

Original Article

The Relationship of Physical Activity with Relapse of Gastritis in Gastritis Patient

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ABSTRACT

Background: Strenuous physical activity in gastritis sufferers must be considered because this disease is easy to relapse. Increased stomach acid is caused due to strenuous physical activity so that it can trigger an increase in stomach acid. This study aims to analyze the relationship between physical activity and relapse of gastritis in patients with gastritis. Methods: The research design used correlation with a cross-sectional approach. The population in this study was 63 and the number of samples was 54 selected by purposive sampling technique. The instrument used to collect data on physical activity and gastritis relapse was a questionnaire. Data analysis using Spearman Rank. Results: The results of the study found that most of the 59.3% of respondents included in the category of heavy physical activity and almost half of the respondents in the category of infrequent and occasional relapse had the same value, each of which was 40.7% of respondents. Analysis with the Spearman Rank statistical test got a p-value of 0.034 <0.05, meaning that there is a relationship between physical activity and the relapse of gastritis inpatient with gastritis. Conclusion: Strenuous physical activity can cause gastritis relapse. This condition occurs because the protective mechanisms in the stomach begin to decrease, causing inflammation, for this reason, patients are expected to be more careful with their daily physical activities to minimize the relapse of gastritis

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Introduction

Nowadays, with the modern era, there are also more and more diseases that arise due to human lifestyle or due to bacterial infections. One of them is gastritis, which occurs due to inflammation of the stomach lining which causes frequent pain in the upper abdomen. Patients with gastritis usually experience disturbances in the upper digestive tract, such as decreased appetite, flatulence and a

feeling of fullness in the stomach, nausea, vomiting, and belching (Novitayanti, 2020). Gastritis usually occurs when the protective mechanisms in the stomach begin to decrease, causing inflammation (inflammation). This damage can be caused by impaired gastric function, anatomical structural disorders that can be in the form of wounds or tumors, irregular eating schedules, excessive alcohol or coffee consumption, stress disorders, smoking, long-term and continuous use of



painkillers. , doing strenuous physical activity (Handayani et al., 2019)

In Indonesia, the incidence of gastritis is quite high. Research conducted by the Ministry of Health of the Republic of Indonesia has a high incidence of gastritis in several cities in Indonesia, reaching 91.6%, namely in the city of Medan, in several other cities such as Surabaya 31.2%, Denpasar 46%, Jakarta 50%, Bandung 32.5%, Palembang 35.5%, Aceh 31.7%, and Pontianak 31.2% (Kusnadi & Yundari, 2020). Based on the health profile in Indonesia in 2012, it is one of the 10 most common diseases in hospitalized patients in Indonesia with a total of 30,154 cases 4.9% (KemenKes RI, 2012). Based on an initial preliminary study conducted by researchers in Siraman Village, Kesamben District on July 16, 2020, on 8 respondents who had a history of stomach acid disease, the results of interviews with gastritis sufferers, 6 of whom said that gastritis they suffered often had recurrences such as heartburn. when finished doing strenuous physical activities such as cycling for too long, hoeing, lifting heavy objects, aerobic exercise for too long. While the other 2 people said that they did not feel the symptoms of gastritis recurrence when they were doing strenuous physical activities, but they said that their gastritis could recur when they ate too spicy and high-fat foods.

Gastritis can occur suddenly (acute gastritis), or gradually (chronic gastritis). Usually, there are no symptoms at all. However, some of the symptoms that often occur are hiccups, lack of appetite, nausea, sometimes vomiting with a little blood or liquid such as coffee, and blackish color in the stool or stool may occur. Factors that influence gastritis include food, smoking, bacterial infection, stress, alcohol, cocaine use, and excessive strenuous activity (Merita et al., 2018). Increased stomach acid is caused because the stomach is not

filled with food or because of physical activity that is too long so that it can trigger an increase in stomach acid (Suryono & Meilani, 2017). Gastritis that is left unchecked will get worse and cause stomach acid to increase and then create sores or ulcers which are often known as gastric ulcers and can even be accompanied by vomiting of blood. This can result in damaged stomach function and can increase the risk for gastric cancer (Rosiani et al., 2020).

Maintaining daily physical activity is very important for people with gastritis because this disease is easy to recur. Things that must be considered by gastritis sufferers when doing the physical activity are limiting and controlling themselves during activities, and also getting enough rest. Experiencing gastritis that can recur more than every week is at risk of causing various dangerous complications. For patients to know, and want to control their daily physical activities, nurses have an important role in increasing patient knowledge (Ariestia, 2019). This is by the role and function of nurses as educators by helping patients improve their health by providing knowledge about good physical activity. Based on the above description, the purpose of this study was to determine the relationship between physical activity and relapse of gastritis in patient with gastritis in Siraman Village, Kesamben District

Method

The research design used is correlational with a cross-sectional approach. The population in this study was 63 people with a history of gastritis in Siraman Village, Kesamben District, Blitar Regency. The sample in this study was 54 people taken by the purposive sampling technique. The inclusion criteria for this research sample are 1) Willing to be a

respondent; 2) Someone who has had gastritis in the last 3 months; 3) Gastritis sufferers with a vulnerable age of 26-45 years. Exclusion criteria in this study were 1) Respondents who were sick when the study was conducted; 2) Respondents who are themselves in the middle of the research. The independent variable in this study was physical activity and was measured by the research instrument IPAQ (International Physical Activity Question). The dependent variable in this study is Gastritis Relapse in Patients with gastritis. The instrument used in this research is by using a questionnaire. The statistical test in this study was using the Spearman rank correlation test formula with computerized assistance with a significant rate = 0.05

Results

This research was carried out in August 2021 on Gastritis sufferers in Siraman Village, Kesamben District with a total sample of 54 respondents. The results of general respondents' data are shown in table 1 below.

Table 1. Frequency Distribution Based on Characteristics of Respondents. Research on the relationship between physical activity and recurrence of gastritis in patient with gastritis , August 2021

No	Characteristics of Respondents	Frequency	Percentage (%)
1.	Age		
	26-30 Years Old	41	75,9
	31-45 Years Old	13	24,1
	Total	54	100
2.	Gender		
	Man	14	25,9
	Woman	40	74,1
	Total	54	100
3.	Education		
	No school	0	0
	junior high	4	7,4
	school	21	38,9
	senior High	29	53,7

No	Characteristics of Respondents	Frequency	Percentage (%)
	School		
	College		
	Total	54	100
4.	Work		
	Housewife	21	38,9
	Laborer	4	7,4
	Farmer	14	25,9
	Civil servant	15	27,8
	Total	54	100
5.	Dietary habit		
	Regular	23	42,6
	Irregular	31	57,4
	Total	54	100
6.	History of Consuming Alcohol		
	Yes	9	16,7
	Not	45	83,3
	Total	54	100
7.	Often Experiencing Stress		
	Yes	32	59,3
	Not	22	40,7
	Total	54	100
8.	Favorite Food Type		
	Spicy	2	3,7
	Sour	26	48,1
	Spicy & Sour		
	Total	54	100

Based on the results of table 1, characteristics based on age, most of the 41 respondents (75.9%) were aged 26-30 years. The distribution of female sex is mostly (74.1%) 40 respondents. The distribution on education is that most of the respondents (53.7%) study up to university. In the distribution of work, almost half of them are housewives, namely (38.9%) 21 respondents. For the distribution of eating patterns, some respondents have a regular eating pattern (57.4%). For the distribution of history of consuming alcohol, almost all respondents have never consumed it (83.3%). Then for the experience of stress, most of the respondents experienced stress, namely



(59.3) 32 respondents. For the distribution of the type of food that the respondents prefer, namely spicy, spicy and sour, almost half of the respondents like it equally (48.1%)

Specific data regarding the results of the identification of physical activity with Gastritis patients can be seen in table 2

Table 2. Physical Activity in Patient with Gastritis in Siraman Village, Kesameben District. August 2021

Physical Activity	Frequency	Percentage (%)
Light	0	0
Moderate	22	40,7
Heavy	32	59,3
Total	54	100,0

Table 2 above shows that the distribution of respondents who do physical activity is mostly (59.3%) included in the category of heavy physical activity as measured by the Physical Activity Questionnaire (IPAQ)

Specific data regarding the results of the identification of physical activity with Gastritis sufferers can be seen in table 3

Table 3 Table of Gastritis Relapse in Patients with gastritis in Siraman Village, Kesamben District. August 2021

Gastritis Relapse	Frequency	Percentage (%)
Never	0	0
Rarely (1-2 x/3 months)	22	40,7
Sometimes (3-4 x/3 months)	22	40,7
Often (> 4 x/3 months)	10	18,5
Total	54	100,0

Based on table 3 above about the characteristics of respondents based on the

frequency of gastritis relapse, it shows that almost half of the respondents are in the rare category and sometimes have the same value, namely each (40.7%) 22 respondents.

The results of the analysis of the relationship between physical activity and gastritis recurrence in gastritis patient are shown in table 4.

Table 4 Relationship of Physical Activity with Relapse of Gastritis in Gastritis Patients in Siraman Village, Kesamben District. August 2021

Gastritis relapse	Physical Activity								
	Light		Moderate		Heavy		Total		
	F	%	F	%	F	%	f	%	
Never	0	0	0	0	0	0	0	0	0
Rarely (1-2 x/3 months)	0	0	8	14,8	14	25,9	22	40,7	
Sometimes (3-4 x/3 months)	0	0	9	16,7	13	24,1	22	40,7	
Often (> 4 x/3 months)	0	0	5	9,3	5	9,3	10	18,5	
Total									
	0	0	22	40,7	32	59,3	54	100	

p-value 0,034 < 0,05 r = 0,289

Based on table 4 above, it was found that a small percentage (16.7%) of respondents were in the moderate physical activity category who occasionally (3-4x/month) experienced a recurrence of gastritis. And also, a small portion (25.9%) of respondents were found in the category of heavy physical activity who rarely experienced gastritis recurrence (1-2x/3 months).

Based on data analysis using the Spearman rank test, the p-value of 0.034 < 0.05 means that there is a relationship between physical activity and relapse of gastritis in patients with gastritis in Siraman Village, Kesamben District. The correlation value of 0.289 means that the strength of the relationship is included in the weak category. The direction of the relationship between variables is positive, meaning that the lighter the physical activity, the less gastritis recurrence



occurs. In this study, it was found that strenuous physical activity can cause a recurrence of gastritis in Siraman Village, Kesamben District.

Discussion

Based on the results of research on the identification of physical activity by respondents, it was found that most of the respondents were included in the category of heavy physical activity. Physical activity is any body movement that increases the expenditure of energy and energy or burns calories (Platini & Pebrianti, 2021). The amount of energy needed depends on how many muscles are moving, for how long, and how heavy the work is done. Physical activity is divided into 3 categories, namely light, moderate and heavy physical activity. In light physical activity requires little effort and usually does not change in breathing and endurance (endurance). Examples: walking, sweeping, washing clothes or dishes, washing vehicles, dressing up, sitting, watching TV, playing computer, studying, hanging out. In moderate activity, intense or continuous energy is required, rhythmic muscle movement or flexibility. Examples: jogging, table tennis, swimming, playing with pets, cycling, playing music, and brisk walking. Strenuous activity is usually associated with exercise and requires strength and makes you sweat. Examples: running, playing soccer, aerobics, self-defense (eg karate, taekwondo, Pencak silat), and outbound (Nurmalina, 2011).

Measurement of physical activity in this study used the International Physical Activity Questionnaire (IPAQ). The International Physical Activity Questionnaire (IPAQ) was developed to measure health-related physical activity (PA) in populations (Widiyatmoko & Hadi, 2018).

The factors that influence the severity of physical activity in the respondents in this study are work. The occupations of the respondents are that almost most of the respondents are farmers, being housewives. Working as a farmer is not an easy job because it takes a lot of energy to do the job. Maintaining daily physical activity is very important for people with gastritis because this disease is easy to recur. Things that must be considered by gastritis sufferers when doing the physical activity are limiting and controlling themselves during activities, and also getting enough rest.

Based on the results of research on the identification of recurrence of gastritis in patients with gastritis, almost half of the respondents experienced the frequency of recurrence of gastritis in the category of rare (1-2x/3 months) and sometimes (3-4x/3 months). Gastritis can be identified through the onset of symptoms such as heartburn, heartburn, bloating, decreased food portions, nausea, vomiting, frequent belching, and a bitter taste in the mouth (Misnadiarly, 2014). The relapse of gastritis symptoms experienced by respondents in this study was most of the respondents felt pain or discomfort in the pit of the stomach, an uncomfortable burning sensation in the stomach, felt full quickly or was unable to finish food with normal/regular portions, felt a sense of bitter in the mouth/esophagus and often belch. Almost half of the respondents stated that they felt nauseous but almost all of the respondents said they had no complaints of vomiting.

Preventing recurrence is very important because it reduces the negative impact of the disease. Preventing relapse can improve people's quality of life, allowing them to participate in recreational, work, social, and family activities can also be an invaluable approach in preventing relapse (Juwariyah

& Priyanto, 2018). If gastritis is left untreated, gastritis will be able cause gastric ulcers and bleeding, some forms of chronic gastritis can increase the risk of gastric cancer, especially if there is continuous thinning of the stomach wall and changes in the cells in the stomach wall (Purbaningsih, 2020)

The results of the cross-tabulation in table 4 show that there is a relationship between physical activity and the relapse of gastritis in patients with gastritis in Siraman Village, Kesamben District. All respondents experienced a recurrence of gastritis when doing physical activity (100%). Respondents who experienced the most recurrences were respondents who did the strenuous physical activity (25.9%). This causes the relationship between the two variables to be weak, because the lighter the physical activity carried out, the less frequent the recurrence experienced by the patient and vice versa. The results of Firmanti research revealed that strenuous physical activity can increase gastric acid production and trigger gastritis (Firmanti, 2014). This is the same as research conducted on gastritis sufferers in Siraman Village, Kesamben District, that respondents with heavy physical activity tend to experience recurrence than respondents with moderate physical activity. Strenuous physical activity can cause gastritis, this happens because the protective mechanism in the stomach begins to decrease, causing inflammation (inflammation) (Firmanti, 2014). This damage can be caused by impaired gastric function due to strenuous physical activity. When doing strenuous physical activity, the stomach will get a lot of pressure and can relax the esophageal sphincter muscle so that stomach acid rises into the esophagus and causes gastritis

Conclusion

This study concludes that physical activity is related to the recurrence of gastritis with a weak relationship that is unidirectional. This means that the heavier the physical activity, the easier it is for gastritis to recur. For this reason, patients are expected to be more careful with their daily physical activities to minimize the recurrence of gastritis

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