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Effect Observation of Process Diabetes Group Nursing on Patients with Diabetes Mellitus

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Abstract: ***Objective:*** Discuss the clinical effect of the process diabetes nurse group in the treatment of diabetes patients. ***Methods:*** A total of 58 patients with diabetes who received treatment in our hospital from January 2021 to June 2021 were selected, and the 58 patients were divided into two groups by random number table. In one group, 29 patients were treated with process diabetes group nursing, which was recorded as the observation group; in the other group, 29 patients were treated with conventional care, which was recorded as the control group. Nursing satisfaction, compliance behavior of patients, and adverse incidence were analyzed. ***Results:*** After nursing, the data of the two groups were summarized. The score of compliance behavior in the observation group was 91.23 ± 4.56, which was significantly better than that in the control group (75.13 ± 5.23). The t values of the score of compliance behavior were 12.4952, $P < 0.05$. The qualified rate of fasting blood glucose in the observation group was 100 %, which was significantly higher than that in the control group (62.07 %), $P < 0.05$. According to the questionnaire analysis, there were 18 patients in the observation group who were very satisfied, 8 patients who were satisfied and 3 patients who were not satisfied, with a total satisfaction rate of 89.66%, and in the control group, there were 4 patients who were very satisfied, 15 patients who were satisfied and 10 patients who were not satisfied, with a total satisfaction rate of 65.52%. The control group was significantly inferior to the observation group, and $P< 0.05$ was regarded as statistically significant. ***Conclusion:*** Adopting the process of diabetes group nursing can effectively enhance the compliance behavior of patients, and effectively control the blood sugar index of patients, and improve the satisfaction degree of patients.

Keywords: Process diabetes group nursing; Diabetes; Blood glucose value

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1. Introduction

According to the statistics of the World Health Organization (WHO), the number of global adult diabetes has reached 463 million in 2019, and it is expected that this number will still increase significantly in the future, and it is expected to reach 700 million by 2045 [1]. According to the Research Report on Market Supply and Demand Situation and Competitive Strategy of Diabetes Drug Industry in China (2020-2026): China's diabetics has reached 122 million in 2019, ranking first in the world. At present, China has gradually entered the aging era, and the population of middle and old age is growing rapidly. Considering the growth trend of elderly type II diabetics, it is estimated that by 2028, there will be more than 149 million diabetics in China, which seems to have become a disaster area [2]. Cardiovascular and nervous system complications caused by long-term hyperglycemia are extremely common in diabetes mellitus, among which cardiovascular diseases have the highest mortality. After a large number of clinical trials and studies, it is concluded that effective control of blood glucose and lipid levels can significantly reduce the risk of diabetes complications. In order to achieve stable blood lipid and blood glucose levels of patients, in addition to the necessary standardized drug treatment [3], patients also need to provide necessary dietary

guidance and exercise guidance. It is of great clinical application value for patients' family members to cooperate in the treatment process to improve the compliance rate of patients after discharge.

2. Materials and methods

2.1. General information

A total of 58 patients with diabetes who received treatment in our hospital from January 2021 to June 2021 were selected, and the 58 patients were divided into two groups by random number table. In one group, 29 patients were treated with process diabetes group nursing, which was recorded as the observation group; in the other group, 29 patients were treated with conventional care, which was recorded as the control group. The observation was approved by the ethics committee and the patient was informed. Patients with severe diseases other than diabetes were excluded, and patients confirmed as diabetes by blood glucose test were included.

2.2. Methods

Both groups of patients were treated with routine nurse, which covers diet, exercise, medication and patient monitor. By reasonably controlling the patient's diet, reduce the probability of increasing the increase of blood glucose, and reduce the content of blood glucose in patients through other methods. On this basis, in addition to routine nurse, Patients in the observation group also need the process oriented group nurse. The specific processes are as follows:

(1) Formulate the diabetes nurse team training plan and establish a professional nurse team. The nurse team includes department doctors, specialist head nurses, nurses, nutritionists, psychological counselors, nursing department staff, etc. Before nursing, standardized training should be conducted for the nursing team to clarify the responsibilities of each department, so as to form a nursing team with collaborative guidance and implementation, supervision and restriction. Theoretical and operational assessment should be conducted for the trained nursing staff to test the group members' mastery of the use of glucose meter and insulin [4].

(2) Implement the plan and improve the nurse process. Firstly, establish personal data files, understand the cognitive status and condition of patients, conduct inquiry and evaluation, and establish targeted flow-based nursing programs; Carry out one-to-one nursing guidance to ensure that patients master the methods of insulin injection and the prevention and treatment of complications [5].

(3) Understand the patient's condition and problems existing in the treatment at any time and process them in time. At the same time, understand the patient's psychological state, provide psychological counseling for patients with bad mood, and improve the patient's treatment compliance.

(4) After the patients were discharged from the hospital, regular follow-up survey was conducted to record the cognitive status and self-management ability of the patients, and timely put forward nursing suggestions for the adverse conditions of the patients after discharge.

2.3. Observation indexes

Nurse satisfaction is divided into three levels, 85-100 points are very satisfied, 60-84 points are satisfied, and less than 60 points are dissatisfied. The anonymous questionnaire form process survey is adopted, and the satisfaction is (satisfied + very satisfied) / total number of cases; Compliance behavior (compliance), adopts the form of score, and the full score is 100; And it also includes the standard rate of blood glucose control.

2.4. Statistical methods

The compliance behavior and the number of complications of the two groups were tested by t-test and expressed in ($\bar{x}$± s). The count data of nurse satisfaction and blood glucose control compliance rate of the elderly in the two groups were expressed in (%). Through X^2 test, when $P < 0.05$, the difference between the two groups has statistical significance.

3. Results

3.1. Comparison of the compliance behavior and blood glucose control compliance rate of the two groups

After nursing, the data of the two groups were summarized. The score of compliance behavior in the observation group was 91.23 ± 4.56, which was significantly better than that in the control group (75.13 ± 5.23). The t values of the score of compliance behavior were 12.4952, $P < 0.05$. The qualified rate of fasting blood glucose in the observation group was 100 %, which was significantly higher than that in the control group (62.07 %), $P < 0.05$. (**Table 1.**)

Table 1. Comparison of compliance behavior and number of complications between the two groups ($\bar{x}$± s)

Group	Number of cases	Compliance behavior (± s) $\bar{x}$	Qualified rate of fasting blood glucose n (%)
Observation group	29	91.23±4.56	29（100）
Control group	29	75.13±5.23	18（62.07）
t/X^2		12.4952	13.5745
P		0.0000	0.0002

3.2. Comparison of nursing satisfaction between the two groups

According to the questionnaire analysis, there were 18 patients in the observation group who were very satisfied, 8 patients who were satisfied and 3 patients who were not satisfied, with a total satisfaction rate of 89.66%, and in the control group, there were 4 patients who were very satisfied, 15 patients who were satisfied and 10 patients who were not satisfied, with a total satisfaction rate of 65.52%. The control group was significantly inferior to the observation group, and $P< 0.05$ was regarded as statistically significant. (**Table 2.**)

Table 2. Comparison of nurse satisfaction between the two groups [n (%)]

Group	Very satisfied	Satisfied	Dissatisfied	Satisfaction
Observation group (n = 29)	18（62.07）	8（27.59）	3（10.34）	26（89.66）
Control group (n = 29)	4（13.79）	15（51.73）	10（34.48）	19（65.52）
X^2				4.8581
P				0.0275

4. Discussion

Diabetes is a metabolic disease with hyperglycemia as the main clinical indication and accompanied by glucose, lipid and metabolic disorders caused by insufficient insulin secretion and function. At the same

time, patients can also show a range of symptoms, including increased blood pressure, disorders in glucose and lipid metabolism. Due to long-term metabolic abnormalities, many diabetic patients suffer from multiple organ dysfunction, such as chronic changes, insufficiency or even failure of organs such as heart, eyes, kidney, blood vessels and nerves. Macrovascular (heart disease, hypertension and lower extremity vascular disease), microvascular (diabetic retinopathy, diabetic nephropathy) and neuropathy are the major chronic complications of type 2 diabetes. Among them, heart disease and hypertension induced strokes are the leading causes of death in diabetic patients.

To sum up, adopting the process of diabetes group nursing can effectively enhance the compliance behavior of patients, and effectively control the blood sugar index of patients, and improve the satisfaction degree of patients.

Disclosure statement

The author declares no conflict of interest.

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