Smyrna Tıp Dergisi ***Araştırma Makalesi***

How much and How did the Number of Patients who Applied to the Pandemic Hospital Gynecology Clinic Change During the Covid-19 Pandemic Period Compared to the Same Period a Year Ago ?
Covid-19 Pandemi Döneminde Pandemi Hastanesi Kadın Doğum Kliniğine Başvuran Hasta Sayısı Bir Yıl Önceki Aynı Döneme Göre Ne Kadar ve Nasıl Değişti?

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Summary
Objective: Rapid spread of Covid-19 and increasing death numbers caused people to take precautions in order to lower infection rates. But some of the patients in our region still admitted to pandemic hospital which Covid-19 patients are diagnosed and treated, to get non-urgent health care. Because of this situation it was planned to compare data of outpatient examinations at gynecology department of a regional pandemic hospital during Covid-19 pandemic and last years same period.
Material and Methods: This study was performed at Karabuk University Education and Research Hospital which designated as pandemic hospital to diagnose and treat Covid-19 patients. This cross-sectional study is planned to compare outpatient data of gynecology department between time period of Covid-19 outbreak in the region which is 11.March-11.May.2020 and 11.March-11.May.2019. Patients complaints, diagnosis, patient numbers, physician numbers and number of clinics providing health care were compared.
Results: Gynecology outpatient clinic monthly patient admission numbers were significantly lower during pandemic in comparison to control group. Total patient number was decreased at pandemic group in comparison to control group. Most frequently examined patient group was pregnacy follow-up patients in both groups. Patients requesting intrauterine device implantation were increased in pandemic group significantly.
Conclusion: Precautions for COVID-19 pandemic were put in place in our country just like all around the world. But these precautions did not stop patients with non-urgent medical conditions to consult to outpatient clinics. This study showed that contraception guidence, specifically intrauterine device implantation requests were increased during pandemic.
Key words: Covid-19, contraception, intrauterine device, outpatient clinic, pregnancy

Özet
Amaç: Covid-19 pandemisinin tüm dünyada hızlı yayilimi ve ölümlere yol açması nedeniyle; kişileri bireysel önlemlere yoneltti. Bu tabloya rağmen bölgemizdeki bir kısım hasta Covid-19 ile enfekte hastaların tanı ve tedavilerinin yapıldığı hastanelere acil olmayan nedenlerle, normal sağlık hizmeti almak için başvurmuşlardı. Bu amaçla pandemi döneminde; Covid-19 ile enfekte hastaların tanı ve tedavilerinin yapıldığı hastanedeki kadın hastalıkları ve doğum kliniğinde ayaktan muayene olan hastaların bir yıl önceki aynı dönem aralığı ile karşılaştırılması ve değişimin gözlenmesi amaçlanmıştır.
Gerec ve Yontem: Çalışma; pandemi döneminde bölgemizde Covid-19 ile enfekte hastaların tanı ve tedavilerinin yapıldığı ve pandemi hastanesi olarak belirlenen Karabük Üniversitesi Eğitim Araştırma Hastanesinde yapıldı. Kesitsel yapılan çalışmamızda, incelen kesit aralığı 11.Mart.2020-11.Mayıs.2020 tarihleri Covid-19 pandemi dönemi ile 11.Mart.2019-11.Mayıs.2019 tarihleriydi. Her iki dönem birbirleriyle kadın hastalıkları ve doğum polikliniğine gelen hastaların şikayetleri, tanıları ve hasta sayıları yönünden ve poliklinik hizmeti veren hekim sayısı ve poliklinik sayısı bakımından kıyaslandı.
Bulgular: Pandemi döneminde kadın hastalıkları ve doğum bölümünde aylık yapılan poliklinik sayısı, kontrol grubuna göre belirgin azalmıştı. Pandemi döneminde polikliniğe başvuran toplam hasta sayısı, kontrol grubuna kıyasla belirgin azalmıştı. Her iki dönemde en sık başvuru nedeni gebelik takibi idi. Pandemi döneminde

kontrasepsiyon yöntemlerinden rahim içi araç (RİA) uygulama istemi kontrol grubu ile kıyaslandığında belirgin olarak artmıştı.
Sonuç: Çalışmada pandemi döneminde gebelik kontrolü ve özellikle kontraseptif yöntemlerden rahim içi araç talebinde artış olduğu gözlenmiştir.
Anahtar kelimeler: COVID-19, kontrasepsiyon, rahim içi araç, poliklinik, gebelik

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Introduction

At the end of 2019, a clinical picture similar to high fever and pneumonia with unknown causative agents began to appear in Wuhan, China (1). In the samples taken from the bronchoalveolar lavage of these patients, a new type of corona virus (Covid-19) was detected, which was determined as the causative agent of the disease (2). The Covid-19 infection, initially described as a zoonotic infection, transmitted only from animals to humans, has been proven to be transmitted from person to person. Because of this feature, it has rapidly spread worldwide (3). The Covid-19 infection has recently been ranked first on the world's agenda because of its economic and psychosocial effects. It is known that similar pandemics occurred in the past years and led to the death of millions of people (4). March.11 2020, when the COVID-19 infection was declared as a pandemic by the World Health Organization (WHO), coincides with the first corona virus case in Turkey. After this date, countries have attempted to reduce the spread rate and transmission routes through social isolation and quarantine practices by increasing the measures they took. In addition; practices such as flexible and alternate working hours, working from home, taking a break on face-to-face trainings to go online training, and imposing a curfew under 20 and over 65 years of age was brought to life.

Because of mortal risks of a pandemic, it is expected that people develop an instinct to protect themselves and try not to apply to hospitals during the pandemic period except for essential health problems (5,6). Especially, in pandemic hospitals this condition is more noticeable (7). At present, with increasing technological developments, the barrier of individuals to access information has almost disappeared. In particular, a number of negative and untrue news on social media can cause negative impact on people's psychology. Many studies have demonstrated that epidemics cause a major trauma to humans and increase anxiety levels (8,9).

The effects of pandemics on humans vary according to economic, social and geographical status (10). Increased number of patients related to epidemic disease during the pandemic in regions where hospital alternatives are limited, can challenge hospital capacities.

In this study, it was aimed to identify three different changes for pregnant and gynecological patients during the pandemic period: 1) reasons for admission of patients to pandemic hospitals during the pandemic period, 2) the change in the number of patients, and 3) the change in the working hours of physicians and the number of outpatient examinations. To eliminate the seasonal difference of the compared parameters, it was planned to compare the pandemic period and the period between the same dates a year ago.

Material and Methods

The study was conducted in the Karabük University Training and Research Hospital, which was designated as a pandemic hospital during the pandemic period. In the city where study performed, there were three hospitals that provide outpatient services, including a private hospital and a public hospital outside the pandemic hospital. The cross-sectional interval examined was between March.11 2020, and May.11 2020, and between March.11 2019 and May.11 2019. Both periods were compared with each other in terms of complaints, diagnoses, and patient numbers of the patients who admitted to the gynecology and obstetrics clinic as well as total number of physicians and outpatient clinics. In the hospital the study conducted, the diagnosis and treatment of patients infected with Covid-19 were carried out and services in all other medical branches in the hospital were continued by reducing the numbers. During periods other than the Covid-19 pandemic period, the number of physicians who provided outpatient clinic services on weekdays in the gynecology and obstetrics clinic was 2 or 3 as per the monthly schedule; however, during the Covid-19 pandemic period, this number was reduced to a single physician. Elective surgeries were then

postponed during the pandemic period, and emergency gynecological cases, caesarean section, and vaginal births continued.

The study included all patients who came to the gynecology and obstetrics clinic between the dates examined. The patients excluded from the study were those who were referred from other centers and were referred to another center.

Statistical Analysis

IBM SPSS for Mac 23 book was published for the analysis of the data of the study. Statistical significance level was taken as $p < 0.05$. Average values were taken for socio-demographic characteristics. Normality of continuous variables was observed in the Kolmogorov-Smirnov test. T test for comparing normally distributed variables between groups, Mann-Whitney U test for variables with nonnormal distribution. Paired t-test for normal distribution variables and Wilcoxon test for variables that do not show normal distribution in intergroup comparisons between continuous variables and Mann-Whitney U-test and Student t-test for continuous variables to test differences between groups.

Results

The total number of patients admitted to the gynecology and obstetrics clinic during the Covid-19 period decreased by 33.04% compared to the control group ($p<0.001$).

Table 1 shows that the total number of outpatient examinations was 104 during the pandemic period, 169 in the same period in the previous year and then decreased by 62.5% ($p<0.001$). In Table 1, the changes of symptoms and diseases in both periods are shown (Table 1).

During the pandemic period, 87% of the patients who came to post-surgical follow-up were post-cesarean follow-up patients. Moreover, 8% of the patients who came to follow-up after surgery in the initial period of pandemics were patients who underwent surgery before the pandemic period, 5% of the patients were operated for emergency gynecological reasons, and all the remaining patients were post-cesarean section surgery follow-up patients. In the control group, 48% of the post-surgical follow-up patients were cesarean section patients, while 52% were the patients who came to follow-up visits after elective surgical interventions. The mean age of patients in both groups was similar except for patients with acute vaginitis, post-surgical control, and vaginal prolapse. The mean age of the patients in this group was lower in the pandemic group.

The correlation and regression analysis we conducted demonstrates that the decrease in the number of physicians and the number of outpatient examinations provided by physicians is effective for reducing the number of patients ($p<0.001$).

Table 1. *Outpatient diagnosis of patients*

Symptoms and diagnoses	***March.11 – May.11 2020***	***March.11 – May.11 2019***	***P value***
Pregnancy follow-up	1700 (66.4%)	3134 (40.47%)	<0.001
Acute vaginitis	420 (16.40%)	2290 (29.57%)	<0.001
Irregular menstruation	230 (8.98%)	1335 (17.23%)	<0.001
Insertion of intrauterine device	65 (2.54%)	77 (0.99%)	<0.001
Menopause	41 (1.60%)	143 (1.85%)	>0.107
Infertility	27 (1.05%)	217 (2.80%)	<0.001
Post-surgical follow-up	42 (1.64%)	300 (3.87%)	<0.001
Wart	4 (0.16%)	25 (0.32%)	>0.001
Endometrium CA	4 (0.16%)	12 (0.15%)	>0.945
Incontinence	8 (0.32%)	132 (1.70%)	<0.001
Prolapse	4 (0.16%)	25 (0.32%)	<0.001
Ovarian cyst	5 (0.19%)	54 (0.70%)	<0.001
Total	2560	7744	<0.001

Discussion

In certain recent scientific studies, the course of the epidemic in Turkiye has been analyzed using the Covıd-19 data officially published by the

Ministry of Health since the date of its first appearance. Moreover, statistical models have been developed in which future forecasts can be made after considering the hospital bed, intensive care bed, and doctor capacities (11). Sharing these estimates and data in the media makes it possible to reach wider audiences with social media. Based on these scientific data, measures taken by countries and regions around the world may vary. This difference affects the admission of people, patients and especially patients with obstetric and gynecological problems to hospitals during the pandemic period. Because of the concern of people being infected with Covid-19, there is a decrease in the number of patients admitted to the outpatient clinic by weeks with a positive correlation. While this decrease less affected the patients with pregnancy follow-up, it affected all patients. However, the reduction in the number of physicians who provide outpatient clinic services in the hospital during the pandemic period contributes to this decrease. The hospital where study performed is a tertiary hospital, which was also serving as a pandemic hospital where the diagnosis and treatment of Covid-19 patients were applied.

In both periods, pregnancy follow-up visits were the most frequent reason for application; however, during the pandemic period, this rate was observed to relatively increase. The decrease in the number of admissions to the outpatient clinic during the pandemic period is primarily associated with patients with acute vaginitis and irregular menstrual bleeding. About 33% of women experience symptoms of acute vaginitis at some time in their lives (12). Vaginitis is more common, especially during the sexually active period. Although the application to the outpatient clinic because of acute vaginitis decreased during the pandemic period, the mean age of the patients who admitted with this complaint during the pandemic period was younger. It was believed that this is because of lower tolerance to symptoms of acute vaginitis in young people and that young patients believe the Covid-19 viral infection will not affect themselves. Despite the curtailment for people under 20 and over 65 and the fatal risk of pandemic during the pandemic period, it is seen that acute vaginitis cannot be tolerated and cause sufficient symptoms to consult a physician. The fact that the patients in the control group are at an older age and have experience about the treatment and course of the possible disease is possibly the reason for them contacting physicians lesser.

Although the admissions to the outpatient clinic with complaints of irregular menstrual bleeding decreased in the pandemic period compared to the control group, it was the third most common cause of outpatient clinic application during the pandemic period. Abnormal uterine bleeding can cause anemia because of intensive bleeding or cause pelvic pain (13). It is observed that in the most risk periods of the pandemics, patients come to the doctor with complaints of abnormal uterine bleeding.

The most commonly used contraceptive method is surgical sterilization in men and women, followed by intrauterine devices (IUD) and oral contraceptive pills (OCP). As per the 2003 data, the most commonly used contraceptive method prevalence in the world is sterilization of women with 20.2%, while IUD takes the second place with 13.9% (14,15).

In the Covid-19 pandemic period, the demand for insertion of IUD appears to be increasing. It seems that people care enough about family planning to take the risk of transmission during the pandemic period. Recently, studies demonstrated that data on the heavier course of the Covid-19 infection in pregnancy is insufficient (16). However, because of teratogenicity and risk of miscarriage and inability to provide sufficient health care during the pandemic period, pregnancy with spontaneous and auxiliary reproductive techniques is not recommended (17,18). In addition to these recommendations, the trauma and anxiety because of epidemics on humans may have led to an increase in demand for contraception during this period. When the level of knowledge about preventive methods and the use of contraception methods in Turkey are examined, IUD is the most common method with 94.9% (19). Although IUD is a method that can be considered to be invasive, it has been the most preferred contraception method requiring physician control during the pandemic period.

Menopause is a transitional period when there are many hormonal and psychological changes that affect the entire body in women. In this transition period, patients have many symptoms that negatively affect daily life and reduce the quality of life (20,21). Despite the decrease in the total

number of patients diagnosed with menopause during the pandemic period, there is no change in the patient rate. Some patients in menopause admitted to the hospital because of symptoms such as fever flashes and insomnia, which significantly reduce their comfort of life during the pandemic period despite the risk of infection with Covid-19, which can be fatal.

According to the Turkey Demographic and Health Survey; the prevalence of infertility among women aged 15-49 years was reported to be 12.2% (22). The American Association of Reproductive Medicine (ASRM) offered suggestions for early pregnancy updated on March 30 and recommended that initiating new treatment cycles aimed at achieving pregnancy should be suspended during the Covid-19 period (23). Therefore, during the pandemic period, there has been a decrease in patient applying to the hospital because of infertility. However, anxiety because of infertility in some patients is important enough to risk the Covid-19-related infection.

Patients who came to post-surgical check-up decreased in the pandemic period compared to the control group. The reason for the decrease was the fact that elective cases were stopped by the Ministry of Health. The majority of patients who came to post-surgical visit during Covid-19 were post-cesarean section patients.

Wart, which is a pathology caused by the Human Papilloma Virus (HPV), leads to malodorous discharge in the patient, the external appearance of which causes anxiety in the person and is another probable cause of patients' admissions during the pandemic period. Because the patients during the pandemic period are younger indicates that they have encountered lesions for the first time and have no ability to cope with lesions.

Endometrium cancer is most often manifested by irregular vaginal bleeding. Admissions to the outpatient clinic in both periods are similar because of serious symptoms that may occur because of anemia and health anxiety in the person because of bleeding.

More rarely, patients admitted to the outpatient clinic for reasons such as urinary incontinence, uterine prolapse, and ovarian cyst, and these applications were significantly lower than the control group.

Limitations

In both periods, groups can be compared in more detail by identifying and examining patient groups with additional parameters and questionnaires that determine their concerns.

Recommendations

Different measures are taken against the Covid-19 pandemic around the world, based on countries and regions. During the pandemic period, the conditions in each region can be examined and safer examination centers can be established or determined according to the conditions found and by considering the pathologies for which patients most often apply to pandemic hospitals.

Conclusion

Additional measures have been taken in the study region against the Covid-19 pandemic. Despite these precautions, patients can apply to pandemic hospitals with similar complaints to those outside this period. In the study, during this period there was an increase in pregnancy follow-ups and in demand for intrauterine devices, one of the popular contraceptive methods.

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