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Research / Araştırma

Eating Attitudes, Depression and Anxiety Levels of Patients with Hyperemesis Gravidarum Hospitalized in an Obstetrics and Gynecology Clinic

Ebru Erginbas Kender[1], Goksen Yuksel[2], Can Ger[2], Urun Ozer[2]

[1]Family Practice Specialist, Siran State Hospital, Gumushane - Turkey
[2]Psychiatrist, Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery, Istanbul - Turkey

ABSTRACT

Eating attitudes, depression and anxiety levels of patients with hyperemesis gravidarum hospitalized in an obstetrics and gynecology clinic

Objective: Nausea and vomiting are the first symptoms of pregnancy, and hyperemesis gravidarum is more severe form. The aim of the study was to investigate socio-demographic and clinical features, eating attitudes, depression and anxiety levels of this diagnosis in which etiology remains unclarified.

Method: Fifty one hyperemesis gravidarum patients hospitalized in obstetrics and gynecology clinic of Okmeydanı Training and Research Hospital between October 2012-May 2013 were included in the study. Forty one pregnant women with no hyperemesis gravidarum diagnosis who applied to obstetrics and gynecology outpatient clinic were taken as control group. Socio-demographic data, features about family and marriage, medical and psychiatric history, family history and features about pregnancy have been collected with face to face interview. Beck Depression Inventory, Beck Anxiety Inventory and Eating Attitudes Test were applied to cases.

Results: Socio-demographic data showed no difference between hyperemesis gravidarum and control groups. No significant difference in medical and psychiatric history and features about pregnancy was found between two groups. Family history of psychiatric disorder was found significantly higher in hyperemesis gravidarum group. Depression and anxiety levels were significantly higher in hyperemesis gravidarum group compared to control group. A significant difference was detected in eating attitudes of two groups.

Discussion: Depression and anxiety levels were higher in pregnant women diagnosed with hyperemesis gravidarum compared to control group, and eating attitudes were more negative. There was no difference between hyperemesis gravidarum and control group in socio-demographic data and features about pregnancy, but family history of psychiatric disorder was associated with hyperemesis gravidarum. Psychiatry consultation might be useful in treatment and follow-up of hyperemesis gravidarum cases.

Key words: Anxiety, depression, eating attitudes, hyperemesis gravidarum

ÖZET

Hiperemezis gravidarum nedeniyle kadın doğum servisinde yatan hastalarda yeme tutumları, depresyon ve anksiyete düzeyleri

Amaç: Bulantı ve kusma gebeliğin ilk belirtilerinden olup hiperemezis gravidarum bu durumun daha ciddi bir hal almasıdır. Çalışmamızda etiyolojisi tam olarak aydınlanmamış olan bu tanının sosyo-demografik ve klinik özellikler, yeme tutumları, depresyon ve anksiyete düzeyleri ile ilişkisinin araştırılması amaçlanmıştır.

Yöntem: Çalışmaya Okmeydanı Eğitim ve Araştırma Hastanesi'nde Ekim 2012-Mayıs 2013 tarihleri arasında Kadın Hastalıkları ve Doğum kliniğinde hiperemezis gravidarum tanısı ile yatarak izlenen 51 hasta dahil edildi. Aynı kurumun kadın hastalıkları ve doğum polikliniğine başvuran ve hiperemezis gravidarum tanısı olmayan 41 gebe kontrol grubu olarak alındı. Olgularla yüzyüze yapılan görüşmelerde sosyo-demografik bilgiler, evlilik ve aile özellikleri, tıbbi ve psikiyatrik özgeçmiş, soygeçmiş ve gebelikle ilgili özellikleri içeren detaylı öykü alındı. Olgulara Beck Depresyon Ölçeği, Beck Anksiyete Ölçeği ve Yeme Tutumu Testi uygulandı.

Bulgular: Hiperemezis gravidarum ve kontrol grupları arasında sosyo-demografik özellikler açısından anlamlı fark bulunmadı. İki grup arasında tıbbi ve psikiyatrik özgeçmiş ve gebelikle ilgili özellikler açısından anlamlı fark saptanmadı. Soygeçmişte psikiyatrik öykü hiperemezis gravidarum grubunda anlamlı düzeyde fazla bulundu. Hiperemezis gravidarum grubunda depresyon ve anksiyete düzeyleri kontrol grubundan anlamlı derecede yüksek bulundu. İki grup arasında yeme tutumları açısından anlamlı fark saptandı.

Tartışma: Hiperemezis gravidarum tanılı gebelerde kontrol grubuna göre anksiyete ve depresyon düzeyleri daha yüksek, yeme tutumları daha olumsuzdur. Hiperemezis gravidarum tanılı gebeler ile kontrol grubu arasında sosyodemografik ve gebelikle ilgili özellikler açısından fark saptanmamış fakat ailede psikiyatrik hastalık öyküsünün varlığı hiperemezis gravidarum ile ilişkili bulunmuştur. Hiperemezis gravidarum olgularının tedavi ve izlem sürecinde psikiyatri konsültasyonu yararlı olacaktır.

Anahtar kelimeler: Anksiyete, depresyon, yeme tutumları, hiperemezis gravidarum

Address reprint requests to / Yazışma adresi:
Psychiatrist Goksen Yuksel,
Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery,
Zuhuratbaba Mah., Dr. Tevfik Saglam Cad.,
No: 25/2, 34147, Bakirkoy/Istanbul, Turkey

Phone / Telefon: +90-532-768-6665

E-mail address / Elektronik posta adresi:
drgoksenyuksel@gmail.com

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INTRODUCTION

Nausea and vomiting often appear to be the early and frequently occurring symptoms of pregnancy (1,2). These complaints may have an onset in the first trimester and remain until the end of pregnancy and be observed in 75% of all pregnancies (3). It is reported that the severity of complaints might vary from one to another and even from one pregnancy to the other of the same person while they were seen at any time of the day despite its highest occurrence in the morning (4).

Hyperemesis gravidarum (HG) is defined as the severe form of nausea and vomiting occurring in pregnancy that is usually characterized by dehydration, malnutrition and bodyweight loss more than 5% (5). Prevalence of HG was found to be varying between 0.3% and 2% (2,6). It was reported that among those with HG, fluid-electrolyte and acid-base imbalance, anemia, ketonuria and some neurological symptoms as severe as lethargy, that often require hospitalization could be seen. In these severe cases, fetal development might be impaired. HG adversely affects not only the physical condition of the pregnant but also her mental health and quality of life; and functional impairment could be seen. Although the etiology and pathogenesis of HG have not been fully enlightened, endocrinological and psychosocial factors are suggested to take a role in its occurrence (2,5,7,8). Conflicting opinions have been published about the association of HG with psychiatric diseases in the literature (8). Prevalence of mental diseases in patients with the diagnosis of HG has been displayed to be more than that of the healthy control groups in various studies (9). Severity of depression and anxiety in pregnant with HG was found to be more, when compared to healthy pregnant (5). Major depression, generalized anxiety disorder and some personality disorders were detected to be more prevalent in pregnant with HG (3).

Gestation is a term experienced with elevated concern about the changing body form and weight; and it is suggested that pregnancy is less tolerated by those who have eating disorders (ED) (10). Findings referring to an association of ED with abortus, preterm birth, need for caesarian delivery, low birth-weight and postpartum depression were acquired in some studies (11,13).

In our study, sociodemographic and clinical features as well as the eating attitudes and depression and anxiety levels of inpatients in the OBYGN clinic, which have the diagnosis of HG, were aimed to assess.

METHOD

Fifty-one patients hospitalized and followed up in the OBGYN clinics of Okmeydani Research and Training Hospital with the diagnosis of HG between October 2012 and May 2013 were recruited in the study. The control group was consisting of forty-one non-HG pregnant cases under follow up as outpatient in the same institution. Our study was granted ethical committee approval of the hospital, where it was carried out.

Inclusion criteria were determined as viable pregnancy of 14 weeks or less, lack of fetal congenital malformations, lack of a gastrointestinal or audiovestibular or endocrinological or infectious disease leading to nausea or vomiting, lack of diabetes mellitus or a renal disease or any other systemic disease that may affect the serum sodium, potassium, creatinine, urea nitrogen, acetone or ketone levels. As a measure of confirmation of the diagnosis of HG, the urinary assay of ketones at +3 or +4 was considered meaningful.

Patients who met the inclusion criteria and accepted to participate in the study by releasing an informed consent were included in the study. A detailed patient history covering sociodemographic data, pregnancy characteristics, disease history, medication history as well as the use of tobacco, alcohol and psychoactive substances was acquired from each patient interviewed by the investigators. Familial status and marital satisfaction were also interrogated. Patients were applied Beck Depression Scale, Beck Anxiety Scale and Eating Attitudes Test.

Measures

Beck Depression Inventory: Beck Depression Inventory is a 21-item, four point likert-type, self-rating

scale used to rate the severity of depressive symptoms within a score range of 0-63 points. Increase in scores refers to a higher severity of depression. The validation study for Turkish was made by Hisli (14).

Beck Anxiety Inventory: Beck Depression Inventory is a 21-item, four point likert-type, self-rating scale used to rate the severity of anxiety symptoms. Increase in scores refers to a higher severity of anxiety. The validation study for Turkish was made by Ulusoy et al. (15).

Eating Attitudes Test: Eating Attitudes Test was developed by Garner and Garfinkel (16) to assess the potential disorders of eating behaviors. Eating Attitudes Test is a 40-item, six point likert-type rating scale with a cut-off score of 30 points. Increase in total scores refers to a higher severity of psychopathology. The validation study for Turkish was made by Savasir and Erol (17). Cut-off score for Turkish form has not been calculated.

SPSS 18.0 was used for statistical analyses in our study. Mean values, standard deviations and percentages were used for descriptive statistics. For independent groups, comparison of mean values for quantitative variables was made by applying t-test. Ordinal variables were compared by using Mann-Whitney U test. In comparison of categorical variables Chi-square test or Fisher exact p value (when chi-square test conditions are not met) were used. Correlation power of sequential variables that are supposed to be associated was assessed by using Spearman test. For all test results threshold for significance was regarded as 0.05.

RESULTS

Fifty-one HG patients and 41 healthy controls were included in our study. The age range of HG group was 18-37 years. The mean ages were 26.88±5.77 years and 27.24±5.62 years for HG group and control group, respectively. There was no statistically significant difference in terms of mean ages between groups (p=0.763). There was no statistically significant difference between groups in terms of sociodemographic features such as educational level, holding a social security and employment. Three cases from HG group declared lack of a registered marriage. Cases with a registered marriage in HG group and the control group as a whole have been married to their first spouses. Mean ages to get married were 21.34±4.40 years and 22.00±5.06 years in HG group and for control group, respectively. Mean durations of marriage were 5.40±4.82 years and 4.74±4.73 years in HG group and for control group, respectively. Groups were not statistically significantly different in terms of marriage variables. Results are comparatively displayed in Table 1.

In particular of clinical characteristics, there were 1 (2.0%) and 4 (9.8%) smokers in HG group and control group, respectively and there was no statistically significant difference between groups (p=0.320). None of the participants from any group declared the use of alcohol or psychoactive substance during pregnancy. In particular of medical disease history, there were 2 (3.9%) cases and 3 cases (7.3%) with thyroid problems, 3 (5.9%) and 0 (0%) with cardiac disease, 4 (7.8%) and 2 (4.9%) with neurological disease, 1 (2.0%) and 1 (2.4%) with diabetes and 10 (19.6%) and 5 (12.2%) with other diseases were recorded in HG group and control group, respectively. In terms of general history of existing diseases, there was no statistically significant difference between groups (p=0.212). No statistically significant difference in terms of previously existing psychiatric disease was detected between groups (p=0.819). When the distribution of psychiatric diseases along the groups are considered, there were 1 (2.0%) patient with bipolar disorder and 8 (15.7) with major depression in HG group. In control group, there were 7 (17.1%) cases with major depression. Homicide or infanticide was not reported in any group. Prevalence of familial history of a psychiatric disease in HG was statistically significantly more than that of the control group (p=0.040). While there were 2 (3.9%) cases with major depression, 4 (7.8%) with psychotic disorder, 1 (2.0%) neurotic disorder and 1 (2.0%) with a psychiatric disorder other than specified in HG group, there was only one (2.4%) major depression case in the familial history of the control group. Clinical features of groups are comparatively displayed in Table 2.

Table 1: Comparison of sociodemographic and marital characteristics of Hyperemesis Gravidarum (HG) group and the control group

	HG (n=51)		Control (n=41)			
	n	%	n	%	z/χ^2/Fisher	p
Educational Level						
Not educated	5	9.8	2	4.9	0.439[a]	0.661
Primary	18	35.3	13	31.7		
Secondary	11	21.6	12	29.3		
High school	5	9.8	7	17.1		
University	12	23.5	7	17.1		
Occupation						
Never been employed	16	31.4	13	31.7	1.068[b]	0.785
Used to be employed	19	37.3	13	31.7		
Left for pregnancy	4	7.8	2	4.9		
Already employed	12	23.5	13	31.7		
Holding a social security	37	72.5	35	85.4	2.195[b]	0.139
Households						
Conjugal family	33	64.7	29	70.7	0.376[b]	0.540
Extended family	18	35.3	12	29.3		
Marriage will						
Intentionally	47	92.2	39	95.1	Fisher	0.689
Unintentionally	4	7.8	2	4.9		
Married to relative						
None	35	68.6	30	73.2	0.370[b]	0.831
3rd degree	9	17.6	7	17.1		
+4th degree	7	13.7	4	9.8		
Marital Satisfaction Exists	47	92.2	36	87.8	Fisher	0.505
Sexual Satisfaction exists	40	78.4	35	85.4	0.726[b]	0.394
Marriage w/forensic event	5	9.8	0	0	Fisher	0.063

[a]z, [b]χ^2, Statistically significant

Table 2: Comparison of clinical characteristics of Hyperemesis Gravidarum (HG) group

	HG (n=51)		Control (n=41)			
	n	%	n	%	χ^2/Fisher	p
Psychiatric disease in the past	9	17.6	8	19.5	0.052[b]	0.819
Childhood trauma	12	23.5	7	17.1	0.578[b]	0.447
Maternal stres factor	8	15.7	8	19.5	0.232[b]	0.630
Postpartum depression in the past	5	9.8	2	4.9	Fisher	0.455
Suicidal committment	2	3.9	1	2.4	Fisher	1.000
Premenstrual syndrome	32	62.7	19	46.3	2.476[b]	0.115
General physical disease	20	39.2	11	26.8	1.561[b]	0.212
Familial psychiatric disease in the past	8	15.7	1	2.4	Fisher	0.040*
Psychiatric treatment in the past						
Shorter than a month	45	88.2	36	87.8	Fisher	1.000
Longer than a month	6	11.8	5	12.2		

[b]χ^2, *p<0.05 statistically significant

Mean gestational times were 10.23±4.00 and 12.42±4.06 weeks in HG group and the control group, respectively. Four multiple pregnancies in total (Two in HG and two in control) were reported. There was only one case in control group, who was applied an assisted reproduction technique and the rest of the participants have had spontaneous pregnancy. The numbers of planned pregnancies were 29 (59.6%) and 30 (73.2%), whereas the numbers of unintentional pregnancies were 22 (43.1%) and 11 (26.8%) in HG group and control group, respectively. The mean body weights were found as 62.96±8.97 and 65.84±11.78 in HG group and the control group, respectively. In HG group, 43 (84.3%) cases had a weight loss while seven (13.7%) had no weight change and 1 (2.0%) had gained weight. In control group, 16 (40.0%) cases had a weight loss while

Table 3: Comparison of gestational characteristics of Hyperemesis Gravidarum (HG) group and the control group

	HG (n=51)		Control (n=41)			
	Mean	SD	Mean	SD	z/t	p
Length of gestation in weeks	10.23	4.00	12.42	4.06	3.026[a]	0.002*
Number of pregnancies in the past	2.20	1.55	2.02	1.11	0.041[a]	0.967
Number of live births in the past	0.73	0.94	0.63	0.77	0.187[a]	0.852
Abortus/Termination in the past	0.51	0.95	0.39	0.67	0.486[a]	0.627
Body-weight (kg)	62.96	8.97	65.84	11.78	1.296[b]	0.198

[a]z, [b]t, *Statistically significant

Table 4: Comparison of Beck depression inventory, Beck anxiety inventory and eating attitudes test scores of Hyperemesis Gravidarum (HG) group and the control group

	HG (n=51)		Control (n=41)			
	Mean	SD	Mean	SD	t	p
Beck Depression Inventory	21.16	11.77	9.63	6.09	6.056	<0.001*
Beck Anxiety Inventory	19.22	10.96	11.71	8.21	3.754	<0.001*
Eating Attitudes Test	30.65	10.86	24.88	10.54	2.565	0.012*

*Statistically significant

7 (17.5%) had no weight change and 17 (42.5%) had gained weight. Forty-five (88.2%) cases in HG group and 37 (90.2%) cases in the control group were not under medication. Declared numbers of the use of a medication were 2 (3.9%) cases and 1 (2.4%) cases taking thyroid hormone replacement, while 4 (7.8%) cases and 3 (7.3%) cases taking other medications, in HG group and the control group, respectively. Gestational characteristics of groups are comparatively displayed in Table 3.

The mean scores of Beck Depression Inventory and Beck Anxiety Inventory of HG group were found to be statistically significantly more than those of the control group ($p<0.001$). The Eating Attitudes Test scores of HG group were found to be statistically significantly more than those of the control group ($p=0.012$) (Table 4).

DISCUSSION

Psychosocial factors that might take a role in the occurrence of HG and psychiatric diseases associated with HG have been the area of interest in numerous studies. Despite there are studies reporting a higher rate of psychiatric diagnosis in HG patients (8,19), there are some others reporting, contrarily, no elevation in prevalence of psychiatric diseases in the course of conception or postpartum (20,21). In the study carried out by Simpson et al. (22), depression, anxiety, obsessive compulsive and psychosomatic particularities were reported to be relatively more but transient after delivery, in pregnant cases with HG. Thus, it has been suggested that psychiatric diseases comorbid to HG could be the consequence of trauma and stress of a physical illness (22). It was reported in numerous studies that the severity of depression and anxiety could be more in pregnant cases with HG than it is in the healthy pregnant cases (7). In studies conducted in our country as well, a significant association of HG with depression and anxiety was found (5,23-26). In the study by Uguz et al. (3), the prevalence of mood disorders such as major depression and anxiety disorders was detected to be higher in pregnant cases with HG than it is in healthy control group. In consistency with the literature, the severity of depression and anxiety was found to be more in pregnant cases with HG than it is in the healthy pregnant cases, in our study. In the same study of Uguz et al., the prevalence of mood and anxiety disorders were reported to be the more in preconceptional term in HG cases than it was in control group and it was suggested that those disorders could be leading to HG during the gestation. However, in our study where we evaluated preconceptional existence of psychiatric diseases and psychiatric treatments, no statistically significant difference between groups was detected.

Pregnancy is a peculiar condition in particular of

ED. It was suggested that many women are overeating due to craving; many others are trying to follow healthy nutrition rules whereas a sizeable population is going on diet to prevent bodily reformation associated with pregnancy (10). A study carried out by Fairburn et al. (10) in a general population sample revealed that palatal or olfactory hypersensitivity towards some foods and beverages as well as some eating behaviors such as craving were seen in addition to nausea and vomiting in the early stages of pregnancy. It was suggested by the authors that there might be changes in the symptoms of ED in the course of gestation. It is suggested that symptoms of ED generally decrease during conception. However, there are also opinions defending that pregnancy could be a stressful and an uneasy period for females with ED and that the weight gain and reshaping of the body may cause recurrence or aggravation of ED symptoms (27). Micli et al. (28) recorded that pregnant cases with ED use more laxatives or make self-throw up or go under diet or exercise more than the healthy control cases do during pregnancy. In the same study, it is found that pregnant ED cases become more anxious about their body-weight and more obsessive about being over-weight. Stewart et al. (29) suggested that in those with preconceptional ED, symptoms of ED have remained or even become aggravated during gestation and in postpartum period, thus pregnancy should be postponed until full remission of ED symptoms. It was found that the ratio of having a body-weight lower than expected is more among pregnant cases suffering from anorexia nervosa (30). It was stated that gestational blumia nervosa was associated with anxiety, depression and low self-esteem; and those cases had low life-satisfaction (31).

Findings revealing the association of ED with abortus, preterm birth, caesarian delivery, low birth weight and postpartum depression were acquired in some studies (11,13,32,33). Andersen et al. stated that ED could manifest itself during conception with insufficient weight gain and HG (33). In another study, it was found that the prevalence of nausea and vomiting is higher during the pregnancy in purging type bulimia; however, there was no statistically significant difference between ED and non-ED groups in terms of the frequency of HG (34).

In our study, where the eating attitudes of the participants were rated by using Eating Attitudes Test, HG score of HG group were found to be statistically significantly more than those of the control group. Therefore, it was concluded that the eating attitudes of the HG group were more pathological than those of the control group. This finding is in conflict with the study of Annagur et al. (26) suggesting a lack of difference between ED and non-ED pregnant cases in terms of eating attitudes. Albeit, an association of HG with pathological eating attitudes was found in our study, studies based on ED diagnosis through structured psychiatric interviews are needed to establish the relationship between HD and ED.

Findings in favor of a higher prevalence of HG in young, primiparous females from a low socioeconomical population, usually those who went under assisted reproduction techniques, with diabetes and hypertension that are more prevalent, have taken place in literature (35). In the study of Tsang et al. (21), socioeconomical characteristics of pregnant cases with HG and the general pregnant population were found to be similar. Similar findings were acquired in some studies conducted in our country (5,23). Kamalak et al. (36) did not detect a significant difference between HG and non-HG pregnant cases in terms of age, age at marriage, age at first pregnancy and employment status but they reported a higher prevalence of HG among those pregnant cases with a higher level of education and socioeconomical power. In the same study, no significant difference between groups in terms of preterm birth or type (vaginal/caesarian) of delivery was observed but a higher prevalence of abortus and a lower prevalence of parity was reported in HG group. In another study, a lower frequency of conception and a higher frequency of abortus were reported in pregnant cases with HG (37). However, in the study of Annagur et al. (26), no significant difference in terms of both the obstetric history and existence of a general medical condition was observed between HG and control groups of pregnant cases. It was suggested in the literature that HG could be associated with the relations between spouses and the

communication with the family members as well as the stress level (36,38). No difference was found in our study, between HG group and the control group in terms of stress, familial characteristics, marriage characteristics and relational satisfaction. Our findings give an impression that factors other than sociodemographic, familial and gestational could play a role in the occurrence of HG. A statistically significantly higher prevalence of familial mental illness history in HG group puts an emphasis on the importance of family history on the development of psychiatric disorders.

Lack of a structured interview for the diagnosis of ED, being cross-sectional by design and having no information about the newborns of the evaluated pregnancies were the limitations of our study. For it being cross-sectional, our study failed to display clearly the causality relationship between HG and psychiatric symptoms. The objective diagnosis of HG and existence of a healthy control group were the strengths of our study. It is important to learn about the psychiatric and familial histories for the assessment of HG cases. Psychiatric interview reinforces the patient-physician relationship by helping the patient verbalize own complaints, worries and similar emotions while on the other side, paving the way for the diagnosis and the treatment of depression and anxiety (8). It was suggested that the reduction in the symptoms of depression and anxiety would help prevent preterm birth or low birth weight through attenuating the symptoms of HG (22). Therefore, liaison psychiatry could be considered to provide a profound benefit in the treatment and follow up of HG cases.

In conclusion, the findings of our study demonstrated that the anxiety and depression levels of pregnant cases with HG were more than those of healthy pregnant cases. Concurrently, eating attitudes of pregnant cases with HG were more pathological than those of healthy pregnant cases. No significant difference between HG group and the healthy control group in terms of sociodemographic and gestational characteristics but an association of HG with familial history of psychiatric disorders was found in our study. Assessment of psychiatric symptoms and disorders as well as referring to psychiatric consultancy for treatment would be helpful in the course of treatment and follow up of HG cases.

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