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Original article

Quality of life in women with nausea and vomiting from pregnancy

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Abstract

Background: Nausea and vomiting in early pregnancy is a common complaint, affecting approximately 50-80% of pregnant women. The aim of this study was to determine the effect of the severity of nausea and vomiting from pregnancy on the quality of life during the first trimester of pregnancy.

Methods: An analytical study was conducted on pregnant women with nausea and vomiting from pregnancy (NVP) during their first 12 weeks. These pregnant women were receiving prenatal care at the prenatalogy ward of Rouhani Hospital, which is affiliated to Babol University of Medical Sciences. The women were asked to complete a visual analogue scale questionnaire to report their intensity of nausea within the last 24 hours. The severity of NVP was measured by a structured questionnaire. A Health-Related Quality of Life for Nausea and Vomiting during Pregnancy (NVPQOL) questionnaire was also used to measure the quality of Life of pregnant women with NVP. Low scores in all domains of NVPQOL and the overall quality of life evaluation mean better quality of life. A total number of 80 women with NVP, who were within the age range 18 to 35, were randomly selected for the purpose of this study.

Results: The mean total score of NVPQOL was 95.5±15.69. The total quality of life score in women with severe nausea ($p = 0.003$) and sever vomiting ($p = 0.029$) was higher than that of the mild/moderate group. A statistically significant result was found in the mean scores of the fatigue domains between the women with mild/moderate and severe nausea groups ($P = 0.001$). The women with severe vomiting also had significantly higher mean scores of the physical symptoms ($P = 0.027$) and limitation ($P = 0.027$) domains compared with those with low/moderate vomiting.

Conclusion: The finding showed that the NVPQOL score was correlated with the severity of NVP symptoms. It is, therefore, very important that we, in our clinical practices, consider the impact of NVP on Iranian woman's quality of life in order to provide them with optimal management in case the need arises.

Keywords: Nausea, Pregnancy, Quality of life, Vomiting

Introduction

Pregnancy is a normal process in the women life. Most pregnant women (50-90%) experience nausea and vomiting from pregnancy (NVP) during the first trimester (1). NVP commonly begins in the 4th-7¬th weeks of pregnancy, gradually subsiding after the 20th week (2). In particular, NVP can cause considerable distress and temporary disability that can impact both

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the pregnant women and families (3). These problems can be reflected in the postpartum period. It has suggested that the presence and severity of NVP have an effective on the quality of life of pregnant women (4, 5).

Some generic measures of health-related quality of life are available, but the only existing NVP- specific questionnaire is the health- related quality of life for nausea and vomiting during pregnancy (6).

In Iran, the prenatal care has been given adequate support by the government in Primary Health care centers. These services are part of the general public health system, the management and treatment utilized in the prenatal care is nearly provided for free and is a low cost for these women (7). But most women live during pregnancy with encountering real or potential problems. Therefore, Knowing about the effects of the effect of the severity of NVP on the quality of life in pregnant women will be greatly helpful in providing decent care for the women. In this study, we made an attempt to test the hypothesis that women who had severed NVP reported higher QOL score.

Materials and Methods

This analytical study was conducted on pregnant women with nausea and vomiting from pregnancy (NVP) during their first 12 weeks. These pregnant women were receiving prenatal care at the prenatalogy ward of Rouhani Hospital, which is affiliated to Babol University of Medical Sciences. A total number of 80 women with NVP, who were within the age range 18 to 35, were selected randomly selected for the purpose of this study. The inclusion criteria were singleton pregnancies, the first trimester of pregnancy, Lack of diseases causing nausea and vomiting such as gastrointestinal diseases, lack of unwanted pregnancies and passive or active smokers.

This study was approved by Tarbiat Modares University of Medical Sciences for ethics in medical research. The written informed consent was obtained from all subjects in the study. The researcher approached the pregnant women in the room, and carried out a brief, face-to-face interview with each woman to collect socio-demographic information including maternal age, gestational age, gravity, parity, abortion, education, life place ownership, occupation, experience of nausea and vomiting in previous pregnancy. After the interview, the women were invited to complete QOL instruments. The following questionnaires were used to collect data for the purpose of this study:

The severity of NVP was measured by the structured questionnaire of nausea and vomiting. This instrument was based on the number of vomiting episodes within the last 24 hours and quantity of retching episodes, the intensity of VNP allocated to mild to moderate group (grades 3-6) and sever group (grades over 6). This visual tool includes a 10 cm ruler with certain beginning and end area and clear range that patients indicate their health condition on it. The reliability of the structured questionnaire was estimated through Cronbach's alpha internal consistency 73% and Split-Half using Spearman-Brown formula to calculate the correlation coefficient of $\alpha \geq 0.9$ for the entire questionnaire.

The NVP-specific Quality of Life for Nausea and Vomiting during pregnancy (NVPQOL) questionnaire was measured the QOL of pregnant women with NVP. This questionnaire contains 30 questions covering 4 general domains (physical symptoms and aggravating factor, fatigue, emotions and limitations). Every question of this questionnaire is calculated by 7-point Likert scale, ranging from 1 (none of the time) to 7 (all of the time). Low scores in all domains and the overall quality of life evaluation mean better quality of life. The development of NVPQOL questionnaire was established in Canada in 2002 by Magee et al (8). Many researchers reported that the NVPQOL questionnaire is reliable and valid for investigating all women with mild to severe NVP. These measures have acceptable for use in many medical conditions (9, 10).

All analyses were performed with SPSS (version 18.0). Descriptive statistics were used to describe socio-demographic. Independent t-test was used to determine the effect of the severity of NVP on the quality of life during the first trimester of pregnancy. Cronbach's alpha statistical method was used to calculate reliability coefficient. The significance level of $\alpha=0.5$ was considered for all assumptions.

Results

The mean age of the participants was 26.0±4.9 years which 62.5% was nulliparous. Study participants had a mean education of 11.9±3.1 years. More than 73% (n=59) of the subjects had no income (housewife) (Table 1). Out to of 80 pregnant women with NVP

Table 1. Socio-demographics of women with NVP (n=80)

Demographics	N (%)
Age (year) (mean ± SD)	26.0 ± 4.9
Occupation	
House wife	59(73.8%)
Worker	21 (26.2 %)
Education (Year) (mean ± SD)	11.9 ± 3.1
Gestational age (Week)	9.5 ± 1.9
Location (Life place ownership)	
No	26 (32.5%)
Yes	52 (65%)
Other	2(2.5%)
Gravidity	
Primigravid	42(52.5%)
Multigravid	38(47.5%)
Parity	
Nuliparity	50(62.5%)
Multiparity	30 (37.5%)
Abortion	
No	65 (81.3%)
Yes	15 (18.7%)
Body mass index (kg/m^2) (mean ± SD)	25.2 ±4.69

Values are given as number (Percentage) or mean ± SD

6.3% reported NVP in morning only and 36.3% from pregnant women had NVP in evening. Sixty three percent of the women (n = 63) reported that had server nausea and 23.8% (n = 21) had severed anxiety.

The mean total score of NVPQOL was 95.5±15.69. The mean quality of life score of pregnant women with severe nausea in physical symptoms, fatigue, emotions, and limitations domain and total QOL were 28± 1.19, 10.7 ± 0.91, 18.2 ± 1.18, 28 ± 1.1, and 85.18 ± 4.17, respectively. The total quality of life score in women with severe nausea was higher than of the mild/moderate group that was showed significant difference between two groups (p = 0.003). A statistically significant result found in the mean scores of the fatigue domains between the women with mild/moderate and severe nausea groups (P = 0.001). There was no statistically significant result found in the mean scores of the other domains (physical symptoms, emotions, and limitations) between two groups. The total quality of life score in women with severe vomiting was significantly higher than of the mild/moderate group (p = 0.029). The women with severe vomiting also had significantly higher mean scores of the physical symptoms (P = 0.027) and limitations (P = 0.027) domains compared with those with low/moderate vomiting. There was no statistically significant result found in the mean scores of the other domains (fatigue and emotions) between two groups (Table 2).

Discussion

This Study was shown that severity of NVP was associated with higher score quality of life (worse) and NVP have a negative impact on health–related quality of life. This funding is consistent with a study that reported the various degree of severity of NVP significantly impair both physical and mental HRQOL in Chinese women but in this study was used form the SF-36 (11). Other researchers have also reported a relationship between NVP in early pregnancy and women's general sense of well- being and day to day life activities (12). Also, a study in Canada have reported that severity of NVP have a negative impact on health –related QOL, which emphasizes the importance of an optimal management of NVP. In this study pregnant women reported intensity of nausea symptoms with VAS questionnaire and filled out the SF-12 and the NVP specific quality of life for nausea and vomiting (13). Overall, our results supported this hypothesis that the pregnant women with severe NVP have higher score (worse) NVPQOL.

Table 2. Health related quality of life scores for women with Nausea of pregnancy for each of the domains of the NVPQOL

Domain	Severe nausea of pregnancy (n=63)	Mild /moderate nausea of pregnancy (n=17)	P valve
Total	85.18 ± 4.17	98. 4 ±1.77	0.003
Physical symptoms	28± 1.19	30.7±0.58	0.69
Fatigue	10.7 ± 0.91	13.79±0.39	0.001
Emotions	18.2 ± 1.18	20.25±0.51	0.63
Limitations	28± 1.19	30.7±0.58	0.69

-Values are given as mean ± SD

Conclusion

In conclusion, we did not assess factors associated with NVP and quality of life which limited our ability was due to sample limited and not selected of health women without NVP. Despite this limitation mentioned, our study confirms an association between severities of NVP with worse scores of quality of life in pregnant women. It is, therefore, very important that we, in our clinical practices, consider the impact of NVP on Iranian woman's quality of life in order to provide them with optimal management in case the need arises.

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Conflict of Interest

None declared.

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