Evaluation of Sexual Function in Men with Diabetes Mellitus Type 2- Yazd Diabetes Research Center

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Abstract

Objective: Sexual dysfunction is considered as an important health problems. Chronic diseases such as diabetes can have negative effect on sexual function. This study aims to determine the level of sexual dysfunction in male patients with diabetes mellitus type 2 in Yazd Diabetics Research Center.

Materials and Methods: This descriptive study involved 69 male patients with type 2 diabetes mellitus in Yazd Diabetes Research Center- 2014. The Questionnaire consisted of two parts: demographic characteristics of patients and the IIEF questionnaire (the International Index of sexual function). Data analysis was performed by using SPSS software version 21, and by using descriptive statistics, mean, standard deviation and statistical tests of Fisher' exact and T-test.

Results: The mean of age, height and weight of participants were 51.44 year, 171.14 cm, 77.55 kg, respectively. Through 15 items surveyed, lowest mean is related to the question attempted to intercourse (1.20±0.40) and the highest average related to the question marriage satisfaction (3.50±0.50).

Conclusion: According to the results, most of the participants were in trouble in making erection and frequency of intercourse. Informing the patient as the first and most effective ways of prevention and treatment is essential.

Keywords: Sexual function, Diabetes mellitus type 2, Erection, The international index of sexual function

Introduction

One of long term complications of diabetics is sexual dysfunction which is often overlooked in the care of diabetic patients (1). Sexual dysfunction influences quality of life of millions males and their sexual partners and most of them prefer to suffer in silence (2).

World health organization considers sexual health as integrity and harmony through mind, emotions and the body has leads the human to the social and rational aspects and to create relationship and love. Therefore, any disorder that leads to inconsistency and consequently lack of sexual satisfaction, it can cause sexual dysfunction (3). International Classification of

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Disease-10 considers sexual dysfunction as individual inability for participating related to the origin of biological and psychological conflicts. One of sexual dysfunction is erectile disorders which are defined as the inability to achieve and maintain penile erection sufficient for satisfactory sexual intercourse. In other words it is applied for the persistent inability to achieve or erection maintain for sexual intercourse satisfactorily (4).

The pathophysiology source of disorder can be organic or biological origin (biogenic) psychological or interpersonal and complicated of such factors. For example arterial, venous disorders, chronic diseases (diabetes, chronic hepatitis, cirrhosis, renal chronic failure) and hormonal factors and factors related to the penis. Any kind of mental conflict, stress, emotional disorders, depression, anxiety, relationship problems between the couples, ignorance of the physiology and sexual function can affect sexual function and especially in development of erectile dysfunction (5).

Sexual dysfunction is more prevalent in diabetic patients compared with the general population and the disorder occurs in both genders (6-8). Many studies have been done on sexual dysfunction in men with diabetes (9-11). Sexual dysfunction in men with diabetes includes decreasing libido, ejaculation dysfunction, soft erections and finally sexual dysfunction (12). The sexual dysfunction disorders are associated with low quality of life in diabetic patients (7,10). In our country there are about 3 million pairs who suffer from this problem and only 1% is treated (13).

According to the results of Allard et al study, stress and emotional distress caused by chronic diseases, diabetes or cardiovascular disorders affects family relationships, often in the form of the conflict beyond the meal plan setting, medication recommending and physical activities (14). According to research conducted by Clayton et al (2008) it was found that diseases such as pelvic, cardiovascular, endocrine and nervous diseases affect men's sexual health (15). Among the studies done in the context of the negative impact of diabetes and other chronic diseases on individual function and involving sexual health can refer to research performed by Clayton (14), Balon (15) and Trief (16).

The most concern of sexual dysfunction disorder is not only its high prevalence. But it's impact on individual quality of life and causes anxiety, depression and reduction of an individual thinking of marriage life and removing confidence that each one lead to increasing psychological and social effects related to the disease.

The purpose of this study was to evaluate sexual function in men with diabetes mellitus type 2 patients in Yazd Diabetes Research Center.

Materials and Methods

The present study was done in 2014. The sample of study were male patients with diabetes mellitus types 2 covered by Yazd Diabetes Research Center. The patients were: being married, age between 25 to 55 years old and suffering from diabetes more than 5 years. Also, they were not: unstable cardiovascular status (angina and heart attack experience), cancer chemotherapy, those how taking reduced medications and secretion of androgens, surgery in the pelvic or prostate area, insulin medication, opium addiction and any apparent disorders of the genital system by endocrinologist assumption.

The data collection instruments had two parts. The first part included patients demographic characteristics, such as age, duration of diabetes, height, weight, body mass index (BMI), education, hip circumference, job and waist circumference. The second part was international index erectile function (IIEF) questionnaire. As a diagnostic instrument for erectile dysfunction(ED), IIEF is a validated questionnaire which consists of five questions to assess five domains of male sexual function: erectile function, orgasm function, sexual desire, intercourse satisfaction, and overall satisfaction. Each question is scored on a five-point ordinal scale ranging from 1 to 5, which

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lower values represent lower sexual dysfunction. The total score of IIEF is computed by summing up the responses to the 5 items. According to this scale, ED is classified into three categories based on the total scores severe (scores <15), mild to moderate (scores 15 - 25) and scores of more than 25 were considered as without ED or normal. Validity and reliability of Persian translated form of questionnaire was confirmed by Mehraban et al. (19). The informed consent was attracted. In illiterate patients, the questionnaire was read for them and his response was inserted. Data were analysis using SPSS software version 21. Descriptive statistics, mean, standard deviation and statistical tests of Fisher's exact and Student t-test were used.

Results

Table 1 shows the characteristics of the study patients so that means of age, height and weight were, 51.44 year, 171.14 cm, 77.55 kg, respectively. Also the mean of their waist and hip circumferences were 99.60 cm and 95.34 cm. Most of them were retired (37.7%) or being free employed (36.2%). Most of patients had high school education (50.60 %).

The Table 2 shows the frequency and mean of specific questions scores. Through the 15 surveyed questions the lowest mean was related to the question “attempted intercourse” (1.20±0.40) and the highest mean was related to the question “marriage satisfaction” (3.50±0.50). Most of the responses were related to questions the “sufficient rigidity times of the penis for intercourse by sexual stimulation” (Half of the time, 73.9%) and “Action times for intercourse” (1 to 3 times, 79.7%).

Discussion

Through the surveyed 15 questions the minimum mean is related to the question “action times to intercourse” (1.20±0.40) and the maximum mean is related to the question “marital life satisfaction” (3.50±0.50).

Table 1. Demographic characteristics of studied patients

Variables	mean±SD
Age (year)	51.44±2.64
Diabetes duration (year)	10.50±4.00
Height (cm)	171.14±7.16
Weight (kg)	77.55±11.88
Body mass index (kg/m2)	26.43±3.42
Waist circumference (cm)	99.60±8.77
Hip circumference (cm)	95.34±6.12
Occupation	N (%)
Employee	5 (7.2)
Retired	26 (37.7)
Driver	8 (11.6)
Free	25 (36.2)
Farmer	5 (7.2)
Education	
Primary	11 (15.8)
Guidance	13 (18.8)
Secondary	35 (50.3)
University	10 (14.5)

In fact, in this study male's satisfaction was evaluated and then the consent of the appropriate marital life. Sexual satisfaction as one of the physiological needs helps to human health. Lack of sexual satisfaction causes high physical and mental pressures which disturbs his health and reduces his capabilities (20). Also, having an awful sexual life can lead to divorce and destroy the marital life continuity (21). Hulbert et.al stated sexual function dissatisfaction is not only related to divorce but also causes social problems such as crime, sexual assaults or mental illness (22). Lack of essential information about sex, false beliefs and attitudes between the families is the most significant problem. Also lack of adequate information about the chronic disease such as diabetes on the male sexual function is the other problem. Empowering the women can reduce many problems. Instruction the different methods of establishing sexual friendly relationships between couples and informing them about the impact of chronic diseases such as diabetes on male sexual function are the other solving methods.

According to our findings, 31/9% of the males in few cases, 66.7% half of the times and only 1.4% of the males most of the times claimed about adequate erection. The prevalence of ED in Tehranian diabetic male patients was also 35.1% (23). In Safarinezhad et al study on 2674 males showed the

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prevalence of ED has been 18/8% (24). In other foreign studies the prevalence of disorders related to ED through diabetic males has been between 1.5 to 3% (25,26). However, the severity of this disorder is not the same in different studies, the existing differences is caused by different diagnostic criteria for erection disorders, wide range of ages, racial and cultural differences (27,28). In our study, some of these disorders occurred due to diabetes.

Factors such as life physiological stresses associated with diabetes, penis diseases, balanities, phimosis, kurpus degeneration, metabolic abnormalities such as hyperglycemia and protein glycosylation, microvascular and macrovascolar disease, hypertension and anti-hypertensive medication increase the ED (29).

It is natural that with the spread of such factors over time, ED in diabetic patients increase. Considering these factors and attempt to reduce their impact on diabetic patients, can lead to reduction of ED and other complications of diabetes. In summary, we can say that ED is a frequent complication in

Table 2. Frequency and mean to specific questions about the sexual function of the patients

Questions	Item	N	%	Mean±SD
Insufficient erection times due to sexual stimulations	In few items	22	31.9	2.69±0.49
	Half of the time	46	66.7	
	Most of the time	1	1.4	
The sufficient rigidity times of the penis for intercourse by sexual stimulation	In few items	15	21.7	2.89±0.48
	Half of the time	51	73.9	
	Most of the time	3	3.4	
Entrance times during intercourse	In few items	21	30.4	2.71±0.48
	Half of the time	47	68.1	
	Most of the time	1	1.4	
Erection keeping times during intercourses	In few items	22	31.9	2.68±0.46
	Half of the time	47	68.1	
Difficulty to keep erection until the end of sexual intercourse during intercourse	So hard	19	27.5	2.73±0.47
	Hard	49	71	
	A little hard	1	1.4	
Action times for intercourse	1 to 3 times	55	79.7	1.20±0.40
	3 to 4 times	14	20.3	
Being sufficient from intercourse times	Never times	69	10.1	2.28±0.64
	In few items	7	50.7	
	Half of the times	35	39.1	
The amount of pleasing intercourse	I didn't enjoy	27	8.7	2.39±0.64
	I enjoyed a little	6	43.5	
	I enjoyed on average	30	47.8	
Sperm extraction times as follows as sexual stimulation and intercourse	In few items	33	34.8	2.82±0.70
	Half of the times	24	47.8	
	Most of the time	33	17.4	
Satisfaction times as follow as sexual stimulation and intercourse	Never times	12	3.4	2.52±0.60
	In few times	3	40.6	
	Half of the times	28	53.6	
	Most of the time	37	1.4	
The times feeling libido	In few times	21	30.4	2.71±0.48
	Half of the times	47	68.1	
	Most of the time	1	1.4	
The amount of libido	Few	34	49.3	2.50±0.50
	Average	35	50.7	
Marital life satisfaction	Neither satisfied nor dissatisfied	34	49.3	3.50±0.50
	Fairly satisfied	35	50.7	
Satisfaction from sexual relationship with wife	Fairly satisfied	6	8.7	3.05±0.48
	Neither satisfied nor Dissatisfied	53	76.8	
	Fairly satisfied	10	14.5	
The amount of erection making and keeping ability	Few	30	43.5	2.56±0.49
	Average	39	65.5	

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diabetic patients. Paying more attention to it and its risk factors in the preparation of the health files and common care of these patients is essential (30).

An interesting point which we encounter during the study was diabetic patient negligence about diabetes and its complications including erectile dysfunction, so that the majority of patients linked erectile dysfunction to growing older and were not informed about its association with diabetes

Conclusion

According to the results, of the most males were in trouble in making erection and frequency of intercourse. Therefore, it is necessary to pay more attention to ED in diabetic patient, also adequate control of blood glucose is recommended. Informing patients as the first and most effective technic and in the prevention and treatment seems to be necessary.

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