Case Report

Role Of Acupuncture And Energy Medicine In The Management Of Diabetes Mellitus - A Case Report

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ABSTRACT

Diabetes mellitus is a significant global health concern characterized by hyperglycemia due to insulin dysfunction. This case study explores the integration of acupuncture and energy medicine as adjunctive therapies for managing type 2 diabetes mellitus (T2DM). A 47-year-old female newly diagnosed with T2DM and grade 1 obesity presented with glycated haemoglobin (HbA1c 11.1%), accompanied by signs and symptoms of burning and itchy feet, polydipsia, polyuria, and stress-related issues. Acoording to traditional Chinese medicine diagnosis, kidney and spleen qi is deficient. Over 139 days, the patient received 45 sessions of acupuncture (every 3 days), focusing on points associated with diabetes management. Concurrently, she practiced daily meditation, prayer (including mantra chanting), and self-healing reiki. Lifestyle modifications included specific dietary changes and improvements in sleep hygiene. Results showed a significant reduction in HbA1c levels from 11.1% to 7.4%, along with decreased severity of foot burning sensation, improved sleep quality, enhanced energy levels, and better cognitive function. Pulse and tongue diagnosis according to Traditional Chinese Medicine revealed improvements in kidney and spleen function. Discussion highlights the potential of acupuncture and energy medicine in improving glycemic control and overall well-being in T2DM patients. These complementary therapies not only aimed to regulate blood sugar levels but also addressed mental and psychic health aspects associated with the disease. Mechanisms of action may involve immune modulation and metabolic regulation. Limitations include the small sample size and short follow-up period, suggesting a need for further randomized controlled trials to validate findings and optimize treatment protocols. Nevertheless, integrating acupuncture and energy medicine into conventional diabetes management offers promising benefits, potentially empowering patients and reducing healthcare costs. In conclusion, this case study underscores the potential of acupuncture and energy medicine as valuable adjunctive therapies in the comprehensive management of T2DM. Healthcare providers should consider these integrative approaches to enhance health outcomes and improve quality of life for individuals with diabetes.

Key words: Type 2 Diabetes mellitus, Energy medicine, Acupuncture, HbA1c.

Diabetes mellitus is an elevated blood glucose that is one of the metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both [1]. One of the top 10 causes of death for individuals, it was estimated to have resulted in four million deaths globally. Since 2000, the International Diabetes Federation has monitored the prevalence of diabetes and reported on cases at the national, regional, and global levels. In 2017, there were 425 million more cases of type 2 diabetes worldwide. In 2019, 77 million individuals had diabetes in India, which is expected to rise to over 134 million by 2045. Approximately 57% of these individuals remain undiagnosed [2]. Changes in diet and insufficient or inadequate exercise are the major reasons of this, as they have an impact on the body's physiology and can also lead to overweight or obesity. The management of diabetes presents challenges since it necessitates regular medication compliance and the prevention or treatment of associated issues [4]. Of the several mechanism-based medications now prescribed to treat type 2 diabetes mellitus, only insulin sensitizers—like biguanides and thiazolidinediones directly affect insulin resistance [5].

Pharmacological treatments face obstacles such as patient non-compliance, resistance, and clinical inertia, which may be exacerbated by concerns about the safety profile of medications [6]. While complementary and alternative medicine (CAM) is seen as having less negative effects and is more socially and culturally acceptable among Asian populations, it might be a useful supplemental therapy for diabetes mellitus. One of the most popular complementary and alternative medicine (CAM) treatments for type 2 diabetes

Access this article online

Received – 25th July 2024

Initial Review – 22nd August 2024

Accepted – 12th September 2024

Quick response code

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mellitus is acupuncture in conjunction with conventional therapy [7]. Furthermore, the National Institutes of Health (NIH) of the United States has recognised that, when administered by a qualified practitioner, acupuncture may be used as a supplementary treatment for diabetes mellitus with minimal adverse effects [8]. Acupuncture is a technique with the concept of Qi, vital life force, also translated as Chi [pronounced as "chee"], they provide the basic foundation for Traditional Chinese Medicine (TCM's) comprehensive mind, body, and spirit ideology and practice.

Pulse and tongue is often given importance to TCM, which distinguishes it from modern medicine, is the attention to various pulses, unique to major organs and meridians. Chinese pulse diagnosis and tongue diagnosis is an effective tool to extract detailed information on the state of the internal organs and the corresponding meridians. TCM serves as an adjuvant therapy that treats Diabetes mellitus [9]. Pulse diagnosis is based on the five elements and it is responsible for body structure and function. The concept of energy in health is universal, referred to as Chi, Prana, or Lung, and is akin to the Western idea of spirit. When the energy flow is disrupted, physical symptoms occur, but optimal energy flow can be achieved through a balanced lifestyle and energy medicine, which enhances flow through methods like diet therapy, acupuncture, Reiki, meditation, and prayer. These practices aim to balance energy, alleviate symptoms, and promote well-being, reflecting the holistic philosophy that changes in one aspect of life affect the entire being [10].

CASE DESCRIPTION

A female patient aged 47 years presented to the outpatient department (OPD) at the International Institute of Yoga and Naturopathy Medical Sciences, Chengalpattu, Tamilnadu, India with the signs of polydipsia and polyurea for the past 7 months. She was also noticed to be restless due to the family issues. Her lips, tongue, skin, hair are too dry. She came up with the symptoms of burning, dark and itchy feet on the dorsal aspect of both the foot. She was diagnosed with Diabetes mellitus who's HbA1C ranging up to 11.1% and showed obesity grade 1 with the BMI of 33.3kg/m^2. She weighs 78kg with 153cm height. On Pulse examination according to traditional Chinese Medicine (TCM), overall the strength of the pulse is so weak and the quality of the pulse is slow. Among the 5 element diagnosis in the pulse, water element particularly kidney is deficient. Also, in earth element, spleen is deficient. On tongue diagnosis, it is pale and dry that has low spirit. The patient diagnosed with type 2 diabetes mellitus, obesity grade 1 and kidney and spleen qi deficient (TCM diagnosis).

INTERVENTION

As the institution involving multiple therapies of yoga and naturopathy, the patient is convinced to take acupuncture treatment on particular days as well as other energy therapies are taught to be practiced on the daily basis in her home for her good prognosis since the advantages regarding the therapies. 45 sessions of acupuncture has been given in 139 days for every 3 days. The selected points are Zhongwan (Ren 12) – located 4 finger-widths below the umbilicus, Sanyinjiao(SP 6) – located 4 finger-widths above the medial malleolus, Yingu(KI 10) – located in the depression just below the kneecap, about 1 finger-width below the patella, Shangqiu(SP 5) – located in the depression below the base of the first metatarsal bone, Zusanli(St 36) – located in a depression just below the tibialis anterior muscle, Baihui (Du 20) – located at the midpoint of the line connecting the apex of the two ears [**FIG – 1**].

Needles are retained for about 30minutes duration. These points are selected based on various scientific studies of acupuncture for the management of Type 2 diabetes mellitus [11]. A commitment to daily meditation and prayer was made. Meditation involves the breath awareness and concentrating on Heart Cakra with the manifestation of "I'm healthy physically and mentally" for about 15 minutes. Prayer involves the mantra chanting like Gayathri mantra and Dhanvanthri mantra 9 times and OM chanting of 108 times. Also, patient was taught to practice self healing of reiki twice daily. Lifestyle changes are made mandatory for the health improvement which involves the sleep cycle and waking pattern with the consumption of drinks in empty stomach like Amla with bitterguard and curryleaf juice or lady's finger infused water or fenugreek soaked water or guava leaf decotion in alternative days was followed.

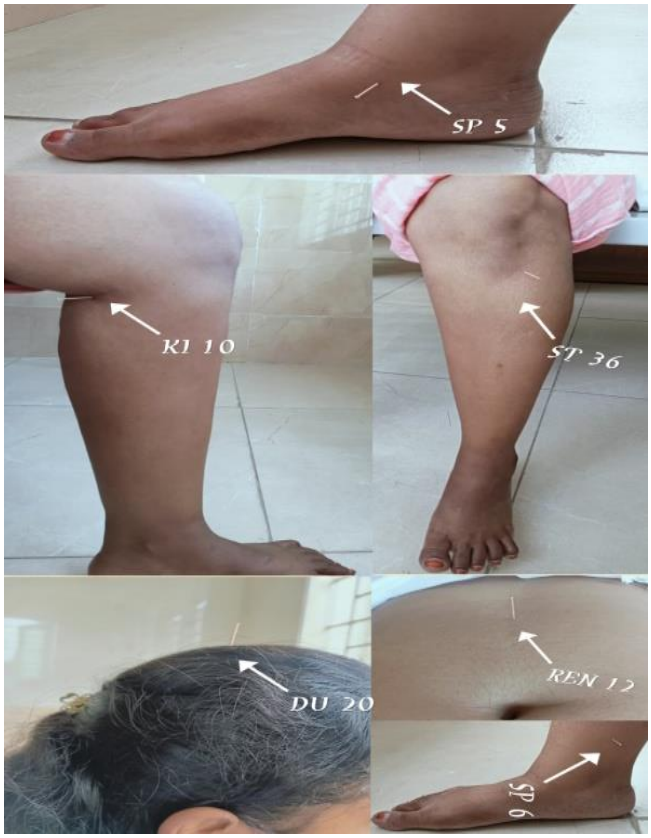


Fig – 1: The selected acupuncture points

Table 1 - Timeline

1st day	45 sessions of acupuncture [once in 3 days] – 30 minutes of each session ~~Daily - Meditation~~, Prayer, Reiki Basic lifestyle changes with morning juices	139th day
11.1%		7.4%

Table 2 – Intervention

Intervention	Therapy	Technique, Duration and Frequency
Diet	Amla with bitterguard and curryleaf juice / lady's finger infused water / fenugreek soaked water / guava leaf decotion	Alternate days in morning empty stomach
Acupuncture	Zhongwan(Ren 12) Sanyinjiao(SP 6) Yingu(KI 10) Shangqiu(SP 5) Zusanli(St 36) Baihui(Du 20)	45 sessions Every 3 days - 30 min / session
Energy Medicine	Self Reiki (Hand positions include eyes, ears, top of the head, back of the head, throat, shoulder, chest, lower ribs, mid abdomen, lower abdomen, kidney area, lower back, knees, soles of feet, ankle, and chest).	Twice daily
	Gayatri mantra chanting	9 times daily
	Dhanvantri mantra chanting	9 times daily
	Om chanting	108 times
	Meditation	Breath awareness and concentrating on Heart Cakra with the manifestation of "I'm healthy physically and mentally" for about 15 minutes.

Table 3 - Pre and Post assessment

Parameters	Pre assessment	Post assessment
Height	153cm	153cm
Weight	78kg	76kg
BMI	33.3kg/m^2	32.5 kg/m^2
SBP	134	86
DBP	126	74
HbA1c	11.1%	7.4%

BMI – Body Mass Index, SBP – Systolic Blood Pressure, DBP – Diastolic Blood Pressure,

HbA1c – Glycated Haemoglobin

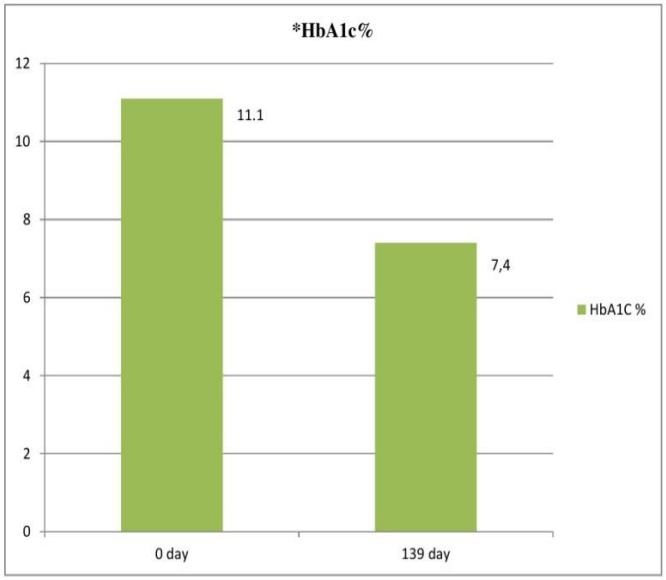
RESULTS

There is a significant decrease in HbA1c levels from 11.1% to 7.4% [**FIG – 2**]. She lost 2 kgs of weight and her BMI is reduced from 33.3kg/m^2 to 32.5kg/m^2 and on pulse and tongue diagnosis, her kidney pulse became normal and her tongue shows good spirit with moisture. This signifies the changes that happened lead to good prognosis and she responded well to the therapy. Also, patient reported the severity of burning sensation at the foot was decreased. Added to that unexpectedly there is reduced body pain and improved sleep quality with enhanced energy levels and cognitive function. Furthermore, patient reported that she can able to cope up the family problems. However, she encountered challenges in maintaining lifestyle changes, particularly with regards to dietary adherence. Patient got highly satisfied with the laboratory results and expressed her gratitude towards the nature's energy and natural lifestyle.

DISCUSSION

This case study illustrates the potential benefits of integrating acupuncture, complementary therapies, and lifestyle modifications in the management of Type 2 Diabetes Mellitus (T2DM). The patient, a 47-year-old female with significant glycated haemoglobin (HbA1c of 11.1%), obesity, and associated symptoms, demonstrated notable improvements following a comprehensive treatment approach that included acupuncture, meditation, prayer, mantra chanting, Reiki, and

dietary changes.



*HbA1C – glycated haemoglobin

Fig – 2: The graph shows the significant decrease in HbA1C* level in 4.6 months

Efficacy of Acupuncture

Acupuncture has gained recognition for its role in managing diabetes, particularly as an adjunct to conventional treatments. In this case, the patient underwent 45 sessions of acupuncture targeting specific points such as Zhongwan (Ren 12), Sanyinjiao (SP 6), Yingu (KI 10), Shangqiu (SP 5), Zusanli (St 36), and Baihui (Du 20). These points were selected based on their roles in regulating metabolic functions and addressing deficiencies observed in pulse and tongue diagnostics. The significant reduction in HbA1c from 11.1% to 7.4% reflects a meaningful improvement in glycemic control. The mechanisms of acupuncture in managing diabetes mellitus encompass several key physiological effects. Acupuncture enhances insulin sensitivity and improves glucose metabolism by influencing hormonal pathways and reducing insulin resistance [11] [12].

It also stimulates increased insulin secretion and helps regulate stress hormones such as cortisol, which can exacerbate insulin resistance [12]. By enhancing both local and systemic blood circulation, acupuncture alleviates symptoms of diabetic neuropathy and improves tissue health [13]. Additionally, acupuncture helps in balancing the sympathetic and parasympathetic nervous systems, leading to improved metabolic processes and better glycemic control [12]. It positively affects lipid profiles and supports weight management, contributing to overall metabolic health [7] [8]. Moreover, acupuncture promotes relaxation and reduces stress, which can positively impact blood glucose levels by mitigating stress-induced hyperglycemia [9].

Energy medicine

The integration of Reiki, meditation, prayer, and mantra chanting contributed significantly to the holistic management of the patient's diabetes. Each of these practices supports diabetes management through various mechanisms: Reiki operates through several mechanisms that can be beneficial in managing diabetes mellitus. Firstly, Reiki promotes relaxation and reduces stress, potentially lowering cortisol levels, which in turn may improve insulin sensitivity and glycemic control [14]. By enhancing psychological well-being, Reiki helps in managing stress, a significant factor in diabetes management. Secondly, Reiki may positively influence immune function by modulating the immune system and reducing inflammation, thereby supporting better metabolic health [15].

Thirdly, Reiki aims to restore balance in the body's energy systems, which could influence metabolic processes and glucose regulation [14]. Additionally, Reiki is effective in managing pain and discomfort, particularly neuropathic pain, thereby enhancing the overall quality of life for individuals with diabetes [15]. Finally, Reiki encourages self-care and patient empowerment, which are crucial for managing diabetes effectively. By actively engaging in their healing process, patients are more likely to adhere to self-care practices that are essential for diabetes management [14].

Meditation, prayer, and mantra chanting each contribute uniquely to diabetes management through various mechanisms. Meditation primarily reduces stress and lowers cortisol levels, which can enhance insulin sensitivity and glycemic control [16]. It also improves emotional regulation, reducing symptoms of anxiety and depression, thus supporting better adherence to diabetes management [17]. By balancing the autonomic nervous system—reducing sympathetic activity and enhancing parasympathetic activity—meditation aids in metabolic regulation [18]. Furthermore, increased mindfulness from meditation encourages healthier lifestyle choices, which are crucial for effective diabetes management [19].

Prayer provides psychological comfort and a sense of connection, which can alleviate stress and positively influence blood glucose levels [20]. It promotes a positive outlook and effective coping strategies, supporting better diabetes management and enhancing quality of life [21]. Additionally, the communal aspect of prayer often involves social support and a sense of belonging, which is associated with improved health outcomes [20].

Mantra chanting induces relaxation and reduces stress, positively impacting blood glucose levels [22]. Its repetitive nature enhances focus and mental clarity, aiding in effective diabetes management [23]. By evoking positive emotional states, mantra chanting supports improved self-care and adherence to diabetes management [23]. Moreover, it helps regulate the stress response system by decreasing sympathetic nervous system activation, which supports better glucose regulation [24]. Together, these practices contribute to a holistic approach to diabetes management by addressing both physiological and psychological aspects, promoting overall

well-being and supporting effective diabetes care.

Challenges and Adherence

Despite the overall positive outcomes, the patient faced challenges with dietary adherence, a common issue in diabetes management. This highlights the importance of personalized and flexible treatment plans. Ongoing support and education are essential for enhancing adherence and improving the effectiveness of the therapeutic regimen [18]. Future studies should validate these findings through randomized controlled trials and explore optimal treatment protocols. If proven effective, these integrative therapies could offer valuable adjuncts in diabetes management, promoting patient empowerment and potentially reducing healthcare costs.

Implications for Clinical Practice

This case study underscores the potential of integrating complementary therapies into conventional diabetes care. The significant improvements in glycemic control, symptom relief, and overall well-being support the inclusion of acupuncture, Reiki, meditation, prayer, and mantra chanting in comprehensive treatment plans. This holistic approach can enhance patient outcomes and quality of life, emphasizing the need to address both physical and mental health aspects of diabetes management.

Healthcare providers should consider these integrative therapies when developing treatment plans for T2DM patients. Researchers should build upon this study to further investigate the benefits and applications of these therapies in diabetes care. By exploring the complex interplay between physical, mental, and energetic factors, this study advances our understanding of holistic health and the management of metabolic diseases.

CONCLUSION

This study highlights the potential benefits of integrating acupuncture and energy medicine into the management of diabetes mellitus. The significant improvements observed in the patient's glycemic control and overall quality of life suggests that these complementary therapies may offer valuable alternatives to conventional treatments. Although further research is necessary to fully understand the mechanisms and efficacy of acupuncture and energy medicine in diabetes management—especially given the lack of existing studies on the impact of energy medicine—this case underscores their potential in addressing the complex physical and energetic imbalances associated with diabetes. Healthcare providers, incorporating integrative therapies of acupuncture and energy medicine into patient care could lead to the improved health outcomes and enhanced well-being for individuals suffering from diabetes.

Patient's Consent: Patient has given written consent for the utilization of data and publishing.

Acknowledgment

I would like to express my sincere appreciation to the patient for her willingness to share her case and for her cooperation throughout the study. My deepest thanks go to my colleagues for their insightful guidance and support. I also thank to the Head of the Department of Acupuncture and Energy Medicine for instilling in me the confidence to undertake and complete this paper. Additionally, I extend my gratitude to the International Institute of Naturopathy and Medical Sciences for their support. This research was conducted without external funding.

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How to cite this article: Jayapal P, Sankar G, S.T. Venkateshwaran. Role Of Acupuncture And Energy Medicine In The Management Of Diabetes Mellitus - A Case Report. Indian J Integr Med. 2024; 4(4):160-165.

Funding: None; *Conflicts of Interest: None Stated*