Knowledge and impact of diabetes in patients in a tertiary clinic in Southeast Nigeria

E O Achigbu, R N Oputa, K I Achigbu, and I U Ahuche

Abstract

Diabetes mellitus is a chronic non-communicable disease (NCD) of public health importance, as it has become a global epidemic requiring the efforts of caregivers and patients for effective management and prevention. This has necessitated the inclusion of diabetes education as an essential component of diabetes care. The aim of this study was to determine the knowledge of diabetes and the impact of this knowledge on patient management, with a view to making recommendations on how to improve management and treatment outcomes.

This was a prospective cross-sectional study including all previously diagnosed patients with diabetes who attended the Outpatient Endocrinology Clinic of the Department of Internal Medicine, Federal Medical Centre, Owerri, Imo state, Nigeria during the period of the study. One hundred and three (103) subjects consisting of 44 males and 59 females aged 20–80 years participated in the study. Most had had diabetes for 5 years or less, and about 40% did not know what diabetes meant. Approximately 80% knew the names of their drugs. Diet was the only lifestyle modification adopted by the respondents. They had good social disclosure attitudes.

In conclusion, the patients displayed a good knowledge of the drugs used in their management, and a positive impact of their knowledge in the area of diet control and disclosure attitudes. There was still a poor knowledge of the cause of diabetes, which cannot easily be overlooked, as it is significant to the total management of the patient. A nationally adopted programme of structured education for people with diabetes is recommended.

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Introduction

Diabetes mellitus is a chronic non-communicable disease (NCD) which has become a global epidemic.[1,2] Diabetes education and diabetes self-management education, as well as on-going support, are essential components of diabetes care. Patient participation is crucial in the management of diabetes. Education empowers people living with diabetes to manage their disease, improve health goals and outcome, as well as contributing to the care of other patients.[3,4] Different aspects of diabetes management demand lifestyle changes, self-monitoring of treatment, and prevention of complications.[5,6]

A joint initiative of the World Health Organization (WHO) and International Diabetes Federation (IDF), 'Diabetes Action Now', aims to stimulate and support the adoption of effective measures for surveillance, prevention, and control of diabetes; as well as to achieve a substantial increase in global awareness about diabetes and its complications. It has 19 healthcare domains – screening and diagnosis, care delivery, education, psychological care, lifestyle management, glucose control level, clinical monitoring, self-monitoring, oral therapy, insulin therapy, blood pressure (BP) control, cardiovascular (CV) risk protection, eye screening, kidney damage, foot care, nerve damage, pregnancy, children, and in-patient care.[5] Self-management education provides knowledge and practice of all the various aspects of diabetes care and support.

Therefore, health workers must be trained on a regular and continuous basis to impart the correct information on diabetes, and also provide general information on networking and health systems. Some countries such as Canada, the USA, and Australia provide standard courses for certified diabetes health educators (who undergo regular recertification) to ensure that such educators have current best practice knowledge and skills.[7] The use of diabetes guidelines and standards to teach people living with diabetes can improve health outcomes[8–10] of patients.

This study aimed to determine the knowledge of diabetic patients attending the Diabetes Clinic of the Federal Medical Centre, Owerri, Nigeria on diabetes, drug use, co-morbidities, causes, complications, and psychosocial factors; with a view to making recommendations on

how to improve management and treatment outcome.

Patients and methods

This study was carried out in the Outpatient Endocrinology Clinic of the Department of Internal Medicine, Federal Medical Centre, Owerri, Imo State, Nigeria. It included all previously diagnosed patients with diabetes who attended the clinic during the period of the study. This was a prospective cross-sectional study using a structured questionnaire comprising open and closed questions. It captured information on the biodata of respondents, their medical history, and their knowledge, perception, and attitude to diabetes. Data were collected using a questionnaire administered by the interviewer. The questionnaire was divided into four parts:

1. Section A: Biodata of subjects including their age, sex, and occupation.
2. Section B: Medical history of subjects.
3. Section C: Perception and understanding: this section sought to elicit the subject's view and knowledge of their illness.
4. Section D: Attitude to illness. This consisted of questions concerning the subject's lifestyle changes or behaviour attributed to their illness.

Data collected was analysed using SPSS version 20 (2012) and presented in tables and charts. Institutional consent was obtained in writing from the Federal Medical Centre Ethics Committee. In addition, informed verbal consent was obtained from each subject who participated in the study after detailed explanation.

Results

One hundred and three (103) subjects consisting of 44 males and 59 females (ratio 1.0:1.3) participated in the study. There were 21 (20%) aged 20–50 years, and 82 (80%) aged 51–80 years. Forty-three (43) were unemployed (42%), 30 (29%) were in business, 14 (13%) were farmers, 12 (12%) were civil servants, and 4 (4%) were artisans. Most (69%) had had diabetes for less than 5 years, 22% had had diabetes for 6–10 years, 5% for 11–15 years, and 4% for 16–20 years.

Slightly over half of the respondents (56%) knew diabetes was an excess of sugar in the blood, 38% did not know what diabetes was, while 5% and 1% respectively thought it was caused by hypertension or pregnancy.

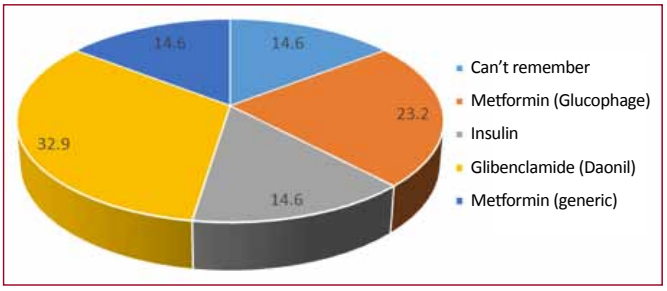

Figure 1. Drugs used by the respondents

Sixty-seven (67) respondents (65%) saw diabetes as just an illness, 21% thought it was a spiritual attack, while 14% believed it was an inherited disorder.

Figure 1 shows the patients' reporting of the treatment they were taking. Eighty-two (80%) of subjects knew the names of their drugs and most (83%) were on oral hypoglycaemic agents. Daonil (glibenclamide) was the most prescribed drug (33%). Knowing the names of their prescribed drugs was significantly associated with the duration of illness (p=0.023).

Knowledge of complications of diabetes was not influenced by age or sex of the respondents. Hypertension was the most common co-morbidity (58%) and it was not associated with duration of diabetes (p=0.460). Diet modification (92%) was the only change in lifestyle adopted by the respondents. This change was also not dependent on age (p=0.564) or sex (p=0.756).

Almost all (98%) of respondents irrespective of age had disclosed their illness to family and friends. This disclosure was to make relatives aware and encourage them to be screened for diabetes (52%). The remaining respondents (47%) disclosed their disease in order to get financial support to enable them to purchase drugs. The decision to disclose the disease to others was not significantly related to the duration of diabetes (p=0.821) or the age of the patients (p=0.143).

Discussion

The peak age for type 2 diabetes in most studies is between 41 and 60 years,[11–13] and the peak age in this study was similar. Most cases of type 2 diabetes present after the age of 40 years, irrespective of the fact that the disease may have remained unrecognised and undiagnosed for years.

Most of our subjects were unemployed and dependent on their families; the self-employed consisted of business people, artisans and farmers, and civil servants. The civil servants worked for the government and were usually the only group with access to some form of health insurance. Therefore most patients were unable to meet the high cost of the management of diabetes. The mean diabetes-related expenditure per person with diabetes in Nigeria is US$137 which is very low when compared with expenditure for Denmark (US$7272), the United Kingdom (US$3994) and the USA (US$9800).[11] Poverty, ignorance, and inability to access healthcare provide the obvious factors that account for the high rate of morbidity and mortality among diabetic patients in our environment.[11–14]

The duration of diabetes from the time of diagnosis was mostly less than 5 years. Increase in mortality rate associated with long-standing diabetes and its complications or decline in clinic attendance may be responsible for this drop.

A high level of ignorance about diabetes is common in Nigeria and in most of Africa.[15-18] Almost 40% did not know the cause of diabetes, while a few attributed it to pregnancy and hypertension. It is however heartwarming to note that the majority of the subjects saw diabetes as an illness as opposed to a spiritual attack. This perception may be attributed to the regular health talks given

in our diabetic outpatient clinic.

The knowledge of the drugs used was high and increased with duration of diabetes. This may also be a result of the clinic-based health talks on diabetes. It supports the need for continuous education in the management of patients.

The most common drug used in our subjects was metformin (as 'Glucophage' or generic metformin) followed by 'Daonil' (glibenclamide). A small proportion used insulin (15%). Hypertension was the most common co-morbidity noted in this study and was not associated with the duration of diabetes. Essential hypertension is very common in this environment and may not necessarily result from diabetes as a complication.[19,20] Some of the subjects may have been diagnosed as being hypertensive many years before developing diabetes.

Knowledge on diet as a major form of diabetes management was high (92%) and this is similar to the findings in other studies.[12–14] Most people in Nigeria, in both urban and rural areas, have access to natural food products high in complex fibre such as cassava, rice, yam, beans, and vegetables. Also, most people in rural areas practice subsistence farming. Diet control is therefore primary in diabetes management in this environment.

The attitude of the patients towards disclosing their illness is impressive, even though about half of them did that to get financial support. The role of poverty in the rates of morbidity and mortality of people with diabetes cannot be overemphasised.

In conclusion, we found a good knowledge of the drugs used as well as the role of diet in the management of diabetes, but a high level of ignorance about the cause of diabetes. This ignorance may very well affect the attitude of these patients towards their illness, especially in the face of poverty. People living with diabetes should have enough knowledge to aid their management, and help prevent future complications.

There is a need to institute a well-funded and monitored Diabetes Self-Management Education (DSME) and Diabetes Self-Management Support (DSMS) programme in our health facilities. There is also the need to train diabetes educators in well-established and recognised institutions[21–24] in order to foster diabetes prevention and care.

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