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Quantitative and Qualitative Research on the Fear of Recurrence and the Belief in Prevention of Recurrence in Elderly Patients with Coronary Heart Disease

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Abstract: **Objective**: To explore the fear of recurrence and the belief in prevention of recurrence in elderly patients with coronary heart disease. **Methods**: A total of 178 elderly patients with coronary heart disease were included, and quantitative and qualitative research methods were used to explore the fear of recurrence and the belief in prevention of recurrence in elderly patients with coronary heart disease. The quantitative research tool was a self-made fear of coronary heart disease recurrence questionnaire; the qualitative research was guided by the phenomenological method, semi-structured in-depth interviews with 11 elderly patients with coronary heart disease, and the data were collected by recording, and the Colaizzi method was used to analyze the data. **Results** Elderly patients with coronary heart disease were afraid of recurrence; they knew the etiology of coronary heart disease, but the controllable rate of the cause and effect was extremely low. **Conclusion**: Due to the belief in fatalism and the lack of control over the etiology of coronary heart disease, elderly patients with coronary heart disease are afraid of recurrence.

Keywords: Elderly; Coronary Heart Disease(Chd); Fear of Recurrence; Health Beliefs; Quantitative and Qualitative Research

1. Introduction

Coronary atherosclerotic heart disease (CHD), referred to as coronary heart disease, is a common cardiovascular disease in the elderly, mainly due to the imbalance of coronary blood flow and myocardial demand caused by coronary organic lesions. Myocardial damage is characterized by chronic persistence and high recurrence[1]. According to a survey, the recurrence rate of CHD patients is as high as 40%[2]. Secondary prevention is the focus, but prevention has little effect. At present, with regard to the recurrence of CHD, it is uncertain whether it is a medical and lifestyle issue or a psychosocial issue. Although patients want to learn more about preventing relapse in CHD, there is a lack of knowledge about their beliefs about perceived risk factors being controllable, and therefore, beliefs that risk factors are uncontrollable may lead to fear and anxiety in patients. This study aims to explore the fear of recurrence and the belief in prevention of recurrence in elderly CHD patients through quantitative and qualitative research methods, so as to provide a reference and basis for the scientific and effective implementation of CHD secondary prevention.

2. Objects

A total of 178 elderly CHD patients hospitalized in the Department of Cardiovascular Medicine of a tertiary hospital in a city were included, including 96 males and 82 females, with an average age of 67.21±4.89 years. Inclusion criteria: (1) a clear diagnosis of CHD; (2) age ≥ 60 years; (3) informed consent. Exclusion criteria: patients with aphasia and cognitive

impairment.

3. Methods

Quantitative research combined with qualitative research

3.1 Quantitative Study

3.1.1 General information of research subjects

Self-formulated, including demographic and clinical characteristics, such as age, gender, religious belief, marital status, educational level, personal monthly income, course of disease, medical insurance, and knowledge of the disease.

3.1.2 Fear of Coronary Heart Disease Recurrence Questionnaire

Originated from the adaptive items of the Fear of Cancer Recurrence Scale[3], the questionnaire items were revised and established by using specific language for CHD and following the guidance and advice of relevant experts. A total of 8 items, using Likert 5-level scoring method, each item is 0~4 points, 0=strongly disagree, 4=strongly agree, the 4th and 8th items are scored in reverse, and the rest of the items are positive to score. The reliability and validity test was carried out. The Cronbach's alpha coefficient of the questionnaire was 0.881, and the test-retest reliability was 0.892, indicating good reliability and validity. This questionnaire can be used to investigate the fear of recurrence in elderly CHD patients.

3.1.3 Study subjects' control of etiology

Scale: 0=no control at all; 1=no real control; 2=some control; 3=good control; 4=excellent control.

3.1.4 Statistical analysis

SPSS 22.0 was used for statistical analysis of the data.

3.2 Qualitative research

3.2.1 Knowledge about the etiology of CHD

The subjects were first asked to describe what they understood about CHD and whether they feared relapse, and second, they were asked to describe what they thought was causing CHD. Contains: full meal, straining to defecate, rain, overwork, depression/anger, smoking, drinking, stress, worry, co-morbidities, lack of exercise, stress, high blood lipids, high blood pressure, lifestyle, environmental factors, overweight, age, gender , diet, alcohol consumption, excessive agitation, family history, diabetes, anxiety, depression. Records were made when subjects reported information different from the above.

The subjects were asked to answer "If you had to choose the most important cause of your CHD from the above items, which would you choose?"

4. Results

4.1 Fear of recurrence

4.1.1 Quantitative results of fear of recurrence

The total score of fear of recurrence was (16.42 ± 4.31), 60.7% (108/178) of CHD patients expressed fear of recurrence, the number of causes of recurrence was (2.95 ± 0.73), and the score of causality was low (1.62 ± 0.67).

Table 1 Fear of recurrence in elderly CHD patients（n=178）

Items	Fear of recurrence score（$\bar{x} \pm s$）
1 Uncertainty about health bothers me	2.67±0.89
2 I think I am healthier now than before I got sick	2.12±0.78
3 I always think about my health when planning for the future	3.01±0.99
4 I have less health concerns than other CHD patients	1.43±0.49
5 Because of my health, I focus on the future	2.61±0.82
6 I am worried about CHD recurrence	3.11±0.89
7 When I think about my health, I feel uneasy	2.88±0.87
8 Not feeling anxious when I hear about CHD	1.76±0.56
Total score	16.42±4.31

4.1.2 Qualitative resuls of fear of recurrence

Almost three-quarters of the study subjects reported that they feared that CHD would recur, causing more serious consequences and even death.

What the hell is going on here, I'm worried about relapse, and I'll give up. (Subject 48, male, 70 years old)

If it relapses, it may become a vegetative person even if it does not die. It is better to die. (Subject 9, male, 63 years old)

If it did happen, I wouldn't have any other problems if I died. (Subject 11, female, 67 years old)

Some study subjects learned that relapses would be more severe by observing other patients in the hospital and consulting with health care workers.

That was his fourth seizure. The doctor told me that quite a few patients had multiple relapses, up to 9 or more, and I was surprised. With each recurrence, the condition worsens. (Subject 79, male, 83 years old)

Some patients are very afraid of relapse due to reports from friends or relatives that CHD has led to severe dependence or death.

In a particularly bad state, sitting in a wheelchair, unable to speak. (Subject 57, male, 62 years old)

I was worried that I would die like my mother did. (Subject 43, female, 76 years old)

4.2 Knowledge about CHD etiology and prevention of recurrence

4.2.1 Quantitative results on knowledge of CHD etiology and recurrence prevention

82.3%of the subjects were able to say the definition of CHD, and 96.4%of the subjects considered at least one etiology, with an average (2.95 ± 0.73) etiologies, with hypertension as the primary cause. The controllability score of etiology is (1.62±0.67), and different individuals think different etiologies have different controllability.

4.2.2 Qualitative results on perceptions of stroke etiology and recurrence prevention

In the interviews, about 50% of the subjects agreed with the recognized risk factors, and some patients took the

initiative to obtain information and take action to control risk factors such as high blood pressure. Two patients reported high confidence in the treatment, others felt that compliance with the physician was imperative.

My blood pressure must be down to normal within a month. (Subject 28, male, 62 years old)

While focused on preventing recurrence, they were also conflicted, anxious, and reluctant to waste medical staff's time.

I'm still scared to learn more about CHD, I don't want to think too much. (Subject 44, male, 72 years old)

I was curious, wanted to know what exactly caused the relapse, and wanted to make sure it didn't happen again. (Subject 54, male, 75 years old)

My wife says I should talk to a doctor, but I don't want to waste their time. (Subject 67, female, 65 years old)

Some of the study subjects emphasized the factors of poor behavior, especially smoking and drinking.

I love smoking and can't quit. (Subject 13, male, 71 years old)

I wonder if there is any way I can stop drinking. (Subject 35, male, 68 years old)

Some study subjects were unsure whether strenuous activity should be avoided because of the risk of CHD relapse.

I was told that doing too much housework would cause my illness to relapse. (Subject 12, female, 71 years old)

I have been working all my life, and I can't be idle. I have a lot to do. I don't want to lie in bed every day and eat and wait to die. (Subject 64, female, 64 years old)

Some CHD patients discuss the absence of any warning signs, deepening the idea of relapse.

It's terrible, you don't know when it will come, how it will come, and what the consequences will be. (Subject 31, male, 80 years old)

Some CHD patients are accustomed to fatalism in response to CHD recurrence.

If it recurs again, it is fate, there is no way, just accept it. (Subject 59, male, 82 years old)

5. Discussion

With the acceleration of population aging and the improvement of living standards in my country, the incidence of CHD continues to rise. Re-stenosis and blockage of coronary arteries are caused by aging of the body, resulting in a high recurrence rate[4]. Fear of recurrence is very common among elderly CHD patients, and they are more afraid of physical disability or communication impairment caused by recurrence than cancer patients.Qualitative findings highlight that patients' fear of relapse often resonates with family members, close friends, or other patients.

Subjects in this study received treatment in specialized departments and received formal health education upon discharge, and most of them had knowledge about CHD. Risk factors for CHD include high blood pressure, smoking, diabetes, physical inactivity, obesity, hypercholesterolemia, poor diet, depression, and excessive alcohol consumption. Ways to reduce CHD risk include eating a healthy diet, exercising regularly, maintaining a healthy weight, and quitting smoking[5]. Quantitative and qualitative findings showed a lack of confidence in prevention and low scores in patients with causal controllability beliefs. Hypertension is the biggest risk factor for CHD and can be partially controlled; most study subjects believe that smoking is more risky than other factors, but it cannot be truly controlled. Uncontrollable risk factors increase the likelihood of CHD recurrence[6].

Qualitative research has shown personal beliefs or experiences related to fear of relapse, including: (1)Involves death or disability; (2)fatal surrogate experiences; (3)lack of warning; (4)overwork-induced CHD; and (5)fatalism. There are studies reporting that heavy housework triggers CHD. Subjects expressed fatalism, which may have helped them accept the possibility of relapse, and in a sense, fatalism serves the purpose of protecting individuals from liability. This paper argues that qualitative research appears to be more appropriate to interrogate the individual status of disease onset.

The causes of CHD are well known, but confidence in prevention is lacking. Many people with CHD fear relapse due to fatalistic beliefs and a lack of control over the cause. Before providing evidence-based secondary prevention information to patients, it is necessary to address the patient's fear of the disease and establish the correct belief in relapse prevention.

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