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RELATIONSHIP OF FAMILY WITH THE INPATIENT OF CONGESTIVE HEART FAILURE OF PATIENT IN THE CARDIOVASCULAR AND BRAIN CENTER OF RSUP PROF DR.R.D KANDOU MANADO

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ABSTRACT

Patient sometimes back to the clinic or hospital because of relapse of heart failure. Mostly relapse of heart failure occur because the patient does not meet the recommended therapy, such as the patient unable to carry out appropriate treatment therapy, ignore the restriction of diet, do not comply with medical follow-up, perform excessive physical activity, and cannot recognize symptoms of relapse. The aim of this research is to determine the relationship of family with the inpatient of congestive heart failure of patient in the cardiovasculer and brain center (CVBC) ward of RSUP Prof Dr.R.D Kandou Manado. Cross sectional descriptive analytic used in this research, respondents was 33 people using total sampling. Collecting data used questionnaires and observation sheets. Then Analyzed with chi square statistical test. The outcome of the research was most of age 46-55 years old 9 respondents (27.3%), most of gender was male 20 respondents (60.6%) most of education was SMA 29 respondents (87.9%), most of occupation was household workers 13 respondents (39 ,4%). The outcome of chi square test obtained p value <α 0.05. The conclusion of this research is there is a relationship between the support of family and the incidence of re-inpatient. hoped that the hospital able to use this research as a basis for evaluating the implementation of good discourse planning.

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1. INTRODUCTION

Heart failure is the inability of the heart to pump blood adequately to maintain blood circulation (Grossman and Brown, 2019). Congestive heart failure is a clinical syndrome that occurs in patients who experience abnormalities (either due to heredity or acquired) in the structure or function of the heart, causing the development of a series of clinical symptoms (fatigue and dyspnea) and clinical signs (edema and rales) that result in hospitalization, poor quality of life, and shortened life expectancy (Mubarak, 2018).

According to Suryadipraja (2017), currently Congestive Heart Failure (CHF) or commonly called congestive heart failure is a cardiovascular disease whose incidence and prevalence continues to increase. The risk of death from heart failure ranges from 5-10% per year in mild heart failure and increases to 30-40% in severe heart failure. In addition, heart failure is the disease that most often requires re-hospitalization even though outpatient treatment has been

optimally given. Meanwhile, according to Andrianto (2018), that the mortality rate due to congestive heart failure is 20-50% of patients, and the rate of re-admission with a frequency of 1 or more times for 12 months is 45%.

The mortality and morbidity of congestive heart failure ranges from 30-40% who are hospitalized for each year. The mean mortality of patients with heart failure in 1971 was 60% in men and 45% in women. In 2010 the most common cause of death in congestive heart failure was progressive heart failure, and about 45% died suddenly. Based on the results of an audit conducted between 2017-2018, in 4606 heart failure patients hospitalized it was found that the average total mortality was 19%, with 30% dying from non-cardiac causes (Grossman and Brown, 2019).

After undergoing treatment in hospital and heart failure can be controlled, the patient is gradually attempted to return to lifestyle and activities as before the illness as early as possible. Activities of daily living should be planned to minimize the onset of symptoms caused by fatigue, and any activity that may cause symptoms should be avoided or adapted. Various adjustments to habits, work, and interpersonal relationships must be made. Patients should be helped to identify emotional stress and explore ways to resolve it (Smeltzer and Bare, 2016). When undergoing treatment at home, good family support is needed starting from information support to emotional support where with good family support it is hoped that a relapse will not occur, causing re-hospitalization.

Patients often return to the clinic or hospital because of recurrent episodes of heart failure. Most recurrences of heart failure occur because patients do not meet the recommended therapy, for example unable to carry out treatment therapy properly, violate dietary restrictions, do not comply with medical follow-up, perform excessive physical activity, and cannot recognize symptoms of recurrence (Smeltzer and Bare, 2016). According to Rich, Beckham and Wttenberg (2017), that old age is a high risk of readmission, which is 29-47% within 3-6 months after being discharged from the hospital.

Family support is a process of the relationship between the family and the social environment. In all stages, family social support makes the family able to play a role in various aspects of knowledge, so that it will improve their health and adaptation in everyday life (Setiadi, 2018). Family support can reduce the likelihood of re-hospitalization in heart failure patients. Social factors have also been shown to be important predictors of morbidity and mortality in patients with coronary artery disease. The importance of family support has been confirmed by a recent study that there is strong emotional support, thereby increasing mortality and hospital re-admission rates in patients hospitalized with Cardio Heart Failure (Majid, 2015). The description of the phenomenon above, researchers are interested in taking the title of the relationship between family support and the incidence of re-hospitalization in patients with congestive heart failure in the cardiovascular and brain center (CVBC) ward Prof Dr. R.D Kandou Manado.

2. METHOD

This study uses a descriptive analytic method with a 'Cross Sectional' design. The population in this study were patients with congestive heart failure with a sample of 33 patients. The sampling technique used is purposive sampling. This research was carried out in March-April 2021 in the cardiovascular and brain center room at Prof Dr R.D Kandou Hospital Manado. The instrument in this study was a family support questionnaire and an observation sheet was used to see the incidence of re-hospitalization. Data analysis consisted of univariate analysis and bivariate analysis. Univariate analysis explains each of the variables studied, while bivariate analysis uses the chi square test.

3. RESULTS AND DISCUSSION

Table 1 shows that the frequency distribution of respondents based on age shows that there is at least 1 respondent (3.0%), while the most age is 46-55 years as many as 9 respondents with a percentage (27.3%), the frequency distribution of respondents by gender shows that at least 13 respondents are female (39.4), while the most respondents are male, totaling 20 respondents with a percentage (60.6%), the frequency distribution of respondents based on education shows that the least respondents have junior high school education as many as 2 respondents (6.1), while the majority of respondents had high school education as many as 29 respondents (87.9%), the frequency distribution of respondents based on occupation showed that the least was a student as much as 1 respondent (3.0%), while the most was IRT as many as 13 respondents (39.4%).

Table 2 shows that the results of the frequency distribution of respondents based on family support show that the least that is less good are 9 respondents (27.3%), while the most respondents have good family support as many as 24 respondents (72.7%), frequency distribution of respondents based on hospitalization shows that the least is high hospitalization as many as 7 respondents (21.2%). While the most respondents were low hospitalization as many as 26 respondents (78.8%).

Table 3 shows that the results of good family support respondents with a low incidence of hospitalization are 22 respondents (66.7%), while good family support with a high incidence of hospitalization are 2 respondents (6.1%). Respondents with poor family support with a low incidence of re-hospitalization were 4 respondents (12.1%), while poor family support with a high incidence of re-hospitalization were 5 respondents (15.2%). Furthermore, the results of the Chi-Square test p value <0.05, indicating a significant relationship between family support and the incidence of re-hospitalization. The ods ratio value of 13,750 is rounded up to 14, which means that respondents with good family support have 14 times the chance for low re-hospitalization compared to respondents with poor family support.

Characteristics of Respondents

Table 1 Frequency distribution by age, education and occupation in cardiovascular and brain center Kidneys, Prof. Dr. R.D. Kandou Hospital, Manado in 2021 (n=33)

Characteristics	Number of Respondents	
	Sampel (n)	Percent (%)
Age		
17-25 Years	1	3,0
26-35 Years	7	21,2
36-45 Years	4	12,1
46-55 Years	9	27,3
56-65 Years	7	21,2
>65 Years	5	15,2
Gender		
Man	20	60,6
Woman	13	39,4
Education		
JUNIOR HIGH SCHOOL	2	6,1
SENIOR HIGH SCHOOL	29	87,9
Bachelor	2	6,1
Work		
Student	1	3,0
IRT	13	39,4
Pns	2	6,1

Self-employed	4	12,1
Farmer	7	21,2
Retired	6	18,2

Source: Primary Data 2021

UNIVARIATE ANALYSIS

Table 2 Distribution of the frequency of family support with the incidence of re-hospitalization at the cardiovascular and brain center of Prof. Dr. R.D. Kandou Hospital Manado in 2021 (n=33)

Variable	Number of Respondents	
	Sampel (n)	Percent (%)
Family support		
Well	24	72,7
Not good	9	27,3
Re-Hospitalization Incident		
Low	26	78,8
Tall	7	21,2

Source: Primary Data 2021

BIVARIATE ANALYSIS

Table 3 Analysis of family support with the incidence of re-hospitalization at the cardiovascular and brain center of Prof Dr R.D Kandou Hospital Manado in 2021 (n=33)

Family support	re-hospitalization				**Total**			
	Low		Tall					
	f	%	F	%	f	%	**OR**	**P**
Good	22	66,7	2	6,1	24	72,7		
Not Good	4	12,1	5	15,2	9	27,3	13,750	0,009
Total	26	78,8	7	21,2	33	100		

Source: Primary Data 2021

DISCUSSION

This study entitled the relationship between this research was carried out at the PROF Dr. R.D Kandou Hospital Manado on April 24 to May 9 and the purpose of this study was to find out that there was a relationship between family support and the incidence of re-hospitalization in patients with congestive heart failure at PROF Dr. R.D Kandou Hospital Manado.

The results showed that the results of good family support respondents with a low incidence of hospitalization were 22 respondents (66.7%), while good family support with a high incidence of hospitalization were 2 respondents (6.1%). Respondents with poor family support with a low incidence of re-hospitalization were 4 respondents (12.1%), while poor family support with a high incidence of re-hospitalization were 5 respondents (15.2%). Furthermore, the results of the Chi-Square test p value <0.05, indicating a significant relationship between family support and the incidence of re-hospitalization. The ods ratio value of 13,750 is rounded up to 14, which means that respondents with good family support have 14 times the chance for low re-hospitalization compared to respondents with poor family support.

This is supported by research from Dwi Amalia Anggraeini and Septi Kurniasari (2016), entitled factors related to the incidence of hospitalization in patients with congestive heart failure at RSU dr. H. Abdul Moeloek Lampung Province. The results showed that there was a significant relationship between family support where the P Value was 0.016 and the incidence of hospitalization.

Family and social support can reduce the likelihood of readmission in patients with congestive heart failure. Social factors have also been shown to be important predictors of morbidity and mortality in patients with coronary artery disease. The importance of social support has been confirmed by a recent study that the absence of strong emotional support, can increase mortality and hospitalization rates in patients hospitalized with CHF.

According to Niven (2016) that family support can help improve individual coping mechanisms by providing emotional support and suggestions on alternative strategies based on previous experience and inviting others to focus on more positive aspects. In addition to receiving support from family, congestive heart failure patients who experience moderate anxiety also take a religious approach by means of dhikr, praying according to their respective beliefs and praying even though lying down. By taking this religious approach, most patients can feel inner peace so that they are able to control their anxiety and perform adaptive coping mechanisms.

The results of cross tabulation showed that the results of good family support with a high incidence of re-hospitalization were 2 respondents (6.1%). Respondents with poor family support with a low incidence of hospitalization 4 respondents (12,1%). This is due to the age factor, according to Rahman in Farid (2016), elderly people experience anatomical, physiological and anatomical pathological changes. The anatomical change in question is the thickening of the left ventricular wall, although blood pressure is relatively normal. Likewise fibrosis and calcification of heart valves, especially in the mitral annulus and aortic valve. In addition, there is a reduction in the number of cells in the sinoatrial node (SA Node) which causes the heart's electrical conductivity to be impaired. Only about 10% of cells are left when humans are 75 years old than they were 20 years ago.

Meanwhile, in the blood vessels, central and peripheral arterial stiffness occurs due to collagen proliferation, smooth muscle hypertrophy, calcification, and loss of elastic tissue. Although atherosclerosis is common in the elderly, normally blood vessels will experience decreased flow due to increased lipid deposition sites on the endothelium. Furthermore, there are also diffuse coronary artery changes that initially occur in the left coronary artery when young, then progress to the right and posterior coronary arteries over the age of 60 years.

The most common physiological changes that occur with age are changes in ventricular systolic function. As the main pump of systemic blood flow, changes in ventricular systolic will greatly affect the general condition of the patient. The main parameters seen were heart rate, preload and afterload, cardiac muscle performance, and cardiovascular neurohormonal regulation. Therefore, old people become easily nervous. As a result of being overly sensitive to this response, the stroke volume increases according to the Frank-Starling curve. As a result, the end-diastolic volume increases and causes the heart to work too hard and the heart to weaken. Initially, this effect was thought to be due to the blocking effect of -adrenergic receptors, but after being given a -agonist, it did not improve the effect.

On the other hand, there is a change in diastolic work, especially in early diastolic filling because the heart muscles have decreased work. Automatically, due to the lack of atrial muscle work to perform initial diastolic filling, atrial fibrillation will also occur, as the elderly often complain. Still related to diastolic, due to the inability of atrial contraction optimally, there will be a decrease in ventricular compliance when receiving blood which can cause an increase in ventricular diastolic pressure during rest and exercise. As a result, pulmonary edema and systemic venous congestion will occur which are often the main clinical symptoms of elderly patients. In general, what often occurs and has a clinically significant effect is diastolic dysfunction.

In addition, the factor of follow-up care at home is increasingly minimal, so the higher the possibility of re-hospitalization. The factor of regular visits to the clinic can also increase the compliance of CHF patients, especially in medical care. The factor of regular physical activity helps improve the overall efficiency of the heart. One clue in that direction is a slower heart rate (usually less than 60 beats per minute). Those who are physically active generally have lower blood pressure

and are less likely to develop high blood pressure. Those who are physically active tend to have better muscle and joint function, because such people are stronger and more flexible.

Activities in the form of movement or aerobic exercise are useful for improving and maintaining fitness, cardio-respiratory endurance. Examples of aerobic exercises are such as walking, jogging, swimming, cycling. Aerobic exercise makes the body's muscles work (CK Giam, 2016). Patients who do not have good activity and exercise cause muscle stiffness so that it is more at risk for recurrence.

Regular physical activity causes changes such as the heart will get stronger in its smooth muscles so that the capacity is large and the construction or pulse is strong and regular, besides that the elasticity of blood vessels will increase due to relaxation and vasodilation so that fat deposits will decrease and increase contraction. the muscle walls of the blood vessels (Anies, 2017).

The nuclear family and extended family function as a support system for family members. The basic function of the family is the health care function. The health care function is the family's ability to care for family members who have health problems. Families need to provide positive support to involve families as supporters so that there is cooperation in monitoring treatment between officers and sick family members so that the same incident does not occur in family members (Friedman, Bowden & Jones, 2010).

According to the researcher, when there is good family support, the mechanism for being able to recover and not being treated again will automatically generate enthusiasm from within the patient.

4. CONCLUSION

There is a relationship between family support and the incidence of re-hospitalization at the cardiovascular and brain center at Prof Dr R.D Kandou Hospital Manado.

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