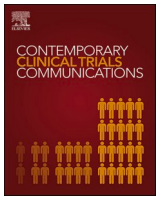
Contemporary Clinical Trials Communications 36 (2023) 101238

Contents lists available at ScienceDirect

Contemporary Clinical Trials Communications

journal homepage: www.elsevier.com/locate/conctc



The impact of using P6 acupressure on the nausea, vomiting, and comfort of myocardial infarction patients: A randomized, single-blind, placebo-controlled clinical trial

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ARTICLE INFO

Keywords:
Acupressure
Nausea
Vomiting
Myocardial infarction
Comfort

ABSTRACT

Background: Nausea and vomiting are two common symptoms in myocardial infarction patients. This study aims to determine the impact of p6 acupressure on nausea, vomiting, comfort, and the need for anti-vomiting drugs in myocardial infarction (MI) patients.

Methods: This research involved 90 patients with acute heart attacks experiencing persistent nausea despite taking anti-vomiting drugs. They were divided into three groups: acupressure, placebo, and control. The acupressure group wore a wristband with a button, the placebo group had a similar wristband without a button, and the control group received no wristband. Data on nausea severity, comfort, frequency of nausea, vomiting, and retching was collected before and after the intervention at different time points. The study also assessed the use of anti-vomiting drugs within 24 h of the intervention.

Results: The patients in the acupressure group, compared to those in the placebo and control groups, experienced significantly lower severity of nausea, frequency of vomiting, nausea, and retching and a substantially higher level of comfort level during the two, four, and 6 h after the start of the intervention ($P < 0.05$). However, no significant difference between the placebo and control groups was observed ($P > 0.05$). During the 24 h after the start of the intervention, administration of anti-vomiting drugs to the acupressure group was significantly less than that done in the placebo and control groups ($P < 0.05$).

Conclusions: The results illustrated that p6 acupressure reduces nausea, vomiting, and retching and increases the comfort level in myocardial infarction patients.

What is already known about the topic?

- Despite the consumption of anti-vomiting drugs, patients in the acute MI phase (in the first 6 h) regularly experience nausea and vomiting.
- Employment of P6 acupressure is a palliative nursing measure recommended to reduce nausea and vomiting.
- Nurses are recommended to employ P6 acupressure along with pharmaceutical methods as a complementary method to reduce nausea and vomiting. However, there is still no instruction on its application.

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https://doi.org/10.1016/j.conctc.2023.101238
Received 13 September 2023; Received in revised form 3 November 2023; Accepted 29 November 2023
Available online 3 December 2023

What does this paper add?

- Using the acupressure wristband stimulating the P6 point on the patient's hand for 6 h lowered nausea, vomiting, and retching, followed by reducing the consumption of anti-nausea drugs in myocardial infarction patients in the acute phase.
- This method of stimulating the P6 point also increased patients' comfort levels.

1. Introduction

Nausea and vomiting stand among the most common complaints; besides, they are two common causes of discomfort in myocardial infarction patients [1]. As nausea and vomiting ought to be diagnosed by nurses and as maintaining the feeling of comfort is a purpose followed through nursing care, nurses should always seek solutions for addressing nausea and vomiting and improving patients' comfort [2,3]. Therefore, it is essential to treat these complications, a goal that can be achieved through different medicinal and non-medicinal methods. If nausea and vomiting are not managed with timely and appropriate intervention, they can aggravate chest pain, create an unpleasant feeling, deteriorate the patient's state [4–6], add to the side effects caused by anti-nausea and anti-vomiting drugs, and increase the workload of nurses [7,8]. Accordingly, due to what is mentioned about the side effects of anti-nausea and anti-vomiting drugs, non-medicinal methods, which are safer, healthier, and less costly, can be used along with the mentioned drugs for the treatment of nausea and vomiting in patients [9].

The acupressure method is a non-medicinal method simply implemented by nurses as a non-invasive method [3]. Acupressure applies gentle yet steady pressure to energy channels and acupressure points [10]. A pressure point on the human body is the P6 point. Inserting pressure on this point can be a helpful method for managing nausea and vomiting in patients [11]. Several studies have been carried out on the insertion of pressure on the p6 point using wristbands and its effect/s on nausea and vomiting, which have yielded different results [10–12]. Nevertheless, P6 acupressure couldn't prevent postoperative nausea and vomiting [13,14].

This difference between the results of different works originates from the method and how long the pressure wristband was used for relieving nausea and vomiting in different patients. It can make the decision-making about P6 acupressure difficult. Therefore, the complications caused by nausea and vomiting in MI patients who are in the acute phase [4], together with nausea and vomiting [6] and feeling of discomfort experienced after the administration of anti-nausea [1], make the use of complimentary nursing (such as the stimulation of acupressure point) necessary [2]. As the researcher's searches illustrate, only one study has been carried out on the P6 acupressure to reduce nausea and vomiting in MI patients. The mentioned study used the pressure wristband on both hands for 24 h. However, as most MI patients in the acute phase undergo angioplasty on the radial area, wearing pressure wristbands on both hands for 24 h renders this method difficult. Thus, the researchers decided to facilitate the employment of evidence-based nursing in MI patients by shortening the duration of the use of acupressure to 6 h [15]. Thus, this study was conducted with the aim of investigating the effect of acupressure on the severity of nausea and vomiting and the comfort of patients suffering MI.

1.1. Purpose of the study

This study aims to determine the impact of P6 acupressure on nausea, vomiting, retching, comfort, and the need for anti-vomiting in patients with myocardial infarction.

2. Materials and methods

2.1. Study design and setting

This study is a randomized, single-blind, placebo-controlled clinical trial. The control group was used to explain the differences between the P6 acupressure and routine care in patients. Moreover, the research uses a placebo group so that the impact of the wristband is investigated. The University's Committee of Ethics approved this work with IR. UMSHA. REC.1398.959 ID, and then the Center for Clinical Trails registered it under the IRCT20160110025929N30 code.

2.2. Study setting

This study was carried out in the hospital of the cardiovascular center from **September to December 2020**. It is a 200-bed hospital. One ward is specified for emergency and five wards for CCU; there are twenty beds in the emergency ward and eight beds in each CCU ward.

2.3. Participants

This study was conducted on patients who met the inclusion criteria, were in the acute MI stage, and were hospitalized in the diagnostic and therapeutic hospital of the cardiovascular center.

2.3.1. Inclusion criteria

1 The patients in the acute MI stage who experience nausea despite receiving 10 ml of Metoclopramide drug in the past 2 h (the maximum effect time of this drug is 2 h) [16];
2 Age 35–70;
3 Complete consciousness and good vision;
4 Having no physical or skin disorders or any obstacle on the point used for acupressure;
5 Not suffering from other diseases that cause nausea or vomiting
6 Not suffering from a neuropsychological disease.

2.3.2. Exclusion criteria

1. Reluctance of patients for involvement in the study;
2. Reduction of consciousness, acute delirium, becoming seriously ill, or death of the patient during the conduction of the research;
3. The inability to determine VAS despite being educated.

2.3.3. Randomization

Firstly, those patients meeting the inclusion criteria were chosen using the available sampling. Then, using the permutational randomization and the pattern specified previously, three groups were formed: (A) the acupressure wristband, (B) the placebo, and (C) the control. Patients had no information about the group to which they were assigned. Therefore, the research is single-blinded.

2.4. Measurement instruments

The data were collected via in-person interviews and data collection forms.

2.4.1. The questionnaire of demographic and clinical information

a) Demographic information questionnaire covered items such as age, sex, BMI, marital status, and education level.
b) Clinical information, including: 1. The type of myocardial infarction, 2. The duration of fasting before entering the research, 3. The heart pain palliative drugs received before the intervention, 4. The narcotic consumed before the intervention, 5. How many times it is consumed during the 24 h before the start of the intervention, 6. How

many times the anti-nausea drug was consumed during the 24 h before the beginning of the intervention?

c) Pain measurement tool: The VAS scale was used to measure the pain that ranged from 0 to 100. On this scale, 0 stood for no pain, and 100 pointed for the acutest pain.

2.4.2. Nausea measurement tool

VAS scale was used to measure nausea that ranged from 0 to 100. On this scale, 0 stood for no nausea, and 100 pointed for its severest state.

2.4.3. Comfort measurement tool

VAS scale was used to measure the comfort that ranged from 0 to 100. On this scale, 0 stood for no discomfort, and 100 pointed for the greatest discomfort.

2.5.4. Checklist examining the frequency of vomiting, retching, and nausea

Using this checklist, researchers asked and recorded the patients' number of vomiting, retching, and nausea during the research.

2.5. Sample size calculation

Considering the data of the Dent et al. study (2003) [4] and $\alpha = 5$ %, test power of 90 %, and attrition of 10 %, the sample size was determined to be at least 30 people in each group.

2.6. Blinding

The chief researcher did the data collection. All the patients received some information about the purpose of the study. Furthermore, they knew they were divided into three groups and might receive a wristband to wear on their hand wrists based on the group they were randomly assigned to, or they might undergo no intervention. The patients assigned to the placebo and intervention groups weren't informed about the wristband.

2.7. Intervention

Here, to implement the procedure on the patients, firstly, the researcher needed a traditional medicine specialized consultant to confirm the wristband use and help find the P6 point. Once the necessary permissions were granted, the researcher attended the heart hospital and introduced himself to the qualified patients. All the participants signed a written consent once they received information about the goals and method of the research. Then, all patients were instructed on how to score nausea, comfort, and pain using the VAS 0–100 scale (with an eye to the fact that the intensity of pain can affect the intensity of nausea of patients) [17]. Moreover, the participants got the chance to practice with the VAS scale.

2.8. Data collection

Initially, upon the admission of the patients to the research, the researcher collected their personal and clinical information through questions and answers based on the information recorded in their files. Furthermore, the intensity of pain and nausea and comfort level were determined (T0). Then, patients were assigned to acupressure wristband (A), placebo (B), and control (C) groups through permutational randomization. All groups received routine and prescribed nursing and medical care, and they were different only in terms of the application of the research protocol as follows:

Acupressure wristband group (A): Firstly, the researcher illustrated the P6 point on the left hand located on the inner side of the forearm, in the cavity between the bones of the forearm, with three finger widths space above the crease of the wrist. As the patients experiencing the acute phase of heart attack routinely receive primary angioplasty on the radial area of their right hand, those assigned to the acupressure and placebo groups wore the wristband on their left hand. Then, the wristband with the push button was tied and fixed on the P6 point for 6 h so that it could press the mentioned point.

The placebo group (B): Similar to what was done for the intervention group, in the placebo group, the P6 point was determined, and the group members wore the wristbands for the same duration. The only difference here was the absence of the push button on the wristbands.

The control group (C): No wristbands were used for this group.

Again, the patients in all three groups determined the intensity of their pain and nausea and the level of their comfort using the VAS 0–100 mm tool during two (T1), four (T2), and six (T3) hours after the start of the research protocol. In addition, the researcher measured the frequency of nausea, vomiting, and retching by asking questions in the mentioned time intervals. Finally, the amounts of the anti-nausea, anti-vomiting, and narcotic drugs administered to the three groups during the 24 h after the intervention were compared.

2.9. Data analyses

The data analysis was carried out using the SPP statistical software (version no. 16). The Kolmogorov-Smirnov test was employed to check the observations' normality. If the distribution of the observations was normal, the repeated measurement test was run to compare the average observations in each group at different time intervals. However, when the distribution of observations was not normal, the Friedman test was performed. If the distribution of the observations was normal, the one-way variance test was used for comparing the average observations in the three groups of acupressure, placebo, and control; however, when the distribution wasn't normal, the Kruskal-Wallis test was utilized. The Chi-square test was employed to check the relationship/s between the qualitative variables. If the requirements of the chi-square test weren't fulfilled, Fisher's exact test was conducted.

3. Results

68 out of the 169 patients who underwent evaluation were reluctant to cooperate with the researcher, and three did not meet the inclusion criteria. The remaining 98 patients were randomly assigned to three groups (acupressure group $n = 34$, placebo group $n = 33$, and control group $n = 31$). However, eight patients, four in the acupressure group, three in the placebo group, and one in the control group, left the study during the research. In the end, 90 patients completed the study (Fig. 1).

3.1. Demographic information

The majority of research participants in the three groups were male and married; most members of the acupressure and placebo groups aged from 55 to 64 years old, and those in the control group aged between 45 and 54 years old. Besides, the chest pain in all three groups could be alleviated with sublingual tablets (nitroglycerin). The narcotic received before the intervention was a morphine ampoule; in addition, most of the patients in all three groups suffered from an Inferior MI-type heart attack. Finally, the patients in the three groups were not significantly different in terms of education ($P = 0.997$), the average duration of fasting until admission to the study ($P = 0.980$), and BMI ($P = 0.988$) (Tables 1 and 2).

3.2.1. Pain intensity

The results showed that before the start of the intervention, the intensities of pain were not significantly different in patients attending the three acupressure, placebo, and control groups ($p > 0.05$). Besides, the Friedman test results showed that the patients' average pain intensities were significantly different in the three acupressure, placebo, and control groups in the time interval extending from before the intervention to 6 h after the intervention ($p < 0.001$). In addition, the pain intensity in all three groups has decreased over time. However, the analysis of the

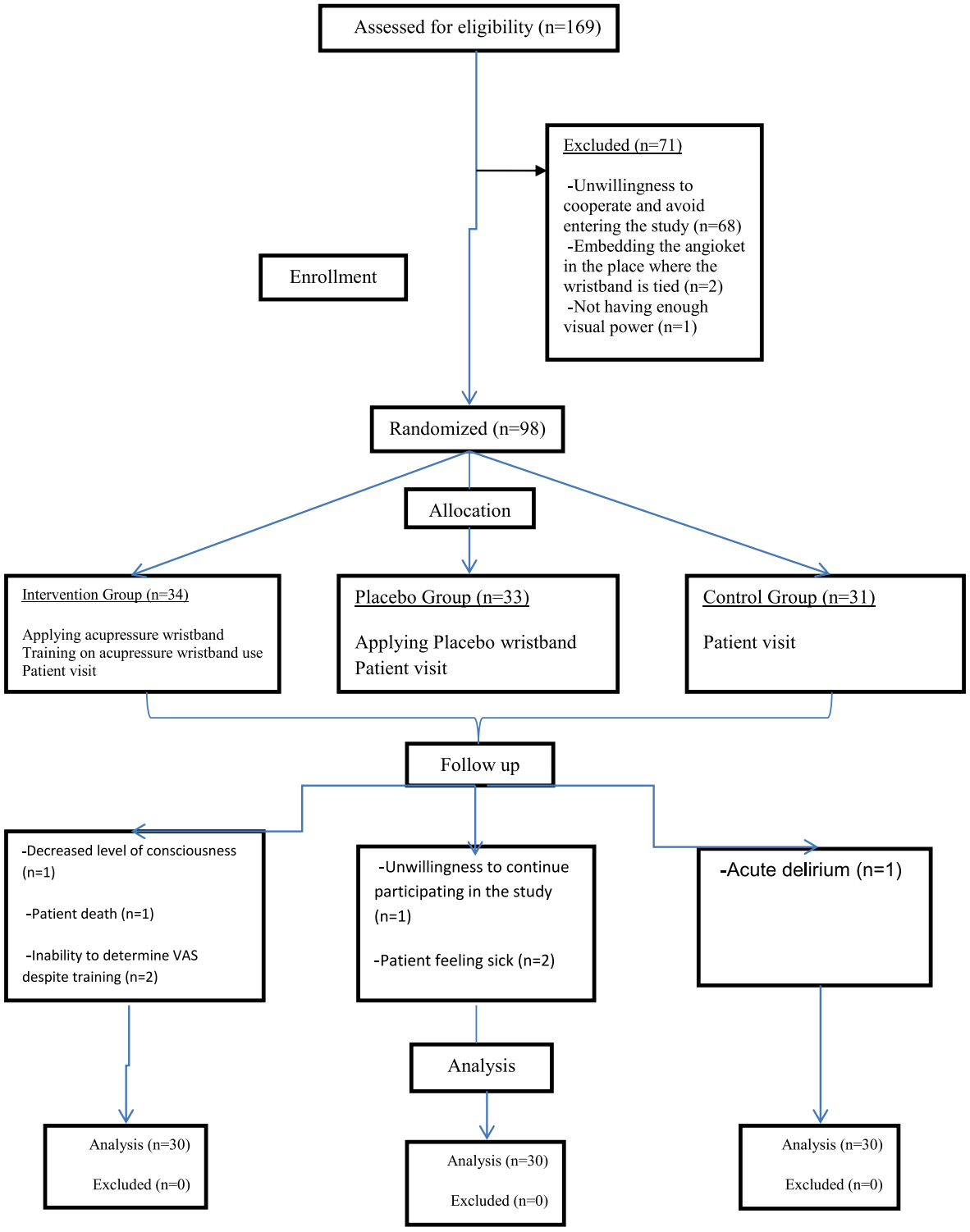

Fig. 1. CONSORT flow diagram.

repeated measures illustrated that there is no statistically significant difference among the three groups' members in terms of reduction of their pain intensity during the time interval extending from the start of the study to 6 h after the intervention (P = 0.213) (Table 3).

3.2.2. Nausea intensity

The results showed that before the start of the intervention, the intensities of nausea were not significantly different in patients attending the three acupressure, placebo, and control groups ($p > 0.05$). Besides, the Friedman test results showed that the patients' average nausea intensities were significantly different in the three acupressure, placebo, and control groups in the time interval extending from before the intervention to 6 h after the intervention ($p < 0.001$). Although the nausea intensity decreased in each group over time, the results indicate that this decrease is more considerable in the acupressure group.

3.2.3. Comfort score

The results showed that before the start of the intervention, the

Table 1
Comparison of the frequency of research units based on demographic and clinical information between three acupressure, placebo, and control groups.

Variable		Acupressure group number (percentage)	Placebo group number (percentage)	control group number (percentage)	The significance level
Gender	Lady	(33.3) 10	(30. 0) 9	(30.0) 9	**Chi-square test**
	sir	(66.7) 20	(70.0) 21	(70.0) 21	**P = 0.950**
marital status	Single	(0.0) 0	(0.0) 0	(0.0) 0	**Fisher exact test**
	married	(76.7) 23	(83.3) 25	(73.3) 22	**P = 0.803**
	divorced	(13.3) 4	(13.3) 4	(20.0) 6	
	the widow	(10.0) 3	(3.3) 1	(6.7) 2	
Education	illiterate	(26.7)8	(26.7)8	(26.7)8	**Chi-square test**
	High school	(26.7) 8	(26.7) 8	(23.3) 7	**P = 0.997**
	diploma	(23.3) 7	(16.7) 5	(26.7) 8	
	university	(23.3) 7	(30.0) 9	(23.3) 7	
age categories	35–44	(6.7) 2	(6.7) 2	(0.0) 0	**Fisher exact test**
	45–54	(30.0) 9	(36.7) 11	(53.3) 16	**P = 0.362**
	55–64	(43.3) 13	(46.7) 14	(40.0) 12	
	65–70	(20.0) 6	(10. 0) 3	(6.7) 2	
Type of heart attack	Inferior	(46.7) 14	(43.3) 13	(46.7) 14	**Fisher exact test**
	anterior	(30.0) 9	(33.3) 10	(33.3) 10	**P = 1.000**
	posterior	(10.0) 3	(10.0) 3	(10.0) 3	
	Extensive	(13.3) 4	(13.3) 4	(10.0) 3	
The type of drug received before the intervention	morphine	(53.3) 16	(56.7) 17	(56.7) 17	**Chi-square test**
	pethidine	(46.7) 14	(43.3) 13	(43.3) 13	**P = 0.962**
Cardiac pain reliever before intervention	nothing	(46.7) 14	(33.3) 10	(36.6) 11	**Chi-square test**
	Sublingual nitroglycerin	(53.3) 16	(66.7) 20	(63.3) 19	**P = 0.541**

Table 2
Comparison of average BMI and duration of fasting until entering the study of patients in three acupressure, placebo and control groups.

Variable	Acupressure group	Placebo group	control group	Test statistics	
	Standard deviation ± mean	Standard deviation ± mean	Standard deviation ± mean		
BMI (kg/m^2)	28.2 ± 21.25	29.2 ± 35.25	25.2 ± 32.27	0.45	Analysis of variance test P = 0.988
Duration of fasting until entering the study (in hours)	6.1 ± 93.50	6.1 ± 83.50	6.1 ± 77.50	0.04	Kruskal-Wallis test P = 0.980

comfort was not significantly different in patients attending the three acupressure, placebo, and control groups ($p > 0.05$). The Friedman test results showed that the patients' average comfort levels were significantly different in the three acupressure, placebo, and control groups in the time interval extending from before the intervention to 6 h after the intervention ($p < 0.001$). Although the comfort level rose in each group over time, the obtained results indicate that this increase is more extensive in the acupressure group. The analysis of the repeated measurements further revealed a significant difference between the studied groups in terms of their members' comfort levels ($P = 0.026$). As per the results of the Mann-Whitney test, the comfort level in the acupressure group, compared to that of two other groups, increased (Table 3).

3.5. Number of retching, nausea, and vomiting

The analysis of repeated measurements illustrated that there was a statistically significant difference between the patients in the studied groups in terms of the number of retching and nausea ($P < 0.001$) and vomiting ($P = 0.015$). Furthermore, the results of the Mann-Whitney test illustrated that compared to the other two groups, the acupressure group experienced a smaller number of retching, nausea, and vomiting (Table 4).

4. Discussion

This study deals with the impact of P6 acupressure on nausea, vomiting, retching, comfort, and the need for anti-vomiting in patients suffering from myocardial infarction. The present study's findings illustrated that the intensity and number of nausea, vomiting, and retching dropped significantly in three groups from the start of the study to 6 h after the intervention. Yet, this drop was more considerable in the acupressure group. In other words, the manual use of the acupressure wristband on the P6 point for 6 h leads to decreased nausea, vomiting, and retching in the patients going through the acute MI phase.

Similarly, the use of the acupressure wristband on both hands from 1 h before the surgery to 6 h after the surgery resulted in a reduction of intensity and lowered the number of nausea in the patients undergoing Laparoscopic cholecystectomy surgery [18]. Contrary to what happened in the placebo and control groups, when the myocardial infarction patients in the acupressure group tied the acupressure wristband on both hands, it reduced the intensity and number of their nausea and vomiting, though these differences were not statistically significant [4].

When the patients undergoing a gynecological operation wore the acupressure wristband on the P6 points of both their hands for 12 h, it reduced the intensity and frequency of their nausea and vomiting [11]. According to another study, wrapping both hands with acupressure wristbands for four days lowers pregnant women's nausea, vomiting, and retching [19]. The mentioned studies confirm the effect of acupressure wristbands tied on both hands at different times. However, wearing wristbands on both hands makes the clinical use of the device difficult, as MI patients often undergo radial angioplasty surgery when they go through the acute phase. Besides, shortening the time the acupressure wristband is used makes its use easier for the patients.

It is noteworthy that some efforts have been made to restrict the time and the use of wristbands to one hand; however, no significant result has been obtained. Accordingly, the results of studies demonstrated that the short-term use of the acupressure wristband (2 h) on one hand couldn't reduce the intensity and number of nausea and vomiting in the 24 h after the outpatient surgeries [14]. Moreover, pushing the P6 points on both

Table 3
Comparison of acupressure and placebo and control groups based on the average severity of nausea and comfort and pain intensity scores (0–100) of patients in four-time intervals.

Variable	group	Before the intervention	Two hours after the intervention	Four hours after the intervention	Six hours after the intervention	Test statistics	level of significance
		standard deviation ± mean	standard deviation ± mean	standard deviation ± mean	standard deviation ± mean		
Severity of nausea (0–100)	Acupressure	41.1 ± 67.52	34.2 ± 00.65	34.3 ± 33.51	10.1 ± 67.97	**<0.001**	P = 0.003
	Placebo	44.1 ± 67.71	40.2 ± 00.67	43.2 ± 00.88	14.1 ± 00.77	**<0.001**	
	Control	43.1 ± 00.60	42.2 ± 67.67	45.2 ± 33.78	14.1 ± 67.84	**<0.001**	
	The significance level	P = 0.460	P = 0.050	P = 0.050	P = 0.110		
Pain intensity (0–100)	Acupressure	50.2 ± 33.90	39.2 ± 00.55	39.3 ± 00.53	15.2 ± 33.07	**<0.001**	P = 0.213
	Placebo	51.2 ± 67.67	42.2 ± 67.39	42.3 ± 00.30	17.2 ± 67.02	**<0.001**	
	Control	48.2 ± 67.52	43.2 ± 00.67	46.3 ± 67.40	18.1 ± 33.80	**<0.001**	
	The significance level	P = 0.730	P = 0.480	P = 0.311	P = 0.411		
Convenience score (0–100)	Acupressure	39.2 ± 67.51	33.2 ± 67.82	30.4 ± 33.11	6.2 ± 00.23	**<0.001**	P = 0.026
	Placebo	43.2 ± 00.84	39.2 ± 33.95	39.3 ± 67.88	7.2 ± 67.18	**<0.001**	
	Control	42.2 ± 33.74	43.2 ± 00.84	43.3 ± 00.75	8.2 ± 00.17	**<0.001**	
	The significance level	P = 0.700	P = 0.070	P = 0.040	P = 0.320		

Table 4
Comparison of the average number of belching, nausea, and vomiting of patients in three-time intervals in acupressure, placebo, and control groups.

Variable	group	Two hours after the intervention	Four hours after the intervention	Six hours after the intervention	Test statistics	level of significance
		standard deviation ± mean	**standard deviation ± mean**	**standard deviation ± mean**		
The Number of retching	Acupressure	1.0 ± 57.14	1.0 ± 13.16	0.0 ± 37.09	0.001>	P < 0.001
	Placebo	1.0 ± 97.14	1.0 ± 93.19	0.0 ± 73.12	0.001>	F = 9.87
	Control	2.0 ± 07.13	2.0 ± 20.18	0.0 ± 80.12	0.001>	
The number of nauseas	Acupressure	1.0 ± 67.18	1.0 ± 33.17	0.0 ± 47.10	0.001>	P < 0.001
	Placebo	2.0 ± 17.17	2.0 ± 10.21	0.0 ± 83.08	0.001>	F = 8.57
	Control	2.0 ± 40.14	2.0 ± 40.19	0.0 ± 87.08	0.001>	
Number of vomiting	Acupressure	0/0 ± 77.15	0.0 ± 63.13	0.0 ± 13.06	0.001>	P = 0.015
	Placebo	1.0 ± 13.14	1.0 ± 10.14	0.0 ± 30.08	0.001>	F = 4.38
	Control	1.0 ± 20.15	1.0 ± 13.13	0.0 ± 37.09	0.001>	

hands for 30 min doesn't control the intensity and number of nausea and vomiting during spinal anesthesia of cesarean surgery [13]. It can be concluded that the short-term use of acupressure wristbands (2 h or less) cannot decrease patients' nausea, vomiting, and retching. Nevertheless, making any statement in this regard needs multiple comprehensive studies on different groups of patients.

The present research findings show that the comfort of the patients in the acupressure groups increased significantly more than that in the placebo and control groups. By the researcher's searches, this is the first work studying the comfort in MI patients following the use of the acupressure wristband. The results of other works further demonstrate that acupressure on the P6 points for 12 h can elevate the comfort level of the patients [11]. We can also expect that reducing patients' nausea, vomiting, and retching can boost their comfort, yet more comprehensive studies should be conducted on different populations of patients.

The present study's findings illustrate that the administration of the anti-nausea drug to the acupressure group during the 24 h dropped significantly. What makes the mentioned finding profoundly important are the different complications of anti-nausea drugs, including constipation, headache, exhaustion, restlessness, increased Q-T distance, Tachycardia, dangerous arrhythmias, lack of knowledge about temporal and spatial knowledge, and extrapyramidal complications that can increase the costs and duration of the treatment [7,8]. Similarly, the results showed that using acupressure on both hands for 24 h can reduce the consumption of anti-nausea drugs by myocardial infarction patients in the acupressure group compared to those in the placebo and control groups [4]. The use of acupressure on the P6 points of both hands for 12 h can be effective as much as the anti-nausea drugs affect the patients after surgeries; furthermore, it can cut down the consumption of anti-nausea drugs [11]. However, some studies have illustrated that acupressure wristbands have not impacted the prescription of anti-nausea drugs.

The use of acupressure wristbands on one hand for 48 h after the Craniotomy surgery didn't manage to lower patients' need for anti-nausea drugs [20]. These differences may be rooted in the research population and method. As the reduced need for anti-nausea drugs is regarded as an indicator of decreased nausea and vomiting, more comprehensive studies should address the impact of acupressure wristbands on factors like the consumption of anti-nausea drugs, the complications of these drugs, drug interactions, and costs. Considering the importance of complementary medicine interventions, especially acupressure, in alleviating symptoms in patients with various diagnoses and the cost-effectiveness of these measures compared to pharmacological treatments, it is recommended that future studies focus on cost-effectiveness of acupuncture compared to drug treatments in patients with myocardial infarction.

4.1. Clinical implication

As the conduction of clinical trial studies with accurate methods allows the evidence to be employed for evidence-based nursing and renders the provision of nursing guidelines about controlling nausea and vomiting of myocardial infarction patients possible, several studies should be carried out in this respect. In this regard, the results of the present study demonstrated that the use of acupressure for 6 h, on one hand, could lower the intensity, number of nauseas, vomiting, retching, and the need for anti-vomiting drugs; in addition, it can boost the comfort of these patients.

4.2. Limitations

As nausea intensity and comfort are two abstract concepts, their determination can be affected by the patient's feelings, an issue the researcher can't control; however, the researcher attempted to monitor the related statements more critically with the tool. This study was carried out on 90 MI patients; therefore, the results of this work can be generalized if similar studies with more samples are carried out. Last but not least, the study was conducted on all MI types, yet some other studies can be performed on a specific MI to make the result more accurate.

5. Conclusion

The results illustrated that p6 acupressure reduces nausea, vomiting, and retching and increases the comfort level in myocardial infarction patients. Furthermore, it can diminish the need for anti-vomiting drugs in these patients. As the application of this method is pretty easy, it is effective, and without any complications, it is recommended to be used by nurses to reduce complications in myocardial infarction patients. Based on the results of this study, it is also suggested that interventions based on complementary medicine therapies be taught to the companions and families of patients with myocardial infarction, and that such interventions receive broader attention from healthcare policymakers.

Consent for publication

Not applicable.

Data statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Funding

Hamadan University of Medical Sciences funded this project, in Hamadan, Iran (No: IR.UMSHA.REC.1398.959).

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Acknowledgments

This research is extracted from an MA thesis in nursing, registered by Hamad University of Medical Sciences under the 9905143086 codes. The authors appreciate the financial support provided by the research and technology department of Hamadan University of Medical Sciences; we also thank the staff of Farshchian Heart Hospital and all the patients who helped us conduct this study.

Abbreviation

MI Myocardial Infarction

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