

Prevalence of Erectile Dysfunction among Type-2 Diabetes Mellitus & Availability of Treatment Options in Pakistan

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Abstract

Introduction

Erectile dysfunction has been defined as failure to obtain and maintain an erection sufficient for sexual intercourse or decreased erectile turgidity on 75% of sexual occasions, lasting for at least six months. Estimates of the prevalence of erectile dysfunction (ED) in men with diabetes range from 20% to 85% [1]. Type 2 Diabetes patients have a high risk of sexual dysfunction in men; three times increased risk of ED was seen in diabetic compared with nondiabetic men. There are multiple risk factors which include, obesity, age-related hormonal changes metabolic syndrome in young patients, it is associated with a greater increase in the risk of future cardiac events as compared to its first detection in older males.

Aim

The aim of the study is to determine the relative prevalence of Erectile Dysfunction in the Pakistani population attending diabetes with help of the SHIMS score/IELTS.

To establish further management of this commonly under-recognized, under-discussed, and commonly untreated complication of diabetes. But it is also one of the most treatable diabetic complications. It is a "couple's disorder," affecting both the patient and his partner. In Pakistan, there is not much evidence & options for treatment are not ideally available inclusive of the availability of PD5 drugs.

Methodology

Male patients with diabetes mellitus having poor glycemic control, hypertension, and hyperlipidemia with or without active complaint of Erectile Dysfunction attending The Diabetes Centre (TDC) during the study period were enrolled in the study. 319 males with diabetes were examined by the Diabetologist, endocrinologist, and clinical psychologist. Patients were surveyed using the five items version of the International Index of Erectile Dysfunction questionnaire, also known as the Sexual Health Inventory of Men (SHIM) to determine the presence and severity of ED and the efficacy of ED treatment conditions.

Discussion and Results

In the study, a total of 319 diabetic patients were enrolled and assessed/examined. Those with severe ED were found to have poor glycemic control, abnormal lipid profile, with BMI. 19%, 15%, and 31% of patients scored as severe, moderate, and mild to moderate ED respectively; 65% were scored as suffering in ED, whereas 20% of diabetic male patients have a higher proclivity of developing server ED. Male patients with poor glycemic control & hyperlipidemia were suffering from severe erectile dysfunction.

Conclusion

The accumulated percentage of diabetic male patients who have signs of ED is higher therefore the prevalence of ED is too high in diabetic male patients. In addition, there are no appropriate management options like the availability of safe drugs and treatment in Pakistan.

Keywords: Type 2 Diabetes Mellitus, Erectile Dysfunction, Glycemic Control, Premature Ejaculation, Hyperlipidemia, Endocrinology, Healthcare Improvement, Diabetes Centre

1. Introduction

Type-2 diabetes mellitus is one of the most common non-communicable diseases worldwide and the incidence and prevalence of diabetes mellitus in Pakistan are increasing day by day. ED is three times more common and occurs 10-15 years earlier in men with diabetes than in those without. Diabetes mellitus [2]. The chronic nature of diabetes (and its complications) can lead to relationship problems, including arousal difficulties and sexual inhibition. Men with diabetes may need more physical stimulation, which may not be appreciated by their partner, who might feel unloved and less attractive. This can then lead to poor self-esteem, anxiety, and depression for all concerned. Since many men are reluctant to admit being affected by ED or to speak to a doctor, precise estimates are difficult to come by. Several factors contribute to the development of ED in diabetic men, but the most important underlying causes can be categorized as neurological, vasogenic, and psychological. There is a possibility that ten to thirty percent of ED cases are psychogenic. Studies have shown that depression is a common psychiatric condition among diabetics and that its presence increases the risk of developing others, suggesting a bi-directional causal relationship [3]. Our primary objective was to assess the prevalence of ED among diabetic men and to compare patients with severe ED to those with normal erections based on various sociodemographic and clinical data.

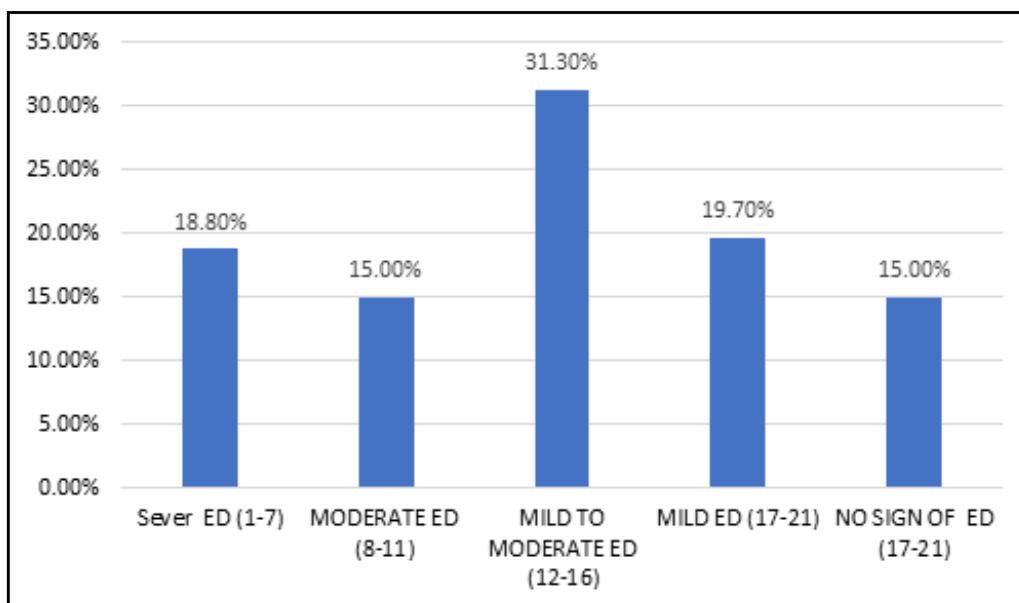
1.1 Methodology

This study was conducted on male diabetic patients attending the departments of endocrinology and clinical psychology of The Diabetes Centre (TDC) in Pakistan from July 2022 to October 2022. Since all men are reluctant to discuss erectile dysfunction issues with their healthcare providers therefore the fear, distress, and confidentiality concerns were considered prior to conduct the assessment and survey. It was a cross-sectional study and the 319 male diabetic patients fulfilling the inclusion criteria were enrolled in the study after taking informed consent. In accordance with the

exclusion criteria, patients with pelvic/spine trauma, mental disorders, non-diabetic, and incapacitating diseases such as tuberculosis, AIDS, etc., were excluded. During the interview, we collected detailed information regarding the individual's age, socioeconomic status, personal and family history of diabetes, hypertension, duration of diabetes, and type of diabetes medication currently being taken. A general physical, systemic, and mental examination was performed, and results were obtained regarding body mass index (BMI). A comprehensive investigation of blood sugar, HbA1c, lipid profile, blood urea, serum creatinine, serum bilirubin, and liver function tests was conducted on patients. In order to determine the prevalence and severity of ED and the efficacy of ED treatment conditions, the International Index of Erectile Dysfunction questionnaire, also known as SHIM (Sexual Health Inventory of Men), was used. 319 patients were assessed using a predesigned Sexual Health Inventory of Men (SHIM). The participants of the study were placed in appropriate categories after careful assessment and surveys; the participants of the study who scored 1 to 16 in the SHIM tool were considered Erectile Dysfunction (ED) cases. Those study participants who scored 17 – 21 and 22 – 25 were categorized as mild ED and no sign of ED respectively. These cases were excluded from the study in order to make it as precise and accurate as possible. Mild cases of erectile dysfunction can be caused by a variety of unidentified factors, including psychological factors, therefore these cases were excluded from the study.

2. Discussion & Results

In the study, a total of 319 diabetic patients were enrolled and assessed/examined during the outpatient visits. Those with severe ED were found to have poor glycemic control, an unhealthy lipid profile, and BMI. 19%, 15%, and 31% of patients scored as severe, moderate, and mild to moderate ED respectively; 65% of patients can be scored as suffering in ED, whereas 20% of diabetic male patients have a higher proclivity of developing server ED.



The Results of the Study Were Also analyzed Considering the Age Group of the Study Participants and Exhibited in the Following Table.

Age	Frequency	Percent	Severe ED	Moderate ED	Mild to Moderate ED	Mild ED	No Sign of ED
			1-7	8-11	12-16	17-21	22-25
21-30	17	5%	4	0	10	0	3
31-40	68	21%	9	27	14	6	12
41-50	80	25%	13	11	29	17	10
51-60	91	29%	11	7	28	24	21
61-70	38	12%	6	3	12	16	1
71-80	25	8%	17	0	7	0	1
TOTAL	319	100%	60	48	100	63	48

Table 1: Sociodemographic Profile

ED= Erectile Dysfunction

In order to refine the study based on SHIM score tool recommendations, The 111 participants who scored 17 - 25 on the SHIM scoring tool were excluded from the study, and the remaining 208 participants were further evaluated. 29% (60/208) of them were suffering from severe Erectile Dysfunction (ED); 23% (48/208) study participants had moderate Erectile Dysfunction (ED) and 48% (100/208) study subjects had mild to moderate Erectile Dysfunction (ED).

Age	Frequency	percent	Erectile Dysfunction	
			ED Present	Absent
21-30	17	5%	14 (6.73%)	3
31-40	68	21%	50 (24.04%)	18
41-50	80	25%	53 (25.48%)	27
51-60	91	29%	46 (22.12%)	45
61-70	38	12%	21 (10.10%)	17
71-80	25	8%	24 (11.54%)	1
TOTAL	319	100%	208	111

Table 2: Prevalence of ED

ED= Erectile Dysfunction

The maximum number of study participants 72% (149/208) of the age group 31 – 60 years experiencing erectile dysfunction (ED). Similarly, 22% (45/208) fall into the age group 61 – 80 years categorized as having dysfunction (ED); Whereas the 7% (14/208) study participants of the age group of 21 – 30 years also experienced erectile dysfunction (ED). The accumulated prevalence rate of ED in diabetic patients is 65%.

3. Conclusion

The accumulated percentage of diabetic male patients who have signs of ED is higher therefore the prevalence of ED is too high in diabetic male patients. In addition, there are no appropriate management options like the availability of safe drugs and treatment in Pakistan. Due to their general tendency to ignore symptoms and delay seeking treatment, patients with Erectile Dysfunction had a significantly longer duration of untreated diabetes mellitus (DM), which could explain their poorer glycemic control. Erectile Dysfunction (ED) is mainly caused by vascular and neurologic factors in patients with DM; however, psychological factors also play a significant role and cannot be completely ignored. Other factors

like the provision of education to diabetic patients are also much neglected areas and must not be overlooked. It is also recommended that during the initial and subsequent assessment and examination of diabetes patients, these areas like awareness & education, partner's relationship, psychological factors, and compliance to disease treatment and management plan should be assessed and recorded. The most important is how to treat or manage erectile dysfunction in diabetic male patients; in this regard, a national-level policy needs to be defined to regularize the accessibility of safe drugs and treatment to physicians and patients. In this regard, DRAP (Drug Regulatory Authority of Pakistan) may play a significant role [4-9].

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