To assess the Health Status of the Diabetic Patients .In Regard to HbA1c, taking in consideration the demographic data, duration of disease and life style in Tulkarm Directorate of Health

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Background

Diabetes mellitus (DM) affects more than 422 million people around the world. By the year 2040, the number of people with diabetes is expected to rise to 642 million, most of who are going to be in low- or middle-income countries (1). It is considered a major cause of morbidity and mortality (1).The American Diabetes Association (ADA) holds that good glycemic control is essential for the management of DM; and that glycated hemoglobin (HbA1c) is the best indicator for the monitoring of blood glucose levels (2).HbA1c gives an indication of the average blood glucose levels maintained in the past 3 months .Hence, it is important when estimating the risk of complications associated with the disease . For instance, maintaining HbA1c levels below or around 7 % (i.e., having good glycemic control)contributes to the reduction, delay and prevention of microvascular and macrovascular complications (1). Studies conducted by Arnetz *et al*. (3) and Kilpatrick *et al*. (4) in diabetic patients have shown a significant correlation(positive or negative) between HbA1c and age, gender, educational level, life style as well as duration of diabetes. It is thought worthwhile to investigate the significance of such correlations in West Bank , where such the effect of these parameters for the progression of diabetic has not yet been recognized. The aim of this study is to assess the correlation between the above detailed parameters so that they can be used as diagnostic or prognostic markers for the assessment of the degree of control of this disease, to delay or prevent the complications before they can eventually manifest.

Methods

A retrospective cross - sectional study conducted in Diabetic Clinic at Tulkarm Health Directorate. Data was collected in 2020 by reviewing 215 patient's medical files of type 2 diabetic using a basic information questionnaire on demographic data, duration of disease and life style elements.

The researcher took an official permission from the general director of Tulkarm Directorate of Health. The data analyzed by Statistical Package for Social Sciences, (SPSS) Windows version (23) program using the chi-square test to determine whether there is a significant difference between males and females in the categories listed in the questionnaire. Independent –T- Test used to find any significant differences of HbA1c values in relation with gender. One way analysis used to test any significant differences in demographic data .Pearson correlation uses to measure any significant differences in duration of diseases in terms of Hba1c .Multiple regression to investigate any correlation between HbA1c values and life style elements.

Findings

The study suggest is a significant differences at the level of 0.05 in terms of HbA1c values of diabetic patients in regarding gender, these differences were more HbA1c values among males with mean (2.79) than females with mean (2.61). HbA1c values for diabetic patients in

regarding age groups 66-75(3) was more than age group 56-65(2.5) and age group 25-35(2.4). In addition , HbA1c values for diabetic patients regarding educational level > 16 years (2.3) was less than educational level 13-16 years (2.8) and education level 1-6 years(2.7) and educational level 7 – 12 years (2.6).

The study also demonstrate without doubt a strong significant positive correlation at the level of 0.05 between duration of disease and HbA1c values of diabetic patients, as duration of disease increases , HbA1c values showed a significant increase and vice versa (0.000).

Finally, the study showed a varied significant correlation at the level of 0.05 between most of life style elements and HbA1c values among diabetic patients where physical active and vegetarian diabetic patients on the top of the list followed by diabetic patients who comply a dietary management principles including meal timing , eating between meals and number of meals and finally obese and smoker diabetic patients showed a slight correlation with HbA1c values.

Conclusion

The data in the present study reveal a problem with poor glycemic control (high HbA1c) of type 2 DM patients in Palestine .Several social, clinical and behavioral factors underlie the problem. Knowledge of these factors could be a start toward helping patients and targeting interventions to improve glycemic control and prevent diabetes related complications. Poor glycemic control in Palestine indicates a need for more research and improvement, and highlights the need to review the existing guidelines and develop an awareness program around issues related to diabetes care. Health professionals and decision makers should direct their efforts and interventions towards the empowerment of patients by providing appropriate educational sources that highlight the benefits of self-management in the context of disease treatment, control, and elimination of risk factors.