Study on illness uncertainty and its influential factors among coronary heart disease inpatients and family caregivers

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Abstract: Objective: By exploring the uncertainty and influencing factors of the disease in the relatives of patients with coronary heart disease, we can make intervention measures in advance, which will help patients to establish positive coping styles. The hospital can improve the quality of life of patients with coronary heart disease by improving their care ability. **Method:** According to Mishel disease uncertainty scale, 250 families of patients with coronary heart disease were investigated. **Result:** The family members of patients with coronary heart disease of different age, education level and family monthly income had different uncertainty induction scores, which was statistically significant ($P < 0.05$). **Conclusion:** Education level, knowledge of coronary heart disease, self-efficacy of chronic disease, monthly income and residence are the influencing factors of health literacy of patients with coronary heart disease. The hospital must reduce the uncertainty of coronary heart disease, which will improve the rehabilitation effect of patients.

1. Introduction

Coronary heart disease (CHD) has become one of the most common cardiovascular diseases that endanger human health, which affects people's quality of life. According to China cardiovascular report 2018, the main cause of heart failure has changed from rheumatic valvular heart disease to coronary heart disease. Coronary heart disease (CHD) has become an important public health problem in China. It is urgent to strengthen its prevention and treatment. The mortality of coronary heart disease continues to increase, as shown in Figure 1.

2. Connotation and source of disease uncertainty

2.1 Connotation of disease uncertainty

Uncertainty is a state of discomfort, which can be expressed through different levels of behavior. The uncertainty of disease can affect the treatment compliance of patients, which will lead to complications. After surgery, patients will have a series of negative effects, such as ability of daily life, compliance of lifestyle change, adaptability, quality of life and so on. With the occurrence of negative psychological and adverse life events, it will stimulate the sympathetic nerve of patients. The following conditions may occur after operation, such as heart rate rise, myocardial contraction, blood pressure rise, arrhythmia, which will increase the oxygen demand of the heart and further increase the burden of the heart. At present, most of the studies are only limited to patients, and there are few studies on their family members, a special and important group. In this study, the family members of patients with coronary heart disease are taken as the research objects, which can be used to explore the uncertainty of disease and influencing factors. These references can help families of patients with coronary heart disease to establish positive coping styles, which will improve the quality of life of patients with coronary heart disease.

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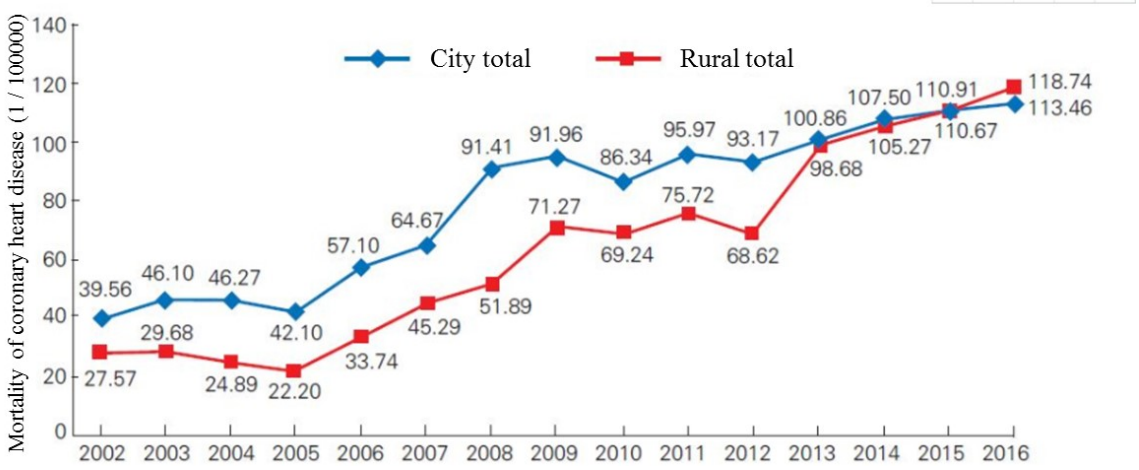

Figure 1: The mortality of coronary heart disease

2.2 Sources of disease uncertainty

Disease uncertainty belongs to cognitive category. When we lack the ability to identify things related to diseases, especially life-threatening diseases, we often have a sense of disease uncertainty. It is widespread and throughout the disease, which can make patients feel uneasy about their daily lives. By challenging the patient's existing beliefs, we can force the patient to face the disease, which will affect the patient's perception of the disease. According to the theory of disease uncertainty, the patient's disease uncertainty mainly comes from the following four aspects, including the state of uncertain disease, complex treatment and nursing, lack of information related to disease diagnosis, and unpredictable disease process. Disease uncertainty includes the following four dimensions. The indefinite dimension is that the patients are not clear about the state of the disease. Complexity dimension is the complexity of treatment and nursing. The dimension of lack of information is lack of information related to disease diagnosis. The unpredictability dimension is the unpredictability of disease development and prognosis. Disease uncertainty will increase the pressure of patients, which will affect patients' treatment compliance and postoperative rehabilitation.

3. Object and method

3.1 Research object

In this paper, convenient sampling method was used to select coronary heart disease patients from January 2017 to December 2018 in the cardiovascular department of a top three hospital. Patients have normal thinking, can communicate with each other, and voluntarily participate in the study under the principle of informed consent. 250 questionnaires were sent out, 248 were recovered, 248 were effective, and the effective rate was 99.2%.

3.2 Survey tools

Mishel's Disease Uncertainty Scale was revised by Mishel and developed into four dimensions: uncertainty, complexity, lack of information and unpredictability, a total of 33 items. The total score range is 32.0-160.0, which is divided into three levels: low level (32.0-74.7), medium level (74.8-117.4), high level (117.5-160.0). The higher the score, the higher the degree of uncertainty.

3.3 Statistical methods

SPSS18.0 statistical software was used to analyze the data, and the difference was statistically significant ($P < 0.05$).

4. Results

4.1 Disease uncertainty

The dimension scores of disease uncertainty of relatives of patients with coronary heart disease are shown in Table 1.

Table 1: Disease uncertainty and dimension score

Project	Scoring range	Family score	Score
Overall disease uncertainty	32~160	34~133	89.82 ± 12.280
Ambiguity dimension	13~65	13~52	38.59 ± 8.772
Complexity dimension	7~35	7~31	14.59 ± 2.805
Lack of information dimension	7~35	7~28	20.39 ± 4.493
Unpredictable dimension	5~25	7~22	16.25 ± 3.586

The disease uncertainty of the family members of patients with coronary heart disease and stent is affected by many factors. Table 2 is obtained from the analysis of this paper.

Table 2: Uncertainty scores of different influencing factors

Project	Entry	Total score of uncertainty	Project	Entry	Total score of uncertainty
Age (year)	18-50	85.69 ± 13.425	Marital status	Spouse	89.85 ± 12.273
	More than 50	90.51 ± 11.955		No spouse	89.43 ± 12.554
Gender	Male	88.02 ± 12.032	Payment Method	Medical insurance	87.97 ± 12.348
	Female	91.57 ± 12.290		Ncms	92.20 ± 11.411
Nation	Han nationality	89.73 ± 12.318		Self-payment	90.78 ± 26.579
	Other	94.67 ± 9.233	Duration of illness (year)	January 3rd	91.02 ± 12.388
Family residence	Urban district	88.61 ± 12.838		3-5 years	90.93 ± 12.244
	Urban-rural integration	90.84 ± 12.295		More than 5 years	90.83 ± 11.846
	Countryside	90.73 ± 10.540	Predisposing factors	Nothing	89.19 ± 11.947
Degree of Education	College or above	85.75 ± 13.618		1 kinds	89.58 ± 12.739
	High school	88.48 ± 12.515		2 kinds	91.48 ± 11.382
	Junior middle school	89.93 ± 11.969		3 or more	93.80 ± 11.504
	Primary school and below	92.28 ± 11.507	Therapeutic examination	Medicine	89.90 ± 12.093
Monthly income (yuan)	Less than 1000	91.71 ± 12.927		Drug + coronary	90.59 ± 12.652
	1000-5000	90.29 ± 11.026		Drug + stent	87.70 ± 12.484
	5000-8000	88.24 ± 12.620	Suffer from chronic diseases	Nothing	87.69 ± 10.969
	Greater than 8000	86.05 ± 13.117		1 kinds	89.54 ± 13.141
Occupation	Cadre	88.70 ± 12.357		2 kinds	90.49 ± 11.317
	Worker	88.13 ± 12.364		3 or more	93.48 ± 12.461
	A farmer	92.25 ± 11.893			
	Other	87.55 ± 12.126			

4.2 Result analysis

There are many factors influencing the uncertainty of coronary heart disease. According to table 2, the patients with low education level, low monthly income and old age have higher scores of disease uncertainty. Women, farmers and NCMS paid for coronary heart disease patients had higher scores of disease uncertainty ($P < 0.05$).

4.3 Suggestions of medical staff

Family members of patients with coronary heart disease and stent have a sense of disease uncertainty, which will affect the treatment and rehabilitation of patients. Therefore, medical staff should not only pay attention to the uncertainty of patients and their families = early intervention,

but also pay attention to the special group of family members. When making and implementing health education plans, medical staff should include patients and their families into the scope of education at the same time. Through the comprehensive evaluation of patients' demographic characteristics, disease-related information and psychological status, medical staff can formulate targeted health education content, which will reduce the uncertainty of patients and their families.

5. Conclusions

The uncertainty of disease can affect the efficacy, prognosis and treatment compliance of patients. Through the influence of patients' psychological adjustment ability and coping ability, disease uncertainty can increase the pressure of patients in the process of disease, which will affect the quality of life of patients. The study of uncertainty in early coronary heart disease is mostly descriptive. In this paper, the uncertainty of family members of patients and its influencing factors were confirmed. It is worth discussing that medical staff should work out effective intervention measures.

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