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Quality of Life in Patients After Heart Attack at Mataram City General Hospital in 2019-2020

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Abstract

Background: Acute coronary syndrome is a non-communicable disease whose prevalence is increasing every year. The impact after a heart attack is a decrease in the patient's quality of life. This study aims to determine the characteristics and factors associated with the quality of life of patients after a heart attack.

Methods: This research is a quantitative study with a cross sectional design. The research sample was patients after a heart attack at the Mataram General Hospital in 2019-2020. Data on smoking characteristics and status were collected through forms using a structured questionnaire, while quality of life data was collected using the SF-36 questionnaire.

Results: Characteristics of post-heart attack patients at Mataram General Hospital were male (86.7%), aged <60 years (60%), smoking status (40%), STEMI diagnosis (50%), and poor quality of life. (63.6%). No significant relationship was found between gender , age , type of diagnosis and smoking status with the patient 's quality of life .

Conclusion: There are 63.6% of patients with poor quality of life. There is no significant relationship between gender, smoking status, age, type of diagnosis and quality of life. Patients with smoking status tend to have a poor quality of life in the domains of physical roles (91.7%) and emotional roles (83.3%).

Keywords: quality of life, after heart attack patients at Mataram General Hospital, age, gender, smoking status, diagnosis

INTRODUCTION

Heart attack or acute coronary syndrome is a disease caused by decreased blood supply due to critical narrowing of coronary arteries due to atherosclerosis or total blockage of arteries by embolism or thrombus [1]. Decreased coronary blood flow can also be caused by shock or bleeding resulting in an imbalance between supply and demand. cardiac oxygen that causes a heart attack [1,2]. The high mortality rate for heart disease is caused by the many risk factors that influence lifestyle changes. Risk factors for heart disease such as CHD include risk factors that cannot be modified (cannot be controlled) such as family history, age and gender. While the modifiable (controllable) risk factors that may be prevented, treated and controlled such as high blood pressure (hypertension), smoking, high blood sugar (Diabetes Mellitus), dyslipidemia (abnormal fat metabolism), obesity (obesity), lack

of physical activity, diet, consumption of alcoholic beverages and stress [3.] Some patients who have had a heart attack (post-heart attack) or acute coronary syndrome cannot be expected to work as before on time due to their condition [4]. Thus, physical and emotional disorders in patients Post-cardiac arrest can be permanent and in many cases affect and impair the lifestyle thereby reducing the long-term quality of life in these patients[4,5]. Smoking is considered as one of the important factors that can affect the quality of life in patients after cardiac arrest, in addition to patients with a diagnosis of ST elevation Myocardial Infarction (STEMI) which is associated with extensive damage to the heart muscle and decreased left ventricular function. [6.7].

METHOD

This study is a cross-sectional analytic study that aims to determine the relationship between age, gender, STEMI diagnosis and smoking status with quality of life in post-heart attack patients. This study was conducted on patients diagnosed with acute coronary syndrome at the Mataram City Hospital and carried out in September – December 2019. Inclusion criteria were 1) Patients after the last 1 year of acute coronary syndrome at the Mataram City Hospital who were willing to be research respondents and signed a research approval letter at the Mataram City Hospital. September to December 2019 Exclusion criteria were 1) Patients with acute disturbances of consciousness, 2) Patients with aphasia during examination, 3) Patients with a history of DM. The sample in this study was taken by non-probability sampling. The sampling technique used in this study is consecutive sampling.

RESULTS

The sample of this study as shown in table 1 is 30 people, 26 people (86.7%) are male, and 4 people (13.3%) are female. The mean age of the study subjects was 59.7 years (SD±11.4 years), with an age range of 44-89 years. Age was then grouped into 2 groups, namely the age group >=60 years as many as 12 people (40.0%) and the age group <60 years as many as 18 people (60.0%). Based on the diagnosis, the sample was grouped into 15 people diagnosed with STEMI (50.0 %), NSTEACS as many as 15 people (50.0 %). Table 2 shows a description of the independent variable of the patient's current smoking status, as many as 12 people (40.0%) smoked, 9 people (30.0%) were former smokers and never smoked. Tables 3 and 4 show an overview of the overall quality of life and quality of life based on eight domains. Judging from the overall domain, most patients have a poor quality of life (63.6%). Most of the poor quality of life occurred in the physical role (86.7%) followed by the emotional role (76.7%). Meanwhile, the highest quality of life occurred in mental health (96.7%), followed by general health (76.7%), social function (66.7%) and pain (56.7%).

Table 5 shows no significant relationship between gender, age, diagnosis and smoking status (p value 0.05) with quality of life based on physical roles. Male and female patients mostly had poor quality of life (88.5% and 75%). Patients aged >=60 years and patients aged <60 years had more poor quality of life (91.7% and 83.3%). Patients with a diagnosis of STEACS and NSTECS had more poor quality of life (93.3% and 80.0%). Patients who smoke mostly have a poor quality of life (92.3%) but patients who do not smoke also have a poor quality of life (93% and 80.0%).

Table 6 shows that there is no significant relationship between gender, age, diagnosis and smoking status (p value 0.05) with quality of life based on emotional roles. Male and female patients had more poor quality of life (76.9% and 75.0%). Patients aged >=60 years and patients aged <60 years had more poor quality of life (83.3% and 72.2%). Patients with a diagnosis of STEACS and NSTEACS had more poor quality of life (86.7% and 66.7%). Patients who smoked and did

not smoke had more poor quality of life (84.6% and 70.6%).

DISCUSSION

This study found that more patients after a heart attack at the Mataram City Hospital had a STEMI diagnosis (50.0%), this result is in accordance with the Itrasari study at PKU Muhamamadiyah Hospital Yogyakarta in 2015, where more patients with a STEMI diagnosis (40%) compared NSTEMI and STEAM (30%) [8]. Acute coronary syndromes consist of STEMI, NSTEMI, and STEAM, most of which are STEMI [8-9]. So this study is in line with previous studies where STEMI type acute coronary syndrome is the most common diagnosis for heart attacks.

In terms of gender, most of the patients after a heart attack (86.7%) were male. Another study also found that post-heart attack patients who were treated were more male [8,10,11,12]. Judging from the age variable, the mean age of the patients was 59.7 years (SD ±11.4 years), with an age range of 44-89 years, and more in the <60 years age group (60.0%). This age group is in accordance with what was found in other studies, namely 80% of post-heart attack patients aged 41-65 years and 68.4% of post-heart attack patients aged 45-49 years [8,10,11,12]. These studies are in line with the results of Riskesdas 2018, which is the highest heart disease found in men and the age group 55-64 years, but the prevalence is only 3.9%13. Although the results of Riskesdas cannot be compared with the results of this study, the magnitude The difference in results shows an iceberg phenomenon, meaning that many heart diseases are not detected in the community or only known after the patient has had a heart attack. incidence of heart disease to a younger age, even in this study the youngest patient was 44 years old [3.15].

The variables studied in this study were smoking status and quality of life. More than half of the patients were smokers (70.0%) before the heart attack, of which 30.0% had quit after the heart attack. This result is different from previous studies, where the proportion of patients who do not smoke (69.13%) is more than who smokes [10]. This difference is due to the difference in the number of samples where Taira et al conducted a study on 1,432 patients, and the location of the study was multicenter in hospitals. special heart disease [10].

The results of this study also illustrate that 63.6% of post-heart attack patients have a poor quality of life. Most of the poor quality of life occurred in the domain of physical roles (86.7%) and emotional roles (76.7%). While good quality of life mostly occurs in mental health (96.7%), followed by general health (76.7%), social function (66.7%), pain (56.7%). While the domains of physical function and fitness have the same percentage of good and bad quality of life (50%). This study is in line with the research of Itrasari, 2015 which found that the quality of life of patients after coronary heart attack at PKU Muhamamadiyah Hospital Yogyakarta was mostly (70%) in the sufficient category for the aspect of quality of life in terms of physical and research by Anggraini, 2017 which examined that quality of life Most of the patients' life after Percutaneous Coronary Intervention (PCI) at Dustira Hospital, Cimahi (73.7%) were in the low category for the aspect of quality of life in terms of physical [8,12]. The research design and the number of patients in the Itrasari and Anggraini studies are similar to this study, but there are differences in the questionnaires used, namely the Itrasari and Anggraini studies using the WHOQOL questionnaire while this study used the SF-36 questionnaire.[8,12] The WHOQOL questionnaire only assesses 3 physical domains, namely pain and discomfort, energy and fatigue and sleep and rest, then the quality of life in the physical aspect is divided into 2 categories, namely good and sufficient [16,17]. The current study uses the SF36 questionnaire which assesses the quality of life not only from the physical component but also from the mental component[17,18]. Physical components include physical functions, physical roles, pain and general health, while mental components include emotional roles, mental health, social functions and fitness. Furthermore, the quality of life is categorized into bad and good [16,17,19]. The quality of life of the physical aspect in the Itrasari

study mostly came from the discomfort factor of physical activity (60%) while in this study, the worst quality came from the domain of physical roles, namely physical health in the last 4 weeks reducing the achievement of the desired activity (86.7%) , limiting the type of work and other activities (86.7%), reducing the length of time spent on work or other activities (80.0%), and causing difficulty doing other types of work or activities (66.7%). The higher the limitation of physical activity possessed by the patient, the lower the quality of life [8]. Patients with Acute Coronary Syndrome (ACS) are advised to avoid certain activities, refrain from sudden activities, and to stop activities that can cause ACS symptoms to recur [20]. Activities excess in ACS patients can increase oxygen demand, this can disrupt balance and endanger the function of the myocardium [21]. ACS patients tend to reduce daily activities so that the impact seen in this study is that the achievement of activities is decreasing, types of work and other activities are limited, duration time spent on work or other activities is reduced, and causes difficulty doing other types of work or activities [20,22]. In addition to the physical component, the study using the SF-36 questionnaire also looked at the mental component [23.] Of the four mental components, it can be seen that the worst quality of life occurred in the emotional role domain where most patients stated that emotional health in the last 4 weeks reduced the length of time spent on work. or other activities (83.3%), causing not doing work or other activities as carefully as usual (83.3%) and reducing the achievement of the desired activities (76.7%). The decline in the quality of life in the domain of the emotional role in this study occurred simultaneously with the decrease in the physical role. A person who has decreased physical health tends to be followed by a decrease in emotional/mental health.

There are two domains in which smoking patients have more poor quality of life, namely the physical role domain and the emotional role. This study is in line with the results of previous studies, although there are differences in the research methods carried out in the general public 8,24. This suggests that a decrease in the quality of life can occur in smokers in the general population and can worsen if the patient has heart disease or after a heart attack.

The results of this study showed that there was no significant relationship between gender and age with overall quality of life and quality of life based on 8 domains (p value 0.05). These results are in line with the research by Wiggers (2006) which revealed that there was no significant relationship between gender and quality of life based on physical components (p=0.43) and between age and quality of life based on physical components (p=0.06). and mental component (0.09) [25]. However, there is a difference in the domain of the role of emotion, namely there is a significant relationship between gender and quality of life based on the role of emotion (p=0.03) [25]. The research design and the number of samples of the Wiggers study are different, namely the RCT in 344 patients [25]. In general, more male patients had poor quality of life (66.7%), but for the domain of physical roles and emotional roles, all female patients had poor quality of life. Patients aged >=60 years had more poor quality of life (81.8%), poor quality of life based on physical roles (100%) and emotional roles (90.5%). Elderly (>=60 years) male and female have different levels of quality of life and life expectancy. Older men have better personal, family, socio-economic and health relationships, while elderly women are more worried about the future [25]. According to the Central Statistics Agency, 2020, older men who are still working earn higher salaries than older men. female elderly salary. This shows that older men are more economically independent so they are not worried about their future [25,26]. The elderly who are financially secure can use their free time for constructive things, feel happy with their social contacts and they will be able to maintain a superior self-concept, remain highly motivated and feel happy with their life[27,28]. This study supports the need for further research to include issues of depression, anxiety, and social support in post-heart attack women.

Another result found in this study was that there was no significant relationship between smoking status and quality of life (p value> 0.05). These results are in line with those found in previous

studies by Wiggers et al., 2000, but differ from those of De Smedt, 2012 and 2014 and Taira, et al., 2000; and Goldenberg, et al., 2014 [4,8,10,12]. De Smedt, 2012 and 2014 analyzing secondary data from the EUROASPIRE III survey found that smoking status was significantly associated with quality of life where ex-smokers patients had a better quality of life than smoking patients [4]. This result is in line with the study of Taira et al, 2010 where patients who smoke have a poor quality of life seen from all domains using the SF-36 questionnaire [10]. The prevalence of smokers who experience an improvement in their quality of life after 6 months is lower than that of non-smokers and ex-smokers. The improvement in the quality of life was mostly found in patients who were former smokers. [14] This indicates that quitting smoking significantly improves the quality of life. However, in the current study, it is not possible to conduct further analysis to determine the effect of quitting smoking on quality of life or differences in quality of life in former smokers compared to current smokers.

The implication of the results of this study is to show the importance of lifestyle changes, especially smoking cessation in post-heart attack patients, not only to prevent recurrence but also to improve quality of life. Recommendations that can be given are the promotion of behavior change in post-heart attack patients with cognitive-behavioral strategies including nutrition, physical activity, smoking cessation, and medication adherence.

Conclusions

1. There are 63.6% of patients with poor quality of life.
2. There was no significant relationship between age, gender, diagnosis and smoking status with quality of life in post-heart attack patients. Patients with smoking status tend to have a poor quality of life in the domains of physical roles (91.7%) and emotional roles (83.3%).

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Tables attachment

Table 1 Distribution and frequency of patient characteristics

Parametric			(n)	(%)
Gender	Male		26	86,7
	Female		4	13,3
Age	>=60		12	40,0
	<60		18	60,0
Diagnose	STECS	STEMI	15	50,0
	NSTECS	NSTEMI	12	40,0
		UAP	3	10,0

Table 2 Distribution and Frequency of Patient Smoking Status

Status		(n)	Persentase (%)
Smoking		12	40,0
Non Smoking	Ex-smoker	9	30,0
	Never	9	30,0

Table 3 Overall quality of life overview

Parametric		(n)	Persentase (%)
Quality Of life	poor	19	63,6
	Good	11	36,7

Table 4 Quality Overview Based on eight domains

Domain	Quality Of Life	(n)	(%)
Physical Function	Poor	15	50
	Good	15	50
Physical Role	Poor	26	86,7
	Good	4	13,3
The Role of Emotions	Poor	23	76,7
	Good	7	23,3
Fitness	Poor	15	50
	Good	15	50
mental health	Poor	1	3,3
	Good	29	96,7
Social Function	Poor	10	33,3
	Good	20	66,7
Pain sensation	Poor	13	43,3
	Good	17	56,7
Global Health	Poor	7	23,3
	Good	23	76,7

Table 5 Relationship of Age, Gender, STEMI Diagnosis and Smoking Status Smoking Status with Quality of Life Based on Physical Role

Parametric		QOL (Physical Role)		P
		Poor n (%)	Good n (%)	
Smoking Status	Smoking	12 (92,3)	1 (7,7)	0,409
	Non Smoking	14 (82,4)	3 (17,6)	
Gender	Male	23 (88,5)	3 (11,5)	0,454
	Female	3 (75,0)	1 (25,0)	
Age	>=60	11 (91,7)	1 (8,3)	0,469
	<60	15 (83,3)	3 (16,7)	
Diagnose	STEACS	14 (93,3)	1 (6,7)	0,299
	NSTEACS	12 (80,0)	3 (20,0)	

Table 6 Relationship of Age, Gender, STEMI Diagnosis and Smoking Status with Quality of Life Based on the Role of Emotions

Parametric		QOL(Role Of emotion)		p
		Poor n (%)	Good n (%)	
Smoking Status	Smoking	11 (84,6)	2 (15,4)	0,326
	Non Smoking	12 (70,6)	5 (29,4)	
Gender	Male	20 (76,9)	6 (23,1)	0,677
	Female	3 (75,0)	1 (25,0)	
Age	>=60	10 (83,3)	2 (16,7)	0,403
	<60	13 (72,2)	5 (27,8)	
Diagnose	STEACS	13 (86,7)	2 (13,3)	0,195
	NSTEACS	10 (66,7)	5 (33,3)	