

Diabetes & its Complications

Sexual Dysfunction in Women with Diabetes: Prevalence and Associated Factors in The Diabetes Center in Cotonou – Benin

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ABSTRACT

Diabetic complications occur in both sexes but impaired sexual function in people with diabetes, largely debated in men, is less documented in women.

Objective: *The aim of the study was to evaluate the prevalence of sexual dysfunction in women with diabetes and to investigate associated factors.*

Patients and Methods: *In a cross-sectional study, Women living with diabetes attending the outpatient diabetes center of Cotonou completed the validated questionnaires of the Female Sexual Function Index. After clinical examination, Medical records of patients were consulted to complete information on the diabetes, its control and complications. Square Chi test was used for statistical analysis. Difference observed were considered significant for $p < 0.05$.*

Results: *A total of 184 women with diabetes were included in the study. Mean age of patients was 52.9 ± 10.3 years with extremes of 24 and 80 years. The mean duration of the diabetes was 6.9 ± 5.8 years (extremes: one month and 27 years). The prevalence of sexual dysfunction was 84.2% (155/184).*

Factors associated with high prevalence of sexual dysfunction were age of patient higher or equal to 50 years ($p=0.003$), low instruction level ($p=0.03$), low monthly income ($p=0.04$), Parity or gestity higher or equal to 4 ($p=0.01$), high blood pressure ($p=0.0001$), the presence of neuropathy ($p=0.013$), diabetes duration higher or equal to 5 years ($p=0.007$).

There was no association of sexual dysfunction with body mass index or with central obesity.

In multivariate analysis, only diabetes duration and gestity remained significantly associated with sexual dysfunction.

Conclusion: *Sexual function impairment is very frequent in women with diabetes but not often investigated. It can constitute a major cause of alteration of quality of life. More attention must be paid to this condition in clinical practice.*

Keywords

Sexual dysfunction, Women with diabetes, Prevalence, Associated factors.

Introduction

Diabetes mellitus is a condition with persistent metabolic disorders that lead to a numerous of chronic complications of which, some are largely studied like cardiovascular and neurological complications

[1-3]. Sexual dysfunction is a well known complication of diabetes that involves in its mechanism, both neurological and vascular complications [4,5].

Sexual dysfunction occurs in both sexes. Erectile dysfunction is largely studied in men with diabetes [6-9] but very few studies had been devoted to sexual dysfunction in women with diabetes, particularly in Subsaharian Africa. The present study aimed to evaluate the prevalence of sexual dysfunction in women with diabetes and to investigate factors associated with this condition.

Patients and Method

The study population was constituted by women with diabetes attending the diabetes center of Cotonou, the main town of Benin. It was a cross-sectional study with a prospective data collection. Sexual function was assessed using the Female Sexual Function Index (FSFI) [10]. The domains assessed in sexual function were desire, arousal, lubrication, orgasm, satisfaction and pain. Factors investigated regarding patients were: age of patients, diabetes duration and complications, gestity, the menopausal status, instruction level, the presence of neuropathy and the presence of high blood pressure.

As psychological status is an important factor that influences sexual function, anxiodepressive status of patients was assessed using the Hospital Anxiety and Depression Scale (HADS) [8]. Chi square test and the student test were used for statistical analysis. The study design was approved by the ethic comity of the faculty of health sciences.

Results

A total of 184 women with diabetes were included in the study. Characteristics of patients were shown in table 1.

From these 184 women with diabetes, 149 (81%) were menopausal and 175 (95.1%) presented type 2 diabetes. Instruction level and marital status of patients were presented in (Table 2).

Prevalence of sexual dysfunction

In the 184 women with diabetes included in the study, sexual dysfunction was detected in 155 making a prevalence rate of 84.2%. The frequency of disturbance observed in the different domains of sexual function investigated is shown in (Table 3).

It can be noted that women with diabetes presented a very high prevalence rate of sexual dysfunction.

Characteristics	Mean	Extremes
Age (year)	52.99 ± 10.29	24 – 80
BMI (Kg/m ²)	29.65 ± 6.21	15.81 – 47.85
Parity (n)	5 ± 2	0 – 10
Diabetes duration (year)	6.90 ± 5.83	0.08 - 27
HbA1c (%)	9.22 ± 2.62	5.2 – 14

Table 1: Characteristics of patients.

Instruction level	Effectif	Pourcentage
None	97	52.7
Primary school level	37	20.1
Secondary school level	45	24.5
University level	5	2.7
Marital status		
Unmarried	3	1.6
Maried	116	63
Divorced	14	7.6
Widow	51	27.7

Table 2: Instruction level and marital status.

Domain of sexual function	Prevalence (%)
Desire	96.2
Excitation	88
Lubrication	82.1
Orgasm	89.7
Satisfaction	81.5
Pain	81.5

Table 3: Prevalence of disturbance in the different domains.

Factors		Effectif (n)	Prévalence of Sexual dysfunction (%)	P
Age (year)	<50	75	74.7	0.003
	>50	109	90.8	
Monthly income (x1000 XOF)	<80	167	78.3	0.04
	>80	17	64.7	
Parity	<2	20	75.0	0.01
	≥2 and <4	34	70.6	
	≥4	130	89.2	
High Blood Pressure	Yes	104	93.3	0.0001
	No	80	72.5	
HbA1c (%)	≤7	17	76.5	0.31
	>7	46	87.0	
Peripheral neuropathy	Yes	83	91.6	0.013
	No	101	78.2	
Diabetes duration (year)	<5	91	76.9	0.007
	≥5	93	91.4	
Abdominal obesity	Yes	168	85.1	0.28
	No	16	75.0	
Depression	Yes	60	30.9	0.005
	No	124	79.0	

Table 4: Factors associated with sexual dysfunction.

Factors associated with sexual dysfunction in women with diabetes is presented in (Table 4).

As shown in this table, many factors were significantly associated with high prevalence of sexual dysfunction in women with diabetes, espacially, the age of patient, the parity of the woman, the presence of high blood pressure or peripheral neuropathy, diabetes duration and the presence of depressive status.

In multivariated analysis, only diabetes duration above five years, gestity higher or equal to 4, the presence of depressive status or severe anxiety remained significantly associated with sexual dysfunction in women with diabetes.

Factors		P	OR	Confidence Interval of 95%	
Age	>50 / ≤50	0.3318	1.8064	0.5472	5.9635
Diabetes duration	>5 / ≤5	0.0118	3.8651	1.3488	11.0755
Gestivity	<2 / [2-4[0.4814	1.8392	0.3372	10.0328
	≥4 / [2-4[0.0257	3.8112	1.1760	12.3512
Depression	Yes / No	0.0403	6.6183	1.0868	40.3049
High blood pressure	Yes / No	0.2259	0.5551	0.2141	1.4391
Menopause	Yes / No	0.4468	0.6033	0.1641	2.2179
Neuropathy	Yes / No	0.2511	0.5432	0.1916	1.5403
Instruction	Yes / No	0.5630	0.8545	0.5015	1.4559
Anxiety	Suspected/Normal	0.7957	0.8292	0.2010	3.4207
	Anxiety / Normal	0.9105	0.9029	0.1522	5.3584
	Severe / Normal	0.0160	0.0631	0.0067	0.5974

Table 5: Factors associated with sexual dysfunction in multivariate analysis.

Discussion

Mean age of women included in this study was 53 ± 10.3 years which is closed to the mean age of 54.4 ± 9.8 years and 57.9 ± 6.9 years reported respectively by Shadman et al. and Esposito et al. [11,12]. Prevalence of sexual dysfunction was very high in our study (84.2%). High prevalence of sexual dysfunction has been reported in women with diabetes by several authors : 88% for Ogbera et al. [13], 79.2% for Shi et al. [14], 94.4% for Shadman et al. [11], 75% for Nowoelski et al. [15] and 88% for Ziaei-Rad et al. [16]. On the other hand less high prevalence rate of 59.6% has been reported by Abu Ali et al. [17]. Regarding domains of sexual function explored, all domains of sexual function were affected in our study with a high prevalence rate. For Erol et al. [18], most affected domains were desire (77%), excitation (62.5%), and orgasm (49%) when Elyasi et al. [19] reported that the most affected domains were respectively lubrication, desire, excitation, pains and satisfaction.

As reported in some other studies [11,20-22], the lower instruction level was, the higher was the prevalence rate of sexual dysfunction in women with diabetes in the present study. We observed that Sexual dysfunction was also associated with monthly income in women with diabetes in our study. The same observation was made by Lewis [23] conversly to what has been reported by Duman [24]. As it can be expected and conformly to several reports [17,25], sexual dysfunction was significantly associated with disease duration. Surprisingly, there was no association of diabetes control and sexual dysfunction in our study. This can be explained by the small size of the study population. We found also that sexual dysfunction was associated with peripheral neuropathy, anxiety and depression as reported by Elyasi et al. [19]. As reported by Doumas et al. [26] and Valdares et al. [27] the present work shown an association between high blood pressure and high prevalence of sexual dysfunction in women with diabetes. This observation is not surprising since erectile dysfunction has been demonstrated as cardiovascular risk factor in men with diabetes.

Conclusion

In this study a very high prevalence of sexual dysfunction has been demonstrated in women with diabetes in Cotonou. Other studies in other areas had reported a similar observation. This condition can have a negative impact on quality of life but because of it's taboo

status patients did not complain of it. So, to inhence the screening of this condition, sexual dysfunction must be systematically investigated in clinical practice.

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