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Review Article

TYPE 2 DIABETES MELLITUS AND DIABETIC FOOT IN UNANI SYSTEM OF MEDICINE: A COMPREHENSIVE REVIEW

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ABSTRACT

Health is the key factor for the progress both at individual and community level, so the disease should be of the great concern at both the levels. Diabetes being the most known disease of this era and India is the diabetic capital of the world. Despite availability of various advanced form of management incidence of diabetes is still increasing day by day. One of its most serious complications is diabetic foot which results in well-known non-healing ulcer. Studies have shown the fact that the conventional management of the diabetes does not have a justifiable answer to decrease its burden from society. Therefore, researchers are looking for an alternative approach to tackle and cease the ever-increasing load of diabetes. Unani System of Medicine (USM) is one of the oldest and time proven methods to manage this kind of situation. It has entirely different and comprehensible concept of diabetes. According to the basic philosophy of USM the diabetes mellitus is the result of disturbance in quantity as well as quality of *Akhlat* (Humors) and *Mizaj* (Temperament) which leads to decrease in *Hararat-e-Gariziya*. This concept clearly describes diabetes, its pathogenesis, complications and holistic approach towards its management. Non-healing ulcer, in conventional medicine, is entirely manageable in USM. Hence the objective of this comprehensive review is to explain the Unani Approach in the management of *Ziabetus Shakri* (Diabetes Mellitus) and its complications.

Key Words: *Hararat-e-Gariziya, Akhlat, Mizaj, Ziabetus Shakri, Asbabe-e-Sitta Zarooriya*

INTRODUCTION

Health is undoubtedly the key factor for the development of individual as well as the community. Any disease is harmful to society. Diabetes is one of the most prevalent and known diseases of the current era. With the second most populous nation of the world India is the home to maximum diabetic patients and often touted as-the diabetic capital of the world. Despite the availability of various forms of management diabetes is increasing day by day.

One of its most serious complications is diabetic foot which is well known as non-healing ulcer in modern system of medicine. According to the WHO the number of diabetic foot patients will increase from 51 million in 2010 to 87 million in 2030¹. This data itself narrates that the current methods of the management of diabetes and medical science do not have a justifiable answer to decrease its burden from society.

In conventional medicine DM is a heterogeneous group of metabolic diseases that are characterized by chronic hyperglycemia and disturbances in carbohydrate, lipid and protein metabolism, resulting from defects in insulin secretion and/or insulin action. Fasting (chronic) and postprandial hyperglycemia are mainly responsible for the acute, short-term, and late complications which affect all body organs and systems².

In Unani System of Medicine (USM) the word “Diabetes” is derived from Greek language of “*Ziabetus*”, which means, “to

run through” or “Siphon”, is characterized by hyperglycemia, polyuria, polyphagia, polydipsia and gradual loss of body weight. In Arabic language, diabetes is called as “*Ziabetu*”, “*Dolab*”, “*Diaquomous*”, “*Salasulbol*”, “*Berkaria*”, “*Qaramus*” and “*Zalaqul kulliya*”. Unani and Arabic physician were well familiar with Diabetes. In the old classical books of USM the comprehensive description of “*Ziabetus Shakri*”, its pathogenesis, complications have been described along with its management. *Buqrat* (Hippocrates) the Father of Medicine also described its signs and symptoms like excessive urinary flow with loss of body weight.³⁻⁶ *Arsyatoos* (*Aretaeus*) and *Jalinoos* (*Galen*) provided the first precise picture of the symptoms of *Ziabetus*^{4,6}.

Ibne Sina (*Avicenna*) explained the clinical features of the *Ziabetus Shakri* (Diabetes mellitus) in “*Al-Qanoon Fil Tibb*” (*The canon of medicine*) and mentioned its specific complications like abnormal appetite, gangrene and sexual dysfunction and he also described the sweet taste of diabetic urine⁷. According to the USM Sue Mizaj of kidney and liver along with abnormal life style leads to *Ziabetus Shakri*.^{8,9}

Overall USM offers a different and understandable concept of diabetes. It says that the diabetes mellitus (*Ziabetus Shakri*) is the result of disturbance in quantity and quality of *Akhlat* (humour) and *Mizaj* (temperament) which decreases the *Rutoobat-e-Gariziya* and ultimately causes the degradation of *Hararat-e-Gariziya*. Generally *Ziabetus Shakri* is due to Sue Mizaj Barid Ratab Umoomi (and various predisposing factors such as excess *Harkat*, excess *Sukoon*, Barid aghziya, less or

excess diet, excess awakening, excess *Istefragh*(Evacuation), excess *Harkate Nafsani*, excess use of *Har Aghziya* (Hot temperament diet) and sedentary life style catalyse this abnormal condition. All these predisposing factors fall into *Asbab-e-Sitta Zarooriya* in USM. All these Asbab are modifiable from time to time in case there is any change in them¹⁰⁻¹³.

CARDINAL FEATURES OF ZIABETUS SHAKRI AND USM

According to the USM Ziabetes Shakri is due to the excess amount of Rutoobat and Buroodat in terms of quality and quantity. Normal physiological phenomenon of the body is excretion of unnecessary amount of fluid in the form of urine so the first symptom develops is polyuria which ultimately leads to polydipsia. Every organ in our body sustains on *Akhlat-e-Saliha* but Sue Mizaj Barid Ratab Umomi disturbs the normal physiology^{11,12}. If Akhlat and nutrition are not sufficient in quantity as needed hence body will need more nutrition frequently that results in 2nd symptom of Ziabetes Shakri i.e. polyphagia. This Polyphagia alone cannot fulfill every requirement of the body but simultaneously Sue Mizaj also needs correction through the modifications in the 2nd factor of Asbab-e-sitta Zarooriya (i.e. Makool wa Mashroob (Fig. 1).

SUE MIZAJ BARID RATAB UMOOMI AND ZIABETUS SHAKRI

Ziabetes Shakri is a complex disease similar to metabolic syndrome in conventional medicine. It increases the abnormal buroodat and rutoobat in body and develops Sue Mizaj BaridRatabUmoomi. Sue mizaj is classified in many ways such as Mumacil Sue Mizaj, Mukhalif Sue Mizaj, Mustahkam or Gair Mustahkam Sue mizaj etc. In case of Ziabetes, initially Sue Mizaj Mumacil develops in the body that means the organs which have the phlegmatic mizaj are affected first for example kidney, Aasab and Nukha. It is clear that kidney is the organ which is fully covered with fat and Polyuria is the first symptoms due to the development of sue Mizaj mumacil in it. Abnormal Buroodat and Rutoobat causes constriction and tightness in Aasab wa nukha (Nerve and Spinal cord) which leads to obstruction in the free passage of Rooh-e -Nafsani. Therefore, Aasab-e-Harkia(Motor Nerve) affect motor function and Aasab-e-Hissiya (Sensory Nerves) affect sensory functions. These two condition may occur simultaneously or one after other. Sense, action or reaction is the essential function of human body. If functions of these Aasab(Nerves) become poor then protective sensation such as cold, heat, pain and frictions is lost, these features resemble Diabetic Neuropathy. If it occurs in either of the foot or in bed ridden patients it results in peripheral ulcers and bed sores respectively. In intestine or colon, it results in constipation, colicky pain and obstruction etc. Neuropathy is not the result of diabetes only but it may be due to trauma or tumors in or around the nerves (Fig. 2)^{8,10,11,14,15}.

DIABETIC VASCULOPATHY

In Advanced case of Ziabetes Shakri, Mukhalif Sue Mizaj is developed which means those organs are affected which have *Har Ratab Mizaj* such as Urooq and this ailment also causes constriction and tightness in vascular system which leads to deficiency of Rooh-e Tabiye and Rooh-e Haiwani to the affected organs. Resulting in less blood supply to those particular organs and these affected organs gradually loses its normal contour (anatomy as well as physiology). This loss appears as ischemia and ultimately diabetic foot and gangrene develops. It must be pointed here whenever *Rooh-e-Tabiye* is disturbed, initially Quwat-e Gaziya is affected. This Quwat-e Gaziya consists of *Quwat-e Jaziba, Masika, Hazima and Dafiya*. *Quwat-e Gaziya* acts in three different modes *Tawleed, Talseeq* and *Tashbeeh*. This indicates that any disturbance in Quwat-e Gaziya means all the four Quwa are already affected and further three more Quwa (*Tawleed, Talseeq* and *Tashbeeh*) will also be affected on which growth and development of the body is dependent. *Dafiya* of Quwat-e Gaziya wants to remove excess or unused material from the body which ultimately results in a wound (Fig. 3)^{7,10}.

DIABETIC FOOT

Sue Mizaj ummomi means general mijaz of the patient has changed and it is usually suemizaj yabis or sue mijazbarid and sue mijazHar in case of septicaemic condition. In unani system there are two active conditions Hrarat and Buroodat and two passive conditions Yaboosat and Rutoobat and their combinations. Diabetes causes sue mizaj baridratabumoomi in which broodat is dominant. In such conditions, digestive system is the major system to be affected and due to the disturbance of Rooh-e Tabiye and Rooh-e Haiwani Hararat-e Gariziya is also decreased. Body wants to remove excess rutoobat and rutoobat finds out a way to go away from the body therefore this rutoobat is collected in lower limbs. This Rutoobat increases pressure around the ankle joints. Skin and surrounding vessels are devitalized and a wound is formed and this wound is well known as diabetic foot in modern system of medicine and the only management of the diabetic wound is correction of *Sue Mizaj BaridRatabUmoomi* with *HarRatab* medicine internally and locally (Fig. 4)^{7,16,17}.

CONCLUSION

In spite of the advanced age of medical science we are still lagging behind to get an appropriate management of Ziabetes Shakri. Therefore, researchers are looking for an alternative approach to tackle and manage the Ziabetes Shakri. According to USM main cause of the Ziabetes Shakri is Sue Mizaj BaridRatab. Therefore, it becomes easy to prevent Ziabetes according to USM. Correction of *Asbab-e-Sitta Zarooriya* and Ghair Zarooriya are the only way to stop and prevent Ziabetes Shakri and its complications, for example living in little bit hot environment, avoidance of excess barid foods, excess harkat or sukoon, excess or less meals means USM wants equinox in every part of life.

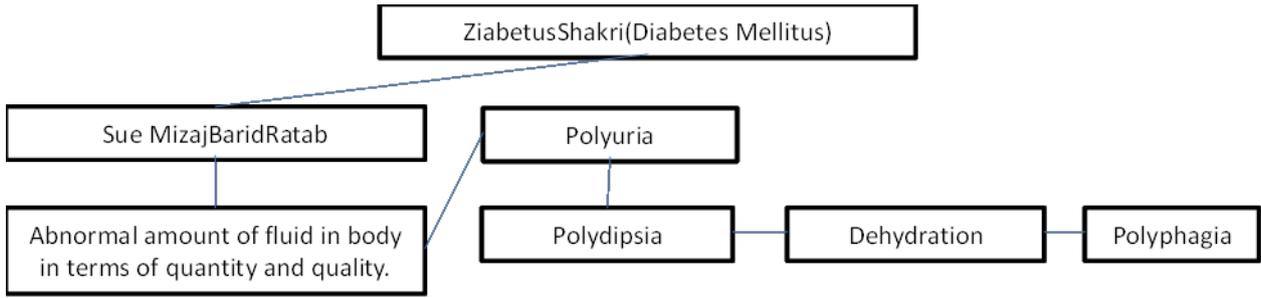


Fig. 1

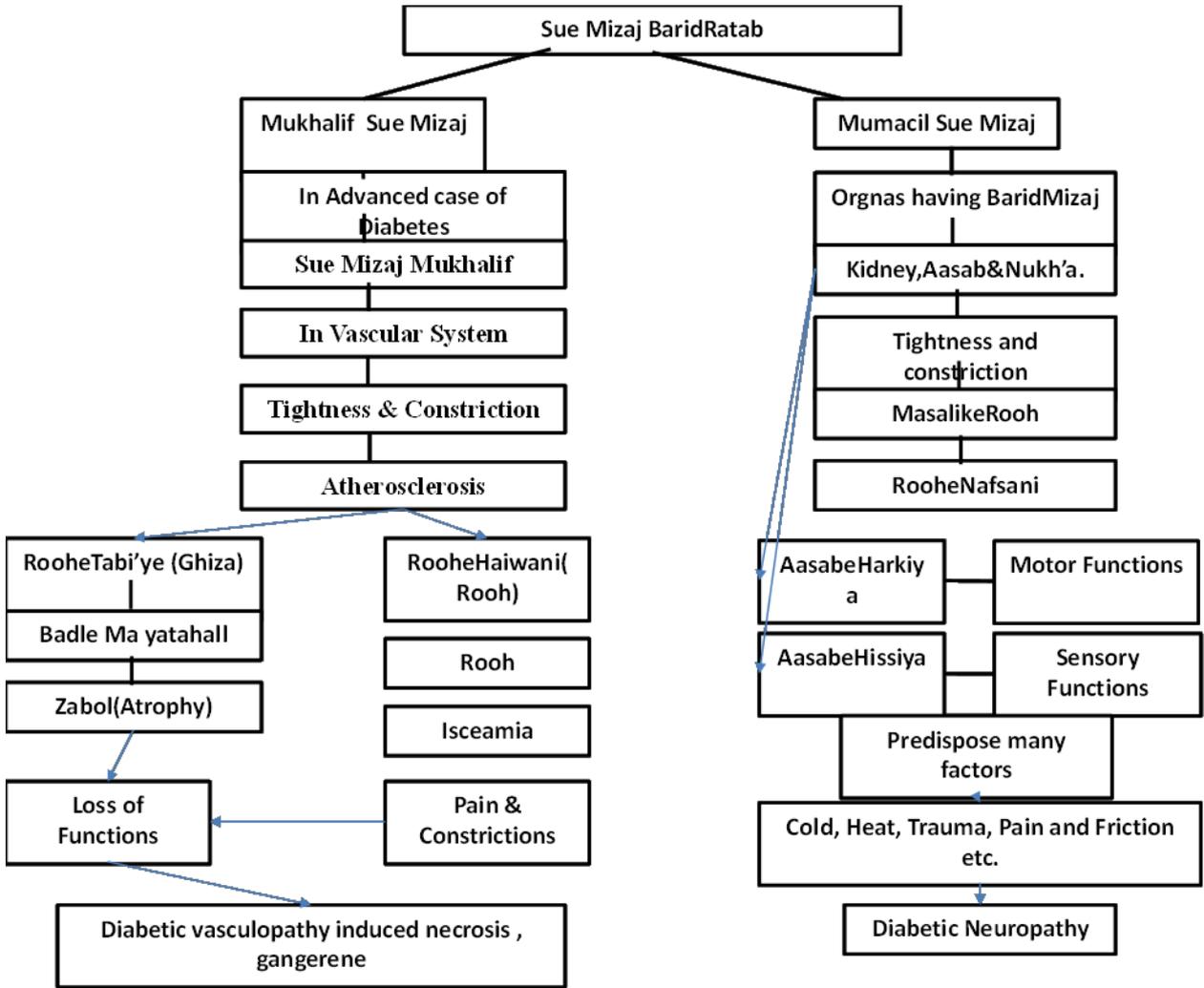


Fig. 2

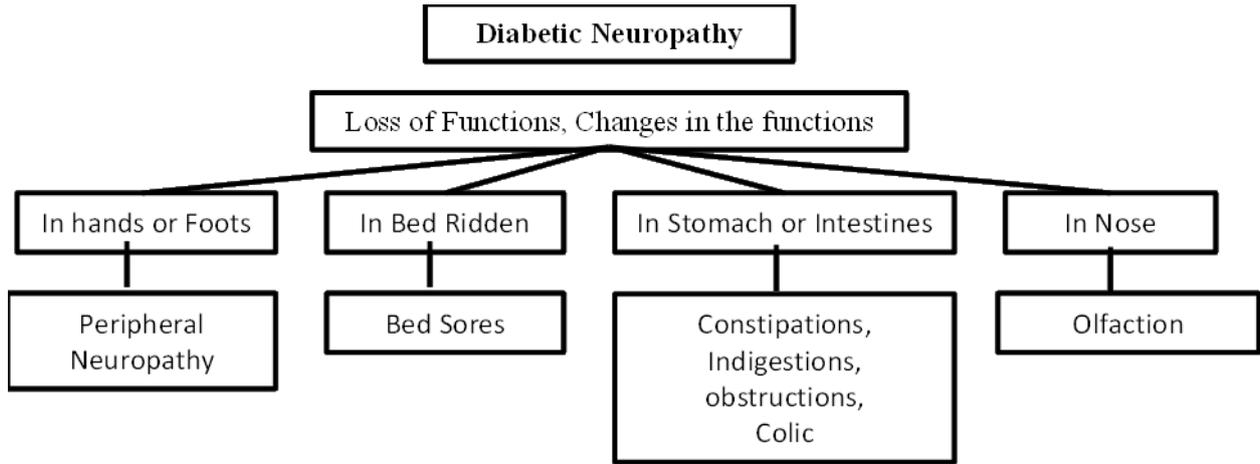


Fig. 3



Fig. 4

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