Hyperemesis Incidence in Planned versus Unplanned Pregnancy

Planlanmış ve Planlanmamış Gebeliklerde Hiperemezis İnsidansının Araştırılması

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Abstract

Objective: We evaluated the incidence of hyperemesis between planned and unplanned pregnancy.

Materials and Methods: A prospective study was conducted among 100 women with planned pregnancies and 100 women with unplanned pregnancies. Participants completed a questionnaire to determine the presence of vomiting. If pregnant women had severe vomiting (>3 times per day), urinary investigation was performed; at least one positive ketonuria was considered as hyperemesis.

Results: There was a significant difference between planned and unplanned pregnancy in terms of the incidence of hyperemesis (p=0.0001). Women with unplanned pregnancies had a more than 18-fold increased risk of hyperemesis (OR=18.88; %95 CI, 8.84-40.31) compared to women with planned pregnancies.

Conclusion: Healthy women may be able to improve their management of hyperemesis during pregnancy if they plan their pregnancies.

Keywords: Hyperemesis, Incidence, Planned pregnancy, Unplanned pregnancy

Özet

Amaç: *Planlı ve plansız gebelikler arasındaki hiperemezis insidansının farkını araştırmayı amaçladık.*

Gereç ve Yöntem: *Bu çalışma planlayarak gebe kalmış 100 ve planlamadan gebe kalmış 100 hastada prospektif olarak yapıldı. Gebeler kusmanın olup olmadığı yönünden sorgulandı. Günde üç defadan fazla kusma tarif eden hastalara tam idrar tetkiki yapıldı. İdrar tetkikinde en az 1 pozitif keton cisim tespit edilen hastalar " hiperemezis" olarak adlandırıldı.*

Bulgular: *Planlı ve plansız gebelikler arasında hiperemezis insidansı açısından önemli fark bulundu (p=0,0001). Planlanmamış gebeliği olan hastalar 18 kat daha fazla hiperemezis riskine sahipti (OR=18,88; %95 CI, 8,84-40,31).*

Sonuç: *Sağlıklı kadınlar planlayarak gebe kalırlarsa; gebelikte hiperemezis oluşma riskini azaltabilirler.*

Anahtar Kelimeler: *Hiperemezis, İnsidans, Planlanmış gebelik, Planlanmamış gebelik.*

Introduction

Nausea and vomiting affect up to 50% of pregnant women. One study reported the prevalence of nausea to be 74% and that of vomiting to be 37.5% during pregnancy [1]. In another study, the prevalence of nausea was found to be as high as 80% and that of vomiting to be 52% during pregnancy [2]. Vomiting is so common that it is used in the diagnosis of pregnancy. It may be severe in 0.5-1% of pregnant women, designated by the term "hyperemesis" [severe vomiting (>3 times per day), weight loss of more than 5% and at least one positive ketonuria].

Hyperemesis may affect normal nutrition and the quality of life of pregnant women, and it may cause weight loss [3,4]. Endocrinological, psychological and biochemical factors cause hyperemesis [5]. However, the etiology of hyperemesis has not yet been completely elucidated. Walker et al. [6] investigated the relationship of psychosocial and demographic variables to health behaviors in early pregnancy. They indicated that higher levels of depressive symptoms were related to less favorable health behaviors in early pregnancy.

Chou et al. [7] revealed that pregnancy-related nausea and vomiting is more severe in women who have poor maternal psychosocial adaptation. Thus, if pregnant women are not psychosocially ready for pregnancy, nausea and vomiting may be more severe.

The purpose of this study is to determine the incidence of hyperemesis among women with planned versus unplanned pregnancies.

Materials and Methods

This study was designed in the Department of Obstetrics and Gynecology, Nenehatun Hospital in January-March 2009. Women with planned pregnancies (n=100) and women with unplanned pregnancies (n=100) were included in this study. In the unplanned pregnancy group, women reported the use of some contraceptive methods such as condoms or coitus interruptus. All pregnant women were housewives and were free of metabolic disorders (e.g., thyroid function disorders, diabetes, and chronic disease). Plural pregnant women were excluded. Gestational age was determined using the first date of the last menstrual period and confirmed by ultrasonography. Written informed consent was obtained from all enrollees, according to the criteria of the Ethical Committee of Medical Faculty, Ataturk University. Subjects in both groups were at between 9 to 14 weeks' gestation.

Participants completed a questionnaire to determine the presence of vomiting in the first trimester of the pregnancy. The diagnostic criteria for hyperemesis were as follows: severe vomiting (>3 times per day), weight loss of more than 5%, and at least one positive ketonuria.

Statistical Analysis:

SPSS was used for data analysis. The Kolmogorov Smirnov test was used to assess the assumptions of normality and homogenity of variance. The Mann-Whitney U test was employed to test the differences in continuous variables between groups. The Chi-square test was used to test the difference in hyperemesis between women with planned and unplanned pregnancies. Differences with $p<0.05$ were considered as statistically significant. For risk analysis, odds ratios (95% confidence interval) were calculated.

Results

In this study, the mean maternal age of women with planned pregnancies was 25.85±2.67 years, and it was 26.50±2.26 years in women with unplanned pregnancies. This difference was not significant ($p>0.05$).

The mean gestation number in women with planned pregnancies was 1.51±0.50 and 1.60±0.49 in women with unplanned pregnancies, but this difference was insignificant ($p>0.05$).

The mean gestational age in women with planned pregnancies was 11.90±1.62 weeks, and it was 11.91±0.62 weeks in women with unplanned pregnancies. This difference was not significant ($p>0.05$).

The proportion of women with hyperemesis was significantly higher in women with unplanned pregnancies (68%) compared to women with planned pregnancies (15%); (Chi-square=72.23, $p=0.0001$). Women with unplanned pregnancies had a more than 18-fold increased risk of hyperemesis (OR=18.88; %95 CI: 8.84-40.31) compared to women with planned pregnancies.

Discussion

The etiology of hyperemesis in pregnancy is multifactorial. The factors predisposing women to hyperemesis are still unclear.

In this study, we found that the women with unplanned pregnancies had a higher incidence of hyperemesis. These results are consistent with the study by Chou et al. [8], who investigated the relationship between nausea and vomiting, stress, social support, pregnancy planning and their ability to predict maternal psychosocial adaptation in women during early pregnancy. In their study, the severity of nausea and vomiting was positively and significantly associated with stress. Furthermore, women with an unplanned pregnancy reported more stress. They concluded that women at higher risk for poor maternal psychosocial adaptation had not planned their pregnancies, thus resulting in greater stress, which led to severe nausea and vomiting.

In another study of Chou et al. [7], they aimed to test if nausea and vomiting correlated with psychosocial variables. Of 113 participants, 40 (35%) had frequent nausea and vomiting. Depressive symptoms had the highest correlation with nausea and vomiting. Social support was negatively related to nausea and vomiting.

The results of our study are different from those of Kuo et al. [9]. They found that the pregnant women who had "mild or

less" nausea and vomiting were more accepting of their pregnancy than the pregnant women with severe nausea and vomiting. They found no significant relationship for pregnancy-related nausea and vomiting between planned and unplanned pregnancies, also they found no relationship between pregnancy-related nausea and vomiting and gravidity, parity and occupation. In contrast, Fitzgerald et al. [10] concluded that women who had an unplanned or undesired pregnancy tended to experience more nausea and vomiting.

In conclusion, women with unplanned pregnancies may have a higher risk for hyperemesis gravidarum, so by planning their pregnancies, women can improve their psychosocial adaptation and reduce the likelihood of experiencing severe nausea and vomiting. Further prospective and longitudinal studies are needed to investigate the association of pregnancy planning with the development of hyperemesis in planned and unplanned pregnancies.

Conflict interest statement The authors declare that they have no conflict of interest to the publication of this article.

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