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Review Article

Use of Tools of Medical Humanities in Understanding Nature and Management of Type 2 Diabetes: A Step Further to Glycaemia and Medications

Awad Mohamed Ahmed*

Professor of Internal Medicine, College of Medicine, Najran University, Najran, Kingdom of Saudi Arabia

***Corresponding Author**: Awad Mohamed Ahmed, Professor of Internal Medicine, College of Medicine, Najran University, Najran, Kingdom of Saudi Arabia.

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Abstract

Medical humanities are several sciences of relevance to clinical studies and practice including sociology, philosophy, theology and arts.

Diabetes mellitus is a lifelong disease that is largely influenced by the local sociocultural factors. This paper aims at using the different tools of medical humanities to understand the nature of diabetes mellitus and the factors that may influence its management. In conclusion, social, cultural and psychological factors are essential for a successful management of diabetes. Thus, diabetes care providers are expected to adopt cultural competencies for assessment and planning culturally appropriate interventions.

Keywords: *Diabetes Mellitus; Medical Humanities; Culture*

Introduction

Medical humanities (MHs) are interdisciplinary sciences that include three fields, pure humanities, social sciences and arts. To detail, pure humanities include literature (poetry, prose and narratives), linguistics, philosophy, ethics, history, and religious studies (theology). Social sciences include sociology, anthropology, demography, cultural studies, health geography, politics, economics, law, gender studies, communication and information. Arts include performing arts (theatre, films, music, dance and soap opera) and visual arts (painting, photography). The major objective of study of MHs is to help students to acquire values and attitudes such as empathy, fostering of observational skills to promote clinical acumen, critical thinking, focusing on whole person and not the symptoms and signs, tolerance of ambiguity and getting a deep insight into the different human conditions and perspectives. Thus, MHs should be taken seriously by medical educators and not a short 'pleasurable break' among an overwhelming curriculum of tedious clinical and laboratory works [1]. A serious step toward inclusion of MHs in the medical study and practice, is to tailor their concepts and items in the management of common lifelong diseases. This is the aim of this study.

By today, diabetes mellitus is considered among the most common diseases in the world. The total number of diabetic persons was 422 million in 2014, with a prevalence ranging from 7.1% in Africa, to 13.7% in the eastern Mediterranean region [2]. Unfortunately, half of diabetic cases are undiagnosed [3]. One and half a million deaths due to diabetes were recorded in 2012, amounting to be among the lead-

ing ten causes of death globally [2]. Type 2 diabetes mellitus (T2DM) constitutes the most majority of diabetic persons (up to 90%), and is associated with adult age, obesity and overweight and physical inactivity in an already genetically predisposed persons. It is a lifelong disease that affects every organ in the body. Diabetes is a lifelong disease that needs to be managed all day and every day in all aspects of living, including meals, work, vacation, family issues, and its proper management needs significant modifications in lifestyle of patients. Thus, it is important to study the impact of cultural factors on such a disease. It need a look to the patient as a whole person, and not only as blood glucose reports and then hurriedly change or fix the antidiabetic medication, or its dose. Only a minority of patients who had reported that their physicians were interested in non-physical aspects of diabetes management [4]. Nothing apart from the tools of MHs which can efficiently address the holistic approach in managing diabetes. In this review we will discuss the relevance of several medical humanities to understanding nature and management of T2DM.

Religion

Religion affects every aspect of the life of its followers; heath issues are no exception. Religious fasting, especially that of Muslims (Ramadan fasting) has profound biochemical changes that may affect diabetes care. In Ramadan fasting, adult Muslims are required to abstain foods, drinks, smoking, medications and sex from dawn to sunset daily for one month each year. Although sick people are exempted from fasting, but some diabetic person insist to fast [5].

As diet has a paramount role in management of diabetes, it is important to check the views of religion on some foods. Some diabetes-unfriendly food items are recommended by the Islamic religion e.g. dates and honey [6]. The Hindus have limited choices of food as they adopt the vegetarian diet. The religious ceremonies and festivals in the Arab countries witness serving large quantities of sweets and fatty foods [7].

Fatalism is a religious concept, especially among Muslims, that attributes all life events to the will of the god or supernatural powers [6]. The extremist believers feel no need for seeking therapies for diseases as it 'makes no change' and then are not adherent to therapy, diet and self-management. Such patients are then rendered powerless and unable influence their disease. As well, African patients may regard diabetes as a punishment by supernatural powers such as witches, evil eyes and the souls of 5 dead family members [5]. The only 'positive' point of fatalism is that it helps some patients to accept and cope with diabetes and associated disabilities as an 'unavoidable fate'. There is a need of innovative thinking by religious thinkers to load the concept of fatalism with positive annotations.

Philosophy

Concept of illness: Patients usually ignore chronic illnesses at their early phase when they do not cause symptoms or signs severe enough to disturb daily activities, or result in severe pain. In one study, a diabetic respondent stated that 'Why should I go to doctors if I do not feel ill' [7]. Some patients tend to deceive themselves that diabetes is not a serious disease and it is just 'a touch of sugar'. Even after early phase of illness, some patients prefer to take folk medicines, thinking that hospital treatments are for 'true' illnesses, leading to delay of proper care of diabetes until appearance of complications [7]. Relevant to this erroneous concept of disease, is that some diabetic persons stop their antidiabetic drugs once the acute symptoms such as polyuria or polydipsia are over, believing that their diabetes is 'cured' [6].

Medical anthropology/culture

Medical anthropology specializes in the study of cultural aspects of health, illness and healing. Cultural beliefs can cast light on the way people understand and react to their bodies, illness and health (although they do not automatically translate into behaviours). Culture influences patients' attitudes to diabetes including changes in lifestyle to cope with the requirements 0f diabetes management. Awareness (sensitivity) to cultural characteristics and differences between individuals and groups is the first step in planning and evaluating a proper diabetes education. The diabetes doctors and educators need to be aware of local cultural customs, religious beliefs, dietary patterns and preferences, conceptions, family patterns, disease stigma, attitudes toward health and illness, care seeking behaviours and value systems [6].

In particular, perceptions are important to assess in diabetes as there are many misunderstandings in aetiology, nature of diabetes and therapeutic options. There are many myths regarding some aspects of diabetes. For example, in India some people believe that diabetes is directly caused by excessive intake of sweets [7]. They also believe that bitter food and drink items decrease blood glucose levels [7]. Some persons find difficulties in relating diabetes to obesity as they, simply, see thin persons with diabetes in their environments. There are negative attitudes against slimness in many cultures, relating obesity and overweight to 'good' health. Other wrong beliefs about diabetes aetiology include that it is a disease of wealthy or influential persons only.

In some societies the mere 'successful' completion of a sexual intercourse has been viewed culturally as a sign of virility and strength. Diabetes is a significant cause of erectile dysfunction and thus is considered as a source of social stigma.

Language

Use of effective personal communication is an important step to overcome cultural barriers in proper diabetes management. Miscommunication leads to patients' discomfort and dissatisfaction of provided care and then lesser adherence to therapy and diet. Use of some words and phrases relevant to diabetes is misleading in some areas. The term 'good health' is used to denote obesity by some people [6]. Some patients feel boredom as their carers speak difficult to understand language or insert foreign language words. Some persons restrict the 'sweetness' to where the foods or drinks artificially sweetened by table sugar; thus they may liberally take items such as natural honey or sweet fruits. The phrase 'a person with diabetes' sounds better than 'a diabetic person' which implies that the disease is diabetes is the central aspect of their life, whereas the other phrase refers to that diabetes is just one aspect of the patient's life.

Economics

Diabetes is a costly health problem. In 2010 the total direct costs of diabetes care in USA were 245 billion dollars [8]. The diabetic person requires 2 - 3 times costs of the non-diabetic one [8]. Diabetic patients in undeveloped countries find difficulties in securing their costly insulin supplies. They then tend to decrease the dose, or to shift to the cheaper oral drugs.

The poor families may not afford preparing separate meals of low sugar, salt and fat contents for their diabetic members.

Geography

The increased rate of urbanization throughout the world is associated with shifting to the sedentary life and affluent diets, and then increase in incidence of non-communicating diseases [9]. There are wide variations in urban/rural distribution of diabetes. For example, in Ghana and South Africa the prevalence of diabetes in rural areas reaches up to 4.9%, whereas a study in Sudan stated no significant difference in urban/rural distribution [10]. The situation is aggravated by that in undeveloped countries the incidence of non-communicable diseases (NCDs) is increasing, while still the communicable diseases and poverty-related health problems still exist as significant health problems, leading to a situation of a double jeopardy [11]. Unfortunately, the health infrastructures after many decades of dealing with infectious diseases are not well prepared to deal with NCDs including diabetes [11].

Ethnology

Diabetes is commoner among several minorities in some countries compared to the rest of the population. In USA, 15.9% of the American Indians, 13.2% of the African Americans and 12.8% of the Latinos are diabetic, compared to 7.6% among the White Americans [12]. Not only the prevalence is high, but the minorities suffer poor diabetic control and improper self-management [12]. It was noted that many of members of minorities bears diabetes beliefs similar to their original countries [13].

Psychology

Psychological factors such as anxiety, depression or type of personality can affect and predict outcome of diabetes care and life quality. This is confirmed by the results of DAWN (Diabetes Attitudes, Wishes and Needs) study which included 5000 diabetic patients and

3000 health professionals from 13 countries in all over the world continents [14]. The surprising main finding of the study was that two fifth of diabetic patients suffer undiagnosed psychological problems that impair their coping with disease and care and then lead to poor physical health [14].

History

History of diabetes mellitus since the first discovery of a polyuric disease by the ancient Egyptians 3000 years ago is a fascinating story [15]. It denotes the importance of good observations by genius scientists in (e.g. tasting the sweetness of urine or observing gathering of sugar ants around the urine of the diabetic persons) [16]. A good observation was that some of great discoveries in diabetes were made by very young scientist, in their just third decade of age (e.g. Langerhans, Banting, Best). One of the great lessons in diabetes history was the refusal of Banting to patent insulin and chose to share it with the world [16]. In recognition of Banting's generosity, his birthday (14th November) was chosen as the world day of diabetes since 2007.

Gender issues

In many parts of the world, ill women report lack of family support even to the extent that their disease, however severe, is not considered among the family priorities [7]. For example, no one accompanies them to care clinics or even to encourage them to go there. They cook what other family members prefer without considering their special dietary needs (e.g. in adding sugar, salt or fats) [7].

Due to some complication, the diabetic husband may lose his social role as the 'family master' as a family financial supporter, then this role is conferred to the wife that may generate tensions in their life especially in patriarchal societies.

Conclusion

Diabetes is a global disease where there is no associated specific age, sex, ethnicity, social or cultural background. Health carers need to know that cultural perceptions of health can be unique for each person. Cultural beliefs and traditional practices affect nearly all aspects of the disease, like perception about diabetes, its assessment and diagnosis, care seeking behavior, expectations from clients and so forth. Beliefs regarding illnesses and in particular chronic illnesses like diabetes are greatly influenced by cultural norms in a significant way. As well, cultural factors are responsible for the way in which the diabetes is perceived by the community, the manner in which the symptoms and signs related to diabetes and its complications are perceived. Even the erroneous beliefs relevant to misunderstanding of religious teachings can influence views to health and disease issues. There is a need to exert some caution to avoid generalizations and stereotyping.

Self-management of patients with diabetes mellitus largely depends on their attitudes and beliefs. The degree of self-management of diabetes depends on the way patients perceive the diseases. Individualized approaches have to be undertaken in delivering culturally appropriate care for diabetic patients. Religion and religious values and institutions have affected virtually every nation, people, culture, and race on the earth.

Improving diabetes care needs a better understanding of the relevant cultural determinants and dimensions. There appears to be no universal best practice currently, hence the need for guidelines on management of diabetes taking into account the sociocultural backgrounds of the patients. For example, there is a need to consider literal and language variations in preparing educational materials or talks to educate patients on their disease.

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