The Effect of Complementary Acupressure Therapy for Morning Sickness

Indah Kusmindarti, Veryudha Eka P, and Indra Yulianti

Midwifery, School of Health Science Bina Sehat PPNI, Mojokerto, Indonesia.

Correspondence should be addressed to Indah Kusmindarti; indahk903@gmail.com

Abstract

Emesis gravidarum is a physiological thing but if it is not treated immediately, it will become a pathological thing. Most of emesis gravidarum can be treated with outpatient treatment and administration of sedatives and anti-vomiting drugs, but a small percentage of pregnant women cannot cope with ongoing nausea and vomiting so that it interferes with daily activities and falls into a condition called hyperemesis gravidarum. Not all pregnant women can undergo therapy using drugs, there are some mothers who do not really like it when they must take drugs, so the provision of non-pharmacological therapy is needed here. One of the non-pharmacological therapies that can be used to treat emesis gravidarum is acupressure.

Research Objectives: This study aims to determine the effect of complementary acupressure therapy on morning sickness in Mojokarang village, Dlanggu, Mojokerto in 2020. The research design used in this study was a Quasy Experiment with a pretest and posttest design with a control group. The population was 30 people with 15 people as the treatment group and 15 people as the control group. The sampling technique in this research is done by purposive sampling. Data analysis using t-test. Results: Showed vomiting before intervention Mean 10.53 Min 9 Max 13 and Standard Deviation 1.408 and Standard Error 0.257, after being given acupressure Mean 7.30 Min 5 Max 10 and Standard Deviation 1.317 and Standard Error 0.240. Statistical test results obtained value of P-value = 0.000 means that their Effect Therapy Complementary Acupressure to The Morning Sickne ss pregnant women in the village Mojokarang Dlanggu District of Mojokerto 2020. Conclusion: Acupressure stimulates the regulatory system and activates endocrine and neurologic mechanisms, by stimulating the hypothalamus to secrete endorphins that provide a sense of relaxation. Suggestion: As input in providing information about morning sickness, understanding, treatment and impact if morning sickness left, besides the benefits and resources for mothers on treatment of nausea and vomiting using complementary acupressure in daily life.

Keywords: Complementary Therapy, Acupressure, Morning sickness

Introduction

Morning Sickness is a condition that physiology experienced by pregnant women and is a common complaint that occurs during early pregnancy. Nausea and vomiting are very commonly experienced by women in early pregnancy. This can have considerable physical, social and psychological effects on pregnant women (Anne Matthews 1, David M Haas, Dónal P O'Mathúna, 2015). Nausea and
vomiting are a result of changes in the endocrine system that occur during pregnancy, especially the increase in the HCG hormone in pregnancy is a common complaint of almost 50-80% of pregnant women\textsuperscript{[1]}. Problems in the first trimester, for example, are feelings of nausea and vomiting due to increased estrogen levels, continuous nausea and vomiting can cause dehydration\textsuperscript{[2, 3]}. If underestimated, nausea and vomiting felt during pregnancy can objectively affect the fetus born with low birth weight\textsuperscript{[4]}. One of the causes of low birth weight (LBW) babies is nausea and vomiting. The incidence of nausea and vomiting is at least 14% of all pregnant women (WHO, 2012). Data for pregnant women obtained from the Ministry of Health of the Republic of Indonesia in 2013 stated that the incidence of excessive nausea and vomiting in Indonesia was 14.8% of all pregnancies. Complaints of nausea and vomiting occur in 60-80% of primigravida and 40-60% of multigravida. The incidence of hyperemesis gravidarum in Indonesia in 2015 was 1.5-3% of pregnant women, while the incidence of hyperemesis gravidarum in East Java Province in Trimester 1 and 2 or in K1-K2 coverage reached 10-15% of the number of pregnant women who were as many as 182.815 people in 2015\textsuperscript{[5]}. The cause of nausea and vomiting is a multi-factorial problem. Estrogen is known to increase nausea and vomiting. The increase in estrogen can provoke an increase in stomach acidity which makes the mother feel nauseous. Emesis gravidarum if not treated immediately can result in impaired fetal growth, the fetus dies in the womb and the fetus can experience congenital abnormalities\textsuperscript{[6]}. The management of morning sickness can be in the form of pharmacological and non-pharmacological treatment. One of the non-pharmacological methods to treat nausea and vomiting is acupressure\textsuperscript{[7]}. Related research conducted\textsuperscript{[8]}, regarding Interventions for nausea and vomiting in early pregnancy, one of which was acupressure involving 5449 pregnant women who met the inclusion criteria showed that acupressure showed significant results in reducing nausea and vomiting in pregnant women.

**Materials and Methods**

The research design used in this study was a *Quasy Experiment* with a *pretest* and *posttest design* with a control group. The design in this study used a *non-equivalent control group design*\textsuperscript{[6]}.
The illustration of this research design can be seen as follows:

\[ R \ O1 \ X1 \ O2 \]

Information:
- **R**: Subject (pregnant woman)
- **O1**: Observation before giving complementary acupressure therapy
- **X1**: Intervention / complementary therapy treatment of acupressure
- **O2**: Observation after being given complementary therapy acupressure

### Result and Discussion

#### Table 1. Frequency distribution of respondents based on age, duration of hypertension and body weight in the treatment group and control group

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Treatment Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td><strong>1 Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20 years</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>20-30 years old</td>
<td>7</td>
<td>46.6</td>
</tr>
<tr>
<td>31-37 years old</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>amount</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td><strong>2 pregnant to</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td>2-4</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>amount</td>
<td>15</td>
<td>100</td>
</tr>
</tbody>
</table>

Primary Data 2020

Based on the table above, it shows that in terms of age, most of the respondents in the control group ranged in age <20 years, namely 12 (80 %) and the lowest was in the age range of 31-37 years, namely 1 person (6.7%). The most in the control group was in the 2-4th pregnancy, namely 11 respondents (73.3 %). The number of respondents in the treatment group was 15 respondents and the number of respondents in the control group was 15 respondents.

#### Table 2. Average morning sickness in TMI pregnant women before the application of acupressure

<table>
<thead>
<tr>
<th>Measurement results</th>
<th>N</th>
<th>mean</th>
<th>Min-Max</th>
<th>Std. Dev</th>
<th>Std. Error</th>
<th>CI-95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning sickness</td>
<td>15</td>
<td>10.53</td>
<td>9-13</td>
<td>1,408</td>
<td>0.257</td>
<td>10.01- 11.06</td>
</tr>
</tbody>
</table>

From table 2 above can be seen that the average morning sickness mother pregnant TMI before given acupressure therapy with value Mean 10.53 value Min 9 value Max 13 and value Standard Deviation 1,408 and the value of Standard Error 0.257.

#### Table 3. Average morning sickness in pregnant women TMI after the application of acupressure

<table>
<thead>
<tr>
<th>Measurement results</th>
<th>N</th>
<th>mean</th>
<th>Min-Max</th>
<th>Std. Dev</th>
<th>Std. Error</th>
<th>CI-95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning sickness</td>
<td>15</td>
<td>7.30</td>
<td>5-10</td>
<td>1.317</td>
<td>0.240</td>
<td>6.8 - 7.79</td>
</tr>
</tbody>
</table>

From Table3 above it can be seen that the average morning sickness mother pregnant TMI after given therapy acupressure with values Mean values 7:30 Min 5 grades Max 10 and the value Standard Deviation 1,317 and the value of Standard Error 0.240.
Table 4. Effect of Acupressure Application on pregnant women with morning sickness

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>mean</th>
<th>Std. dev</th>
<th>SE</th>
<th>p-value</th>
<th>CI-95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>15</td>
<td>10.53</td>
<td>1.408</td>
<td>0.257</td>
<td>0.000</td>
<td>2.656</td>
</tr>
<tr>
<td>Post test</td>
<td>15</td>
<td>7.30</td>
<td>1.317</td>
<td>0.240</td>
<td>3.811</td>
<td></td>
</tr>
</tbody>
</table>

From table 4 the average morning sickness is 15 respondents with Mean 10.53 Min 9 Max 13 and Standard Deviation 1.408 and Standard Error 0.257 in the second measurement, 15 respondents with morning sickness were obtained after being given acupressure treatment with Mean 7.30 Min 5 Max 10 and Standard Deviation 1.317 and Error Standard 0.240. The results of the statistical test obtained p-value = 0.000 which means that there is an effect of giving acupressure on morning sickness.

Nausea and vomiting, also known as emesis gravidarum, is a common complaint in early pregnancy. The occurrence of pregnancy causes hormonal changes in women because there is an increase in the hormone’s estrogen, progesterone, and placental HCG secretion. Nausea and vomiting can also be caused by hormonal changes and body conditions to prepare a new position or home for the fetus. In this study, emesis gravidarum has at least a minimum value of 6 and a maximum value of 13, the frequency of nausea and vomiting can be caused by the body's response to objects, odors, or the food consumed, besides the handling and management of nausea and vomiting is very necessary for pregnant women, such as providing warm food, snacks or crackers, as well as non-pharmacological management (hobatherbal) in the hope that nausea and vomiting can be resolved, and do not interfere with maternal nutritional intake[4, 9]. Pathophysiology Emesis gravidarum can be caused by an increase in the Chorionic Gonadotropin Hormone (HCG) which can be a factor in nausea and vomiting[7]. Increased levels of the hormone progesterone cause smooth muscles in the gastrointestinal system to relax so that motility decreases, and the stomach becomes empty. Hyperemesis gravidarum which is a complication of young pregnant women if it occurs continuously can result in dehydration, electrolyte imbalance, and can result in carbohydrate and fat reserves being used up for energy purposes[7, 10]. Acupressure is a method of treatment from ancient China by stimulating special points on the body by using needles for acupuncture and using fingertips in acupressure because it is an emphasis on certain body points[11]. Acupressure and acupuncture sessions should be done 2-3 times a week, acupressure and acupuncture stimulate the regulatory system and activate endocrine and neurological mechanisms, which are physiological mechanisms in maintaining...
balance, manual emphasis on P6 or pericardium 6 in the wrist area, namely 3 fingers from the distal wrist or two tendons for 2 minutes\textsuperscript{[7]}. In this literature review, some literature describes acupressure more effectively cope with nausea and vomiting in pregnant women. The process with the acupressure technique focuses on the nerve points of the body. Acupressure is believed to increase or revive diseased organs, so that it can facilitate impaired blood circulation. The statistical test results obtained a p-value = 0.000 which means that there is an effect of giving complementary acupressure therapy on emesis gravidarum, in line with the theory put forward that emesis gravidarum is a state of nausea and vomiting that is more than 10 times in 24 hours or any time a pregnant woman interferes with work. day-ha ri because generally become worse and can prevent dehydration. Emesis gravidarum is excessive nausea and vomiting so that daily work will be disrupted, and the general condition becomes worse. Acupuncture or acupressure utilizes stimulation at the patient's acupuncture points, ears or scalp to influence the flow of the body's bioenergy known as Qi. Qi flows in a meridian (channel), so the essence of acupuncture/acupressure treatment is to restore the body's homeostatic system which is manifested by a regular and harmonious flow of qi in the meridians so that the patient is healthy again. By strengthening the qi, the body's power becomes good, the causes of disease can be eliminated indirectly. The loss of the cause of the disease and the strength of ci 18 can restore the state of yin and yang so that disease can be cured, and people become healthy again\textsuperscript{[2-4]}.  

**Conclusion**  
The provision of acupressure complementary therapy to pregnant women with morning sickness has a significant effect on reducing nausea and vomiting in pregnant women with morning sickness. Acupressure is a method of treatment from ancient China by stimulating special points on the body by using needles for acupuncture and using fingertips in acupressure because it is an emphasis on certain body points. Acupressure and acupuncture sessions should be done 2-3 times a week, acupressure and acupuncture stimulate the regulatory system and activate endocrine and neurological mechanisms, which are physiological mechanisms in maintaining balance, manual emphasis on P6 or pericardium 6 in the wrist area, namely 3 fingers from the distal wrist or two tendons for 2 minutes. Acupressure is believed to increase or revive diseased organs, so that it can facilitate disturbed blood circulation. The results of this study can also be used as reference material in conducting further research, which is related to
pharmacological therapy in mothers who experience emesis gravidarum during pregnancy. As well as the development of research on the provision of complementary acupressure therapy for other health complaints.

Data Availability

Conflicts of Interest

Funding Statement

Acknowledgments

Supplementary Materials

Reference


