

Sexual dysfunction among women with diabetes mellitus in a diabetic center in Amol

Shabnam Omidvar,
Maryam T. Niaki¹,
Fatemeh Nasiri Amiri,
Farzan Kheyrikhah²

Department of Nursing and Midwifery, Babol Medical Sciences University, ¹Department of Nursing and Midwifery, Sari Branch of Azad University, Department of Nursing and Midwifery, Babol Medical Sciences University, ²Department of Psychology, Babol Medical Sciences University, Iran

Address for correspondence:

Dr. Shabnam Omidvar, Department Nursing and Midwifery, Babol Medical Sciences University, Iran.
E-mail: shomidvar@yahoo.com

Abstract

Background: Sexual disorders among diabetic men have been proved in different studies but sexual dysfunction of diabetic women has received attention only recently. Neuropathy, vascular impairment, and psychological complaints have been implicated in the pathogenesis of decreased libido, low arousability, decreased vaginal lubrication, orgasmic dysfunction, and dyspareunia among diabetic women. **Aim:** The aim of this research was to study the prevalence of sexual dysfunction in different areas among diabetic women. **Materials and Methods:** A cross-sectional study was conducted on 500 women who were recruited from a diabetes center, based on questionnaires completed by them. Data regarding demographic features, physical complications, and sexual disorders were obtained. Medical records of patients were used to obtain body mass index (BMI) and details of complications. **Results:** Mean age of participants, duration of diabetes, and BMI was 48.8 ± 0.4 , 8.9 ± 0.32 years, and 28.9 ± 0.23 , respectively. Prevalence of sexual dysfunction was 32.3%. Low sexual desire was seen in 81.8%, disorders of arousal in 78.3%, of orgasm in 47.5%, and 35.1% had disorder in resolution area. There was no significant relationship between some factors such as age, duration of diabetes, BMI, and frequency of sexual dysfunction. Frequency of diabetic complications demonstrated a significant effect on the prevalence of sexual dysfunction. **Conclusion:** Sexual problems are frequent among diabetic women and deserve more attention in clinical practice and researches.

Key words: Diabetes, diabetes complications, libido, sexual dysfunction, women

INTRODUCTION

Diabetes mellitus is an endocrine disorder in which our body confronts a lack of insulin or resistance to insulin.^[1] Currently, 150 million people in the world and 3 million in Iran suffer from diabetes.^[2] The prevalence of diabetes is between 5 and 8% in different parts of Iran.^[3,4] Diabetes causes short-term and long-term complications and usually its long-term complications develop 5 to 10 years after the diagnosis of both types of the disease.^[5] One of its long-term complications is a neurological complication that includes a disorder of sexual functioning. The autonomic

system causes a wide range of disorders in all systems of our body including the urinary-sexual system. It can be said that sexual dysfunction develops frequently as a complication among these patients.^[6] Erectile dysfunction is seen among men with diabetes during the first years. This disorder is seen among 35% of men between 20 and 59 years and in 65% of the men 60 years or above.^[7] Although diabetic disorders have been proven among diabetic men by plenty of researches,^[8-11] there are fewer studies regarding sexual dysfunction among diabetic women.^[11-15] Prevalence of sexual dysfunction is nearly 50% among diabetic men. However, it seems that it is lesser and varied among women with diabetes.^[12,16,17] Neuropathy, vascular impairment, and psychological complications are involved in decreased libido, low arousal, decreased vaginal lubrication, orgasmic dysfunction, and dyspareunia among women with diabetes. Even if there are many controversies in different reports,^[12,15,18] it seems that type 1 and 2 diabetes have different effects on the sexual functioning of women.^[12,13,19,20] Based on other reports, this relationship includes decreased sexual arousal,

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vaginal lubrication, increased dyspareunia, and problems in orgasm phase, disorder in sexual indulgence, anxiety, sexual satisfaction, and vaginal infections as well.^[5]

In a research conducted by Amini *et al.* in Isfahan in 2001, a low sexual desire, lack of sexual satisfaction, low vaginal lubrication, and orgasmic dysfunction have been recognized as sexual problems among women.^[21] The effect of neuropathic autonomy on sexual activities of women has not been understood completely in each examination and the presence of sexual dysfunction should be examined because this dysfunction develops before any other neurotic dysfunction. For every patient with diabetes who refers with a reduction in sexual desire, first other reasons (hormonal reasons and so on) should be ruled out, and then neuropathic; therefore, the genital organ should be examined, and the levels of testosterone, prolactin, thyrotropin, and estrogen should be checked. Sexual dysfunction among women with diabetes includes vaginal dryness, a low sense of perinea, a lack of orgasm, and so on. Early diagnosis, managing known risk factors such as smoking, drinking, and high blood pressure, and efficient management of diabetes are important factors for prevention of the related complications.^[22,23]

Considering the few studies related to sexual dysfunction among women with diabetes especially in developing countries where it is a neglected aspect of life and understanding the importance of sexual life and its effect on improvement of quality of life, the present study was done.

MATERIALS AND METHODS

The present research is a cross-sectional study. The study population was women with diabetes who presented at the Diabetes Control Center in Amol. Women who were willing to participate in the study were given a consent letter. For collecting the data we used available medical files and questionnaires of patients which comprised two parts.

The first part included a demographic questionnaire and determination of physical complications caused by diabetes. The second part contained questions regarding sexual dysfunction.

Participants were asked to complete the questionnaires. The required information about the complications due to diabetes was extracted from their medical files. The obtained information was analyzed by SPSS statistical software. Those who scored up to 50% on the questionnaire related to sexual dysfunction were categorized in the group

which had the problem. It must be mentioned that a score of 50-70% was considered in the group of light (medium) dysfunctions, above 70% in the severe one, and less than 50% in the normal group.

RESULTS

The average age of the subjects, duration of married life, number of children, duration of diabetes, and body mass index (BMI) were 48.8 ± 0.04 years, 29.6 ± 0.5 years, 4.2 ± 0.1 , 8.9 ± 0.3 years, and 28.9 ± 0.2 , respectively. The results show a significant frequency of sexual dysfunction in different sexual areas [Table 1].

Majority (95%) of the subjects were suffering from type 2 diabetes; 26.3% of them mentioned a severe pain during sexual intercourse. In this study, there was no association between age, diabetes duration, and BMI with frequency of sexual dysfunction, although there was a significant association between age and dysfunction in desire ($P = 0.02$), sexual satisfaction ($P = 0.01$), and pain during intercourse ($P = 0.004$). We found a significant statistical association between the number of complications due to diabetes and frequency of sexual dysfunction ($P = 0.01$) [Table 2].

The findings of this study indicate that there is a significant association between the number of complications due to diabetes and disorders in sexual desire ($P = 0.002$), orgasm ($P = 0.01$), lack of sexual satisfaction ($P = 0.02$), and disorder in the area of suppression ($P = 0.003$). It is evident from the findings that complications related to higher occurrence of sexual dysfunction.

Table 1: Status of frequency of sexual dysfunction among diabetic subjects

Sexual areas	Sexual dysfunction status		
	Normal n (%)	Medium n (%)	Severe n (%)
Desire	72 (18.2)	105 (26.5)	219 (55.3)
Arousal	82 (20.7)	152 (37.4)	162 (40.9)
Orgasm	208 (52.5)	84 (21.2)	104 (26.3)
Resolution	257 (64.9)	57 (14.4)	82 (20.7)

Table 2: Status of frequency of sexual dysfunction according to the number of complications among diabetic subjects

The number of complications	Sexual dysfunction status		
	Normal n (%)	Medium n (%)	Severe n (%)
More than 3 complications	104 (41.4)	40 (60.6)	23 (41.8)
Less than 3 complications	147 (58.6)	26 (39.4)	32 (58.2)

DISCUSSION

In our study, overall sexual dysfunction among women with diabetes was 32.3%. Nearly 82% of them were afflicted in the area of dysfunction in sexual desire, 78.3% had problems of arousal, 47.5% experienced dysfunction in orgasm, and 35.1% in the area of resolution. In all, 45.5% were not satisfied with sexual functioning, 39.4% experienced pain during intercourse, and 36.1% had disorders in vaginal lubrication.

Previous reports have shown an increase in the prevalence of sexual dysfunction among women with type 1 diabetes.^[12,13,19,24,25] In a study conducted by Enzlin *et al.*, 27 and 22% of diabetic women and men with sexual dysfunctions were suffering from type 1 diabetes. No significant association between gender and the type of sexual dysfunction has been observed, although in comparison to men, women with no physical complications due to diabetes complained more about the reduction of their sexual desire.^[9]

A study from Iran reported that women suffering from type 2 diabetes had a higher frequency of sexual dysfunction in comparison with nondiabetic women, and their sexual function was affected in different areas such as desire, arousal, and orgasm. Additionally, they had lower general satisfaction with sexual activity ($P = 0.05$).^[25] There are reports of adverse association between duration of diabetes, age, and sexual dysfunction. No significant association between sexual dysfunction and BMI has been observed.^[9,26] We also could not find a statistically significant association between BMI and sexual dysfunction among women with diabetes which is consistent with earlier reports. In our study, there was no relationship between age and duration of diabetes and frequency of sexual dysfunction but there was a statistically significant association between the number of complications due to diabetes and frequency of sexual dysfunction ($P = 0.01$). A report from Hong Kong showed that sexual dysfunction among patients with diabetes had an association with increased age, duration of diabetes, and chronic complications of diabetes.^[27]

There are many reports about increased prevalence of sexual dysfunction among men and women with type 1 diabetes.^[9,12,26-27] Additionally, other studies suggest the presence of sexual dysfunction among those who suffer from type 2 diabetes.^[25,26] These disorders include disorders of desire, lubrication, satisfaction, orgasm, and dyspareunia. In our study due to the small number of participants with type 1 diabetes, there was no assessment of occurrence of sexual dysfunction among them. Although the adverse effects of diabetes on sexual function of women have often been discussed, in some studies done as a comparison between men and women with diabetes, the obtained results

revealed that the rate of sexual dysfunction among women with diabetes, like men, has also increased.^[9,19]

The etiology of sexual dysfunction in patients with diabetes needs more attention because patients with diabetes are at risk for vascular and psychological complications. Therefore, they have a higher risk for developing sexual dysfunction. According to the findings of this study and similar studies, which endorse a high prevalence of sexual dysfunction among patients with diabetes, it emphasizes the recognition of diabetic patients with sexual problems and offering the required care in this area in diabetes centers and conducting courses for training nurses and personnel in such centers. In addition, we should focus more on the assessment of sexual problems, required consultation and treatment, and comprehensive research in this field.

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