Research Article

Evaluation of the effect of anterior chest massage using Tellington method on vital signs of patients with unstable angina

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INTRODUCTION:

Cardiovascular disease is one of the deadliest and growing diseases of industrial societies, which can affect the individual and social life of people, especially the elderly. It is estimated that by the year 2020, cardiovascular diseases around the world have been infected with diseases that reduce the usefulness of people due to premature death and morbidity. In between, ischemic heart disease or coronary artery disease such as unstable angina and acute myocardial infarction are some of the most important health threats [1]. Ischemic heart disease any other illness causes death and disability and imposes many economic costs on the community [2]. Ischemic Heart Disease (IHD) causes such disabilities as disability and reduced productivity, and, in this regard, the source of the losses Economic is a lot of society. The clinical symptoms of these types of diseases vary from asymptomatic anesthetic to stable angina, unstable angina, myocardial infarction, ischemic α-cardiomyopathy and sudden cardiac death [3]. In the United States, about 12 million people with IHD, about 6 million people have angina pectoris [2]. In Iran, cardiovascular disease is the most common cause of mortality and morbidity and accounts for about 46% of deaths, with an estimated 3.6

million cases each year only in Hospitals covered by the Ministry of Health and Medical Education are hospitalized because of these illnesses [4]. Unstable angina is a form of ischemic heart disease that reduces the supply of oxygen to the heart following narrowing of the coronary arteries so that it does not meet the metabolic needs of the myocardium [2]. People with unstable angina, due to anxiety and complications of pain, are more at risk than other people at risk of death [5-7]. The unstable angina pectoris is considered an important stressor to the patient. It can lead to a patient in a defective cycle and increase the need for oxygen, because this pain by stimulating the sympathetic nervous system leads to an increase in catecholamine, thereby increasing heart rate and cardiac contractility, and in the whole causes increased myocardial oxygen demand and increased heart load [5]. Among the consequences of stress in the individual, it can be noted that the increase in heart rate, which causes an aggravation Symptoms occur in a person with angina pectoris. Increasing heart rate increases the need for myocardial oxygen and shortens to a greater proportion of diastole than systole, thus reducing the total time of

hematopoiesis per minute (8). People with heart attack, stroke or discomfort Heartburn has a need to strengthen their spirits and tension control, which means achieving this important goal involves reducing their tension in different ways, because cardiovascular disease is a devastating event that scares the patient and his entourage into horror. In such a way as to support the direction of adaptation to such a catastrophic situation. The nursing of these patients should be in direct of an appropriate communication with the patients and their families. [9] Stress increases heart rate and left ventricular pressure, which results in increased need for oxygen in the heart muscle. Increased need for heart muscle to oxygen, ischemic process and myocardial necrosis. Anxiety by causing arrhythmia can cause the patient to die, the patient becomes ill as a result of anxiety, and anxiety has reduced the strength of the center and the thinking itself, and it is the effect of the training of nurses in patients. The disease, which is anxious, takes on a lower role in self-care and takes longer to stay in the hospital, which costs her treatment increases [10]. Therefore, it is obvious that anxiety control and psychological relaxation in patients with coronary heart disease are effective in the treatment and recovery of these patients. So that relaxation can reduce heart activity and can be effective. The cardiac output comes down to a complete relaxation, which shows a decrease in the burden on the heart. The heart can never rest completely, but continuous work and more than this size can be detrimental to it for any reason, such as exercise or excitement [11]. Among them, the importance of nurses' roles and skills in reducing anxiety and ultimately preventing the exacerbation of heart disease by them will be more pronounced. In fact, learning how to reduce and eliminate worries is one of the most important things that a specialist nurse should do with the utmost care and effort to learn, and to take care and patience in implementing it. Specialist nurse requires special skills due to working in a critical environment. He must be able to identify emotional changes in the patient and his or her family [12]. Carrying out any non-pharmacological treatment alone or in combination is effective in reducing systolic and diastolic blood pressure. However, the use of non-pharmacological methods in the treatment of mild to moderate hypertension can be used as a first choice [13].

In recent years, the acceptance of supplementary therapies has increased in the health system. Hill (1993) suggested that complementary treatments can be considered in two ways: first, they can be considered as psychosocial factors In order to create a degree of relaxation and comfort in tense situations, and secondly, they can be used to facilitate the therapeutic relationship between the nurse and the patient through building trust and increasing communication. The use of non-medical interventions to complete advanced medicine among nurses in clinical practice is being reformed [14].

One of the non-medical interventions is reduced by using different massage techniques [15]. There are many definitions of massage, one of these definitions by Holey quoted by Gudllain 1926 is as follows: Massage is a scientific way of treating some of the illnesses that are manipulated the exterior is applied to soft tissues of the body [16]. Probably the massage has begun since the caves joined their hands. Although the fundamentals of Chinese medical science have been eliminated, it is thought that massage has progressed like other medical practices [17]. Massage has several effects, for example, by massage, criteria that indicate the activity of the sympathetic nervous system, such as heart rate, respiratory number, and hypotension, decrease [18, 19]. In studies, the types various massage treatments such as Swedish massage (Effleurage,Pettrysage, and Friction), neuromuscular massage, deep-tissue massage and sport massage have been mentioned [19]. One of the new methods of massage therapy is massaging by the Tellington method [20]. The Tellington Massage was first introduced in 1978 by Mrs. Linda Tellington - Jones to breed animals such ashorses, dogs and cats. Five years later, in 1983, this method was also used on humans [20]. The advantages of this method are simple learning and easy to use, the need to learn the body's anatomy and the need for additional tools. [20] The tallying procedure is generally done in tilt, spin, tensile, first used for animals. Each of these methods in

turn has different types. Swirling massage includes Abalone, Lying leopard, and Clouded leopard, Raccoon, Bear, Tiger, Lama and Chimp. Tissue massage includes all kinds of Python,Coiled python and Python lift with sheet. Slipping massage includes all types of Noah's march, Cow's tongue, Octopus, Tarantula and Grounding.Of course, the Massage Therapy with the Tellington method also has a combination of massage and massages for specific areas. The combination method has a variety of Heart Huge, Sponge, Snail's tail, Rhinoand lasers.Massage for certain areas also has a variety of hair styling, ear massage, oral massage and facial massage. Several steps are required to perform a massage using the Tellington method. First, a trust-based relationship is created with the patient. In the second step, the hands and fingers are used, so that the hand is often rotated in the clockwise direction. In order to perform the rotational procedure, we need to observe circular patterns such as rotational velocity, skin swelling, slow motion, and aiming at the target [20]. In this research, a massage using the Tellington method has been used, called "In this type of massage, the massage was done using the fingers and palms in a rotary and clockwise manner [20].

MATERIALS AND METHODS:

The data gathering tool in this research was a questionnaire that included sections, personal information, age, gender, marital status, occupation, education, and information about the history of admission to CCU and the number of admissions. The record of vital signs includes systolic and diastolic blood pressure, respiratory rate, pulse rate and arterial oxygen content, which was designed with the help of supervisors and counselors and necessary corrections were made. In order to eliminate anticipation due to age and gender, random block design was used. The number of samples was based on a preliminary study performed on 10 patients and a sample size of 95% with a confidence interval of 32% was obtained from each group.

Criteria for entering the study: In this study, the following criteria were considered as the criteria for selection of research units:

1.Having full vigilance

2.Ability to communicate with others

3. No history of injury or trauma (due to surgery or other factors) in the scapular area

4.Patients did not receive intravenous nitroglycerin when they entered the study.

The present study was a randomized clinical trial with a control group, in which 64 unstable angina patients admitted to the Cardiology Department of Fatemieh Hospital in Semnan were studied. This study was performed after the hospitalization of patients with unstable angina and the diagnosis was made by a specialist physician. The units were randomly divided into two groups of control and test. In this study, the independent variables of the massage using the Talking method and the dependent variable were vital signs. In this research, random block design was used to eliminate the disruptive effect of gender and age variables of the research units. The research units were of age in the range of 30-60 years and above 60 years. Significant symptoms in both groups were studied by a collaborator, in order to minimize the bias resulting from the judgment of the researcher. A collaborator of the research was permanently selected from a staff member in the cardiac care unit. This person received the necessary training before doing research on how to record vital signs in the control group and the test and the procedure for performing massage in the test group. After recording vital signs in both groups, intervention was started.In both groups, the patient was placed in a semi-arranged state at a 30 degree angle, and the two groups were given the same amount of oxygen (2 liters) through the nose, and the patient was described in both groups when performing Massage or routine treatment should be avoided by asking any questions or talking about a specific topic, and at the end of the work, the patient's questions will be answered. Then, in the test group, a nitroglycerin sublingual tablet was given to the patient, and then the researcher or therapist immediately performed the Tellington massage. To do this type of massage, a researcher or a research associate started on the left side of the anterior chest Massage was performed for 5 minutes. The method of doing this type of massage, which was a type of Tellington-type, was that it was massage from

the starting point in the tip region of the heart in a rotating direction in a clockwise direction and a quarter of the chest left side of the patients. The amount of pressure on the chest was measured by the researcher or the therapist using a fingertip on his chin and fingertip on his eye so that he could feel a little pressure and cause the skin to become stretched and at least friction. In this research, the person was a massager of the same patients. As male patients were treated by a researcher and female patients by the research fellows. Each patient was only given one study per day. After completing the massage for 5 minutes, the vital signs were immediately measured by the researcher's colleague and in the control group, after 5 minutes of nitroglycerin administration, the underlying signs were measured. At the end, the results were compared in terms of reduction of vital signs in the experimental and control groups. After encoding the questionnaires, the information was entered into the computer and analyzed using the spss software. To test the similarity of the two groups, the Kolmogorov-Spironov test was used. Independent t-test was used to compare the two groups.

RESULTS:

In the study, the samples were analyzed for demographic information. The two groups were not equal in terms of age and gender, and there was no significant difference between them.

Comparison of mean systolic and diastolic blood pressure, pulse rate and respiratory rate in both the experimental and control groups showed that the mean and standard deviation of systolic blood pressure before and after the study in the experimental group were 133.9 and 22.9 and in the control group was 128.6 and 17. The statistical test shows that there is no statistically significant difference between the two groups. The mean and standard deviation of systolic blood pressure after the study in the experimental group was 129.1 and 21.8 and in the control group was 130.4 and 16.9. The statistical test shows that there is no statistically significant difference between the two groups and the lack of correlation between the two groups is determined. The mean and standard deviation of diastolic blood pressure before and after the study in the experimental group were 76.2 and 11.7 and in the control group 74.5 and 15.3. The statistical test shows that there is no significant difference between the two groups before the study. The mean and standard deviation of diastolic blood pressure after the study in the test group was 74.6 and 10.3 and in the control group was 77.2 and 15.4. The statistical test showed no significant difference between the two groups. The mean and standard deviation of arterial oxygen content before and after the study in the experimental group were 93.2 and 3.7 and in the control group it was 94.8 and 2.6, respectively. The statistical test shows that there is a significant statistical difference between the two groups before the study. The mean and standard deviation of arterial oxygen content after the study in the experimental group was 95.3 and 2.5 and in the control group was 95.8 and 2. 2. There is no statistically significant difference between the two groups after the study (Table 1).

Table 1: Comparison of systolic and diastolic blood pressure and arterial oxygen content in the studied samples in both the experimental and control groups before and after the study

Groups / Variable		Test		Witness		P value
		Average	Standard deviation	Standard deviation	Average	
Systolic blood pressure	Before the study	133.9	22.9	128.6	17	0.298
	After the study	129.1	21.8	130.4	16.9	0.793
Diastolic blood pressure	Before the study	76.2	11.7	74.5	15.3	0.615
	After the study	74.6	10.3	77.2	15.4	0.442
Arterial oxygen content	Before the study	93.2	3.7	94.8	2.6	0.045
	After the study	95.3	2.5	95.8	2.2	0.321

Mean and standard deviation of heart rate before the study were 92 and 15.7 in the experimental group and 71.8 in the control group and 13.4 in the control group. The statistical test shows that there is a

significant statistical difference between the two groups. However, the mean and standard deviation of the heart rate after the study in the experimental group was 75.5 and 14.2 and in the control group was 88.5 and 10.9, respectively, and there was a significant difference between the two groups. The mean and standard deviation of the respiratory rate before the study in the experimental group was 19.9 and 2.4 and in the control group 17.8 and 2.5 respectively. The statistical test shows that there is a significant statistical difference between the two groups. The mean and standard deviation of the respiratory rate after the study in the experimental group was 15.7 and 2.4 and in the control group 18.6 and 2.5 respectively. The statistical test shows that there is a statistically significant difference between the two groups (Table 2).

Table 2: Comparison of the mean heart rate and respiratory rate in the studied samples in both the experimental and control groups before and after the study

Groups / Variable		Test		Witness		P value
		Average	Standard deviation	Standard deviation	Average	
Heart rate	Before the study	92	15.7	71.8	13.4	0.000
	After the study	75.5	14.2	88.5	10.9	0.044
Number of breaths	Before the study	19.9	2.4	17.8	2.5	0.001
	After the study	15.7	2.4	18.6	2.5	0.000

DISCUSSION AND CONCLUSION:

As it is seen in this study, there was no significant difference between the systolic and diastolic blood pressure variables in the control and experimental groups before and after the intervention despite the decrease in mean of these variables after the intervention. However, there was no significant difference in the oxygen content variable there is a significant difference between the blood samples in the control and experimental groups before the intervention, but there is no significant difference between the two groups after the intervention. Research by Albert et al., Entitled Randomized Massage Therapy by rubbing and shaking after heart surgery, showed that systolic and diastolic blood pressure and arterial oxygen levels in experimental and control groups did not significantly decrease before and after the intervention [21].In a study titled "The effect of Massage by the Tellington method on those who were waiting for angiogetting," Wendler showed that systolic and diastolic blood pressure after intervention was significantly lower in the test group than in the test group [20], which made this difference It can be justified by the difference between the type of massage with the massage used in this study.

There was a significant difference in the number of heart rate and respiratory rate variables between the experimental and control groups before and after the intervention. The number of heart rate and number of breaths in the test group decreased after massage. Jordan and colleagues considered the decrease in heart rate from physiological responses to massage [22]. Hayes and Cox concluded that five minutes of foot massage in ICU patients were able to significantly reduce heart rate. This decrease is thought to be the result of a more relaxed outcome in patients [23]. Also, the findings of this study showed that the mean respiration of the studied units in the experimental group had a significant reduction after the intervention. Sutherland and his colleagues in a study showed that 5 minutes of foot massage over a period of 10 days could reduce the number of intrusion units in the study [24]. Hayes and Cox also achieved the same result in their research [23]. In this study, Massage by Tellington method significantly reduced the mean respiratory rate and heart rate, but in other criteria, its reduction was not significant. Due to the limited research time and number of samples, this is partly justifiable. Massage by the Tellington method significantly reduces the number of respiratory rate and heart rate in patients with unstable angina, so it can be concluded that: Massage by the Tellington method reduces respiratory rate and heart rate in patients with angina pectoris It is unstable and in other criteria, there is no statistically significant difference and requires more study and the use of large-scale samples.

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