Original Article　　Insulin in Diabitcs

Knowledge and Attitude regarding Insulin, its Administration in Diabetic Patients Attending Medicine OPD in Tertiary Care Hospital

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ABSTRACT

Objective: To find out knowledge, attitude and frequency of insulin in type II diabetic patients.

Study Design: Observational / descriptive study

Place and Duration of Study: This study was conducted at the Tertiary Care Hospital from January 2016 to July 2016.

Materials and Methods: All diabetic patients who were attending the general medicine OPD were included in the study after taking informed consent. Total 135 cases were selected. Cases were interviewed and all the information regarding patient's knowledge, attitude and its frequency of administration were gathered on pre designed proforma.

Results: Mean age was noted 37 ± 2.03 years. Out of 135 patients, 27(20%) patients belonged to age of <30 years. Majority of cases in this study, i.e. 67(49.62%) had received primary education 21(15.55%) cases were illiterate while only 15(11.11%) were graduate.18.51% had complete knowledge regarding insulin 51.85% had partial knowledge while 29.62% patients don't know. Majority of patients i.e. 79(58.51%) patients believe that if once insulin is started, it should be continued forever and it can't be stopped. Only 48(35.55%) patients agree that Self administration of insulin is beneficial.13(9.62%) patients were in favor that they will use insulin in future if they will be advised. 97(71.85%) patients believe that Insulin is usually prescribed as a last option in the treatment. Only 14.81% patients were under treatment of insulin while 85.19% were under oral medication.

Conclusion: In the conclusion of this study mostly patients were found without proper knowledge regarding insulin administration and mostly showed negative attitude.

Key Words: Knowledge, Attitude, Insulin

INTRODUCTION

Diabetes and its microvascular complications having higher risk of the accelerated atherosclerosis that eventually culminates in the CVD and cerebrovascular events along with premature death.[1]Diabetes is big economic burdens in non-developing nations. It is the commonest prevailing disease worldwide, estimated prevalence globally was in 2013, 382 million people having DM and probably expected that to rise to 592 million in 2035. Currently 6.6 million diabetic cases in Pakistan and in 2025 people with diabetes is probably to be 14.5 million; Pakistan is 11th big diabetic population country.[2]

Studies stated that controlled glycemic status can decrease the complications rate and evidence suggested

that the cases those are knowledgeable regarding DM self-care, having better glycemic status[3]. According to recent estimates, 50% patientshaving type 2 DM require insulin inthe first six years following diagnosis.[4]The self-care practices of individuals influenced through their knowledge about diabetes; the more they know about their illness, more they would have self-management skills. Many research work publishedhave shown that, in Pakistan the diabetic population don't have enough awareness of diabetes, the proper use of medications, life style modifications, dietary plans, myths associated with insulin and other education programs on health issues.[5]Studies of the developed countries stated that above than 30% diabetic patients use insulin with combination of oral anti-diabetic drugs.[6] Low knowledge regarding insulin drug is likely to effects its adherence and the acceptance. Being an injection formed drug, its usesmore likely to be effectedthrough misconceptions than oral anti-diabetic drugs. Insulin ensures attainment of recommended desiredmetabolic targets, maintains the blood glucose level atan appropriate range, and inhibits many complicationsresulting from hyperglycemia. However, insulin is usually not taken ontime by these

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patients.[7]There are different factors that cause resistance tothe initiation of insulin therapy such as myths concerning DM and its treatment andnature of insulin.This may also be due to a dislike of the healthcarecentres[8]. There could also be many other factorsthat might influence attitudes, such as patient hesitation, prejudice against injection, misperceptions, inadequate knowledge of insulin action and belief thatanother treatment should be offered as the initialtreatment.DM patients with poorly regulated blood glucose levels are atrisk of increased morbidity and mortality, and proper insulin treatment is the good blood glucose levels regulator drug.Purpose behind present study was to find out knowledgeand attitude and frequency of patients using insulin in patients with DM.

MATERIALS AND METHODS

Present observational study was held in medicine department at the tertiary care hospital over a 6 months duration from January 2016 to July 2016. All the type II DM patients who were attending the OPD were selected after taking informed consent. Total 135 cases were included in the study. Patient's knowledge was assessed regarding control of diabetes by insulin, their attitudes and myths towards administration of insulin. All patients were interviewed and all the information was gathered on pre designed self-made proforma. Patients were asked about age, literacy level, their socioeconomic condition. Questions were asked regarding awareness and attitude of insulin and its frequency of administration e.t.c. Results were analyzed on SPSS version 16.

RESULTS

Total 135 diabetic cases were incorporated. Mean age was 37+- 2.03 years. Out of 135 patients, 27(20%) patients were with< 30 years of age, 35(25.92%) belonged to age group of 30-40 years while 73(54%) belonged to age of > 40 years. Table 1

Majority of cases in this study, i.e. 67(49.62%) were noted with primary education21(15.55%) cases were illiterate while only 15(11.11%) were graduate. 22(16.29%) cases were from poor socioeconomic class, 85(62.96%) were from middle class and 28(20.74%) were from upper class. Table 1

Figure 1 is showing awareness of diabetic patients regarding insulin. Out of 135 patients, 18.51% had complete knowledge regarding insulin, 51.85% had partial knowledge while 29.62% patients don't know.

Majority of patients i.e. 79(58.51%) believe that if once insulin is started, it should be continued forever and it can't be stopped. Only 48(35.55%) patients agree that Self administration of insulin is beneficial.13(9.62%) patients were in favour that they will use insulin in future if they will be advised. 97(71.85%) patients

believe that Insulin is usually prescribed as a last option in the treatment. Table 2

In this study, only 14.81% patients were under treatment of insulin while 85.19% were not using insulin. Figure 2

Majority of the patients i.e.105 (77.77%) had got information from family and friends, 11(8.14%) had received information from doctors, 9(6.66%) from literature while 10(7.4%) from media. Table 3

Table No. I: Basic characteristics of the cases n= 135

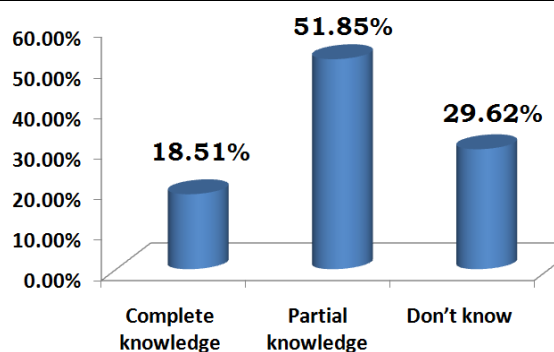| Basic characteristics	Number / percentages
AGE	
<30 years	27(20.0%)
30-40	35(25.92%)
>40 years	73(54.0%)
EDUCATION	
Illiterate	21(15.55%)
Primary	67(49.62%)
Secondary	32(23.70%)
Graduate	15(11.11%)
SEC	
Poorclass	22(16.29%)
Middle class	85(62.96%)
Upper class	28(20.74%)

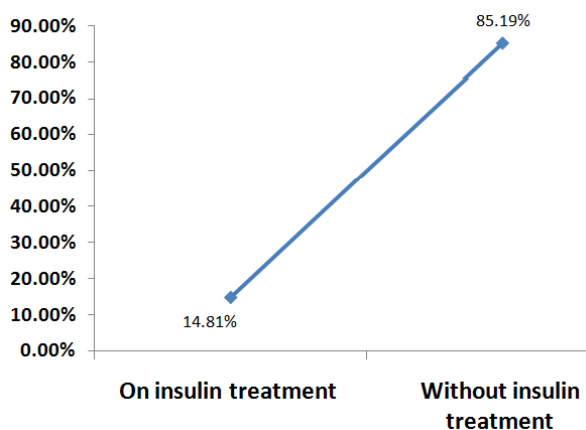**Figure No.1. Cases distribution according to awareness regarding insulin n=135**

Figure No. 2: Patient's distribution according to insulin administration n=135

Table No.3: Attitude of patients regarding insulin n=135

	Agree	Don't agree
Insulin once started, then can't be stopped	79(58.51%)	56(41.48%)
Self-administration of insulin is beneficial	48(35.55%)	87(64.44%)
In future insulin will use or not	13(9.62%)	122(90.30%)
Insulin is a drug which can control diabetes completely	10(7.4%)	125(92.59%)
Friends and relatives not agree for this treatment	26(19.25%)	109(80.74%)
Insulin is usually prescribed as a last option in the treatment	97(71.85%)	38(28.15%)
Insulin is too expensive	94(69.62%)	41(30.38%)
It is a painful treatment option	125(92.59%)	10(7.40%)

Table No.4: Source of information n= 135

Information sources	Number/percentages
Doctors	31(8.14%)
Friends/family	105(77.77%)
Literature	09(6.66%)
Media	10(7.40%)

DISCUSSION

Treatment of DM basically depends on self-care ability of the cases and their life style modification, therefore education status is considered as an essential part in its treatment. Majority of our patients were unaware about the advantages of insulin. Patients had inadequate information on how to respond the unwanted effects of insulin. Most patients lacked explicit and accurate information on the advantages and disadvantages of insulin. For instance, many of our patients believe that insulin lowers the blood glucose level too much. Inadequate and wrong information enhanced the reluctance to use insulin. Majority of patients in our study i.e. 85.19% were reluctant to start insulin because of myths that it is last resort of treatment and patient will not be able to stop this, once it will be started e.t.c. Same is seen in the study conducted by Yilmaz A.[4]

In our study, when patients knowledge was assessed regarding insulin than only18.51% had complete knowledge regarding insulin, 51.85% had partial knowledge while 29.62% patients don't know. Similarly Mengesha AB et al[9] stated that out of 141 cases 55.3% showed average knowledge regarding insulin. Similar results are found in the study conducted by HadguGerenseaet al.[10]Our study showed lower knowledge as compare to Indian and Bangalore studies

which were showed 68% and 86.7% respectively[11].This difference might be due to some factors as well as high illiteracy rate of study participants, insulin is costly for the poor people, unfavorable suggestions of friends and relatives and insulin self-administration.

In this study 35.55% patients agree that Self administration of insulin is beneficial.Another study conducted by Gawand KS[12] demonstrated that lack of awareness of patients regarding insulin. This may due to away from organized health education and the ignorance of insulin self-administration. Low awareness about insulin injection's site may create complicated eventsafter insulin therapy. Therefore it should be highlighted during diabetes education.Several studies reported that patients had poor knowledge regarding diabetes and self-caretreatment[13]. Hence, there is strong knowledge is required regarding diabetes and its self-care management.

The lack of adequate information and frequent misunderstandings contribute to an unwillingness to take insulin. If insulin is essential at any time, it is imperative to change such attitudes, especially in patients with a poor education. Such patients need to be educated on progressive nature of theDM, the role played by insulin, and the mechanism of insulin action.

Majority of patients in this study i.e. 58.51% patients believe that if once insulin is started, it should be continued forever. Similarly Surendranath A et al[11]showed that patientswere on insulin treatment mostly without adequate knowledge.The perception of insulin as the last resort intimidates patients, when insulin initiation is perceived as the final solution patients may show some degree of reluctance. They fear that insulin would affect their lives negatively[14]. In our community insulin is not usually started until diabetes complications occur. Patients' fear could be appreciated from this respect. Patients also disliked the prospect of daily injections. Brunton et al,[15] also found that patients considered insulin to be the drug of last resort, and were thus reluctant to commence treatment. These thoughts were more prevalent in poorly educated patients. Another study conducted by saleem A shows similar results.[16]

In our study majority of the patients i.e. 77.77% had got information from family and friends8.14% had received information from doctors, 6.66% from literature while 7.4% from media. Patients should be educated about the importance of sugar control and insulin. The goal of education should be to reduce the barriers to usethe insulin therapy, and to tackle the reluctance to overcome such barriers, by providing a base of evidence supporting rational decision making. Educational tools should be presented in multiple formats to allow patients to choose materials with which they are comfortable. Continuing medical education programmers and commercial educational initiatives may prove useful. In spite of these interesting

findings, in the present study sample size was limited and from only one hospital, therefore findings of this study are not generalizable towhole country.

CONCLUSION

In the conclusion of this study mostly patients were unaware and showed negative attitude regarding insulin, average patients used insulin regularly, drug cost and unfavorable relative advises are factors to reduced insulin administration**.** The overall level of awareness of diabetic patients about insulin was found low. Strong polices should be made to create awareness in general population. More big sample size studies are needed to conform these findings.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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