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Effectiveness of Application P6 Point Acupressure to Emesis Gravidarum at Hermina Hospital Bekasi

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ABSTRACT

In 2019 the World Health Organization (WHO) in Indonesia obtained data on pregnant women with nausea and vomiting reaching 14.8% of all pregnancies, complaints of nausea and vomiting occur in 60-80% of primigravidas and 40-60% of multigravidas . Untreated nausea and vomiting will continue to become hyperemesis gravidarum or excessive nausea and vomiting. Management depending on the severity of symptoms, treatment consists of pharmacological and non-pharmacological therapy, even now with various complementary therapies like acupressure. Purpose of the study know effectiveness of applying acupressure point P6 to emesis gravidarum at Hermina Hospital Bekasi In 2023 . Study use method *Quasi Experiment* with *pre-test post-test design*. Sample in study this totaling 25 respondents. Retrieval technique sample use *total sample*. Instrument study sheet check mark observation and questionnaires. Data analysts use univariate and bivariate with the Wilcoxon test. In the research Frequency of emesis gravidarum during the pretest of 25 respondents before being given acupressure P6 had an average value (mean) of 8.9. The distribution of data (Std. Deviation) obtained was 2.52 with a minimum value of 4 and a maximum value of 13. The frequency of emesis gravidarum conditions after being given acupressure P6 had an average value (mean) of 5.6 from 25 data. The distribution of data (Std.Deviation) obtained was 1.99 with a minimum value of 4 and a maximum value of 11 after the post-test. Conclusion study there is Effectiveness of Applying P6 Point Acupressure to Emesis Gravidarum at Hermina Hospital Bekasi.

Keywords: *Implementation Acupressure P6 point; Emesis Gravidarum; Hermina Hospital Bekasi*

Introduction

Emesis gravidarum is a feeling of nausea and vomiting during pregnancy. Usually occurs in the quarter first (TM 1). If nausea and vomiting become excessive until cause dehydration so called with hyperemesis gravidarum.

The incidence of emesis gravidarum in the third trimester first in Iran as much as 50-80% [5.]While in Indonesia it reaches 14.8%. Complaints of nausea and vomiting occur in 60-80% of primigravidas and 40-60% of multigravidas [13.]Meanwhile for hyperemesis gravidarum incident

that requires Handling intense Due to lack of fluids and electrolytes due to excessive fluid loss , *the World Health Organization* (WHO) states that the incidence rate worldwide is 12.5% with different percentages in each country , namely 10.8% in China, 2.2% in Pakistan, 1.9% in Turkey, 0.9% in Norway, while in Indonesia it is 1%-3% [17].

Impact on pregnant women The result of nausea and vomiting is a decrease in electrolyte fluids in the mother's body pregnant, resulting in Hemoconcentration which can slow blood circulation, decreased appetite can affect fetal development, nutritional disorders, dehydration,

weakness, and weight loss. Impact on fetus which can cause side effects such as abortion, low birth weight babies, premature birth, and malformations in newborns [16].

Management of nausea and vomiting in pregnancy depends on the severity of the symptoms. Treatment ranges from the mildest with dietary changes to a more comprehensive approach pharmacology and non-pharmacology. Treatment pharmacology like antiemetics, or parenteral nutrition with take care hospitalization. Non-pharmacological treatment like acupressure and aromatherapy.

Acupressure is a treatment that comes from Traditional Chinese Medicine. Acupressure is a branch of acupuncture, a non-invasive action without using needles like acupuncture. Based on theory, acupressure can activate nerves in the muscles by applying pressure to certain points so as to stimulate the muscle nerves then received in the central nervous system to produce different effects depending on the pressure on certain points. Acupressure can also provide balance to the function of internal organs and energy so that hinder improvement sour stomach and can control nausea and vomiting [9].

According to Hilman, acupressure massage at point P6 is believed to be effective and easy to overcome nausea and vomiting. Acupressure massage at points P6 and ST36 is effective in patients undergoing chemotherapy because it can inhibit the effects of nausea and vomiting due to the balance of energy in the spleen and stomach. The release of beta endorphin in the pituitary makes acupressure massage at points P6 and ST36 believed to have an effect on reducing nausea and vomiting because beta endorphin cells play a role in reducing nausea and vomiting impulses in the vomiting center and chemoreceptor trigger zone (CTZ) due to improvements in the flow of Qi energy [2].

Research conducted by Kibas (2018) at BPM Afah Fahmi, Amd. Keb Surabaya and research by Mariza & Ayuningtias (2019) at BPM Wirahayu Panjang in 2018, regarding the effect of acupressure at point P6 on nausea and vomiting in pregnant women in the first trimester occurred decline significant nausea and vomiting ($p: 0.000$) [11],[8].

Based on the results of previous studies, it is known that there is an effect of P6 point acupressure on nausea and vomiting in pregnant women in the first trimester. Therefore, the researcher is interested in conducting a study

entitled "Effectiveness of Application P6 Point Acupressure to Emesis Gravidarum at Hermina Hospital Bekasi in 2023".

Method

This study used *Quasi Experiment* with *pre-test post-test design*. This study was conducted to determine the decrease in emesis gravidarum before and after acupressure point P6 was given. The research was conducted at Hermina Hospital Bekasi. The research was conducted in the period December 20, 2023-January 20, 2024. Population used are all pregnant women who experience emesis gravidarum who visit Hermina Hospital, Bekasi. Sampling technique used was *purposive sampling*, namely a sampling technique based on the researcher's considerations regarding which samples are most appropriate, useful and considered representative. All samples in the study have filled out the informed consent form.

The sample criteria in this study are:

1) Inclusion Criteria

- Pregnant women at the age of pregnancy 0 - 18 weeks
- Willing to be respondents
- Willing to undergo acupressure therapy
- Able to read and write
- Not consuming pharmacological drugs for emesis gravidarum

2) Exclusion Criteria

- Pregnant women with complications of infectious diseases such as HbsAg, HIV/AIDs
- Pregnant women with emesis gravidarum who consume pharmacological drugs
- Not willing to be a respondent

The variables in this study consist of 2 variables. The independent variable is the administration of acupressure at point P6, and the dependent variable is emesis gravidarum.

Research flow, at the beginning of the research, the researcher provides knowledge about acupressure to potential respondents, explains the purpose and benefits of the research, and potential respondents who are willing to take part in the research will fill out a consent form. The next stage a pretest by assessing the degree of emesis gravidarum using the *Pregnancy-Unique Quantification of Emesis and/or Nausea questionnaire*, then an intervention was carried out on each sample, namely the respondents were given acupressure at point P6 which was carried out by the researcher alone. Acupressure point P6 is do emphasis in a way simultaneous on the wrist,

namely three fingers from the distal wrist area between the two tendons at the pericardium point 6 (P6 or Nei Guan point). Massage is performed 30 times at each point for 15 minutes under sedation in the morning, afternoon, evening and night. Acupressure conducted for 3 consecutive days. Then a posttest was conducted.

The research instruments used were checklist sheets and observation sheets that were distributed directly to respondents. The observation

sheet contained the respondent's activities related to the provision of acupressure and the degree of emesis gravidarum filled in by the researcher.

The data processing process consists of: *Editing, Coding, Entering or processing, Cleaning Data*. This research data analysis only carried out two data analyses, namely univariate analysis and bivariate analysis using the SPSS computerized system.

Results and Discussion

Table 1. Distribution of respondent characteristics

Variables	Category	Frequency (f)	Percentage (%)
Age	No risk	21	84.0
	At risk	4	16.0
pregnancy	Trimester 1	18	64.0
	Trimester 2	7	36.0
Parity	Primigravida	18	72.0
	Multigravida	7	28.0
Hemoglobin	No Anemia	17	68.0
	Anemia	8	32.0

Table 2. Emesis measurement results Gravidarum before and after treatment

Variables	Mean	Std. Deviation	Min-Max
Emesis Gravidarum Before Treatment	8.9	2.52	4-13
Emesis Gravidarum After Treatment	5.6	1.99	4-11

Table 3 . Data Normality Test Results

No	Variables	Pvalue	Conclusion
1	Emesis gravidarum Before	.000	Not normally distributed
2	Emesis gravidarum after	.000	Not normally distributed

Table 4. Wilcoxon Test Results

Emesis Gravidarum	After – Before
Z	-3.965b
Asymp. Sig. (2-tailed)	.000

From the population Mother pregnant coming to Hermina Hospital Bekasi from December 2023 to January 2024, 42 respondents were obtained. Those who meet the requirements criteria inclusion and exclusion only 25 respondents.

In this study, the characteristics of respondents were divided based on age, gravity, parity and hemoglobin.

Age

In Table 1 results The study showed that of the 25 respondents, most of the respondents were aged 20-35 years (age No at risk) amounted to 21

people (84.0%), while mothers aged less than 20 years and over 35 years were 4 people (16.0%).

In line with the research of Novita Rudiyaniti & Rosmadewi (2019) that more respondents were of non-risk age, namely 70%. Meanwhile For age at risk there are 30%. Where respondents are < 20 years old There is 4 people, and 5 people aged > 40 years.

Age is the length of time lived or existed (since birth or being held). In the healthy reproductive period, it is known that the safe age for pregnancy and childbirth is 20 years to 35 years. Pregnancy at the age of less than 20 years, the pelvis and uterus are still small, the

development of reproductive organs is not optimal, emotional and mental maturity is lacking and physiological functions are not optimal, so that unwanted complications occur more often in pregnancy. At the age of over 35 years, reproductive organs and physiological functions decline compared to the age of 20-35 years. Early studies suggest that women over 35 years of age are at higher risk of experiencing obstetric complications and perinatal morbidity and mortality.

According to researchers, the most productive age during pregnancy is between 20 and 35 years. Because at that age, the mother is physically stronger compared to those under 20 and over 35 years. Age under 20 is not a good time to get pregnant because the reproductive organs are not yet perfect so that it can cause nausea and vomiting. Nausea and vomiting occur at the age of under 20 years due to the lack of physical, mental, and social maturity of the prospective mother so that it can cause physical doubts, love, and care and nurturing for the child to be born. Nausea and vomiting that occurs over the age of 35 years is caused by psychological factors due to the mother not being ready to get pregnant or even not wanting her pregnancy anymore so that she will feel so depressed and cause stress to the mother. In terms of emesis gravidarum, it is not only age that influences, whatever the mother's age when pregnant depends on the hormones in the mother's body.

Pregnancy

In table 1 h results research shows that most of the 25 respondents. There were 16 respondents (64.0%) in the first trimester of pregnancy and a small number were in the second trimester of pregnancy, there were 9 respondents (36.0%).

In line with research by Inthan Atika, Hadrians Kesuma Putra, Siti Hildani Thaib (2016) that from 35 samples it was found that the gestational age group of 1-12 weeks experienced more emesis gravidarum, namely 22. Respondents (62.9%) compared to the 13-28 week gestation age group, which was 13 respondents (37.1%) [6].

Emesis gravidarum is related to gestational age, namely in the first trimester of pregnancy. Because the HCG hormone increases in the mother's blood in the first trimester of pregnancy. Increased pregnancy hormones can trigger emesis gravidarum.

According to researchers, emesis gravidarum often occurs in the first trimester of pregnancy, which can be caused by high levels of

chorionic gonadotropin hormone in early pregnancy. The hCG hormone bypasses ovarian control in the pituitary and causes the corpus luteum to continue producing estrogen and progesterone, thus stimulating excessive nausea and vomiting. Aggravated by factors physiological and psychological from Mother pregnant.

Parity

In table 1 the results study based on parity obtained part big were primigravida as many as 18 respondents (72.0%) and multigravida as many as 7 respondents (28.0%).

Different with research by Novita Rudiyantri & Rosmadewi (2019) that more respondents had multigravida status (more than 1 pregnancy), namely 62.2%. While primigravida was 37.8%. The possibility this due to Because difference amount respondents studied.

According to researchers, most primigravidas have not been able to adapt to the hormones estrogen and chorionic gonadotropin so that emesis gravidarum occurs more often. While multigravidas have been able to adapt to the hormones estrogen and chorionic gonadotropin because they have experience with pregnancy and childbirth. So it can be concluded that emesis can cause anxiety in both primigravidas and multigravidas. The anxiety experienced by primigravidas shows a lack of knowledge, information and communication between women and caregivers. While multigravidas already have experience, information and knowledge about the symptoms of emesis gravidarum so that they are able to overcome the symptoms. But if the multigravida there is psychological trauma during the pregnancy process or labor previously, then This can trigger emesis in respondents This.

Hemoglobin

In table 1 h results The study showed that the majority of respondents were not anemic, as many as 17 respondents (68.0%), and a small proportion were anemic, as many as 8 respondents (32.0%).

This is in line with Aidah's research that those who experience anemia with those who experience emesis gravidarum are greater, namely 14 respondents or (46.7%) compared to those who experience anemia with those who do not have emesis gravidarum, namely 3 respondents or (10%). Likewise with study In Rosida's research, the prevalence of pregnant women with anemia who experienced cases of emesis gravidarum was 51.6% (32 respondents) compared to their controls 25.8% (16 respondents) [1],[16].

Anemia is a condition where the hemoglobin (Hb) levels in the blood are lower than the normal values for a group of people according to age and gender. Hemoglobin is a colored substance found in the blood that functions to transport oxygen and carbon dioxide in the blood. Anemia in pregnancy is a condition in pregnant women who have hemoglobin levels below 11 gr% in the 1st and 3rd trimesters or levels <10.5 gr% in the 2nd trimester [15].

According to Researchers when women are pregnant, there will be changes in the body that affect health conditions. Naturally, the body of pregnant women will form more red blood cells to meet the oxygen and nutritional needs of the fetus. The production of red blood cells and hemoglobin requires various components, such as iron, folic acid, and vitamin B12. If the body lacks one of these substances, anemia (lack of red blood cells) can occur. Anemia in pregnant women will cause supply oxygen in blood down and can as triggers emesis gravidarum and can entered to in factor adaptation.

Emesis Gravidarum at Hermina Hospital.

Based on Table 2 research results show that the condition of emesis gravidarum before P6 acupressure has an average value (mean) of 8.9. The distribution of data (Std. Deviation) obtained is 2.52 with a minimum value of 4 and a maximum value of 13. The condition of emesis gravidarum after P6 acupressure has an average value (mean) of 5.6. The distribution of data (Std.Deviation) obtained is 1.99 with a minimum value of 4 and a maximum value of 11.

Efforts to overcome nausea and vomiting are many things that must be done from eating, drinking, medication and action. For eating, mothers are expected to consume foods with balanced nutrition, namely foods that contain carbohydrates, fats, proteins, vitamins, and minerals. Lack of these nutrients can worsen the mother's condition. Efforts to reduce the frequency of vomiting can be given several actions such as medication, in addition to medication, nausea in early pregnancy can be reduced by using complementary therapies such as acupressure. Acupressure is a massage or emphasis in a way simultaneous based on point point the science of acupuncture or it can also be called acupuncture without needles.

Acupressure therapy is one of the non-pharmacological therapies in the form of massage therapy at certain meridian points related to internal organs to overcome nausea and vomiting.

This therapy does not include drugs or invasive procedures but rather by activating cells in the body, so this therapy does not provide side effects like drugs and does not require expensive costs. In principle, acupressure therapy is the same as massage so it does not require special skills, unlike acupuncture which requires training. Acupressure therapy for nausea and vomiting is done by manually pressing on the Pericardium 6/Pericardium 6 (Neiguan) in the wrist area [8]. The benefits of acupressure can for the prevention of high blood pressure, rehabilitation healing, anxiety, pain relief, and preventing recurrence of the disease, increasing body stamina, improving blood circulation, improving sleep quality and reducing stress with effect calm the mind [20].

Effectiveness of P6 Acupressure on Emesis Gravidarum.

At the stage initial research data has normality test was performed. The normality test used was the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov formula is as follows:

$$KD : 1,36 \frac{\sqrt{n_1 + n_2}}{n_1 n_2}$$

Information:

KD = the Kolmogorov-Smirnov sum sought

n1 = number of samples obtained

n2 = expected number of samples

Data is said to be normal if the significant value is greater than 0.05 at (P>0.05). Conversely, if the significant value is smaller than 0.05 at (P<0.05) then the data is said to be abnormal.

Based on the data normality test, it was found that all variables had a significance lower than α (0.005) so it can be concluded that the data is not normally distributed.

At Stage next research data Wilcoxon test was performed. Based on Table 4 research results show that the effectiveness of applying P6 point acupressure to emesis gravidarum with *Wilcoxon* test analysis obtained a significance value of 0.000 ($p < 0.05$), it can be concluded that there is a significant change between emesis gravidarum before and after it was carried out. acupressure. Can concluded The application of acupressure at point P6 is effective in reducing the level of emesis gravidarum.

In line with Mariza's research (2019), the results of the statistical test obtained a P-value = 0.000, Tanjung's research (2020) also obtained a p-value of 0.000, and Handayani's research (2019) obtained mark $p = 0.010 < \alpha = 0.05$ [8][18][10].

Can concluded that H0 is rejected, meaning that acupressure has an effect on reducing nausea and vomiting.

Emesis in pregnant women if not treated can cause various impacts on pregnant women and fetuses in the future. Efforts to treat nausea and vomiting in pregnant women can be done with pharmacology and non-pharmacology.

Non-handling pharmacology in emesis is with changes in diet, complementary treatments such as homeopathy, aromatherapy, osteopathy, reflexology, light massage (endorphins) and acupressure at the pericardium point.

Superiority massage acupressure compared to other non-pharmacologic treatments, acupressure massage does not require a room, special equipment and special preparation. In contrast to reflexology therapy, aromatherapy, acupuncture which requires equipment such as needles, blunt objects, special fragrances, a really comfortable room atmosphere, and special skills. So that the acupressure massage technique is therapy that is easy, cheap or not has side effects. Acupressure can be done by the husband or mother herself who has been taught by a health worker.

Acupressure massage is a therapy that is quite important to be given to pregnant women. So far, generally to reduce emesis pregnant women check with a midwife and drink warm water every morning, consume dry food, eat rice in small portions but often. In fact, the massage can done by pressing using the thumb on the area 3 fingers above the wrist (P6). Stimulus at point P6 is an important point that provides acupressure to clients with hyperemesis. Because it can helps mothers feel fresher, more relaxed and comfortable so that it can reduce emesis. This happens because acupressure therapy stimulates the regulatory system and activates endocrine and neurological mechanisms to maintain balance. Even according to Koosnadi acupressure point P6 is one of the points used in emergency cases with nausea and vomiting. This treatment reduces nausea in many pregnant women.

Conclusion

Based on the results of the study on the Effectiveness of Applying P6 Point Acupressure to Emesis Gravidarum at Hermina Hospital, Bekasi in 2023. Distribution of characteristics of respondents who experienced emesis gravidarum, from 25 respondents, the majority were aged 20-35 years, totaling 21 people or around (84.0%), less than 20

years and more than 35 years, totaling 4 people or around (16.0%). Based on gravida, emesis gravidarum occurred in the first trimester of 18 respondents (64.0%) and in the second trimester of 7 respondents (36%). Based on Parity, in primigravida, there were 18 respondents (72%) and in multigravida, there were 7 respondents (28%). Based on Hemoglobin, those who experienced emesis gravidarum were not anemic, there were 17 respondents (68%) and those who were anemic were 8 respondents (32%). The frequency of emesis gravidarum during the pretest of 25 respondents who experienced emesis gravidarum before being given P6 acupressure had an average value (mean) of 8.9. The distribution of data (Std. Deviation) obtained was 2.52 with a minimum value of 4 and a maximum value of 13. Frequency of emesis gravidarum condition after being given acupressure point P6 has an average value (mean) of 5.6 from 25 data. The distribution of data (Std.Deviation) obtained is 1.99 with a minimum value of 4 and a maximum value of 11 after the post-test. With thus can conclude results study There is Effectiveness of Applying P6 Point Acupressure on Emesis Gravidarum at Hermina Hospital Bekasi in 2023 with results test analysis *Wilcoxon* , namely a significance value of 0.000 was obtained at ($p < 0.05$).

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