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Effect of COVID-19 Pandemic on Urology Clinic Attendance: Which Diseases are Important for Patients?

COVİD-19 Pandemisinin Üroloji Poliklinik Başvurularına Etkisi: Hastalar İçin Hangi Hastalıklar Önemli?

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Abstract

Objective: This study assessed whether there were changes in the characteristics of the patient population attending our urology clinic during the COVID-19 pandemic.

Materials and Methods: Patients attending the general urology clinic of SB-ODU Education and Research Hospital were assessed. Dates from 3 February 2020 to 10 March 2020 were accepted as before the pandemic, with dates from 11 March 2020 to 29 May 2020 accepted as after the pandemic. Complaints of patients on attendance were grouped as follows: benign prostate hyperplasia (BPH), ureteral diseases, kidney diseases, testis and scrotum diseases, incontinence, bladder diseases, sexually-transmitted diseases, penile diseases, emergency urologic problems, sexual problems, urethral diseases, kidney and ureter stones, pediatric diseases and urologic tumors.

Results: While 638 patients attended the urology clinic in the 1.5-month period before the pandemic, 398 patients attended in the 2.5-month period after the pandemic. Additionally, 30.9% of patients attending the clinic before the pandemic were women, while this rate fell to 23.6% after the pandemic. After the pandemic, there were statistically significant reductions identified for attendance due to BPH, ureteral diseases, kidney diseases, incontinence, bladder diseases and urethra diseases. There was no significant difference in attendance due to urinary system tumors, pediatric urologic diseases, attendance due to kidney and ureter stones, sexual problems, and emergency urology problems. There were increases identified for attendance for testis and scrotum diseases and sexually-transmitted diseases.

Conclusion: During the pandemic, the numbers of patients attending the urology clinic significantly reduced. There were increases identified for attendance at our clinic for testis and scrotum diseases and sexually-transmitted diseases during the pandemic. While attendance reduced for many disease groups, rates of attendance for urologic emergencies, urinary tumors, pediatric diseases, stone disease and sexual problems continued as usual.

Keywords: COVID-19, Pandemic, Urology, Outpatient, Attendance

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Öz

Amaç: COVİD 19 pandemisi sonrası üroloji polikliniğine başvuran hasta popülasyonunun karakteristiğinde değişiklik olup olmadığını değerlendirdik.

Gereç ve Yöntemler: SB-ODÜ Eğitim ve Araştırma Hastanesi Genel Üroloji Polikliniğine başvuran hastalar değerlendirildi. Ülkemizde ilk COVİD vakasının görüldüğü 11 Mart 2020 tarihi sınır kabul edildi. 03 Şubat 2020-10.03.2020 arası pandemi öncesi, 11.03.2020 – 29.05.2020 arası pandemi sonrası olarak alındı. Hastaların başvuru şikayetlerine göre benign prostat hiperplazisi, üreteral hastalıklar, böbrek hastalıkları, testis ve skrotum hastalıkları, inkontinans, mesane hastalıkları, cinsel yolla bulaşan hastalıklar, penil hastalıklar, acil ürolojik problemler, cinsel sorunlar, üretra hastalıkları, böbrek ve üreter taşı, pediatrik hastalar, ürolojik tümörler olarak gruplandırıldı. Her bir gruptaki pandemi öncesi ve sonrası hasta sayıları karşılaştırıldı.

Bulgular: Üroloji polikliniğine pandemi öncesi yaklaşık 1,5 aylık sürede 638 hasta başvururken, pandemi sonrası yaklaşık 2,5 aylık sürede 398 hastanın başvurduğu ve hasta sayısında ciddi azalma olduğu saptandı. Ayrıca pandemi öncesi polikliniğe başvuran hastaların %30,9'u kadın iken pandemi sonrası bu oran %23,6'ya düştüğü görüldü. Pandemi döneminde BPH, Üreteral hastalıklar, böbrek hastalıkları, inkontinans, mesane hastalıkları, üretra hastalıkları nedeniyle başvurularda istatistiksel anlamlı azalma saptanırken, üriner sistem tümörlerinde, pediatrik ürolojik hasta grubunda, böbrek ve üreter taşları nedeniyle başvurularda, cinsel sorunlarda, acil ürolojik problemler nedeniyle başvurularda, fark olmadığı, testis ve skrotum hastalıklarında ve cinsel yolla bulaşan hastalıklarda artış olduğu saptandı.

Sonuç: Pandemi sürecinde üroloji polikliniğine başvuran hasta sayıları ciddi oranda azalmıştır. Pandemi sürecinde polikliniğimize testis ve skrotum hastalıklarından dolayı ve cinsel yolla bulaşan hastalıklar nedeniyle başvurularda artış olduğu saptanmıştır. Birçok hastalık grubunda başvurular azalırken, ürolojik aciller, üriner tümörler, pediatrik hasta grubu, taş hastalığı ve cinsel sorunlar nedeniyle başvuru oranları aynı şekilde devam etmiştir.

Anahtar Kelimeler: COVİD-19, Pandemi, Üroloji, Poliklinik, Devamlı

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Introduction

COVID-19, emerging in Wuhan city in China and affecting the whole world, was identified to be caused by a novel coronavirus (2019-nCoV) previously not identified in humans. The virus was called SARS-CoV-2 due to the close similarity to SARS-CoV (1). It causes a variable range of symptoms from asymptomatic to very severe cases. Generally, there is dry cough, fever and shortness of breath, while cases developing pneumonia require respiratory support (2).

In spite of all precautions taken against the disease first identified in December 2019, it began to be observed in Turkey in March 2020 and case numbers rose rapidly. The first COVID-19 case was identified on 11 March 2020 in our country, and on the same date, the World Health Organization (WHO) declared the infection was a pandemic (3,4). Before emerging in Turkey, very dramatic information was acquired from countries where the pandemic was experienced earlier. Countries considered to have strong and organized health systems were inadequate when faced with the pandemic and patients died due to full intensive care units. This news was frequently included in the media and a severe climate of fear emerged due to the lack of adequate scientific data related to this new disease. As in the whole world, radical and serious precautions were taken in Turkey to prevent spread of infection from the time of COVID-19 detection. In our study, the aim was to research how this climate of fear and these serious precautions affected the patient population attending a urology clinic.

Materials and Methods

Approval for this study was obtained from the Clinical Research Ethics Committee of Ordu University (date: 01.04.2021 and approval number: 2021/76). Patients attending our urology clinic were retrospectively assessed. The limit for the pandemic was accepted as 11 March 2020, when the first COVID-19 infection was identified in Turkey. The period from 3 February 2020 to 10 March 2020 was accepted as before the pandemic and the period from 11 March 2020 to 29 May 2020 was accepted as after the pandemic. Clinical attendance numbers were determined before and after the pandemic. Not just ICD-10 code, all records were separately investigated, and patient groups were determined. Patients were grouped according to complaints on attendance as: benign prostate hyperplasia (BPH), ureteral diseases (ureteropelvic (UP) stenosis, ureterovesical (UV) stenosis, ureter obstruction, duplicated ureter), kidney diseases (simple cyst, complicated cyst, polycystic kidney, kidney anomaly, angiomyolipoma), testis and scrotum diseases (orchitis, epididymitis, scrotal abscess, hydrocele, spermatocele, epididymal cyst, varicocele, testis atrophy, hypogonadism), incontinence, bladder diseases (chronic cystitis, neurogenic bladder, bladder stone, diverticulitis, cystocele), sexually-transmitted diseases (STD) (urethritis, warts), penile diseases (balanitis, phimosis, paraphimosis), emergency urologic problems (Fournier, acute prostatitis, priapism, torsion, acute pyelonephritis, pyonephrosis), sexual problems (erectile dysfunction (ED), premature ejaculation, delayed ejaculation, Peyronie disease), urethra diseases (urethra stenosis, caruncle), kidney and ureter stones, pediatric diseases (undescended testis, vesicoureteral reflux (VUR), posterior urethral valve (PUV), ureterocele, enuresis nocturna), and urologic tumors (ureter, kidney, bladder, urethra, penis, testis, prostate).

Statistical Analysis

Analyses were conducted using the SPSS v20 (IBM Inc., Chicago, IL, USA) statistical software. The data were tested for normality using the Shapiro-Wilk Test and for homogeneity of variance using Levene's Test prior to the analyses. The patient numbers in each group before and after the pandemic were compared with Pearson's chi-square test. For continuous variables like age, independent groups were compared with the t test. P-value less than 0.05 was considered statistically significant.

Results

While 638 patients attended the urology clinic in the 1.5-month period before the pandemic, 398 patients attended in the 2.5-month period after the pandemic and a severe reduction in patient numbers was identified. Mean age of patients was 54.02±19.95 years before the pandemic, while it was 50.14±19.21 years after the pandemic and the difference was statistically significant (p=0.002). When male and female patients were separately assessed before and after the pandemic, mean ages for men were 51.55±20.27 – 50.0±15.96 years (p=0.482), while mean ages for women were 55.04±19.72 – 50.04±20.17 years (p=0.001). While the mean age of male patients did not change during the pandemic, the mean age of women was identified to be lower. The reason for the difference in terms of age was identified to be due to female patients. Additionally, 30.9% of patients attending the clinic before the pandemic were women, while this rate fell to 23.6% after the pandemic and this difference was found to be statistically significant (p=0.008). During the pandemic, attendance due to BPH, ureteral diseases, kidney diseases, incontinence, bladder diseases, and urethra disease were identified to statistically significantly reduce. There was no difference in attendance due to urinary system tumors, for pediatric diseases, attendance due to kidney and ureter stones, sexual problems, and emergency urologic problems. There were increases identified in attendance for testis and scrotum diseases and sexually-transmitted diseases. There appeared to be a 10-fold increase in patients attending for sexually-transmitted diseases. Findings are shown in detail in the Table 1.

Table 1
The patient numbers in each group before and after the pandemic

Disease Groups	**Before Pandemic** (n=638)	**After Pandemic** (n=398)	**P**
Benign prostate hyperplasia	174 (%27.3)	89 (%22.4)	**0.045**
Ureteral diseases (ureteropelvic stenosis, ureterovesical stenosis, ureter obstruction, duplicated ureter)	15 (%2.4)	2 (%0.5)	**0.016**
Kidney diseases (simple cyst, complicated cyst, polycystic kidney, kidney anomaly, angiomyolipoma)	50 (%7.8)	17 (%4.3)	**0.015**
Testis and scrotum diseases (orchitis, epididymitis, scrotal abscess, hydrocele, spermatocele, epididymal cyst, varicocele, testis atrophy, hypogonadism)	19 (%3)	21 (%5.3)	**0.046**
Incontinence	108 (%16.9)	38 (%9.5)	**0.001**
Bladder diseases (chronic cystitis, neurogenic bladder, bladder stone, diverticulitis, cystocele)	43 (%6.7)	14 (%3.5)	**0.017**
Sexually transmitted diseases (urethritis, warts)	2 (%0.3)	13 (%3.3)	**<0.001**
Penile diseases (balanitis, phimosis, paraphimosis)	14 (%2.2)	8 (%2)	>0.999
Emergency urologic problems (Fournier, acute prostatitis, priapism, torsion, acute pyelonephritis, pyonephrosis)	1 (%0.2)	2 (%0.5)	0.562
Sexual problems (erectile dysfunction, premature ejaculation, delayed ejaculation, peyronie disease)	40 (%6.3)	16 (%4)	0.157
Urethra diseases (urethra stenosis, caruncle)	31 (%4,9)	4 (%1)	**0.001**
Kidney and ureter stones	78 (%12.2)	63 (%15.8)	0.113
Pediatric diseases (undescended testis, vesicoureteral reflux, posterior urethral valve, ureterocele, enuresis nocturna)	17 (%2.7)	10 (%2.5)	>0.999
Urologic tumors (ureter, kidney, bladder, urethra, penis, testis, prostate)	53 (%8.3)	30 (%7.5)	0.725

Discussion

The COVID-19 pandemic affected the whole world in a short duration. The inadequacy of health systems of many countries as displayed in the media caused severe tension and fear among people. Continuously repeated 'stay at home' warnings and panic caused by media related to this disease were observed to cause a severe reduction in attendance at our clinic during the pandemic. Though the period after the pandemic was longer than the period before the pandemic in our study, a severe reduction was identified in attending patient numbers. A study reported that there was a 47% reduction in attendance at a brain surgery clinic, while another study reported 56% reduction in patient numbers attending an orthopedic clinic during the pandemic (5,6). In another study, 90% of urologists reported varying degrees of reduction in clinical attendance (7). The number of patients attending our clinic was 1/3 the number before the pandemic. There was a statistically significant reduction in the mean ages of patients attending our clinic. In Turkey, there was a curfew implemented for people over the age of 65 from 22 March 2020. The fall in mean age was assessed as due to the effect of this restriction. However, when our patient group was assessed separately in terms of gender, the mean age of male patients attending the clinic did not change compared to before the pandemic but the mean age of women fell by statistically significant levels. At the same time, when the rate of patients attending the clinic is examined, the attendance rates for female patients were observed to fall by statistically significant levels compared to before the pandemic. These results lead to consideration that women were more careful in abiding by warnings then men. A study reported women had higher anxiety levels compared to men during the pandemic (8). Normally, higher rates of women are included in patients attending dermatology clinics. A study by Turan et al. reported that women were dominant among patients attending dermatology clinics before the pandemic, while this rate reduced after the pandemic (9). Similarly, Ferahman et al. (10) reported that attendance rates for female patients reduced more compared to men after the pandemic. They noted the reduction in clinical attendance by women may be due to anxiety about COVID-19 which caused them to avoid hospital environments more than men.

In our study, there were reductions identified in attendance due to benign prostate hyperplasia (BPH), ureteral diseases apart from stone disease, kidney diseases like kidney cyst, etc., incontinence, chronic bladder diseases and urethra stenosis. Situations like renal cyst and duplicated ureter are diseases that do not cause symptoms in patients, while incontinence does not cause pain but disrupts patient quality of life. When compared to other diseases, it appears that hospital attendance due to these problems can be delayed. Comfort may be provided with treatment for urethra stenosis and chronic bladder disease, but there is frequent recurrence and these diseases are ones that patients generally have to live with. Patients are aware that these diseases are not a precursor for worse diseases like cancer. It is considered that this group of patients may have reduced their clinical attendance in the pandemic period due to this. Studies by Ferahman et al. (10), similarly, reported a reduction in rates of patients attending general surgery clinics due to benign reasons.

Additionally, there was no change identified in attendance rates due to emergency urologic problems, kidney and ureter stones, pediatric urologic diseases, urinary system tumors and sexual problems compared to the period before the pandemic. The same rates of attendance are expected due to the lack of variation in the incidence of renal colic, emergency urologic problems and urologic system tumors. Similarly, it is expected that parents bring their children with urinary complaints for examination due to the fear that delays may cause conversion to permanent problems. However, in spite of incontinence disrupting quality of life by a significant degree, there was an almost 50% reduction in attendance for this complaint during the pandemic. In fact, a reduction was even reported for attendance due to acute coronary syndrome during the pandemic (11). However, there was no reduction in attendance due to sexual problems during the pandemic. A study by Mesut Berkan Duran et al. (12) reported attendance due to erectile dysfunction increased during the pandemic. This situation is an important indicator of how much importance is attached to sexual problems by men. It should not be forgotten that sexuality is an

inseparable part of human life. The European Urology guidelines recommended assessment of erectile dysfunction as high priority during the pandemic (13).

A notable finding is the severe increase in attendance due to urethritis. A study by Turan et al. (9) similarly reported increases in attendance due to anogenital warts. In a study assessing the effects of the COVID-19 pandemic on sexual relations frequency, García-Cruz and Peraza reported that 3.2% of Spaniards and 9.7% of English people had sexual relations with partners other than their spouse during quarantine (14). The current findings lead to consideration of an increase in sexual relations with different partners during the pandemic in our country. However, it is necessary to monitor the results of multicenter studies to reach a definite judgement about this topic.

When studies in the literature are examined, studies assessing patient groups before and after the pandemic are generally observed to screen according to ICD-10 codes (9,10). Studies including excess numbers of patients must collect data in this way. Generally, in the crowded environment of the clinic, only one ICD-10 code is entered to rapidly end the procedure when patients attend with more than one complaint. Additionally, some diagnoses used in clinic do not have a full equivalent in the ICD-10 system, so an easier diagnosis is entered and the patient files are closed on the computer. This situation may cause erroneous assessment when results are screened according to ICD-10 later. Though the lower number of patients in our study may appear to be a disadvantage, we think our results are more reliable as the records for all patients were separately checked for group diagnoses.

There are some limitations to our study. Firstly, it is a retrospective study. Additionally, no demographic data like socioeconomic status or educational level of patients was available. Factors which may affect hospital attendance like educational level and socioeconomic status were not assessed. However, our study is an observational study and did not target determination of cause-outcome relationships. It will be possible to obtain more detailed results with studies including more patient numbers from multiple centers.

Conclusion

Generally, the number of patients attending the urology clinic reduced during the pandemic. There was a greater reduction in the attendance of female patients. There were increases identified in attendance due to testis and scrotum diseases and sexually-transmitted diseases at our clinic during the pandemic. While there were reductions in attendance for many disease groups, the rates of attendance due to urologic emergencies, urinary tumors, pediatric diseases, stone disease and sexual problems continued with the same frequency.

Ethics Committee Approval: The study was approved by the Clinical Research Ethics Committee of Ordu University (date: 01.04.2021 and approval number: 2021/76).

Informed Consent: Consent was not obtained as it was a retrospective study.

Conflict of Interest: Authors declared no conflict of interest.

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