

# Blood Sugar Controlled of Type 2 DM Patient by Acupuncture Treatment & Suo-Xi Healthy Life Style Modification: A Case Study of Suo-Xi Acupuncture Specialized Hospital in Bangladesh

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## Abstract:

**Introduction and Importance:** The most serious illness, type II diabetes is a growing clinical and public health concern that significantly affects our daily lives. Depression has been associated with hyperglycemia and diabetes-related comorbidities include ophthalmology, nephropathy, neurotoxicity, and macro vascular problems in people with T2DM. Males typically experience it beyond the age of 60, whilst females typically experience it before the age of 40.

**Case Representation:** 75-year-old female patient reported having type 2 diabetes mellitus in 2023. Height was 5 feet 1 inch, weight was 63 kg, and the BMI was 26.2 kg/m<sup>2</sup>. 1500 kcal per day of lifestyle change were employed in acupuncture treatments for type 2 diabetes mellitus. Abdomen: Acupuncture Typical Chinese procedure. The acupuncture procedure was carried out three times a week for three months. Fasting plasma glucose (FGP) and HbA1C tests were performed on the patient, and the findings were used to create a baseline. Each month during the acupuncture treatment, these factors were examined.

**Clinical Discussion:** All data acquired over the course of three months were evaluated to determine the effect of acupuncture therapy in the management of type 2 diabetes mellitus. After three months of testing, the patient's fasting plasma glucose and HbA1c levels have decreased after acupuncture treatment. Additionally, no negative effects were noticed.

**Conclusion:** The results of this clinical investigation are encouraging and provide proof that acupuncture is beneficial in lowering type 2 diabetes mellitus in a patient.

**Keywords:** Acupuncture; Type 2 diabetes mellitus, Fast plasma glucose (FGP), HbA1C.

## 1. INTRODUCTION

Type II diabetes is the most serious disease and has a significant influence on our lives; it is a developing clinical and public health issue. It has recently become a major cause of death. Which is characterized as a collection of widespread metabolic disorders with hyperglycemia as a characteristic. Hyperglycemia is caused by a combination of inadequate

insulin secretion, reduced glucose uptake, and increased glucose production. This is one of the leading causes of coronary heart disease and blindness [1]. The estimated diabetes population by the end of 2030 and 2045 is predicted to reach 578.4 million and 700.2 million, respectively, according to International Diabetes Federation (IDF) projections from 2019 [2]. Despite these

efforts, patients may experience high blood sugar levels, which prompts self-care behaviors where diabetics take precautions to preserve the best possible health circumstances [3]. The goal of diabetic patients' self-care is to prevent complications associated with the disease. Diabetes increases mortality and reduces productivity. However, this can be handled with routine exercise, blood sugar monitoring, and heeding medical instructions [4]. In comparison to non-self-care practitioners, patients who practice greater self-care live longer, have better quality of life, and experience fewer complications [5]. According to WHO statistics, this sickness has already killed 3.2 million people and affected 285 million others. By 2030, it is anticipated that there would be 8700 deaths per day and 6 deaths per minute worldwide in industrialized and developing countries, respectively [6]. According to IDF data from 2011, Bangladesh has 8.4 million diabetic patients, and by 2030, that number is expected to treble [7]. In Bangladesh, urban areas are more likely to have diabetes than rural ones [8]. In patients with T2DM, depression has been linked to hyperglycemia and diabetes-related comorbidities such as ophthalmology, nephropathy, neurotoxicity, and macro vascular issues [9]. When personal efforts to address these issues fall short of expectations or when diabetic complications have a detrimental influence on patient's physical and mental health, their well-being and quality of life may be adversely affected [10]. According to reports, there are between 50 and 125 instances per million people in Western countries, and the number of infected Americans is over 25,000 [1]. The illness typically manifests in males beyond the age of 60 and in females before the age of 40 [12,13]. The muscles that move the extremities, face, eyelids, and eyes, as well as the muscles needed for respiration and swallowing, all

weaken excessively quickly in diabetic's patients. If severe and if untreated, involvement of these latter two muscle groups can be fatal. We described a case report of a 75 years old Bangladeshi woman who had localized, Type 2 DM, and we emphasized the clinical illustration of this condition.

## **2. CASE REPORT**

Female patient, 75 year's old who had developed type 2 diabetes mellitus in 2023 is reported. The patient weight was 63 kg and height was 5 feet 1 inch, the BMI was 26.2 kg/m<sup>2</sup> and IBW: 51 kg. In acupuncture treatment for type 2 diabetes mellitus, we used Suoxi lifestyle modification 1500 kcal / day 2. Acupuncture: Abdomen traditional Chinese method. The patient's tolerance for the intensity of stimulation was maintained by employing the DD wave, and the acupuncture needles (0.3 x 45 mm) were left in place for 30 minutes. For 3 months, the acupuncture treatment was administered three times each week. The patient's fasting plasma glucose (FGP), HbA1C, were all tested before to beginning acupuncture treatment, and the results were utilized to establish a baseline. Throughout the acupuncture treatment, such variables were checked on a monthly basis. The test was examined at Suoxi Hospital (Acupuncture) in Shantinagar, Dhaka, and the plasma samples were examined at Pathlab laboratory. To ascertain the impact of acupuncture therapy in the management of type 2 diabetes mellitus, all data gathered over the course of three months were analyzed. Laboratory investigation showed that at April 13, 2023 RBS found 18.5 mmol/ L and HbA1C: 11.2% after 3 months at 15 July, 2023 RBS found 8.9mmol/L and HbA1C: 7.2% (Figure 1 and 2). The RBS and HbA1C has found decreased in number after 3 months of test results.



**Figure1.** Patient's Biochemical Report Before Treatment **Figure2.** Patient's Biochemical Report after Treatment

### 3. DISCUSSION

Hyperglycemia may result from long-term corticosteroid use, which can change how glucose is produced and regulated. Additionally, corticosteroids disrupt insulin signaling in skeletal muscle cells. As a result, individuals, particularly those with reduced glucose tolerance, are more likely to develop steroid-induced diabetes at high doses [13]. There is evidence from a number of studies showing those who suffer from depression are more likely to acquire type 2 diabetes mellitus [14]. In a recent epidemiological study involving 90,686 individuals, it was discovered that diabetes patients were more likely to experience sadness, whether or not they had the condition officially identified [15]. Additionally, Manuscript accepted [16] published a review of the research on the impact of acupuncture on insulin resistance in 2010 [17]. The authors of that research examined 234 papers and came to the conclusion that there was evidence, however sparse, supporting the effectiveness of acupuncture in treating patients with insulin resistance. Additionally, there haven't been any research published that examine the immediate or long-term effects of acupuncture treatment for insulin resistance. Thus, based on this clinical case report, the authors propose that additional research is required to examine the short- and long-term

effects of acupuncture treatment, as well as any positive effects that may be attained by including additional acupuncture treatments, in a larger population of patients with type 2 diabetes mellitus. Acupuncture has a number of potential benefits, including cheap cost, few problems, and the ability for individualized care. In the hands of qualified practitioners, acupuncture is also a safe intervention [18]. Only 64 adverse events (0.12%) were reported in Yamashita et al.'s prospective evaluation of 55,291 acupuncture treatments delivered by acupuncturists with medical training, and all of them were minor. The most frequent adverse events were bruising, dizziness, perspiration, discomfort, and dermatitis [19, 20]. Such findings indicate that acupuncture is a safe and efficient therapy for managing type 2 diabetes in a patient, while its exact mechanism of action is yet unknown.

### 4. CONCLUSION

Acupuncture has a number of potential benefits, including cheap cost, few problems, and the ability for individualized care. Such results suggest that acupuncture is a safe and effective therapy for treating patients with type 2 diabetes, however the exact mechanism by which it works is yet unknown. More robust proof of the association proposed herein will require future prospective randomized trials that circumvent the constraints of this study.

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