

# **Effect Of Complementary Acupressure Therapy On Emesis Gravidarum In Pregnant Women Trimester I**

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## **ABSTRACT**

Vomiting nausea (Emesis Gravidarum) is a reasonable symptom and often occurs in first trimester pregnancies. Vomiting nausea is caused by increased estrogen hormones, HCG factors, changes in liver glycogen metabolism, and psychological factors. The treatment of vomiting nausea in pregnancy consists of pharmacology and nonpharmacology. Nonpharmacological therapy is performed by diet setting, emotional support, and acupressure. Nonpharmacological therapy is a type of complementary therapy that can be used as an intervention to overcome nausea, among others: acupressure, acupuncture, relaxation, and therapy. The purpose of this study is to find out the effect of acupressure complementary therapy in reducing vomiting nausea (Emesis Gravidarum) in pregnant women trimester I. The research method used is Quasy Experiment Design with one group pretest and posttest design approach. Sampling techniques use proportional random sampling. Instruments used to measure vomiting nausea are questionnaires. The collected data is analyzed using the Wilcoxon test.

**Keywords :** Acupressure, Emesis Gravidarum, Pregnant Women

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**BACKGROUND**

In pregnancy there are major changes to the endocrine system that are important to maintain pregnancy, normal fetal changes and postpartum recovery (nifas). Human Chorionic Gonadotrophin (HCG) increases twice every 48 hours until pregnancy is 6 weeks old (Kusmiyati, 2009). Discomfort in pregnant women differs in each trimester of pregnancy. One of the complaints often felt in pregnancy is vomiting nausea or so-called morning sickness (Madjunkova et al., 2013). Nausea and vomiting in pregnancy are common complaints from nearly 50-80% of pregnant women between 6 and 12 weeks gestation (Cluver et al., 2017) (Rad et al., 2012) (Verberg et al., 2005). Nausea and vomiting are common experiences during pregnancy. Although most women with nausea and vomiting pregnancy have limited symptoms in the first trimester. A small number of women experience a long journey with symptoms that extend to childbirth. Women with severe nausea and vomiting during pregnancy may experience hyperemesis gravidarum (HG), a different entity of pregnancy nausea and vomiting, which if left untreated can lead to significant maternal and fetal morbidity (SumonaSaha, 2013). Emesis Gravidarum if not treated immediately can result in impaired fetal growth, the fetus dies in the womb and the fetus can have congenital abnormalities. The consequences for mothers are dehydration, alkaline acid balance disorders, and potassium deficiency (Anita et al., 2018). Although complaints of emesis gravidarum are considered normal and harmless to pregnant women, if the frequency of nausea is excessive, then be vigilant. Hyperemesis gravidarum can affect 0.3-2% of pregnancies and can cause it to dehydrate, It affects 80-90% of pregnant women at any level, and more than 5% of them lose weight (Banun et al., 2017). Nausea and vomiting early in pregnancy can be reduced by non-pharmacological approaches such as ginger, mint, chamomile, acupuncture, and massage (Abramowitz et al., 2017).

According to the Health Office of East Java Province, the high incidence of emesis gravidarum in pregnant women is 50-90%, while hyperemesis gravidarum reaches 10-15% of the number of pregnant women that is 182,815 people in 2011. From pregnant women who experience emesis gravidarum 1,5 – 2% of them continue in a more serious condition namely hyperemesis gravidarum (Astuti, 2012). During pregnancy, each woman may experience one or more discomforts. This discomfort is important for every pregnant woman who experiences it, and requires drug therapy (Gaikwad & Chinchpure, 2017). Vomiting nausea in pregnancy can increase the risk of maternal stress, anxiety and depression (Ozgoli&Naz, 2018), low quality of life (Attard et al., 2002), and reduction in the physical and social functioning of pregnant women (Smith et al., 2000). The treatment of vomiting nausea in pregnancy consists of pharmacology and non-pharmacology. Nonpharmacological therapy is performed by diet setting, emotional support and acupressure (N & P.M.A, 2012). Nonpharmacological therapy is a type of complementary therapy that can be used as an intervention to overcome nausea including: acupressure, acupuncture, relaxation (Apriany, 2010). Acupressure (pericardium point 6) is an action to reduce or decrease nausea and vomiting in pregnancy carried out by means of emphasis on a particular point of the body (the point of pericardium 6 or three fingers below the wrist). The acupressure theory states that acupressure is able to maintain and control the function and balance of internal organs. Yin and Yang through dynamic circulation of chi and stifled blood can stimulate meridian pathways in the body where vital energy flows (Windle et al., 2001) (Dundee & McMillan, 1991). Acupressure is a way of massage based on the science of acupuncture or can also be called acupuncture without needles. Acupressure therapy becomes one of the non-pharmacological therapies in the form of massage therapy at a certain meridian point associated with organs in the

body to overcome vomiting nausea. This therapy does not include drugs or invasive procedures but rather by activating the cells in the body, so it does not provide side effects such as drugs and does not cost a fortune. On the principle of acupressure therapy is the same as massaging so it does not require special skills. It's different from acupuncture that requires training. Acupressure therapy for vomiting nausea is done by manually pressing on Pericardium 6/ Pericardium 6 (Antoni, 2012) (Wong, 2011). Acupressure at p6 point is one of the therapies of non-pharmacology used for pregnant women with vomiting nausea (Bülbül&Başer, 2018). The purpose of this study is to identify Emesis Gravidarum of pregnant women trimester I before being given complementary acupressure therapy; identify Emesis Gravidarum pregnant women trimester I after being given complementary acupressure therapy; analyze the influence of complementary acupressure therapy on Emesis Gravidarum in pregnant women trimester I without using drugs and prevent hyperemesis gravidarum in pregnant women trimester I.

## METHOD

This study is a pre-experimental study with a One Group Pre-Test Post-Test Design approach where researchers can test if any changes occur after treatment. This research is done by giving pre-test first before being given treatment, after treatment, then given post-test. This research site is conducted at PMB FatimatuZahrok, SST inTondowongso-Gayam-Gurah, Kediri, in July-August 2020. The independent variable in this study is complementary acupressure therapy and the dependent variable in this study is Emesis Gravidarum or vomiting nausea (emesis gravidarum). The population in this study is all pregnant women who experienced emesis gravidarum in Trimester I. This study used total sampling techniques. The sample in this study is a pregnant woman in trimester I who had emesis gravidarum. The instrument used in the form of RINVR questionnaire where Rhodes INVR is a questionnaire that can provide information about vomiting nausea. The analysis in this study used the Wilcoxon test. It has passed the ethics test on June 25, 2020 at the health research ethics commission of Strada Indonesia Institute of Health Sciences.

## RESULT

Table 1. Frequency Distribution Of Symptoms Of Vomiting Nausea (Emesis Gravidarum) Experienced By Pregnant Women In The First Trimester Before Being Given Complementary Therapy (Pretest)

Score	Category	Total	Percentage
0	No vomiting nausea	0	0.0%
1-10.7	Light vomiting nausea	3	18.8%
11-21.7	Moderate vomiting nausea	10	62.5%
≥22	Severe vomiting nausea	3	18.8%
Total		16	100%

Based on the results of the study in the table above, it is known that from 16 trimester I pregnant women at PMB FatimatuZahrok, SST in Tondowongso-Gayam-Gurah, Kediri during the pre test there are 3 Pregnant Women (18.8%) who experience mild vomiting nausea, 62.5%, experience moderate vomiting nausea, while 18.8% of other pregnant women experience severe vomiting nausea.

Table 2. Frequency Distribution Of Symptoms Of Vomiting Nausea (Emesis Gravidarum) Experienced By Pregnant Women In The First Trimester After Being Given Complementary Therapy (Pretest)

Score	Category	Total	Percentage
0	No vomiting nausea	0	0.0%
1-10.7	Light vomiting nausea	10	62.5%
11-21.7	Moderate vomiting nausea	6	37.5%
$\geq 22$	Severe vomiting nausea	0	0.0%
Total		16	100%

Based on the results of the study in the table above, it is known that of the 16 pregnant women trimester I at PMB Fatimatu Zahrok, SST in Tondowongso-Gayam-Gurah, Kediri at the time after being given complementary therapy (post-test) there are 10 Pregnant Women (62.5%) who experience mild vomiting nausea, while 37.5% of other pregnant women experience moderate vomiting nausea.

Table 3. Cross Table Of Vomiting Nausea (Emesis Gravidarum) Between Pre Test And Post Test Given Complementary Acupressure Therapy

		Vomiting Nausea			Total
		Light vomiting nausea	Moderate vomiting nausea	Severe vomiting nausea	
Complementary Acupressure Therapy	Pre test	3	10	3	16
		9.4%	31.3%	9.4%	50.0%
	Post test	10	6	0	16
		31.3%	18.8%	0.0%	50.0%
Total		13	16	3	32
		40.6%	50.0%	9.4%	100%
$\alpha = 0.05$		$p = 0.002$			

In table 3 above, it can be interpreted that of the 16 pregnant women in trimester I at PMB Fatimatu Zahrok, SST in Tondowongso-Gayam-Gurah, Kediri at the time before being given complementary therapy (pre test), there are as many as 3 who experienced mild vomiting nausea, 10 people experienced moderate vomiting nausea, while 3 other pregnant women experienced severe vomiting nausea. At the time after being given complementary therapy (post test) showed a slight decrease in the number of mothers who experienced moderate and severe vomiting, where there are as many as 10 mothers who experienced mild vomiting nausea, while 6 other pregnant women experienced moderate vomiting nausea, and no pregnant women experienced severe vomiting nausea. So it can be said that the administration of complementary acupressure therapy can reduce vomiting nausea (Emesis Gravidarum) in pregnant women trimester I.

Based on wilcoxon statistical test results, it shows a significant value or p value of 0.002 which is smaller than alpha 0.05, so it can be concluded that there is a significant influence on the administration of acupressure complementary therapy in reducing vomiting nausea (Emesis Gravidarum) in pregnant women trimester I at PMB Fatimatu Zahrok, SST in Tondowongso-Gayam-Gurah, Kediri. Other studies show that

the frequency of vomiting, nausea, and vomiting, as well as discomfort caused by nausea and vomiting are significantly lower in the PC6 acupoint pressure treatment group than in the control group under drug therapy (Markose et al., 2004)

## DISCUSSION

From the above data, it can be known that there is a clear tendency, where after being given complementary acupressure therapy, there is a decrease in the frequency of symptoms of vomiting nausea (emesis gravidarum) experienced by pregnant women in the first trimester into more who experience light and moderate vomiting nausea. This is supported by another study rad et al conducted in 2011 in Iran that explained the effect of acupressure at the point of KID21 on the vomiting nausea of first trimester pregnant women with the intensity of vomiting nausea of young pregnant women performed acupressure smaller in value compared to the group that used placebo with acupressure suppression for 20 minutes in four days. Rad et al, concluded that the results of the study found differences in the intensity of nausea and vomiting in both groups during the 4 days performed acupressure therapy showed a difference ( $P < 0.001$ ) (Rad et al., 2012). Acupressure is a non-medical method for reducing nausea and vomiting (Attard et al., 2002). The use of acupressure at point P6 is not associated with an increased risk in the fetus (Heazell et al., 2006). Ozlem et al. examined 25 pregnant women at 5-20 weeks gestational age and showed such pressure in P6 using wristbands performed for 4-6 days, compared to pressure at false placebo points, can reduce symptoms of vomiting nausea in pregnancy without causing side effects. They also used the Visual Analog Scale (VAS) to evaluate changes in nausea and vomiting and concluded that acupressure can reduce the severity of nausea and vomiting, but the sample size is smaller compared to this study. In our study, two acupressure points (P6 and KID21) are compared, whereas in ozlem et al. the wrong point compared to P6 (Can Gürkan & Arslan, 2008). Research Degruyter Galeshi et al. indicates that pressure at point P6 and KID21 can reduce the severity of pregnancy vomiting nausea, but none of the points have an advantage over others in reducing this severity. In addition, putting pressure on both points is safe and has no side effects. This study shows that pregnancy vomiting nausea is more common in 55.5% nulipara, and 69.4% of multipara have a history of nausea and vomiting in previous pregnancies (Galeshi et al., 2020). According to Ozgoli et al. most methods used are effective in reducing the incidence of pregnancy vomiting nausea. One of those methods, P6 acupressure, can be recommended with more reliability and no reported side effects (Ozgoli & Naz, 2018)

## CONCLUSION

Acupressure therapy at point P6 is an effective, complication-free, inexpensive treatment and it can be done anywhere. For pregnant women, this complementary acupressure therapy can be utilized by pregnant women to treat emesis gravidarum. The results of this study can be used as a source of information for health institutions about the treatment of emesis gravidarum by using acupressure massage at point P6 which is located on 3 fingers below the wrist. Despite its practical, acupressure massage can be done wherever the mother is and whatever the situation of the mother is. Thus, the results of the study can be used as basic data for subsequent research related to the treatment of emesis gravidarum using complementary therapy.



**REFERENCE**

- Abramowitz, A., Miller, E. S., & Wisner, K. L. (2017). Treatment options for hyperemesis gravidarum. *Archives of Women's Mental Health*, 20(3), 363–372. <https://doi.org/10.1007/s00737-016-0707-4>
- Anita, A., Aprina, A., & Aryani, R. (2018). Perbedaan Mual dan Muntah Ibu Hamil Trimester I yang Diberikan Ekstrak Jahe dan Ekstrak Daun Mint. *Jurnal Kesehatan*, 9(2), 253. <https://doi.org/10.26630/jk.v9i2.986>
- Antoni, F. (2012). *Terapi Akupresur Manfaat dan Teknik Pengobatan*. Corp Circle Corp.
- Apriany, D. (2010). *Pengaruh Terapi Musik Terhadap Mual Muntah Lambat Akibat Kemoterapi pada Anak Usia Sekolah yang Menderita Kanker di RSUP Dr.Hasan Sadikin Bandung*. Universitas Indonesia.
- Astuti, H. . (2012). *Buku Ajar Asuhan Kebidanan Ibu I (Kehamilan)*. Rohima Press.
- Attard, C. L., Kohli, M. A., Coleman, S., Bradley, C., Hux, M., Atanackovic, G., & Torrance, G. W. (2002). The burden of illness of severe nausea and vomiting of pregnancy in the United States. *American Journal of Obstetrics and Gynecology*, 186(5), 220–227. <https://doi.org/10.1067/mob.2002.122605>
- Banun, S., Puspita, D., & Suyati. (2017). Pengaruh Efektifitas Pemberian Seduhan Daun Peppermint Pada Ibu Hamil Terhadap Penurunan Frekuensi Emesis Gravidarum. *Jurnal Maternity and Neonatal*, 1(2), 103–107.
- Bülbül, T., & Başer, M. (2018). The effect of acupressure applied to P6 acupuncture point on nausea, vomiting, and retching. *Asian Pacific Journal of Health Sciences*, 5(1), 146–149. <https://doi.org/10.21276/apjhs.2018.5.1.32>
- Can Gürkan, Ö., & Arslan, H. (2008). Effect of acupressure on nausea and vomiting during pregnancy. *Complementary Therapies in Clinical Practice*, 14(1), 46–52. <https://doi.org/10.1016/j.ctcp.2007.07.002>
- Cluver, C., Novikova, N., Doa, E., Bengtsson, K., & Gk, L. (2017). *Interventions for treating genital*. 9. <https://doi.org/10.1002/14651858.CD010485.pub2.www.cochranelibrary.com>
- Dundee, J. W., & McMillan, C. (1991). Positive evidence for P6 acupuncture antiemesis. *Postgraduate Medical Journal*, 67(787), 417–422. <https://doi.org/10.1136/pgmj.67.787.417>
- Gaikwad, S., & Chinchpure, S. (2017). An Experimental Study to assess the Effectiveness of Acupressure on Morning Sickness among the Antenatal Mothers. *International Journal of Advances in Nursing Management*, 5(3), 195. <https://doi.org/10.5958/2454-2652.2017.00043.9>
- Galeshi, M., Ghanbarpour, A., Naeimi Rad, M., & Asghari, S. (2020). A comparison of the effect of pressure on the KID21 (Youmen) and P6 (Neiguan) points on the severity of nausea and vomiting of pregnancy. *Journal of Complementary and Integrative Medicine*, 21, 1–9. <https://doi.org/10.1515/jcim-2019-0035>
- Heazell, A., Thorneycroft, J., Walton, V., & Etherington, I. (2006). Acupressure for the in-patient treatment of nausea and vomiting in early pregnancy: A randomized control trial. *American Journal of Obstetrics and Gynecology*, 194(3), 815–820. <https://doi.org/10.1016/j.ajog.2005.08.042>
- Kusmiyati, Y. (2009). *Perawatan Ibu Hamil*. Fitramaya.
- Madjunkova, S., Maltepe, C., & Koren, G. (2013). *Madjunkova\_2013.pdf*. 2013.
- Markose, M. T., Ramanathan, K., & Vijayakumar, J. (2004). Reduction of nausea, vomiting, and dry retches with P6 acupressure during pregnancy. *International*

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- Journal of Gynecology and Obstetrics*, 85(2), 168–169.  
<https://doi.org/10.1016/j.ijgo.2003.09.008>
- N, R., & P.M.A, I. (2012). Pemberian Akupresure di titik P6 terhadap Intensitas Mual Muntah pada Ibu Hamil. *J.Keperawatan Poltekkes Denpasar*.
- Ozgoli, G., & Naz, M. S. G. (2018). Effect of Complementary Medicine on Nausea and Vomiting in pregnancy: A Systematic Review. *International Journal of Preventive Medicine*, 8, 1–10. <https://doi.org/10.4103/ijpvm.IJPVM>
- Rad, M. N., Lamyian, M., Heshmat, R., Jaafarabadi, M. A., & Yazdani, S. (2012). A randomized clinical trial of the efficacy of kid21 point (youmen) acupressure on nausea and vomiting of pregnancy. *Iranian Red Crescent Medical Journal*, 14(11), 699–703. <https://doi.org/10.5812/ircmj.2153>
- Smith, C., Crowther, C., Beilby, J., & Dandeaux, J. (2000). The impact of nausea and vomiting on women: A burden of early pregnancy. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 40(4), 397–401. <https://doi.org/10.1111/j.1479-828X.2000.tb01167.x>
- Sumona Saha, M. . (2013). NIH Public Access Nausea and Vomiting of Pregnancy. *Gastroenterol Clin North Am*, 40(2), 1–27. <https://doi.org/10.1016/j.gtc.2011.03.009>.Nausea
- Verberg, M. F. G., Gillott, D. J., Al-Fardan, N., & Grudzinskas, J. G. (2005). Hyperemesis gravidarum, a literature review. *Human Reproduction Update*, 11(5), 527–539. <https://doi.org/10.1093/humupd/dmi021>
- Windle, P. E., Borromeo, A., Robles, H., & Ilacio-Uy, V. (2001). The effects of acupressure on the incidence of postoperative nausea and vomiting in postsurgical patients. *Journal of Perianesthesia Nursing*, 16(3), 158–162. <https://doi.org/10.1053/jpan.2001.24040>
- Wong, M. F. (2011). *Panduan Lengkap Pijat. Penebar PLUS+*. Penebar Plus++.