

CORRELATION AGE AND PARITY WITH HIPEREMESIS GRAVIDARUM

Martin Andi Hamdjang¹, Tafsil²

martinandi@univbatam.ac.id¹, tafsil@univbatam.ac.id²

Medical Education Study Program, Faculty of Medicine, Batam University¹
Doctor's Professional Study Program, Faculty of Medicine, Batam University²
Jl. Uniba No. 5, Batam Center

ABSTRACT

Background : Hyperemesis Gravidarum is defined as a complication of nausea and vomiting during pregnancy. One of the pregnancy complications that affect the health status of the mother and fetal development is Hyperemesis Gravidarum which can be detected and prevented during pregnancy, where nausea and vomiting occur in 60-80% of primigravidas and 40-60% of multigravidas. The research objective was to determine the relationship between age and parity with the incidence of hyperemesis gravidarum in pregnant women.

Method : This type of research design used is a quantitative method using a retrospective approach. The population in this study were all 596 pregnant women patients at Elisabeth Hospital, and the sample was taken using a random sampling technique of 86 respondents. This research was carried out for 6 months in RS ST. Elisabeth Batam City, data analysis using Chisquare and presented in univariate and bivariate tables.

Result : Based on the results of the study, it was found that the majority of mothers aged <20 and> 35 years were in the highest category, as many as 58 people (67%), and mothers who worked with 58 people (67%) and mothers with primigravida 50 people (58%).

conclusion : The conclusion in this study is that there is a relationship between age and parity with the incidence of hyperemesis gravidarum. The results of this study are expected to be used as a guide and can add knowledge and reference material for further research, especially those related to Hyperemesis Gravidarum.

Keywords: Age, Parity, Hyperemesis Gravidarum

PRELIMINARY

Pregnancy is a reproductive process that needs special care so that it can take place properly in order to achieve a safe delivery and give birth to a healthy baby. One of the complications of pregnancy is nausea and vomiting, known as Hyperemesis Gravidarum. The impact of Hyperemesis Gravidarum, namely dehydration which causes decreased O₂ consumption, impaired liver function and jaundice, bleeding occurs in the liver parenchyma that causes general function disorders of vital organs and causes death.

Hyperemesis gravidarum is excessive nausea and vomiting in pregnant women which can interfere with daily activities and can cause the mother's body to become weak, pale face, and decreased urination frequency. The cause

of hyperemesis gravidarum is not known with certainty, but there are several theories regarding the etiology of hyperemesis gravidarum. Such as the levels of the gonadotropin hormone chorion, the hormone estrogen, the hormone progesterone, until the thyroid hormone has a relationship to the incidence of hyperemesis gravidarum.

About 51.4% of women experienced nausea and 9.2% of women experienced vomiting. The highly pathological state of hyperemesis gravidarum is much less common than nausea and vomiting logically, it is estimated that highly pathological hyperemesis gravidarum occurs in 1 per 500 pregnancies (Denise, 2011).

Nausea and vomiting during pregnancy are usually caused by changes in the endocrine system that occur during pregnancy, mainly due

to high fluctuations in hCG (human chorionic gonadotrophin) levels, in particular because the most common period of gestational nausea and vomiting is at the first 12-16 weeks, which at that time, hCG reaches its highest level (Denise, 2011). The result of hyperemesis gravidarum in mothers and the fetus is that maternal nutrition is reduced, resulting in impaired development and fetal growth in the uterus. In addition to dehydration and disruption of electrolyte balance can occur tearing of the mucous membrane of the esophagus and stomach (Mallory-weiss syndrome) with the result of gastro-intestinal bleeding. Complications can be fatal in the central nervous system (encephalopathy) characterized by nictagamus diplopia and mental changes (Hayati, 2013)

The impact of hyperemesis gravidarum is not only life threatening to clients, but can cause side effects in the fetus such as abortion, low birth weight, premature birth and malformations in newborns. In addition to the physiological impact on the life of the client and the fetus, hyperemesis gravidarum also has psychological, social, spiritual and occupational impacts. Psychologically it can cause an impact of anxiety, guilt, and anger (Runiari, 2010)

Pregnancy at a young age is one of the factors causing hyperemesis. This is related to the psychological condition of pregnant women. The literature states that mothers with the age of less than 20 years or more than 35 years of age often experience hyperemesis gravidarum so the age of the mother has a strong influence on the development of the reproductive organs. Pregnancy at the age of less than 20 years is not biologically optimal, tends to be unstable, while over 35 years is associated with decline and decreased endurance as well as various diseases that often afflict and diseases that easily enter at this age. (Pudiasuti, 2012). Hyperemesis gravidarum tends to occur in primiparous pregnant women. This is due to the absence of physical and mental readiness in facing pregnancy as well as experiences in childbirth, causing fear during pregnancy. Nausea and vomiting occur in 60-80% of primigravidas. One in a thousand pregnancies other symptoms occur more severe, this is due to increased levels of the

hormones estrogen and hCG in serum (Wiknjosastro, 2007)

According to Wiknjosastro (2012), 2-3 parity is the safest parity in terms of maternal mortality. Parity 1 and parity > 3 have higher maternal mortality. The higher the parity, the higher the maternal mortality. In general, pregnant women who experience nausea are caused by increased levels of the hormone estrogen and choironic gonodotropin (HCG), possibly due to the central nervous system or reduced gastric emptying.

Research conducted by Armilah, 2011, entitled Factors Associated with the Incidence of Hyperemesis Gravidarum, found that there was a significant relationship between age and the incidence of hyperemesis gravidarum. Maternal age <20 years and > 35 years are more at risk for the incidence of hyperemesis gravidarum compared to maternal age 20-35 years and parity has a significant relationship with the incidence of hyperemesis ghravidarum as evidenced by the value of $p = 0.001$ ($p < \alpha$). Multiparous parity or > 2 has a greater risk of hyperemesis gravidarum than primiparous parity, and work has a significant relationship with the incidence of hyperemesis gravidarum. Mothers who work are more at risk for the incidence of hyperemesis gravidarum than mothers who do not work

Research conducted by Charlina (2015) showed that there was a significant relationship between age and the incidence of hyperemesis gravidarum (p -value = 0.009). This is because pregnant women aged under 20 years or over 35 years are a risk factor for hyperemesis gravidarum which can cause pregnancy disorders and fetal growth.

Data obtained from the Batam City Health Office states that the number of cases of Hyperemesis Gravidarum in RS ST. Elisabeth there were 72 cases. This figure shows the incidence of hyperemesis gravidarum in the Embung Fatimah Hospital, Batam city is quite high and needs serious attention because hyperemesis gravidarum can endanger the health of the mother and fetus.

Based on the description above, the interested researcher conducted a study entitled The relationship of age and parity with the incidence of hyperemesis gravidarum.

RESEARCH PURPOSES

To determine the relationship between age and parity with the incidence of hyperemesis gravidarum.

RESEARCH METHODS

This type of research design used is a quantitative method using a retrospective approach. The population in this study were all 596 pregnant women patients at Elisabeth Hospital, and the sample was taken using a random sampling technique of 86 respondents. This research was carried out for 6 months in RS ST. Elisabeth Batam City, data analysis using Chi square and presented in univariate and bivariate tables

RESEARCH RESULT

From the research results, the following results were obtained

Table 1
Distribution of Frequency of Age of Pregnant Women

Age	N	%
20 - 35 Year	28	32,6%
<20 and >35 Year	58	67,4%
amount	86	100%

Based on table 1 it can be seen that of the 86 pregnant women who experienced hyperemesis gravidarum there were 58 cases (67.5%) of which occurred in pregnant women aged <20 and> 35 years, thus it can be concluded that the incidence of hyperemesis gravidarum is more common in mothers. pregnant aged <20 and> 35 years

Table 2
Parity Frequency Distribution of Pregnant Women

Parity	N	%
Primigravida	50	58,1 %
Multigravida	36	41,9 %
amount	86	100%

Based on table 2 it can be seen that of the 86 pregnant women who experienced hyperemesis gravidarum, there were 50 cases (58.1%) of which occurred in primigravidas, thus it can be concluded that the incidence of hyperemesis gravidarum was more common in primigravidas.

Table 3
Frequency Distribution of Hyperemesis Gravidarum in Pregnant Women

Hiperemesis Gravidarum	N	%
Not HEG	24	27,9 %
HEG	62	72,1 %
Amount	86	100%

From table 3, it can be seen that there were 62 pregnant women who experienced Hyperemesis Gravidarum (72.1%) and 24 people who did not experience Hyperemesis Gravidarum (27.9%).

Table 4
Relationship between Age and the Incidence of Hyperemesis Gravidarum

Age	Case				Total		P
	ot HEG	%	HEG	%	N	%	
20 dan >35	13	22.5%	45	77.5%	58	100%	0.005
20-35	10	35.7%	18	64.3%	28	100%	
TOTAL	27	63	73%	86	100%		

Based on table 4 it can be seen that the age factor with the incidence of hyperemesis gravidarum in Embung Fatimah Hospital in 2014, pregnant women aged <20 and> 35 years who experienced HEG were 45 people (77.5%), and those who did not experience HEG were 13 people. (22.5%). There were 18 pregnant women aged 20-35 years who experienced HEG (64.2%), and 10 people who did not experience HEG (35.7%). With a p value <0.05, which means there is a correlation between age and the incidence of hyperemesis gravidarum

Table 5
Relationship between Parity and the Incidence of Hyperemesis Gravidarum

Parity	Case				TOTAL		p
	TDK HEG	%	HEG	%	N	%	
PRIMIGRAVIDA	16	32%	34	68%	50	100%	0.00
MULTIGRAVIDA	7	19.5%	29	80.5%	36	100%	1
TOTAL	23	27%	63	73%	86	100%	

Based on table 5, it can be seen that the parity factor for the incidence of Hyperemesis Gravidarum at Embung Fatimah Hospital in 2014, 34 people (68%) of primigravida pregnant women who experienced HEG, and 16 people who did not experience HEG. There were 29 people with multiparity pregnant women (80.5%), and 7 people without HEG

(19.5%). With a p value <0.05 , which means that there is a correlation between parity and the incidence of hyperemesis gravidarum

DISCUSSION

Relationship between Age and the Incidence of Hyperemesis Gravidarum

Based on the results of the study, it was found that the majority of mothers aged <20 and >35 years as many as 58 people (67.5%) had hyperemesis gravidarum.

This study is in line with Manuaba's theory (2010), age <20 years is the immature state of the reproductive organs for pregnancy so that it can affect the condition of the mother and fetal development and ages 20-35 years including healthy reproduction for pregnancy and childbirth because the reproductive organs have matured. and those aged >35 years of age have decreased metabolic function so that the function of the uterus and ovaries has decreased and the function of the hormones estrogen and progesterone has also decreased.

The age for healthy and safe reproduction is the age of 20-35 years. Pregnancy at the age of less than 20 years and over 35 years can cause Hyperemesis gravidarum because pregnancy at less than 20 years of age is not biologically optimal, tends to be unstable, mentally immature so it is easy to experience shocks resulting in a lack of attention to the fulfillment of nutritional needs. during pregnancy, while at the age of 35 years it is associated with deterioration and decreased endurance as well as various diseases that often occur at this age (Pudiastuti, 2012)

This study is in line with research by Charlina (2015), which shows that there is a significant relationship between age (p-value = 0.009) and the incidence of hyperemesis gravidarum. According to Mursyida (2012), pregnancy is a time of great physical and psychological rejection, stress can exacerbate it. hormone-induced nausea and vomiting. Pregnant women aged under 20 years or over 35 years are a risk factor for hyperemesis gravidarum which can cause pregnancy and fetal growth disorders. This is because at the age of less than 20 years it is caused by insufficient physical, mental, and social function maturity of the prospective

mother. When this happens it can cause irritation of the stomach, resulting in vomiting. Hyperemesis gravidarum that occurs over 35 years of age is also due to psychological factors caused by the mother not being ready to get pregnant again or not wanting another pregnancy. So that it will feel a little depressed and cause stress to the mother which can cause Hyperemesis gravidarum

This research is also in line with research conducted by Hertje Salome Umboh at Tompas District Health Center. Minahasa in 2014 obtained p value = 0.001 ($<\alpha$ 0.05), which means that there is a significant relationship between age and the incidence of hyperemesis gravidarum. The results of this study are in line with the research of Wadud, MA (2012) with the result that there is a significant relationship between maternal age and the incidence of hyperemesis gravidarum ($\rho = 0.027$). From these results it is found that there is an agreement between theory and research results, where hyperemesis gravidarum of pregnant women In fact, there were a lot of high-risk mothers (mothers in the range <20 years and >35 years) as many as 31 (72.1%) people. In this study, 12 (27.9%) pregnant women who experienced hyperemesis gravidarum were still found. This occurs because the cause of hyperemesis gravidarum is not only influenced by the age of the pregnant woman, but there are several other factors that influence it, such as multiple pregnancy, primigravida, obesity, non-diabetic pregnancy, metabolic disorders, history of gravidarum and psychological disorders.

Relationship between Parity and the Incidence of Hyperemesis Gravidarum

From the results of the study, there were 34 primigravida pregnant women (68%) who experienced HEG, and 16 people (32%) who did not experience HEG. There were 29 people with multiparity pregnant women (80.5%), and 7 people without HEG (19.5%). With a p value <0.05 , which means that there is a correlation between parity and the incidence of hyperemesis gravidarum

Nausea and vomiting occur in 60-80% primigravida and 40-60% multigravida. The number of pregnancies 2-3 (multi) is the safest parity in terms of maternal mortality. This is in line with the research conducted by Puriati and Misbah (2011) which obtained p value = 0.002, which means that there is a significant relationship between parity and the incidence of hyperemesis gravidarum.

According to Winkjosastro (2012), 2-3 parity is the safest parity in terms of maternal mortality. Parity 1 and parity > 3 have higher maternal mortality. The higher the parity, the higher the maternal mortality. Nausea and vomiting occur in 60-80% primigravida and 40-60% multigravida, this feeling of nausea is caused by increased levels of the hormone estrogen and the hormone chorionic gonadotropin (HCG) possibly due to the central nervous system or reduced gastric emptying. Parity is the number of live births that occur, owned by a woman. Parity can be divided into primiparous, multiparous and grandemultipara (Winkjosastro, 2009).

The close distance between present and past pregnancies and the age of the mother who is more than 35 years old can also have an effect, because the condition is not yet normal as it should be reproducing again for the next pregnancy so that it can cause Hyperemesis Gravidarum and other pregnancy complications (Proverawati, 2009).

Research that links parity with hyperemesis gravidarum has also been conducted, this study shows that there is a significant relationship between parity and hyperemesis gravidarum with a value of $p = 0.029$. This study provides results consistent with the results in this study. According to several theories, hyperemesis gravidarum is found mostly in nulliparous, but other literature states that multiparous has a greater risk of experiencing hyperemesis gravidarum. Meanwhile, another research conducted by Hertje Salome Umboh at Tompaso District Health Center. Minahasa in 2014 obtained $p = 0.001$, meaning that there is a significant relationship between parity and the incidence of hyperemesis gravidarum.

CONCLUSION

Based on the results of the research that the researcher has done, namely the relationship between age and parity with the incidence of hyperemesis gravidarum, it can be concluded that:

1. The majority of Hyperemesis gravidarum occurs in pregnant women aged <20 and > 35 years as many as 58 mothers (67%)
2. The majority of mothers who experienced hyperemesis gravidarum in 50 mothers (58%) were mothers with primigravida parity.
3. The majority of pregnant women who experienced hyperemesis gravidarum were 62 (72.1%)
4. There is a correlation between age and the incidence of hyperemesis gravidarum $p = 0.005$ ($p < 0.05$)
5. There is a correlation between parity and the incidence of hyperemesis gravidarum $p = 0.001$ ($p < 0.05$)

SUGGESTION

1. For the Batam University Educational Institution

It is hoped that the results of this study can be used as a guide and can add knowledge and reference for further research, especially those related to hyperemesis gravidarum.

2. For Research Sites Agencies provide counseling to pregnant women about hyperemesis gravidarum and collaborate with health centers to hold this education.

3. For Pregnant Women Who Have Hyperemesis Gravidarum

It is recommended that mothers who experience hyperemesis gravidarum continue to meet their nutritional needs so that the mother's condition does not get worse. This can be done by eating little but often, avoiding fatty and spicy foods and emetogenic or smelly foods, increasing the intake of bland or dry foods, serving food and drinks warm because they can make the stomach feel sore like it is relaxing.

BIBLIOGRAPHY

- Arikunto, S. 2002. *Prosedur Penelitian Pendekatan Praktek*. Edisi Revisi V. Jakarta: Rineka Cipta.
- Atika, I., Putra, H. K., & Thaib, S. H. (2016). *Hubungan Hiperemesis Gravidarum*

- dengan Usia Ibu, Usia Gestasi, Paritas, dan Pekerjaan pada Pasien Rawat Inap di RSUP Dr. Moh. Hoesin Palembang. *Jurnal Kedokteran dan Kesehatan: Publikasi Ilmiah Fakultas Kedokteran Universitas Sriwijaya*, 3(3), 166-17
- Anjani, A. D., & NurulAulia, D. L. (2017). HUBUNGAN PENGETAHUAN KEPALA KELUARGA TENTANGBADAN PENYELENGGARA JAMINAN SOSIAL (BPJS) DENGAN KEIKUTSERTAAN DALAM PENGGUNAANBADAN PENYELENGGARA J
- Aulia, D. L. N. (2019). Pengaruh Pemberian Informasi Terhadap Pengetahuan Ibu Hamil Tentang Program Perencanaan Persalinan dan Pencegahan Komplikasi. *Jurnal Kebidanan Malahayati*, 5(1).
- Chaniago, A. 2002. *Kamus Lengkap Bahasa Indonesia*. Bandung: CV. Pustaka Setia.
- Dainty Maternity, S. S. T., Keb, M., Putri, R. D., & Aulia, D. L. N. (2017). *Asuhan Kebidanan Komunitas*. Penerbit Andi
- Dainty Maternity, S. S. T., Keb, M., & Anjani, A. D. (2018). *ASUHAN KEBIDANAN NEONATUS, BAYI, BALITA, DAN ANAK PRASEKOLAH*. Penerbit Andi
- Denise, T. 2008. *Mual dan Muntah Kehamilan*. Jakarta: EGC.
- Departemen Kesehatan RI. 2007. Peta Kesehatan Indonesia 2011. Jakarta: Depkes RI.
- Dinas Kesehatan Kota Batam 2011. *Profil Dinas Kesehatan Kota Batam Tahun 2012*. : Dinkes Kota Batam
- Dinas Kesehatan Kota Batam. 2012. *Profil Dinas Kesehatan Kota Batam tahun 2012*. Batam: Dinas Kesehatan Kota Batam.
- Handayani, S., & Aiman, U. (2018). Analisis kejadian hiperemesis gravidarum (HEG) berdasarkan karakteristik
- Hidayat. 2007. *Metodologi Penelitian Kesehatan*. Jakarta: Bineka Cipta.
- Manuaba, IBG. 2011. *Gawat Darurat Obstetri Ginekologin & Obstetri Ginekologi Sosial untuk Profesi Bidan*. Jakarta: EGC.
- Misbah Nurul & Putriati Ruri, 2011. Hubungan Paritas dan Umur Ibu dengan Kejadian Hiperemesis Gravidarum. *Jurnal Obstetrika Scientia*. Rangkasbitung
- Muchtar, A. S. (2018). Hubungan umur dan paritas ibu hamil dengan kejadian hiperemesis gravidarum. *Jurnal Ilmiah Kesehatan Diagnosis*, 12(6), 598-602
- Mursyida. 2013. Hubungan umur dan pekerjaan ibu dengan kejadian Hyperemesis gravidarum di Instalasi Kebidanan Rumah Sakit Muhammadiyah Kota Palembang tahun 2012. *Jurnal: AKBID Pembina*
- Notoatmodjo, S. 2010. *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta.
- Nugroho Taufan. 2012. *Patologi Kebidanan*. Yogyakarta: numed
- Prawirohardjo, S. 2008. *Ilmu Kebidanan*. Edisi IV. Jakarta: PT. Bina Pustaka Sarwono Prawirohardjo.
- Sabgustina, P. V., & Anjani, A. D. (2021). HUBUNGAN RIWAYAT HIPERTENSI DENGAN KEJADIAN PREEKLAMPSIA PADA IBU BERSALIN DI RSUD EMBUNG FATIMAH KOTA BATAM TAHUN 2017. *Zona Kebidanan: Program Studi Kebidanan Universitas Batam*, 8(3).
- Saminem. 2008. *Seri Asuhan Kebidanan Kehamilan Normal*. Jakarta: EGC.
- Sartika Tri, 2013. Gambaran Faktor Risiko Ibu Hamil dengan Hiperemesis Gravidarum. Palembang: *Jurnal Harapan Bangsa*
- Sari, S. 2013. Hubungan Beberapa Faktor Risiko Ibu Hamil dengan Hiperemesis Gravidarum. Artikel Ilmiah. Fakultas Kedokteran dan Ilmu Kesehatan Universitas Jambi.
- Sulistyo. 2011. Hiperemesis Gravidarum. <http://www.kuliah-bidan.blogspot.com>,
- Suririnah. 2011. *Kehamilan dan Persalinan*. <http://www.infoibu.com>.,
- Umboh, H. S., Mamuaya, T., & Lumy, F. S. (2014). Faktor-Faktor yang berhubungan dengan kejadian hiperemesis gravidarum di Puskesmas Tompaso Kabupaten Minahasa. *JIDAN (Jurnal Ilmiah Bidan)*, 2(2)
- Varney, et. al., 2006. *Buku Ajar Asuhan Kebidanan*. Edisi 4. Jakarta: EGC