ABSTRACT

BACKGROUND

Diabetes Mellitus (DM) is one of the leading causes of morbidity and mortality in Palestine. The Palestine (West Bank) STEPwise Survey (2010-2011) indicated a DM prevalence of 12.7% among adults aged 25-64 years. According to the 2011 Ministry of Health (MoH) report, DM was the fourth leading cause of death in the West Bank. Yet studies on DM management and control in Palestine are lacking. This study aimed to assess the level of glycemic control as well as the level of diabetes self-management—including patient self-care activities (SCA) and provider self-care recommendations (SCR)—and to examine the associations between glycemic control (HbA1c) and SCA, as well as between glycemic control and SCR among a sample of adult patients with T2DM in the Ramallah governorate of Palestine.

METHODOLOGY

This study was based on secondary data analysis. A cross-sectional clinic-based survey was conducted with 517 adult men and non-pregnant women (M=166, F=351) diagnosed with T2DM from 11 main primary healthcare clinics in the Ramallah governorate. These clinics are operated by the ministry of health (MoH), United Nations Relief and Works Agency (UNRWA), and by non-governmental organizations (NGO) in partnership with the MoH. Participants were identified from clinic databases and verbal consent was obtained with a response rate of 83.8%. Laboratory examinations of HbA1c levels were

completed, in addition to other laboratory tests. The Arabic translated version of the Summary of Diabetes Self-Care Activities-SDSCA (Ar) scale was used to assess diabetes self-management.

Standard responses to various aspects of self-care were obtained. These responses were organized into subscales. Each subscale was categorized based on patient's performance during the week preceding the survey. Four categories were constructed as follows: 0 (no), 1 (partially performed ≤50% of days/week), 2 (partially performed >50% of days/week) and 3 (complete performance). Data was collected by trained fieldworkers between February-June 2012, and analyzed using SPSS 18. Univariate analysis described the means and proportions of variables. Chi-square tests were used mainly to assess significant associations between glycemic control and study variables: SCA, SCR, demographic and socioeconomic characteristics (sex, age, marital status, education, standard of living (STL), locale, and refugee status), the healthcare sector, and disease-related characteristics such as duration of diabetes, type of diabetes treatment, obesity and others. A logistic regression model adjusted to classical confounders (age and sex) was conducted to determine factors associated with glycemic control.

RESULTS

The mean age was 58.1±9.8SD years and the mean duration of diabetes was 9.4±7.5SD years. The mean value of HbA1c was 8.8%±2.0SD. One in five patients (19.8%) were controlled (HbA1c<7%). 58.6% of participants did not

have a healthy eating plan. On a daily basis, 16.7% adhere to their general diet plan, 1.9% adhere to a specific diet, 1.4% exercise, 5.8% test blood sugar, 26.5% adhere to foot care practices and 77.5% adhere to medications. 16.6% did not receive dietary advice from their healthcare providers, 24.8% did not receive advice on exercise, 66% did not receive advice to test their blood sugar regularly, and 2% were not prescribed medications. Bivariate analysis of glycemic control and self-care subscales, recommendations on diet, exercise and smoking cessation demonstrated no statistically significant association. Logistic regression revealed that glycemic control was not associated with any the following variables: SCA, SCR and demographic, socioeconomic characteristics. The findings indicate significant associations between glycemic control and duration of diabetes, type of diabetes treatment, patient's perceived capability of dealing with diabetes and physician's inquiry about patient eating habits.

CONCLUSIONS

Results demonstrate low levels of glycemic control among patients and sub-optimal levels of SCA and SCR. Absence of associations between glycemic control and SCA, as well as between glycemic control and SCR raise questions regarding the quality of DM care in these clinics and probably the lack of a supportive environment to implement such recommendations. Healthcare providers were not providing all patients with SCR. These findings point to the provision of medications without sufficient health education and monitoring of patients. Self-efficacy and empowerment strategies should be initiated to achieve

better disease control. Further studies are needed to explore the barriers to diabetes management in the Palestinian society.