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Knowledge, Attitude and Practice Regarding Foot Care among Diabetic Patients Who Visited Health Centres in Khartoum State, Sudan, 2018

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Abstract

Diabetes mellitus (DM) is a metabolic disorder that is characterized by chronic hyperglycaemia. Symptoms and signs of DM are weight loss, increase urination (polyuria), increase thirst (polydipsia), increase hunger (polyphagia). There are many types of diabetes like gestational DM, DM type 1 and Type 2 Diabetes. If diabetic patients don't control glucose level by treatment and routine visit to doctor, they will develop serious complications such as retinopathy, nephropathy, neuropathy, coronary artery disease, cerebrovascular disease and peripheral vascular disease. These complications have negative impact on the quality of life, psychological wellbeing, social functioning, and employment of diabetic patients and cost of treatment. Diabetic neuropathy receives special attention because it leads to diabetic foot ulcer (DFU). DFU should be managed by multidisciplinary team. Good patient's education and self-care decrease amputation. Foot care (FC) is a key issue to prevent DFU. Patients awareness about proper FC (primary prevention) method like education play a key role in management from diabetes to minimize or control diabetes related foot complication (amputation). In Sudan, there are increase in prevalence of DM and DFU in last years although there are improve in awareness of population in DM but it may be problem in education level or socioeconomic status or other reasons lead to create this gap between knowledge, attitude and practice. FC received little attention from medical doctors who are concentrating on therapeutic and diagnostic measures more than education of patients and preventive aspects. The aim of this study was to assess knowledge, attitude and practice regarding foot care among Sudanese diabetic patients in Khartoum state.

Keywords: Knowledge; Attitude; Practice; Diabetes; Foot care

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Introduction and Methods

This descriptive observational multi-centres cross-sectional study was conducted at health centres in Khartoum state, Sudan between October 2018 to December 2018.

The study population includes any diabetic patients attended these centres in Khartoum state during study period.

The sample size was calculated according to the following formula:

$n = DEFF \cdot z^2 \cdot p \cdot q / e^2$ Where:

n=Minimum sample size required

z=Probability that e is not exceeded (1.96 correspond to 95% confidence level).

p=Expected proportion with adequate knowledge about FC=0.8

q=1-p

e=Maximum acceptable random sampling error

DEFF=Design effect (1.1)

So sample size=270 (30 for each centre).

It was divided total sample size (270) equally over 9 health centers (30 patients were taken from each center), health centers were choosing randomly and study population (diabetic patients) were selected by simple random sampling. 270 diabetic patients interviewed using a questionnaire containing qualitative and quantitative aspects. Data has been analyzed using SPSS software version 25. Uni-variate, bi-variate and multi-variate was conducted out and p-value at <or 0.05 was taken as significant.

Descriptives analysis were performed for quantitative and qualitative measures and displayed and presented it as frequency and percentages, chi square and binary logistic regression was being performed to obtain the association between the demographic data with knowledge, attitude and practice and between knowledge, attitude and practice. Ethical approval from the Department of Community Medicine, Faculty of Medicine, University of Khartoum. Permission was taken from ministry of health and the director of, health centres. Verbal informed consent was obtained from each diabetic patient before filling questionnaire [1-8].

Results and Discussion

The total number of participants was 270 diabetic patients (100% response rate), the first set of questions aimed to assess demographic characteristics. Overall, 176 (65.2%) women and 94 (34.8%) men were included with a mean average of age was of 57 years (SD=11.6) and mean of duration of diabetes was of 10 years (SD=7.4). Regarding educational level, total of 219 patients below the level of university (81.1%), few of them are very educated (18.9%). Further analysis showed those who have knowledge about foot care constitute 151 (55.9%), different response to knowledge measures. The source of information was medical staff (doctors, diabetic educators or a nutritionist) in 95 (63%) of patients, other source like: tradition, magazine, books, posters. The scoring of knowledge was categorized in to yes (have knowledge) and no (haven't knowledge), the frequency of patients with (yes) was 151 (55.1%) and (no) was 119 (44.9%).

Regarding attitude, 257 patients (95.2%) awarded about foot care and 203 (79%) patients they considered foot care as a preventable method from foot complication (diabetic septic foot, infected wound, not healed wound etc), other cause like: as part from personal hygiene (most), make me relax, as a disease. Responses of patients to measures of practice, the scoring of the practices of foot care is categorized into poor and good practice of foot care. The respondent will be categorized into poor practice of foot care if the correct number of question answered is between 0-5 out of 8 questions and good practice if 6-8 out of 8 questions.

The frequency of patients with poor practice was 158 (58.5%) and good practice was 112 (41.5%). Chi-square test present no association between sex and knowledge ($p=0.532$), attitude with age (0.763) and time of diagnosis (0.764), sex and practice ($p=0.797$), on the other hand there are significant association of educational level with knowledge ($p<0.001$), attitude (0.049) and practice ($p=0.012$) there are significant association of knowledge with attitude (0.001) and practice ($p=0.001$). Binary logistic regression was created to study the association of knowledge, attitude and practice with socio-demographic variables. The result indicate that not statistically significant between knowledge and age ($p=0.888$) and not statistical association of educational level with attitude (0.402) and practice (0.280).

Conclusion

These results supported the view that More than half of patients they know about FC in general but there are not enough knowledge about all FC guidelines .Most of patients were awareness about F.C and foot related complications. More than half of patients had poor practice. Education and trained health care providers have a role in increasing the awareness of diabetic patients about FC. Different in response to knowledge, attitude and practice due to impact of our society, tradition and culture .The study offers some important insights into deficiency in educational programs and fully counselling from health care provides to diabetic patients to complications related to diabetes, that reflected on knowledge and practice of patients, and increase the gap between knowledge and practice.

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