Investigation of Anxiety and Depression Level in Patients who Applied with a Request of Pregnancy Termination During The COVID-19 Pandemic

COVID-19 Pandemisi Sırasında Gebelik Sonlandırılması İsteyen Gebelerde Anksiyete ve Depresyon Durumunun Araştırılması

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ABSTRACT

Objective: At a time when the spread of the COVID-19 virus is very rapid in Turkey, there is not enough information about the course of the pandemic and the effects of the COVID-19 infection in pregnancy, the family planning clinic of our hospital evaluates the levels of anxiety and depression in patients with demand for termination of pregnancy and the desire to terminate the pregnancy for COVID-19. We planned to investigate whether it was associated with concerns related to the COVID-19 pandemic.

Methods: 132 patients with pregnancies below 10 weeks who applied to Etlik Zübeyde Hanım Training and Research Hospital Family Planning Outpatient Clinic with a request for termination of pregnancy in April 2020 and July 2020 were included.

Results: The reasons for termination of pregnancy were stated as 60% not wanting another child, 23.5% economic reasons, 9.8% risky drug use, and 6.8% other reasons. None of the patients included in the study decided to terminate their pregnancy due to the COVID-19 pandemic. The mean total score of the patients on the Beck Depression Inventory was 14 (0-43). Forty-six patients (34.8%) were evaluated as minimally depressed, 30 (22.7%) mild depression, 38 (28.8%) moderate depression, and 18 (13.6%) severe depression. The mean total score of the Beck Anxiety Inventory was 5 (0-44). One hundred and fifteen (87.1%) patients were classified as mild, 14 (10.6%) patients as moderate, and 3 (2.3%) patients as severe anxiety.

Conclusion: During the COVID-19 pandemic, there is an increase in the frequency of anxiety and depression in patients who have undergone pregnancy termination and especially who live with an elderly relative. It was observed that the COVID-19 pandemic was not effective in the decision to terminate the pregnancy and, similar to the previous data, not wanting another child was the most common reason.

Keywords: 2019-nCoV Infection, Pandemic, Unintended Pregnancy, Family Planning, Depression, Anxiety

ÖZET

Amaç: COVID-19 virüs yayılımının Türkiye'de çok hızlı olduğu, pandeminin seyri ve gebelikte COVID-19 enfeksiyonunun etkileri hakkında yeterli bilginin olmadığı bir dönemde, hastanemiz aile planlaması kliniğinde isteğe bağlı gebelik sonlandırma talebi olan hastalardaki kaygı ve depresyon düzeylerini değerlendirmeyi ve gebelik sonlandırma isteğinin COVID-19 pandemisine bağlı kaygılarla ilişkisi olup olmadığını araştırmayı planladık.

Metod: Etlik Zübeyde Hanım Eğitim ve Araştırma Hastanesi Aile Planlaması Polikliniklerine Nisan 2020 ve Temmuz 2020 aylarında gebelik sonlandırma talebi ile başvuran 10 hafta altı gebeliği olan 132 gebe dahil edildi.

Bulgular: Hastaların gebelik sonlandırma nedenleri %60 oranında başka çocuk istememe, %23,5 ekonomik nedenler, %9,8 riskli ilaç kullanımı, %6,8 oranında diğer nedenler olarak belirtilmiştir. Çalışmaya dahil edilen hiçbir hasta COVİD-19 pandemisi nedeniyle gebeliğini sonlandırmaya karar vermemiştir. Hastaların Beck depresyon ölçeği toplam puanı 14 (0-43)'tür. Kırk altı hasta (%34,8) minimal depresyon, 30 hasta (%22,7)hafif depresyon, 38 hasta (%28,8) orta depresyon ve 18 hasta (%13,6) şiddetli depresyon olarak değerlendirilmiştir. Beck anksiyete ölçeğinin toplam puanı ise 5 (0-44) bulunmuştur. Yüz on beş (%87,1) hasta hafif, 14 (%10,6) hasta orta, 3 (%2,3) hasta ise şiddetli anksiyete olarak sınıflandırılmıştır.

Sonuç: COVİD-19 pandemisi sırasında, gebelik sonlandırma işlemi uygulanan ve özellikle yaşlı bir yakınıyla birlikte yaşayan hastalarda anksiyete ve depresyon sıklığında artış görülmektedir. Gebelik sonlandırma kararında COVİD 19 pandemisinin etkili olmadığı, daha önce yapılan verilere benzer olarak başka çocuk istememenin en sık neden olduğu görülmüştür.

Anahtar Sözcükler: 2019-nCoV Enfeksiyonu, Pandemi, İstenmeyen Gebelik, Aile Planlaması, Depresyon, Anksiyete

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INTRODUCTION

Unintended pregnancy is a pregnancy in which the pregnancy is not wanted at the time it occurs, regardless of whether contraception is used or not. This situation emerges as an important reproductive health problem that has negative consequences on maternal, child and public health[1].

The World Health Organization (WHO) reported cases of pneumonia of unknown etiology in the city of Wuhan, China, in December 2019. In the following period, the COVID-19 pandemic caused a worldwide crisis with its negative effects on health, living conditions, politics and economy [2, 3]. The COVID-19 pandemic has also negatively affected women's access to family planning and reproductive health services, causing an increase in the unintended pregnancy burden directly or indirectly[4]. Factors such as pressure on health systems, economic difficulties, bans on staying at home and not applying to a health institution due to fear of being infected with COVID-19 have led to this situation[5]. In a study, while the rate of unimvented pregnancy was 28% before the COVID-19 pandemic, this rate increased to 47% after the pandemic[6].

There are publications reporting that COVID-19 has a more serious course during pregnancy due to changes in the immune system and cardiopulmonary system, and there is an increase in mortality and complication rates [7]. In addition, it is noted that COVID-19 causes widespread depression and anxiety in the early stage of the disease and significant psychological effects on the mental health of the general population [8]. The current risky situation and the uncertainty of the healing process of the disease cause fear and anxiety in people [9]. Studies have shown that depression and anxiety are more intense in pregnant women during the pandemic period. It has been reported that the transmission of infection to the fetus, congenital defects that may occur in the fetus, and termination of pregnancy due to infection raise concerns [10-12]. In March 2020, 71 pregnant women were questioned in Ireland and it was stated that the increased anxiety levels were mostly related to their elderly relatives, followed by their concerns about their other living children and unborn babies[8]. However, there are not enough studies evaluating the level of anxiety about unintended pregnancies during the pandemic period.

We conducted our study at a time when the spread of the COVID-19 virus was very rapid in Turkey, and there was not enough information about the course of the pandemic and the effects of COVID-19 infection in pregnancy. We planned to evaluate the levels of anxiety and depression in patients with voluntary termination of pregnancy in the family planning clinic of our hospital and to investigate whether the desire to terminate pregnancy is related to concerns related to the COVID-19 pandemic.

MATERIAL and METHOD

Patients who applied to Etlik Zubeyde Hanim Training and Research Hospital Family Planning Outptient Clinics in April 2020 and July 2020 with a request for termination of pregnancy were included in our study. In our country, induced abortions were legalized with the Population Planning Law adopted in 1983, and optional termination of pregnancy service is offered until the 10th gestational week. In this context, 132 pregnant women who were less than 10 weeks pregnant at the begin!ning of the COVID-19 pandemic and had a request for termination of pregnancy were included in the study. The work permit was obtained with the TUEK decision dated 21.04.2020 and numbered 06/15.

The patients were questioned about their age, education level, employment status, marital status, smoking and alcohol use, and whether they had any additional diseases. Gravity, parity, number of previous unintended pregnancies, reasons for termination of pregnancy and contraceptive methods to be used after the procedure were evaluated.

The level of knowledge of the patients about COVID-19, the sources they obtained information about COVID-19, the percentage of suspected patients with COVID-19 in their family/close circles, the situations they would be most worried about if they caught COVID-19, and the level of their concerns about transmitting the disease to their families were questioned.

The percentage of individuals over the age of 65 in their close circles or in their families, their usage of masks and similar protective equipments, and if they do, what they think about whether these equipments protect them or not, and the physical condition of the environment they live in were evaluated through a survey study.

In addition, the Beck Depression Inventory and Beck Anxiety Inventory, of which Turkish validity and reliability studies were conducted, were used to question the anxiety and depression status of pregnant women. Those who did not have the mental capacity to answer the questionnaire and those with psychiatric diseases were excluded from the study. After the study was explained, verbal and written informed consent was obtained from all research participants.

Beck Depression Inventory

Beck Depression Inventory is one of the most frequently used tools to measure the severity of depression. It contains 21 multiple-choice survey questions. The total score is taken as an arithmetic sum by grading between 0-3 points for each question. A total score of 0-9 was classified as minimal depression, 10-16 mild depression, 17-29 moderate depression, and 30-63 severe depression [13]. Turkish validity and reliability study was performed by Hisli N [14].

Beck Anxiety Inventory

Beck Anxiety Inventory is a self-rating scale used to determine the frequency of anxiety symptoms. In this scale, patients answer 21 questions, increasing from 0 to 3 for each symptom. Like the Beck Depression Inventory, the final result is found by the arithmetic sum of the answers to the questions. According to the arithmetic sum, the score was classified as mild anxiety between 0-21, moderate between 22-35, and severe anxiety above 36 [15]. In the study of Ulusoy M et al., it was shown that the Beck Anxiety Inventory is a valid and reliable test in Turkish [16].

All of the survey applications were made by the principal researcher and an assistant researcher. Scoring was completed by the principal investigator by evaluating the responses to the questionnaires.

Statistical Analysis

IBM SPSS Statistics 23 program was used for data analysis. First of all, their suitability for the given normal distribution was evaluated by visual (histogram and probability graphs) and analytical methods (Kolmogrov-Smirnov/Shipiro-Wilk tests). Descriptive statistics; It was expressed as mean ± standard deviation for the variables with normal distribution, and as the median (minimum-maximum) for the variables with non-normal distribution. Categorical variables were expressed as percentages. Chi-square test was used to compare categorical variables. When the number of groups was two, Student's t test was used for variables with normal distribution, and Mann-Whitney U test was used for variables out of normal distribution. For $p < 0.05$, the results were considered statistically significant.

RESULTS

A total of 132 patients were included in the study. The mean age of the patients was 32.2 ± 5.9 years. 61 (46.2%) of the patients were primary school graduates and 13 (9.8%) were university graduates. Of the patients, 109 (82.6%) were married and 102 (77.3%) were unemployed. Forty-two (31.8%) patients smoke, while 7 (5.3%) patients use alcohol. The median gestational week of the patients was 6 (5-9), and the number of previous unintended pregnancies was 1 (1-4). As a method of contraception after the procedure, 90 patients (68.2%) stated that they would use an intrauterine device (IUD), 7 (5.3%) patients stated that they would use oral contraceptives (OCs) , and 24 (18.2%) patients would use other methods. It was stated that the reasons for termination of pregnancy of the patients were 60% not wanting another child, 23.5% economic reasons, and 9.8% risky drug use. None of the patients included in the study decided to terminate their pregnancy due to the COVID-19 pandemic. Table 1 shows the demographic characteristics of the patients.

Table 1: Demographic Characteristics

n=132	
Age	32,2 ± 5,9
Educational Level	
Illiterate	9(%6,8)
Elementary School Graduate	61(%46,2)
High School Graduate	49(%37,1)
University Graduate	13(&9,8)
Working Status	
Unemployed	102(%77,3)
Employed	30(&22,7)
Marital Status	
Married	109(%82,6)
Single	23(%17,4)
Obstetric History	
Gravida	4(1-8)
Parity	2(0-6)
Unintended Pregnancy History	1(1-4)
History of Smoking-Alcohol Usage	
Smoking	42(%31,8)
Alcohol Usage	7(%5,3)

84.1% (n=111) of the patients participating in the study stated that they had knowledge about the COVID-19 pandemic. When the patients' sources of information about COVID-19 are listed, television comes first with 61.4%, while social media comes second with 33.3%. 5.3% of the patients stated that they obtained information from the health personnel. While only 7 patients (5.3%) stated that they did not use masks and other protective equipment, 97 patients (73.5%) thought that the mask protected them from COVID-19. While 77.5% (n=86) of the patients who know about COVID-19 pandemic think that the mask is protective, 22.5% (n=25) think that the mask does not protect them. On the other hand, 52.2% (n=11) of the patients who do not know about COVID-19 pandemic think that the mask is protective, while 47.8% (n=10) think that the mask does not protect **(p=0.017)**.

Ninety-nine (75%) patients think that they will not be infected with COVID-19. Half of the patients think that even if they are infected with COVID-19, they will be mildly affected. However, while 61.9% of smokers think that they will be severely affected if they get the disease, 43.3% of non-smokers think that they will be severely affected even if they get the disease **(p=0.047)**.

86.4% of the patients stated that they were worried about infecting their families if they got this disease. 53.5% of the patients who are worried about infecting their families have stated that they think they will be severely affected if they get the disease. 22.2% of the patients who do not have the fear of infecting their families think that they will be severely affected if they get the disease **(p=0.014)**.

The mean total score of the patients on the Beck Depression Inventory was 14 (0-43). Forty-six patients (34.8%) were evaluated as minimally depressed, 30 (22.7%) mild depression, 38 (28.8%) moderate depression, and 18 (13.6%) severe depression. Nineteen (14.4%) patients stated that they lived in the same house with a relative over the age of 65. Patients with moderate and severe depression were more likely to live with an elderly person in the same household compared to patients with minimal and mild depression **(57.9% vs 42.1% p=0.015)**.

The mean total score of the Beck Anxiety Inventory was 5 (0-44). One hundred and fifteen (87.1%) patients were classified as mild, 14 (10.6%) patients as moderate, and 3 (2.3%) patients as severe anxiety. While 10.4% of patients with mild anxiety lived with an elderly relative in the same house, all patients with severe anxiety lived with an elderly person in the same house (p=0.001). When the home environments of the patients are evaluated, the number of rooms in the house they stay is 3 (0-6), and the number of toilets is 1 (1-3). As the number of rooms in the house where the patients lived decreased, the severity of anxiety increased (2 (2-3) vs 3 (0-6) p=0.028).

DISCUSSION

In our study, in which we evaluated the anxiety and depression levels in patients with a demand for voluntary termination of pregnancy and investigated whether the desire to terminate pregnancy is related to the concerns related to the COVID-19 pandemic, the reasons for termination of pregnancy were not wanting another child (60%), economic reasons (23.5%), risky drug use. (9.8%) was found. None of the patients included in our study decided to terminate their pregnancy due to the anxiety they experienced due to the COVID-19 pandemic. In a study conducted by Clara et al. in Italy, it was concluded that the pandemic had no effect on this demand in patients with unintended pregnancies and demand for termination of pregnancy(17).

Family planning and reproductive health have been one of the areas most affected by the COVID-19 pandemic in society. The uncertain future of the pandemic, the fear of being infected with the virus, the possibility of teratogenic effects of the virus affected pregnant women psychologically(18-22). In addition, although maternal-fetal transmission could not be demonstrated in studies, it was stated that cases such as the inability to completely exclude vertical transmission increased the concerns of couples (23).

Demographic characteristics of patients who underwent pregnancy termination during the COVID-19 pandemic were similar to the 2018 Turkey Demographic and Health Survey (TDHS) data, and in our patient group, it was observed that nearly half of the patients who requested pregnancy termination were primary school graduates. Similarly, not wanting another child and economic reasons were seen at the top of the pregnancy termination requests. It is emphasized that healthcare providers should pay attention to birth control for the prevention of unplanned pregnancies during the COVID-19 pandemic(24). In this context, the most common use of long-acting reversible contraceptive methods (copper IUD, LNG-IUD, subcutaneous implant) stands out during the pandemic(24, 25). Similarly, in our study, the most preferred method of contraception in patients was the IUD.

In a study by Tsorng-Yeh Lee et al., most of the patients had correct information about COVID-19 and listed the main sources of information as doctors, midwives/nurses and television(26). In another study, 11,242 people were evaluated and it was reported that traditional media sources such as television, radio, and newspaper were the most used source at a rate of approximately 90%(27). In our study, most of the patients stated that they had information about the COVID-19 pandemic, and about 60% of them were told as television and 30% as social media as sources of information. In our country, the rate of obtaining information from health personnel is lower.

Social isolation was shown as an independent factor affecting postpartum anxiety in a study conducted with 260 pregnant women who showed an increased level of anxiety in those with low education level and high number of children (28).

In a study by Berthelot N et al., it was shown that depression and anxiety levels in pregnant women increased significantly after the pandemic compared to before (29). In our study, it was observed that anxiety levels were higher, and moderate and severe depression was more frequent, especially in patients who shared the same house with an elderly relative. The higher mortality rate, especially over the age of 60, may be the main reason for the increased incidence of anxiety and depression in people living with an elderly relative (30).

The Centers for Disease Control and Prevention (CDC) recommend that someone with Covid-19 symptoms stay at home in a separate, well-ventilated room and use a separate bathroom if it's possible (31). In our study, we found that the anxiety of pregnant women with fewer rooms in the house was higher.**.**

CONCLUSION

As a result, during the COVID-19 pandemic, there is an increase in the frequency of anxiety and depression in patients who have undergone pregnancy termination and especially who live with an elderly relative. It was observed that the COVID-19 pandemic was not effective in the decision to terminate the pregnancy and, similar to the previous data, not wanting another child was the most common reason.

Conflict of interest
No conflict of interest was declared by the authors.

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