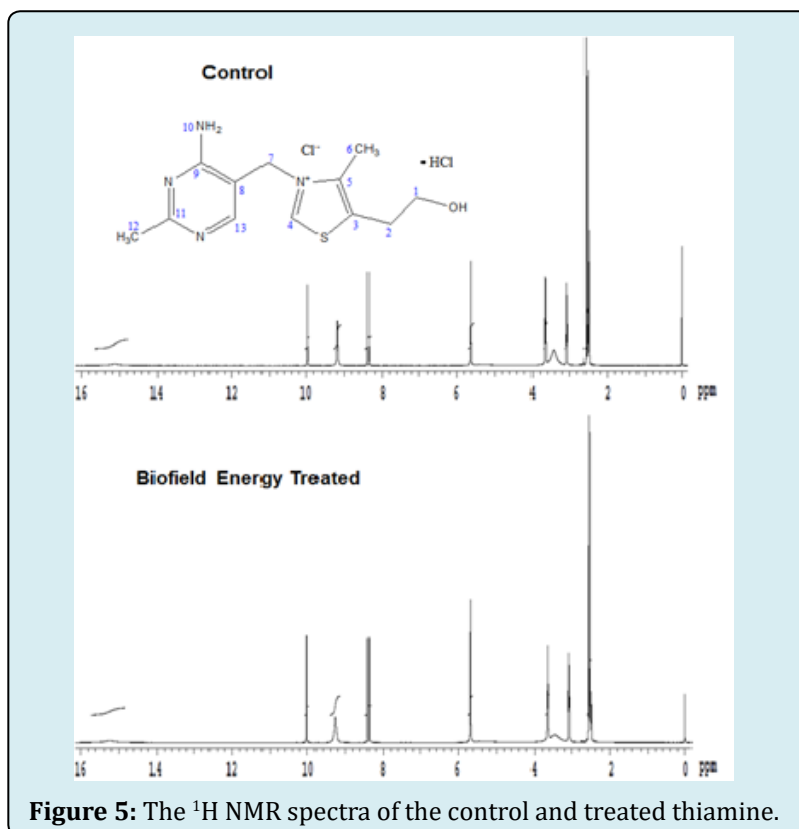


Figure 5: The ^1H NMR spectra of the control and treated thiamine.

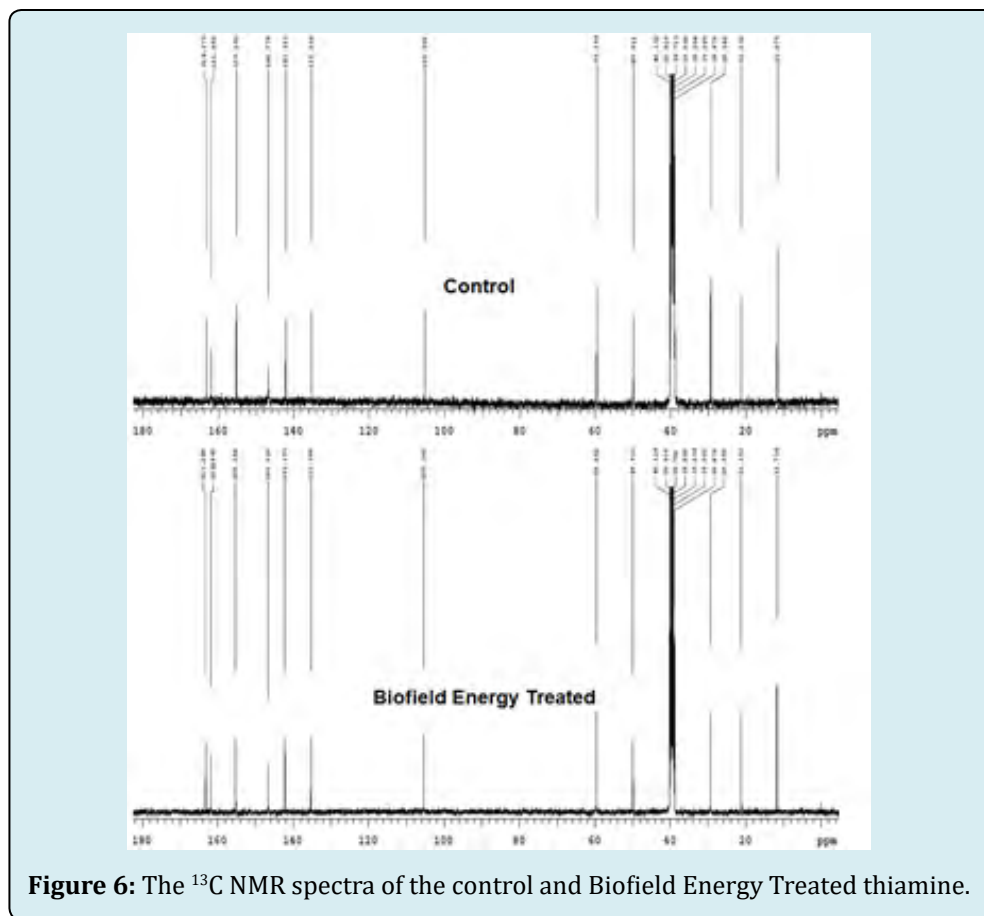


Figure 6: The ^{13}C NMR spectra of the control and Biofield Energy Treated thiamine.

Conclusion

The Consciousness Energy Healing Treatment on thiamine by the renowned Biofield Energy Healer, Mr. Mahendra Kumar Trivedi showed the astonishing significant impact on the relative peak intensities and isotopic abundance ratios. The LC-ESI-MS analysis of both control and Biofield Energy Treated thiamine samples showed the mass of parent molecular ion at m/z 265.03 (calcd for $\text{C}_{12}\text{H}_{17}\text{N}_4\text{OS}^+$, 265.11) at the retention times (R_t) 1.51 minutes with similar fragmentation pattern. But, the relative peak intensities of the Biofield Energy Treated sample were significantly improved compared to the control sample. The isotopic abundance ratios of P_{M+1}/P_M ($^2\text{H}/^1\text{H}$ or $^{13}\text{C}/^{12}\text{C}$ or $^{15}\text{N}/^{14}\text{N}$ or $^{17}\text{O}/^{16}\text{O}$ or $^{33}\text{S}/^{32}\text{S}$) and P_{M+2}/P_M ($^{18}\text{O}/^{16}\text{O}$ or $^{34}\text{S}/^{32}\text{S}$) were significantly increased by 43.60% and 42.68%, respectively in the Biofield Energy Treated thiamine compared to the control sample. Therefore, ^2H , ^{13}C , ^2H , ^{15}N , ^{17}O , and ^{33}S contributions from $\text{C}_{12}\text{H}_{17}\text{N}_4\text{OS}^+$ to the isotopic m/z 266 and ^{18}O and ^{34}S contributions to the isotopic m/z 267 significantly increased in the Biofield Energy Treated sample compared with the control sample. The GC-MS mass peak intensity of the Biofield Energy Treated sample (52940.7) was significantly increased by 131.01% compared to the

control sample (22917.04). The proton and carbon signals for CH_3 , CH_2 , NH_2 , CH , $=\text{C}=\text{C}$, and $\text{C}-\text{OH}$ groups in the ^1H and ^{13}C NMR spectra of the control and Biofield Energy Treated samples were similar. The increased mass peak intensities and isotopic abundance ratios in thiamine might be due to the Trivedi Effect[®]-Consciousness Energy Healing Treatment via the possible mediation of neutrinos, which may change the intra-atomic bond strength, its physical stability, and kinetic isotope effects of the thiamine. Thus, the Trivedi Effect[®]-Consciousness Energy Healing Treated thiamine would be advantageous for designing more efficacious nutraceuticals and pharmaceutical formulations against vitamin B_1 deficiency and related disorders, including beriberi, Korsakoff's syndrome, Parkinson's and Alzheimer's diseases, maple syrup urine disease, Leigh's disease, optic neuropathy, alcoholism, and aging.

Acknowledgement

The authors are grateful to GVK Biosciences Pvt. Ltd., Trivedi Science, Trivedi Global, Inc., Trivedi Testimonials, and Trivedi Master Wellness for their assistance and support during this work.

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