Frequency and Correlates of Sexual Dysfunction in Women with Diabetes Mellitus

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ABSTRACT

Introduction. Sexual dysfunction (SD) in women with diabetes mellitus (DM) is an important but understudied aspect of DM complications in women with DM.

Aim. This report is an attempt to document the prevalence, clinical correlates, and determinants of SD in a cross sectional study of women with diabetes mellitus (DM).

Main Outcome Measures. The main outcome measures were demographic, clinical parameters, psychological morbidity, and frequency of SD.

Methods. A total of 58 married women with type 2 DM and 30 age-matched women who did not have DM had their sexual function and psychological status assessed using the Female Sexual Function Index (FSFI) and General Health questionnaires (GHQ 12) respectively. Glycemic control was assessed using glycosylated hemoglobin.

Results. The prevalence of SD in women with DM and in the control population was 88% and 80%, respectively. The mean (standard deviation) FSFI score in the women with DM was significantly lower than that of the control group (16.2 [9.5] vs. 21 [8.5], $P = 0.02$). Women with DM attempted sex less frequently than those in the control group. Poor mental health status which was found to be associated with SD was noted more in women with DM than those in the control group.

Conclusions. SD is high in women with and without DM. A possible determinant of SD in women with DM is psychological morbidity. **Ogbera AO, Chinenye S, Akinlade A, Eregie A, and Awobusuyi J. Frequency and correlates of sexual dysfunction in women with diabetes mellitus. J Sex Med 2009;6:3401–3406.**

Key Words. Sexual Dysfunction; Prevalence; Type 2 Diabetes Mellitus

Introduction

Sexual dysfunction (SD) is a chronic complication of diabetes mellitus (DM) that is often reported in men but not in women [1]. Reports on SD in women, though few [2–7], show comparable prevalence rates with men; yet despite this, this all important complication of DM in women remained unexplored until 1971 when Kolodny [2] wrote the first report on this entity. Although there have since been more reports on SD in women with DM, this aspect of sexual health in DM has not been extensively studied in sub-Saharan Africa. Deep-rooted cultural and religious beliefs are possible reasons why reports from sub-Saharan Africa on sexuality in women especially in those with DM are lacking. SD in women encompasses persistent or recurrent disorders of sexual interest/desire, disorders of subjective and genital arousal, orgasm disorder, pain, and difficulty with attempted or completed intercourse [8,9]. Although the possible pathophysiological mechanisms for SD in women with DM are unclear, some reports however suggest that DM type and depression are highly associated with sexual responsiveness and marital satisfaction [10,11].

Aims

We attempted to determine the prevalence, pattern and possible predictors of SD in women with DM.

Methods

A total of 120 subjects were recruited for the study of which 82 had DM and 38 served as the Control group. Recruitment was done by seven doctors who also interviewed the subjects.

Inclusion criteria are as follows:

1. Married women with DM who are still sexually active.
2. History of DM for at least three months duration.
3. Sexually active married women without DM whose ages matched those of the Cases were recruited as controls.

Exclusion criteria included pregnancy, women with heart failure, and psychiatric disorders.

Operational Definitions

Using clinical criteria, subjects with DM were classified into types 1 and 2 DM.

Type 1 DM referred to those who have been on insulin since diagnosis and require insulin for survival. Type 2 DM refers to those who were previously/presently managed on sole lifestyle modification, or on oral hypoglycemic agents. It also encompasses insulin requiring patients who initially were not insulin-dependent.

Sexual Function and Psychological Well-Being Assessment

Sexual function was assessed using the Female Sexual Function Index (FSFI) [12] a validated 19-item self-report measure of female sexual function assigned to six separate domains and includes desire, disorder, arousal, orgasm, satisfaction, and pain. The individual domain scores are obtained by adding the scores of the individual items that comprise the domain and multiplying the sum by the domain factor [12]. The maximum score for each domain is six and a full scale score was obtained by adding the six domain scores [12]. The maximum score is 36 and the minimum score is 2. An FSFI score of below 26.55 is deemed poor [12] and suggests SD.

Psychological well-being was assessed with the self-administered General Health Questionnaire (GHQ 12) which consists of a total of 12 items [13]. The scoring scale is from 0 to 3 and basically comprises three factors, namely Anxiety and Depression, Social Dysfunction, and Loss of Confidence [14]. For psychosocial morbidity assessment, Likert's scale [15] was used, whereby scores greater than 15 suggest evidence of distress and scores greater than 20 suggest severe problems and psychological distress.

The biodata, anthropometric indices, the presence of menopause, and hypertension (HTN) were noted in the study subjects.

Body mass index (BMI) was calculated as weight (kg)/height (m^2). A BMI of between 25 and 29.9 kg/m^2 denoted being overweight and that of $\geq$30 kg/m^2 referred to obesity. The waist circumference (WC) was measured to the nearest centimeter at the level of the umbilicus with the subjects standing and breathing normally [16]. A WC of $\geq$80 cm was regarded as central obesity [17].

Glycemic control was assessed in the DM group using the glycosylated hemoglobin and a value of <7% suggests good glycemic control.

Hemoglobin genotype was checked as Hemoglobin SS (HBSS) is a known confounding factor for the use of HBA1c.

The test statistics used are Mann–Whitney *U*-test, Student's *t*-test and χ test.

The statistical package used for analysis was SPSS version 15.0 (SPSS Inc., Chicago, IL, USA).

The study subjects gave informed written consent for the study and ethical consent was obtained from the Ethics Committee of the Hospital.

Results

An initial 120 subjects were recruited but only 94 women responded. The nonrespondents comprised of 8 women without DM and 18 with DM thus giving a response rate of 78%. The reasons for nonrespondence ranged from the questions being too personal, no active engagement in sexual activity enough to volunteer any information, and, in a few instances, no reasons were given. A total of 64 women with DM were recruited as cases and 30 without DM were recruited as controls for the study. Of the women with DM, only six were found to have type 1 DM and of these five were found to have SD. However, because of their small number subjects with type 1 DM were excluded from further analysis. All further results as stated In the following discussion were obtained from the analysis on the subjects with type 2 DM who were 58 in number.