

Measures for Barriers to Starting Using Insulin for Type 2 Diabetes Patients at 103 Military Hospital

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Abstract: *The psychological barrier when starting insulin in patients with type 2 diabetes is one barrier that greatly affects the effectiveness of the treatment process. A cross-sectional descriptive study on 160 patients with type 2 diabetes at 103 Military Hospital using a questionnaire to assess the frequency of patients' psychological barriers when using insulin. On that basis, proposing measures to overcome these psychological barriers to improve the quality of treatment and increase type 2 diabetes patient compliance, reduces the risks and complications arising as well as the burden on caregivers.*

Keywords: Type 2 diabetes, Insulin, Psychological barriers to using Insulin, 103 Military Hospital

1. Introduction

Type 2 diabetes mellifluous (DM) is one of the most common chronic diseases of metabolic endocrine diseases. The disease accounts for about 90 - 95% of all diabetes patients [1] and is one of the three fastest - growing non-communicable diseases (after cancer and cardiovascular disease) [2]. According to the Vietnam Association of Diabetes Educators, the prevalence of diabetes in 2002 accounted for 2.752345% of the population, by 2008 (after 6 years) it had doubled to 5.7% of the population. Meanwhile, the older the age, the greater the incidence of the disease, proved by the fact that from 65 years old and above, the disease rate is up to 16% [3]. Currently, the use of insulin is one of the main methods of treatment for patients with type 2 diabetes when blood glucose levels cannot be controlled with oral medications or in patients with chronic renal failure. The proportion of patients using insulin comprises 13.4%. Many scientific studies that promote early initiation of insulin therapy are increasingly popular with the aim of helping to control blood sugar quickly and effectively, reducing the burden on the pancreas [4]. Insulin can be added to an existing regimen or in place of a hypoglycemic tablet to achieve glycemic control. In a study on the effects of insulin on glycemic control, decreased adherence to insulin regimens resulted in increased HbA1c levels and hospitalization rates [5]. In fact, given the progression of the disease, insulin therapy is the best way to glycemic control. However, initiating insulin sometimes encounters many barriers, making it difficult for both patients and caregivers. The concern relating to using insulin is that it takes a lot of time and effort (25%) or is dependent on medical staff (25%) [6]. Daily, patients must inject insulin 1 - 4 times with the dose and time prescribed by the doctor. From the above issues, the study was carried out with two objectives: First, to evaluate the current situation and analyze the factors affecting the psychological barriers when starting insulin in patients with type diabetes.2. Second, to propose measures to overcome psychological barriers when starting to use insulin for patients with type 2 diabetes at 103 Military Hospital.

2. Research Content

2.1. Research subject and methodology Research Subject

Study on psychological barriers when starting insulin in 160 patients with type 2 diabetes at 103 Military Hospital.

Research methodology:

- Study location and time: The study was carried out at 103 Military Hospital during the period from August 2022 to May 2023.
- Sample size: 160 patients with type 2 diabetes
- Research variables

- (1) Percentage of patients with type 2 diabetes experiencing psychological barriers when starting to use insulin.
- (2) The underlying causes of psychological barriers to initiating insulin therapy in patients with type 2 diabetes

Data collection tools: A survey questionnaire designed based on predefined variables. The questionnaire consists of 3 parts: General information on the research object; psychological barriers when starting to use insulin in type 2 diabetes; causes of these barriers and remedial measures.

Data processing: The data was cleaned, recorded using EpiData 3.1, and analyzed via SPSS software.

The descriptive statistical analysis method was used for two criteria: frequency and percentage.2.2. *Status of psychological barriers when starting insulin in patients with type 2 diabetes at 103 Military Hospital*

Through a survey at 103 Military Hospital, the research team obtained results on the psychological barriers when starting insulin in patients with type 2 diabetes. The results obtained are described in Fig. table below:

Table 1: Status of psychological barriers when starting to use Insulin to treat diseases in patients with type 2 diabetes at 103 Military Hospital (n= 160)

Psychological barriers when starting insulin in patients with type 2 diabetes	Frequency of indication		
	Rarely	Sometimes	Usually
	%	%	%
1. Patients feel anxious when their diseases get worse after treatment	15, 45	45, 30	39, 25
2. Patients feel an inferiority complex when others think the disease is getting worse	16, 13	31, 29	52, 58
3. Patients feel a failure at diabetes management in diet and exercise	21, 30	32, 50	46, 20
4. Patient feels failure at diabetes management in pill treatment	17, 34	39, 16	43, 50
5. Patients feel afraid to depend more on doctors during treatment	19, 38	33, 87	46, 75
6. Patients feel apprehensive when treatment is time and effort consuming	20, 64	33, 25	46, 11

Comment: According to Table 1., most (84.55%) of the patients rated the expression "Patients feel anxious when their diseases get worse after treatment" as double in sometimes and often occurs. Only 15.45% of patients evaluated the expression "Patients feel anxious when their diseases get worse after treatment" seldom. The majority (83.87%) of patients rated the expression "Patients feel an inferiority complex when others think the disease is getting worse" as sometimes and often, and only 16.13% of patients rated "Patients feel an inferiority complex when others think the disease is getting worse" is rarely encountered. Through the survey results, the patients all rated the symptoms such as: "Patients feel anxious when their type 2 diabetes gets worse after treatment", "Patients feel inferiority complex when others think that the disease is getting worse", "Patients feel that they have failed in diabetes management with diet and exercise" mostly sometimes and often encountered. In addition, according to the table, it is found that the majority of patients evaluate the status of psychological barriers when starting insulin use of patients with type 2 diabetes at the level of occasional and frequent encounters. Thus, the psychological barrier when starting to use insulin in patients with type 2 diabetes is causing many difficulties and has a strong impact on the effectiveness of the treatment cure.

2.3 The underlying cause of psychological barriers to initiating insulin therapy in patients with type 2 diabetes

From studying the status of the psychological barrier when starting to use insulin to treat the disease in patients with type 2 diabetes, the research team found that the underlying cause of the psychological barriers includes both subjective and objective causes.

2.3.1. Objective causes

The research team synthesized objective causes into a questionnaire with the aim of surveying patients' opinions on this issue. The survey results are as follows:

Table 2: Objective causes of psychological barriers when start using insulin to treat type 2 diabetes at 103 Military Hospital (n= 160)

Objective causes	Number of choices	Percentage %
1. The principle of insulin treatment management requires strict adherence from the patient in the long run	148	92, 50
2. Difficulty maintaining funding and resources to pay for insulin therapy and insulin injection devices	137	85, 63
3. Lack of support from the health care system as well as attention, close supervision, management, and specific and meticulous instructions on how to use insulin by the health system	116	72, 50
4. Geographical obstacles such as remoteness, distance from the center, difficulties in accessing the health system	97	60, 63
5. Wrong perception about the use of insulin in some localities where the patient lives	65	40, 63

Comment: In general, all the reasons given have a very high patient selection rate. Most of the patients said that: *The principle of insulin treatment management requires strict adherence from the patient in the long run (92.5%); Difficulty maintaining funding and resources to pay for insulin therapy and insulin injection devices (85.63%). Lack of support from the health care system as well as attention, close supervision, management, and specific and meticulous instructions on how to use insulin by the health system (72.5%); Geographical obstacles such as remoteness, distance from the center, difficulties in accessing the health system (60.63%); . . . are the reasons leading to difficulties in starting insulin treatment for patients. of patients with type 2 diabetes.*

2.3.2. Subjective reasons

Besides objective reasons, the research team also synthesized subjective reasons and conducted a survey to obtain the following table:

Table 3: Subjective causes of psychological barriers when starting to use insulin treatment of patients with type 2 diabetes at 103 Military Hospital (n=160)

Subjective reasons	Number of choices	Percentage %
1. Patients with diabetes 2 often have anxiety, stress, and stress due to their health condition	139	86, 87
2. Patients with a low educational background may have difficulty understanding the disease and insulin use	117	73, 12
3. Patients may have other health problems, such as cardiovascular disease, high blood pressure, high cholesterol, obesity, or problems with nerves, vision, and kidneys	112	57, 50
4. The treatment purpose of the patient is not comprehensive and has not been determined specifically and accurately	96	60, 00
5. The patient's low sense of adherence: Not active, relying on the support of medical staff	90	56, 25

Comments: Most of the patients said that: *Patients with diabetes 2 often have anxiety, stress, and stress due to their health condition* (86.87%); Patients with a low educational background may have difficulty understanding the disease and insulin use (73.12%) and Patients may have other health problems, such as cardiovascular disease, high blood pressure, high cholesterol, obesity, or problems with nerves, vision, and kidneys ... are also the causes that come from themselves leading to difficulties in communicating with patients.

2.4. Recommendations of basic measures Pursuant to:

- Decision No: 4031/2001/ Q - BYT dated September 27, 2001, of the Minister of Health on regulations on communication regime in medical examination and treatment establishments [7] - Decision No.29/2008/ Q - BYT dated August 15, 2008, of the Minister of Health on the code of conduct of officials and employees in non - business medical units. [8]
- Decision No.5481/ Q - BYT dated December 30, 2020, of the Minister of Health on the promulgation of the professional document "Guidelines for the Diagnosis and treatment of

Type 2 Diabetes" [9]

We would like to recommend a number of measures as follow:

Measure 1: Provide strategies to overcome psychological barriers when starting insulin for patients with type 2 diabetes for different psychological subjects.

In each patient case, different solutions are needed. The patient believes the disease has worsened: Explain that most patients will need insulin because the body does not make enough insulin; Shows how insulin can be used to control blood sugar at any stage. The feeling of failure: Explaining the need for insulin due to the natural course of diabetes; At the time of diagnosis, educate the patient about the possibility of using insulin during treatment; Do not use insulin as a way to intimidate the patient. Anxiety about injections: Show the patient that the needle is small and thin; Assure patients that insulin injections will be less painful than drawing blood to test their own blood sugar at home; Introduce insulin pen, show patients how to use the pen is very simple. Think insulin isn't working: Explain that using insulin properly can control blood sugar; Assure the patient that using insulin will help improve symptoms, and help the patient get better. Lack of confidence when using Insulin: Long - acting insulin is easy to use; The injection pen is easier to use; Having support from nurses/nursing... Concerns about work, friends, and family: Explain that if you adhere to treatment, insulin will not affect your work.; You should let your superiors and close people know the necessary information

Measure 2: Actively encourage patients to join clubs. Through clubs, educate patients with diabetes about diabetes knowledge and practice on nutrition, exercise, sports as well as compliance with insulin therapy in both inpatients and outpatients at the hospital.

During the club activities, the patients asked questions and interacted directly with the doctors. At the end of the sections, the organizers consulted the participants to improve the contents, methods, and programs of the club activities and proposed more content to be communicated in the club activities. the next set, and at the same time announce the content/theme of the next club activity. In addition to offering communication and education through club activities, the organizers distributed leaflets featuring prevention and treatment of diabetes, knowledge about the practice of nutrition, physical exercise, and blood sugar control for individuals.

Doctors who directly communicate - educate in club activities are those who have one of the below conditions: doctors specializing in endocrinology or nutrition, specialized in treating diabetes patients, doctors with postgraduate qualifications (Master's degree) in the field of endocrinology, dietetics, having had experience in treatment, counseling/ teaching on diabetes and voluntarily participate. Diabetics using insulin often must have a basic knowledge of pathology and how to use insulin to control blood sugar. However, sometimes a patient may experience a knowledge barrier, so the following measures can be taken by the physician to help the patient overcome this. To find out the patient's knowledge status: The doctor can ask the patient about their current knowledge about the disease, insulin, and diet. The doctor may also ask the patient about their understanding of medical terms. From there, doctors can provide the patients with the lack of knowledge so as to manage the disease better. Provide educational materials: Physicians may provide patients with written or video educational materials that explain in detail the medical condition, diet, insulin, and how to use insulin to control blood sugar. Use understandable language: Physicians should use language that is easy to understand and avoid using confusing medical terms when explaining to patients. The physician should also ensure that the patient understands the information provided by asking the patient again. Facilitating practice: The doctor can educate the patient on how to use insulin and how to check blood sugar in the clinic or hospital. The doctor may also give the patient some insulin Dummy Tummy so that the patient can practice using insulin. Provide guidelines and routine visit history: Physicians should provide guidance on routine visit history to patients to monitor the patient's health status and check blood sugar *Measure 3:* Increase the use of newer insulin and cause less weight gain or hypoglycemia, especially nocturnal hypoglycemia. Exercise regularly to limit weight gain and control blood sugar.

Control blood sugar regularly to reduce the risk of weight gain and lower blood pressure, along with providing patients education about the symptoms, management, and prevention of hypoglycemia to help them better manage the disease on their own. Proposing the establishment of organizations and communities specializing in diabetes care, through which imparting knowledge and directing health education to people with diabetes. The goal of this activity is to provide patients with knowledge about insulin use, nutrition, exercise, and sports, instruction on medication use and blood sugar control, and promote a positive attitude throughout the treatment.

3. Conclusion

After conducting a study on psychological barriers to starting using insulin in patients with type 2 diabetes, the research team found: The rate of encountering psychological barriers when starting insulin in patients with type 2 diabetes is pretty high. Which, most (84.55%) patients rated the expression "*Patients feel anxious when their diseases get worse after treatment*" as sometimes and often occurring. and only 15.45% of the students were assessed and the expression "*Patients feel anxious when their diseases get worse after treatment*" is seldom. In general, all the reasons given have a very high patient selection rate. Most of the patients said that: The principle of insulin treatment management requires strict adherence of the patient for a long time (92.5%); Difficulty in maintaining funds and resources to pay for insulin therapy and insulin injection devices (85.63%), etc. are the reasons for the difficulty in initiating insulin therapy for type 2 diabetes patients. In addition, most of the patients said that: Patients with type 2 diabetes often have anxiety, stress, and stress due to their disease status (86.87%); Patients with a low educational background may have difficulty understanding the disease and insulin usage (73.12%) and Patients may have other health problems, such as cardiovascular disease, high blood pressure, high cholesterol, obesity or problems with nerves, vision, and kidneys... are also the causes that come from themselves leading to difficulties in communicating with patients. To overcome the psychological barriers when starting insulin in patients with type 2 diabetes, it is necessary to take many measures as well as the harmonious coordination between the patient himself, his family, and the medical staff. Thereby contributing to the desire to improve the quality of treatment for patients with type 2 diabetes, increase the patient's ability to adhere to treatment, and reduce the risk of complications, as well as the burden on caregivers.

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