Application of Health Education in the Continuous Nursing for Cerebral Stroke Patients

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Abstract. Purpose: The aim is to research on the application of WeChat health education in continuous nursing of discharged cerebral stroke patients. **Methods:** A total of 110 cerebral stroke patients are selected in the neurology department from January 2017 to January 2018, and are divided into observation group and control group randomly based on the random numerical table, with55 cases in each group. The patients in both groups receive routine nursing and health guidance of neurology department. The patients in observation group are followed up by WeChat and the patients in control group are followed up by telephone after discharge. Observers will research on the knowledge level of disease and the compliance of treatment of the observation group and control group after 3 months' follow-up. **Results:** The level of cerebral stroke knowledge in observation group is significantly higher than that of control group (P<0.05) after 3 months' follow-up in observation group and control group, the compliance of the observation group is higher than that of the control group (P<0.05) in four aspects: controlling tobacco and alcohol, taking medicine regularly, taking rehabilitation exercise and following up return diagnosis regularly(P<0.05), and there is no significant difference between the two groups in the balanced diet (P>0.05). **Conclusion:** WeChat follow-up can improve the knowledge level and health behavior of cerebral stroke patients more effectively than telephone follow-up. At present WeChat is widely used and it is feasible to be popularized.

Introduction

Cerebral stroke usually includes acute and serious diseases caused by cerebral hemorrhage, subarachnoid hemorrhage and cerebral ischemic stroke. The mortality and disability rate of this disease are relatively high, which brings heavy burden to society and family [1]. With the improvement of people's living material level and the change of diet structure, the incidence of clinical cerebral stroke is on the rise, which has become a social public health problem. However, effective health education plays an important role in solving the problems existing in clinical treatment and nursing because of the low cognition of stroke disease. This research applies WeChat platform to continuous nursing of cerebral stroke patients, makes health education for cerebral stroke patients and achieves good results. The specific research report is as follows [2-3].

Data and Methods

Clinical Data. It can adopt the method of convenience sampling, which selects 110 patients with ischemic cerebral stroke (all diagnosed as ischemic cerebral stroke patients, involving cerebral thrombosis and cerebral embolism and all are confirmed by cerebral computed tomography and nuclear magnetic resonance imaging) from January 2017 to January 2018, and its diagnostic criteria is the diagnostic criteria of all kinds of cerebral vascular diseases adopted by the fourth national conference on cerebrovascular diseases. Inclusion criteria: patients who are 25 to 70 years old, first onset, have clear mind and stable vital signs and stay in hospital longer than 7 days, and whose relatives are able to use WeChat software and are willing to participate in and cooperate with this study. Exclusion criteria: patients with conscious or cognitive disturbance, with heart, lung, liver, renal insufficiency, or other malignant diseases and the cases of death or withdrawal during the study [4]. All subjects are divided into control group and observation group with each 55 cases

based on the method of random number table. The control group loses 4 follow-up cases due to withdrawal from the study, with a failure rate of 7.3%, and the intervention group loses 5 follow-up cases due to withdrawal from the study, with a failure rate of 9.1%. In the end, 101 patients complete the study, 51 in the control group and 50 in the observation group. There are 35 males and 16 females in the control group, with an average age of 49±13.8 years old, and there are 30 males and 20 females in the observation group, with an average age of 48.3±5.1 years old.

Methods. Methods of patient nursing intervention in the experimental group: Firstly, it should set up WeChat platform and WeChat nursing team, set up network public account "Health Education Platform" in WeChat, and set up special WeChat group account "Cerebral Stroke House". The continuous nursing team is composed of two nurses, a head nurse, a neurosurgeon and a rehabilitation therapist besides researchers. Team members are trained uniformly, so they not only have good communication and coordination skills, but are also proficient in continuous nursing related contents and skilled in the application of WeChat software. Secondly, it should establish contact with patients [5]. For example, it can issue a contact card (which contains the QR code and function profile of the "Health Education platform" and "Cerebral Stroke House") to the patients before their discharge, and nurses help them and confirm that they have scanned of the two QR codes to follow the "Health Education Platform" and join the "Cerebral Stroke House" group chat. Nurses should also introduce their functions and uses: The former is to push cerebral stroke disease related knowledge and health education, the latter is to provide personalized guidance and consultation for patients and set up a platform for patients to communicate with each other. Thirdly, it is the function and push contents. The health education platform regularly pushes the contents of health education to patients every week, which can be combined with words, pictures, videos and other forms. The contents must be reviewed by the doctor before push, and then sent by the nurse. The head nurse is responsible for supervision and management. The contents include cerebral stroke-related knowledge (including concepts, risk factors and causes of stroke, identification and management of precursor symptoms, prevention of stroke recurrence, treatment of stroke drugs and drug effects, the importance and specific methods of rehabilitation exercise for hemiplegic patients, rehabilitation exercise for dysphagia and language disorder, diet and exercise for stroke patients), guidance for discharge compliance,　lecture courseware of the cerebral stroke health knowledge lecture held by the department doctors every Thursday, and the information of weekly expert sitting diagnosis. "Health Education Platform" pushes contents 3 times a week, and "Cerebral Stroke House" implements personalized instruction to each patient once a week in the first month, later on once every 2 weeks and lasts for 3 months [6].

Methods of nursing intervention in the control group: The primary physician or nurse in charge of the study group makes discharge plans according to the specific conditions of the patients at the time of their discharge, and issues the paper-based discharge plan and the handbook of health education for cerebral stroke, what is more, the patients will be followed up regularly by the competent nurse on telephone.

Observation Index. Evaluation of cerebral stroke diseases' knowledge level: It forms the "cerebral stroke disease knowledge questionnaire" based on the reference of *China Guidance for Cerebrovascular Disease Prevention and Treatment*, selects general knowledge, high-risk factors, diet conditioning and life care of stroke diseases, and the related contents of secondary and tertiary prevention based on referring to the literature literature review [7]. The questionnaire is formed as single selection, multiple selection, judgment, and brief-answer questions with a total of 100 points. Patients will be investigated before discharge and 3 months after discharge, and the scores of the two groups will be compared. The higher the score, the better the mastery of knowledge. Evaluation of compliance with discharge guidance: Self-designed compliance questionnaire will be designed and investigated based on the self-report method combined with common contents of discharge guidance for cerebral stroke. The contents include five aspects of tobacco and alcohol controlling, reasonable diet, rehabilitation training, regular medication and regular review [8].

Statistical Treatment. SPSS 19.0 software will be used to process the data, Student's Test will be used to measure the data, and Chi-square Test will be used to count the data. The difference will

be statistically significant if P<0.05.

Results

Comparison of Cerebral Stroke Knowledge Scores Between Two Groups. There is no significant difference in disease knowledge scores between the two groups when they leave the hospital (P>0.05), but there is a significant difference in knowledge scores at 3 months after their discharge (P<0.05). (See table 1)

Table 1 Comparison of cerebral stroke knowledge scores between two groups

Group	Discharge	Three months after discharge	t	P
Control group(n=51)	49.41±8.10	50.2±7.78	1.684	>0.05
Experimental group(n=50)	50.10±9.17	80.2±8.25	22.821	<0.05
t	0.452	19.218		
P	>0.05	<0.05		

Comparison of instruction compliance of two groups after discharge. The compliance of discharge guidance three months after discharge is statistically significant (P<0.05) between the two groups in terms of tobacco and alcohol controlling, rehabilitation exercise, regular medication and regular review, but there is no significant difference in reasonable diet between the two groups (P>0.05). (See table 2)

Table 2 Comparison of discharge guidance compliance between two groups

Item		Control group(n=51)	Experimental group(n=50)	χ^2	P
Tobacco and alcohol controlling	Yes	27(52.9)	43(86.0)	12.971	<0.05
	No	24(47.1)	7(14.0)		
Reasonable diet	Yes	44(86.3)	46(92.0)	0.853	>0.05
	No	7(13.7)	4(8.0)		
Rehabilitation exercise	Yes	26(51.0)	45(90.0)	18.410	<0.05
	No	25(49.0)	5(10.0)		
Regular medication	Yes	36(70.6)	48(96.0)	11.647	<0.05
	No	15(29.4)	2(4.0)		
Regular review	Yes	23(45.1)	48(96.0)	31.329	<0.05
	No	28(54.9)	2(4.0)		

Discussion

Cerebral stroke is a kind of acute cerebral vascular damage caused by various causes, which lasts more than 24 hours and results in focal cerebral dysfunction. It usually includes cerebral ischemic stroke, cerebral hemorrhage and subarachnoid hemorrhage. At present, the health services for cerebral stroke patients in our country are mainly focused on the period of hospitalization, but the insufficient attention is paid to the treatment, rehabilitation and life care needs of the patients at the later stage, resulting in the lack of timely and effective continuous nursing services for most of the patients, which has a negative effect on the body recovery. It has been pointed out abroad that the risk of cerebral stroke recurrence can be reduced by 90% through active intervention after discharge and continuous management even though the patient's condition is stable [9-10].

Paramedic provides routine health education knowledge for stroke patients during the hospitalization, and most of them pay more attention to diet guidance, medication guidance,

rehabilitation exercise and safety nursing, but little step-by-step guidance of systematic basic knowledge of the disease, such as the foreboding symptoms of cerebral stroke, emergency management, and high-risk factors [11]. However, patients and their relatives also pay more attention to the doctor's medical order and the condition of the improvement during the acute phase treatment than that of the nurse's health education. Therefore, the patient's knowledge level of the cerebral stroke disease is still in the low state when they leave the hospital. Giving health education through WeChat not only has the advantage of convenience, time-effective and interactive, but also has more diversified and visualized communication contents, such as text, voice, picture, and video, which is convenient for patients and their relatives to look around anytime and anywhere, so that it stimulates their learning initiative and finally improves the learning effect of the patients. In order to verify the effectiveness of health education in continuous nursing care of cerebral stroke patients, the hospital conducts a clinical control study with some patients as subjects. The data shows that the knowledge level of stroke in the observation group is significantly higher than that in the control group (P<0.05) three months after discharge, and the compliance of tobacco and alcohol controlling, rehabilitation exercise, regular medication and regular review is higher than that of the control group (P<0.05). There is no significant difference in balanced diet between the two groups (P>0.05). The results shows that the health education is effective in the continuous nursing care of cerebral stroke.

In conclusion, WeChat follow-up can improve the knowledge level and health behavior of cerebral stroke patients more effectively than telephone follow-up. At present, WeChat is widely used, and it is feasible to popularize WeChat.

Acknowledgements

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