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DIABETIC PATIENTS' EXPERIENCES AND ATTITUDE TOWARD DIABETES MELLITUS DISEASE AND INSULIN TREATMENT IN PRINCE HASHEM BIN AL HUSSIN MILITARY HOSPITAL

Alaa M. Yasin*, Suhair Shaher Ahmad Al-Trawneh, Rania Ahmad Efaishat, Mohammed Suliman Alkhawaldeh, Samar Atallah Ahmad

Amman.

*Corresponding Author: Alaa M. Yasin

Amman.

ABSTRACT

Objective: to evaluate diabetic patients among insulin treatment and diabetes mellitus disease in Prince Hashem bin Al Hussin military hospital. **Materials and Methods:** a cross-sectional survey was done in Prince Hashem bin Al Hussin military hospital from 10th of December 2017 to 15th of Jan 2018. through face to face communication with 150 patients who were self-administering insulin as part of their therapy. Data collected was analyzed descriptively using SPSS version 19.0. **Results:** one third of respondents were men and 51% of those were in the age group of 40-60 years 12.2% of the patients weren't using insulin because of 9% of them were illiterate, 80% of them reported that insulin was harmful and 53% of them reported that insulin is habit forming. About halve of them reported that there isn't relationship between insulin therapy and diet or execise. More than 40% of didn't measure glucose level and Hb1c regularly. **Conclusions:** pharmacists should be play an effective role toward diabetic patients counseling in special clinic like diabetic clinic due to poor attitude and knowledge of diabetic patients toward diabetes mellitus disease and insulin use.

KEYWORDS:

INTRODUCTION

Diabetes mellitus is a chronic disease associated with insulin deficiency or diminished response to its effect. The major function of insulin is to enable glucose to be stored as glycogen for future metabolic use. [1] The average number of people with diabetes was estimated to reach 171 million in 2000. This number is expected to doubled (366million) by the year 2030 with high prevalence in older men. [2] The percentage of people with type 2 diabetes in Jordan is about 17.1%. [3]

Type 1 of diabetes mellitus is due to inability of pancreatic cells to produce insulin due to autoimmune destruction of B-cells of the pancreas.[4,5] Type11 diabetes mellitus is associated with inability of the body to respond normally to insulin and a relative decrease in insulin production. [5,6]

For type 1 and some type 11 diabetes mellitus diseases intensive insulin therapy by using both basal and bolus doses of insulin is used to reduce the risk of complication such as retinopathy, neuropathy and cardiovascular morbidity and mortality.[8,7] The choice of insulin is based on the pharmacokinetics of different insulin forms. [9]

[10] The role of patients is very critical in the management of this disease with medications.[11] The aim of this study to evaluate diabetic patients toward diabetes mellitus disease and insulin treatment in india

MATERIALS AND METHODS

Knowledge attitude practice Indian survey tool was used to asses diabetic patients toward diabetes mellitus disease and insulin treatment in Prince Hashem Bin Al hussin Military Hospital.

After an extensive literature review, the survey tool was modified to suit diabetic patients in Jordan. The survey tool was translated into Arabic by clinical pharmacist.

Data was collected through face to face interview with 200 patients attending in Prince Hashem bin Al Hussin military hospital during the study period from10th of December 2017 to 15th of Jan 2018.

The survey was consisted from two section. The first section was focused in response distribution to questions pertaining to knowledge and attitude regarding diabetes mellitus disease and insulin treatment. The second

section was focused in response distribution to question pertaining to practice of insulin use.

The data collected was entered to and descriptively analyzed using Statistical Packages for Social Sciences (SPSS) for windows version 19

RESULTS

In this study, the survey were distributed to 200 diabetic patients in Prince Hashem bin Al Hussin military hospital in medicinal clinic yielding a response rate of 150 completed questionnaires . Of those respondents, 30% were males and 51% were 40-60 years old.

Regarding knowledge and attitude towards diabetes mellitus disease and insulin treatment, just 26% of the

Patients visit ophthalmogist regularly, halve of the them had poor idea about the complications of this disease.

12.2% of the patients weren't using insulin because of 9% of them were illiterate, 80% of them reported that insulin is harmful and 53% reported that insulin was habit forming.

The majority of subjects (66%) did not believe any substitution for insulin. Of those respondents (53%) of them didn't think insulin can be stopped once blood sugar levels normalize.

40% of respondents reported that when insulin is started food and sport become less important and didn't aware that there are different types of insulin. Further results are shown in table 1.1.

Tablet 1.1: Knowledge and toward diabetes mellitus disease and insulin treatment.

Question	Response	n	%
Do you visit ophthalmologist regularly?	regular	40	26%
	infrequently	60	40%
	non	50	33%
Do you know the complications of diabetes?	Good idea	25	16%
	Moderate idea	49	32%
	Poor idea	76	50%
Is diabetes mellitus risk factor for heart disease?	yes	30	20%
	no	50	33%
	Do not know	70	46%
Do you know why prescribed insulin?	Yes	30	20%
	Partly	77	51%
	No	43	28%
Do insulin cure the disease?	Yes	30	20%
	Not sure	40	26%
	No	80	53%
Is insulin habit forming?	Yes	70	46%
	Not sure	30	20%
	No	50	33%
Is insulin is the last resort for management of diabetes?	Yes	78	52%
	Not sure	42	28%
	No	30	20%
Can insulin cause harm?	Yes	32	21%
	Not sure	47	31%
	No	71	47%
Is there any substitution for insulin?	Yes	9	6%
	Not sure	41	27%
	No	100	66%
Can you stop insulin if blood glucose level reaches normal?	Yes	23	15%
	Not sure	44	29%
	No	83	53%
Are there different types of insulin?	Yes	12	8%
	Partly	51	34%
	No	84	56%
Are there different types of insulin delivery system?	Yes	23	15%
	Partly	42	28%
	No	85	56%
Are diet and exercise become less important when insulin is started?	Yes	30	20%
	Partly	60	40%
	No	60	40%

When asked about insulin use, the majority of respondents (44%) were didn't clean the injection site with sprite beforehand .13% of them didn't rotate site of administration.

Of the patients 60% of the subjects didn't use glucometer, 40% rarely get Hb1c checked by laboratory. 33 % of respondents reported that they shake mix insulin before used usually and 23% of respondents keep insulin at room temperature after first used. Further results are present in tablet 1.2.

Table 1.2: Knowledge and attitude toward practice of insulin use.

Question			
Do you rotate sites?	Usually	100	66%
	Sometimes	30	20%
	No	20	13%
Do you clean the injection site?	Usually	35	23%
	Sometimes	35	23%
	No	80	53%
When do you take insulin?	Before meal	130	86%
	After meal	15	10%
	Not fixed	5	4%
Where do you keep insulin?	Refrigerator	100	66%
	At room temp	35	23%
	Not fixed	35	10%
Do you use glucochek?	Regularly	25	16%
	Infrequently	35	23%
	No	90	60%
Do you measure Hb1c?	Meticulously	48	32%
	Regularly	42	28%
	rarely	60	40%
Do you miss insulin dose?	Often	8	5%
	sometimes	30	20%
	infrequently	20	13%
	Rarely	92	61%
Do you shake mix insulin well before use?	Usually	50	33%
	Sometime	60	40%
	No	40	26%
Where do keep mix insulin after you opened it?	At room temperature	34	23%
	At refrigerator	116	77%
	At freezer	0	0%

DISCUSSION

This is the first study to diabetic patients known's to be conducted in RMS in Jordan to describe the opinion of the patients toward insulin therapy .Health care professional like pharmacists can play an important role toward the disease and its management. [12]

Community pharmacists are an important member of disease management state program[13,18] with beneficial effect in patient education and disease management[19,21] Also, they are assisting in the detection, counseling and referral of patients at risk of diabetes[21] and high percentage of patients support pharmacist provision of health testing services.[22,26]

One hundred and fifty questionnaires were distributed personally to diabetic patients in RMS in Jordan yielding an excellent level of return. This high level of return may be due to the method of face to face interview.

Almost two third of the respondents in this study reported to Didn't use glucometer regularly This consistence with a previous survey that took part in eastern India. The latter studies indicated that almost approximately one-thirds of patients is infrequently used glucometer.[27] Poor store condition and Didn't shake mix insulin after first used presented in this study Wasn't consistence with dipiro textbook. The book indicate that when open mix insulin at the first time you should keep the vial at room temperature and you should shake mix insulin ten times before use.

Rarely HbA1c checked by laboratory reported in the present study was found to be consistent with previous studies that Took part in Indian to asses knowledge and attitude, and practice regarding insulin use among diabetic patients.[27]

Poor idea about the complication of diabetes in this survey was found to be consistent with previous study in India to evaluate insulin usage[27] These results was

found to be consistent with previous studies that took part in the North East of England and India to evaluate the community pharmacist's role in the management of diabetes.[28,29] Heaton and Frede mentioned that the physicians were not able to provide sufficient counselling to diabetic patients regarding lifestyle behaviour while the pharmacist was found to carry out this task effectively.[30]

CONCLUSION

Pharmacists should be play an effective role toward diabetic patients counseling in special clinic like diabetic clinic due to poor attitude and knowledge of diabetic patients Toward diabetes mellitus disease and insulin use.

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