Original Article

THE PREVALENCE OF COMORBID DEPRESSION AMONG ADULTS WITH DIABETES IN SOUTHERN IRAQ

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ABSTRACT

Objective: symptoms of depression severe enough to warrant treatment are encountered in one of every four patients with diabetes. The goal of this study was to determine the prevalence of comorbid depression among sample of patients with type 2 diabetes mellitus (DM) using Center for Epidemiologic Studies Depression Scale (CES-D) in Basrah (Southern Iraq).

Methodology: This was a cross sectional case control study. It's conducted on patients with type 2 DM being monitored at the endocrinology unit of the Al-Faiha Hospital in Basrah.

Results: Diabetics patients depression score 44.5±11 while that of the control was 34.4±6. Both the diabetics and control score more than 16, which is the lower threshold for diagnosis of depression according to the CES-D. If these figures applied, than almost all of our population will have depression according to CES-D.

Conclusion: Diabetic were having higher score for depression than the control, but both group scored >16, which mean that all of our population were depressed.

KEY WORDS: Diabetes, Depression, Iraq.

Pak J Med Sci April 2007 Vol. 23 No. 2 185-187

INTRODUCTION

Major depression and dysthymic disorder affect 5% to 10% of older adults seen in primary care settings , a figure that is on the rise.[1,2] Diabetes has been reported to at least double the risk of comorbid depression, with the point prevalence approximating 11% in the diabetic population.[3] Rates reaching up to 24–29% have been reported for life-long prevalence of major depression.[4] Symptoms of depression severe enough to warrant treatment are encountered in one of every four patients with diabetes[3] and is associated with hyperglycemia and with increased risk for diabetes complications.[5] There are also findings showing that levels of depressive symptoms are higher in patients with complications.[6] The mechanisms responsible for these effects presently are unclear. The most common explanation is that depression reduces adherence to medical care recommendations,[7] there has been a growing interest in depression as a novel risk factor for the development of type 2 diabetes.[8] Depression is significantly related to marital status and amount of social contact ,but was unrelated to sex, ethnic group, duration or type (type 1 or 2) of diabetes or social class.[8] Several hypotheses have been raised to explain this association that mainly focus on the effects of severity, complications, and poor glycemic control resulting from type 2 diabetes on the development of depression.[9] Treating depression in people with diabetes may be associated with improved glucose control.[10] The goal of this study was to determine the prevalence of comorbid depression among sample of patients with type 2 diabetes mellitus (DM) using Center for Epidemiologic Studies Depression Scale (CES-D),[11] in Basrah (Southern Iraq).

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* Received for Publication: July 21, 2006
* Revision Received: September 15, 2006
* Accepted: September 30, 2006

PATIENTS AND METHODS

This was a cross sectional case control study for the period from May 2005 to May 2006.All patients were having type 2 DM. Only patients with at least one year history of diabetes were included. All patients gave written informed consent for participation in the study. The study was conducted with type 2 DM patients being monitored at the endocrinology unit of the Al-Faiha Hospital in Basrah.Among consecutive out-patients, those who met the inclusion criteria and gave informed consent were admitted into the study. The control was from the medical staff of the hospital. For all patients history was taken including age of the patients, smoking, job, and qualification (years of school achievement). Social class calculated, and each patient was classified into low , and other socioeconomic status based on the aggregate score of education, occupation, and income.[12] Subjects reporting smoking at least one cigarette per day during the year before the examination were classified as smokers. All patients was examined for weight, height, blood pressure, body mass index (BMI), calculated according to Quetelet formula (weight in kilograms divided by height in metres squared).

CES-D was used in this study to assess depression which is a questionnaire developed in the 1970s to detect major or clinical depression.[11] Patients asked to consider their feelings of the past week when responding to questions. Score are the sum of the 20 item weights. A score of 16 or more is considered depressed.[13] The Arabic translation was done by us. The CES-D is a valid and reliable instrument for assessing depression in community samples with high internal consistency, good construct and concurrent validity, and modest test-retest reliability.

The total number of diabetic were 103 (20 males and 83 females), and the control were 103(39 males and 64 females). Mean age of the diabetics were 57.7±12.7 year and control 31.3±8.2 year. Continuous variables were summarized as the mean ± SD. Categoric variables were summarized as percentages. For statistical analysis a chi-square test was used. A comparison of 2 means was carried out with an unpaired Student t test. The level of significance was set to be <0.05 throughout the analysis.

RESULTS

In Table-I the characteristics of participants with type 2 DM, and control were compared with regard to demographics, lifestyle variables, and depression as measured using CES-D. Diabetics patients depression score 44.5±11 while that of the control was 34.4±6 (Fig-1). Both the diabetics and control score more than 16, which is the lower threshold for diagnosis of depression according to the CES-D. If these figures applied, than almost all of our population will have depression according to CES-D. The control age were lower than diabetics, with higher qualification, less married and higher social class, but comparable BMI and smoking rate.

DISCUSSION

There were no data on depression in Iraq. Even data on depression as co-morbid to other systemic disease are also lacking. By this study we tried to build up some base line data on the hope that in the future larger population studded with or with out other illnesses. Application of other scale with Arabic translation is also a point of consideration since were not sure of validation of Arabic translation of

Table- I: Characteristics of diabetic and control

	Diabetics	*Control*	*Total*	*P value*
No.	103	103	206	
Sex Male	20	39	59	
Females	83	64	147	
Age	57.7±12.7	31.3±8.2	44.5±17	0.0001
Qualification	1.3±3.3	7.7±7.5	4.5±6.6	<0.0001
Married	71	55	126	0.03
Low social class	64	18	82	0.00001
Smoking	12	18	30	0.3
BMI (mean ±SD)	27.1±5.2	25.9±3.6	26.5±4.5	0.5
Depression score (mean ±SD)	44.5±11	34.4±6	39.5±10.2	<0.0001
Score ≥16	103	103		
Duration of diabetes	8±8.4			

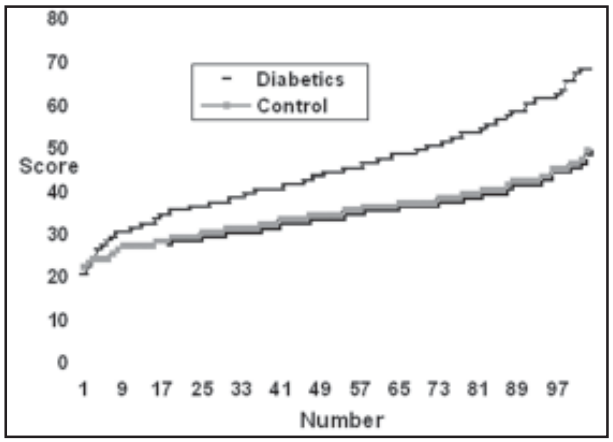

Fig-1: Depression score among diabetics and control

CES-D.[14] The prevalence of depression in out study sample approaching 100%, which seams to be very high and even higher than Afghan, where the depression prevalence reached to 67.7% in 2002 survey.[15] Data on depression prevalence among population are not congruent in the Middle East and varies widely. The prevalence rates of depression among selected samples from an urban and a rural population in Egypt was found to be 11.4% and 19.7% respectively,[16] and in Jordan; one study suggested a prevalence of depression of 31.7% in 493 randomly selected female patients presenting to primary health care clinics.[17] The highest rate of depression (32%) was found in Lebanese Christian women after the Lebanese civil war.[18]

These alarming figures of depression will have negative impacts on cost of managing diabetes in low resource countries, since depression increased subsequent health care costs among adults with diabetes by 50%.[19]

CONCLUSION

Diabetic were having higher score for depression than the control, but both group scored >16, which mean that all of our population were depressed. Study limitations: this study was undertaken during the difficult days of civil war in Iraq which properly reflected in highest depression score. The study population was not homogenous, in that the control age were lower, with higher qualification, less married and higher social class, but comparable BMI and smoking rate.

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