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Integrative Approach to Type 1 Diabetes Mellitus: An Unani Perspective on Asbab-E-Sitta Zaruriya

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Abstract: Introduction Type 1 Diabetes Mellitus (T1DM), also known as Ziabetus Shakri in Unani terminology, is an autoimmune condition characterised by insulin deficiency.: This study aims to evaluate the impact of Asbab-e-Sitta Zaruriya on glycaemic control in patients with Type 1 Diabetes Mellitus. Methods: A cross-sectional observational study was conducted over 8 months at Government Nizamia General Hospital, Hyderabad, involving 60 insulin-dependent T1DM patients aged 9–30 years. Data were collected via structured questionnaires assessing lifestyle domains and HbA1c measurements before and after lifestyle intervention guided by Unani principles. Results Post-intervention HbA1c levels showed statistically significant improvement (mean pre: 11.63%, post: 10.88%, p = 0.003). The majority of participants belonged to the adolescent age group and showed notable gains in glycaemic control when adhering to optimal lifestyle practices. Improvements were especially linked to balanced diet, physical activity, mental stability, and sleep hygiene. It showed statistically significant improvement in glycaemic control post-lifestyle adjustments, affirming the relevance of Unani preventive concepts in modern diabetes management Conclusion: Incorporating Asbab-e-Sitta Zaruriya into T1DM management is both feasible and effective. The Unani lifestyle framework offers a meaningful integrative approach that enhances glycaemic outcomes and overall well-being in diabetic patients.

Keywords: *Asbab-E-Sitta Zaruriya, Type 1 Diabetes Mellitus, Ziabetus Shakri, Unani Medicine, Lifestyle Management, Glycaemic Control.*

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I. INTRODUCTION

Diabetes is chronic health problem with devastating yet preventable consequences. it is characterized by high blood glucose levels resulting from defects in insulin production, insulin action or both [1]. In Greek diabetes means to pass through & mellitus is the Latin word for honey referring to sweetness. [2]

In USM Diabetes mellitus known as 'Ziabetus' which means to pass in between[3]. According to ADA Diabetes is classified as follows:

- Type 1 DM
- Type 2 DM
- MODY, LADA
- GDM [4]

T1DM- This form previously called insulin dependent diabetes or juvenile onset diabetes, accounts for 5-10% of diabetes & is due to cellular mediated autoimmune destruction of pancreatic b cells Autoimmune markers include islet cell auto antibodies & autoantibodies to GAD 65 [5]. Type 1 DM makes up an estimated 10-15% of all diabetes cases[6]. 11-12 million cases worldwide, India accounts for most of children with TYPE 1 DM in southeast Asia. Since 1950s incidence of

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type 1 DM has been gradually increasing across the world by an average 3-4% per year. [7]

According to USM 'Asbab are the factors which are precursors & by its own have an influence on human body to generate a new state or maintain an old state. Asbab -e-sitta are basically six essential factors of life.

- Fresh Air (Hawa-e-muheet)
- Food & Drink (makool wa mashroob)
- Body movements & repose (Harkat wa sukoon e badaniya)
- Mental movement & repose (Harkat wa sukoon-e-nafsaniya
- Sleep & wakefulness (Naum wa yakzah)
- Retention & evacuation (ehtebaas wa istifragh)[8]

Hakeem Mohd hasan Qarshi mentioned about ziabetus in his book Jamiul hikmat. According to him diabetes is known as Dulaab, rehet, charkhi as there lie osmotic disturbances in diabetes that's why it is known as dulaab .[9] famous Unani scholar postulated that Diabetes is caused by extreme innate heat of body specifically of kidneys. [10]

Diagnosis is usually straightforward with the classic symptom of polyuria, polydipsia & polyphagia & weight loss. screening test of choice is an overnight fasting plasma glucose level 11. complications will include retinopathy, macular oedema, neuropathy, CHD, CVD etc.[12]

II. METHODOLOGY

This observational, analytical, cross-sectional study was conducted over a period of eight months—from 16th October to 16th June—at the outpatient department of Govt. Nizamia General Hospital, Charminar, Hyderabad. A total of 60 insulin-dependent patients between the ages of 9 to 30 years, belonging primarily to lower middle and poor socio-economic backgrounds from Hyderabad and nearby districts, were enrolled. Ethical clearance was obtained from the Institutional Ethical Committee of Govt. Nizamia Tibbi College prior to initiation.

Subjects were selected based on inclusion criteria of age and insulin dependency, with HbA1c levels not exceeding 16 mg/dl, while individuals who did not provide informed consent were excluded. Data collection employed a structured, pre-tested questionnaire comprising open-ended questions that covered demographic information, personal and family history, addiction habits, lifestyle practices, and medical history. Parameters evaluated included air quality, dietary patterns, hydration status, physical and mental activity, sleep cycle, and excretory habits—all reflecting elements of *Asbab-e-Sitta Zaruriya*.

Anthropometric variables such as height and weight were measured using standard tools like a stadiometer and digital weighing machine, with BMI calculated via Quetelet's Index and classified as per WHO guidelines. HbA1c levels were documented both before and after lifestyle modifications advocated during the study. Statistical software was used to analyse the collected data, which was presented through relevant tables and graphs. All participants received counselling on healthy lifestyle practices to enhance glycaemic control, prevent micro- and macrovascular complications, and improve overall quality of life.

III. DISCUSSION

T1DM Represents with the symptoms like increased thirst, frequent urination, hunger, sudden weight loss, & weakness.[13] T1DM Requires daily management with insulin injection & blood sugar monitoring. Both adults & children can be diagnosed with type 1 DM [14]. Environmental factors such as viruses EBV, CMV may also contribute to the development of condition.

Global incidence: approximately 8.4 million people worldwide had T1DM in 2021. this number is expected to rise to 17.4 million by 2040 [15]. According to 6th edition of IDFDA India has 3 new cases of T1DM /100000 Children of 0-14 years. [1]

Association of Asbab -e- sitta zaruriya with blood glucose:

- Air pollution induced inflammation & oxidative stress proves a significant pathway in DM
- Increased heat leads to dehydration, in turn vasopressin is released & signalling them to start gluconeogenesis & glycogenolysis [16].
- Diet rich in carbohydrates often leads to increase in blood glucose. high GI index foods & drinks will lead to hyperglycaemia [17]
- Insulin sensitivity is increased during movement & cells are able to use insulin to take up glucose [18]
- During stress or mental instability body shows fight or flight response which in turn releases adrenaline & cortisol, leading to hyperglycaemia .[19]
- Poor sleep efficiency is associated with more pronounced glycaemic response. a person's deviation from their usual sleep pattern was also associated with poor postprandial glucose. [20]
- In T1DM Gastrocolic reflex was delayed & diminished & associated with presence of neuropathy & constipation.[21]

IV. RESULTS

The paired samples t-test revealed a statistically significant improvement in glycaemic control among 60 patients with Type 1 Diabetes Mellitus who underwent lifestyle management training based on Unani principles. HbA1c levels decreased from a mean of 11.63% (SD = 2.70) at the initial visit to 10.88% (SD = 2.51) during the follow-up, indicating a mean difference of 0.75% ($t = 3.132$, $df = 59$, $p = 0.003$). This significant reduction demonstrates that structured guidance on Asbab-e-Sitta Zaruriya — including air quality, nutrition, body movement, mental stability, sleep patterns, and excretory habits — can effectively support better blood glucose management in Type 1 diabetes patients.

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V. CONCLUSION

The present observational study conducted at Govt. Nizamia General Hospital, Hyderabad, aimed to explore the association between *Asbab-e-Sitta Zaruriya*—the six essential factors of life in Unani medicine—and the management of Type 1 Diabetes Mellitus. Over the course of eight months and with 60 participants aged between 9 to 30 years, the research provided valuable insights into demographic, lifestyle, and clinical parameters that influence glycaemic control.

This study substantiates the therapeutic relevance of Unani lifestyle principles in chronic disease management, particularly Type 1 Diabetes Mellitus. It emphasizes that integrative approaches combining traditional wisdom with modern clinical practices can empower patients toward better self-regulation, reduced complications, and improved quality of life. With further research and larger sample sizes, Asbab-e-Sitta Zaruriya may play an increasingly prominent role in personalized preventive healthcare.

- *Conflict of Interest*
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