

Original Research Article

Does having a COVID-19 service in the hospital affect the anxiety state and preferences of patients applying to the urology outpatient clinic

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ABSTRACT

Background: Our aim is to investigate the effect of having a COVID-19 service in the hospital on the anxiety level of patients applying to the urology outpatient clinic and the number of patients admitted.

Methods: The study was designed as a prospective cohort study. We divided the patients into Group-1 (hospital with a COVID 19 service) and Group-2 (hospital without a COVID-19 service). State Anxiety was used to determine the anxiety status of patients in Group-1 and Group-2. Scale (STAI-I) was used. Patients were interviewed face to face. Our hospital has a COVID-19 service. The purpose of the research was explained in detail. An average interview lasted 10-15 minutes. After the data were obtained, Group-1 and Group-2 were compared in terms of anxiety, age, gender and reason for applying to the hospital.

Results: The total number of patients is 313, 92 of these patients agreed to participate in the survey. The number of patients in Group 1 and Group 2 is 33 and 59, respectively. Median age is in Group 1 and Group 2, respectively. 53.03 ± 15.98 and 47.53 ± 15.8 (mean $\pm$ SD). When we look at it in terms of anxiety, we found that the presence of the COVID service negatively affected the psychological state of the patients. 96% (58/60) of the patients with severe anxiety applied to the urology outpatient clinic of the hospital without a COVID service ($p=0.001$). According to the results of multivariate analysis patients who need to start their treatment as soon as possible are more likely to apply to the urology clinic of hospitals that do not have a COVID-19 service (odds ratio (OR): 1.284, 95% confidence interval (CI): 1.051–1.567, $p=0.014$).

Conclusions: We believe that in future epidemic situations, separating specialized hospitals for infected patients will be more efficient both for managing the epidemic and for oncology patients.

Keywords: Anxiety, Bladder tumor, COVID-19, Prostate cancer

INTRODUCTION

The first case of coronavirus-19 (COVID-19) was recorded in Wuhan, China (Hubei Province, China) in late December 2019.¹⁻³ On 7 January 2020, the World Health Organization (WHO) named the causative virus as SARS Coronavirus 2 (SARS-CoV-2) and the resulting pneumonia as Coronavirus Disease 2019 (COVID-19).^{4,5} COVID-19 spread to all continents (37 364 people, 113 countries) in a short period of about 2.5 months, so on 11 March 2020, WHO declared COVID-19 a pandemic.⁶

The rapid increase in the number of cases worldwide necessitated serious changes in the health sector as in all areas.⁷⁻⁹ For this purpose, the European and American Urological Societies prepared "COVID-19 Recommendations" for urological diseases. In line with these recommendations, elective surgeries were postponed, only emergency cases and patients at risk for progression (e.g., high-risk and locally advanced prostate cancer, T2/BCG refractory bladder cancer, T2/T3 renal tumour, etc.) were included in surgery.^{10,11} The COVID-19 pandemic also adversely affected the education of

medical students and research assistants.^{12,13} Although theoretical lectures were held on the online platform, practical training could not be done.¹² At the same time, patients in the low and medium risk group in terms of progression could not receive regular treatment. This situation negatively affected the psychological and health status of the patient population.¹³ Although COVID-19 is no longer a pandemic today, it is still widespread in the society and new serovariants are emerging. In the study, we aimed to investigate the anxiety state and the number of patients who applied to the urology outpatient clinic of two university hospitals with and without COVID service in a certain time interval. Our aim was to investigate the effect of the presence of COVID service in the hospital on the anxiety state of patients applying to the urology outpatient clinic and the number of patients applying. According to these results, we can be more prepared during the epidemic we may encounter in the future.

METHODS

The study was designed as a prospective cohort study. The study was conducted between 01.07.2023-07.07.2023. All patients included in the study were informed in detail about the study and an "Informed Consent Form" was obtained from the patients. The study was approved by the university ethics committee (Code No. 2023231).

Inclusion criteria

Volunteer male and female patients over 18 years of age and under 65 years of age who can read and write Turkish.

Exclusion criteria

Being under 18 years of age and over 65 years of age, a diagnosis of psychiatric or neurological illness. Psychotropic without a diagnosis of psychiatric or neurological illness use of medication. Having a history of being diagnosed with COVID-19 or receiving treatment with this diagnosis. Relatives have been diagnosed with COVID-19 or have died with this diagnosis, residing outside Ankara.

Patients who applied to the urology outpatient clinic of the hospital with a COVID-19 service were recorded as Group-1. Patients who applied to the urology outpatient clinic of the hospital that did not have a COVID-19 service. It was labelled as group 2.

Data collection tools

State Anxiety to determine the anxiety status of the patients in Group1 and Group 2. Scale (STAI-I) was used. Patients were interviewed face-to-face. Whether there is a COVID-19 service in our hospital. The purpose of the research was explained in detail. An average

interview lasted 10-15 minutes. The demographic data form was completed by the researcher at the bedside.

State-trait anxiety inventory (STAI-I) was developed by Spielberger in 1970 and its Turkish form was adapted by Öner N and Le Compte A (1983) and validity and reliability studies were performed. The internal consistency and reliability of the Turkish form was found between 0.94 and 0.96 for the State Anxiety Scale in Kuder Richardson alpha reliability. Responses vary between 1-4. The total score value obtained from the scale is between 0-80. A high score indicates a high level of anxiety. After the data were obtained, Group-1 and Group-2 were compared in terms of anxiety. In addition, age, gender and reason for hospitalization were compared between the groups.

Statistical analyses

Data were analysed using IBM SPSS Statistics Standard Concurrent User V 26 (IBM Corp., Armonk, New York, USA) statistical package programme. Descriptive statistics were given as number of units (n), percentage (%), mean, standard deviation values. Homogeneity of variances, one of the prerequisites of parametric tests, was checked by "Levene" test. Normality assumption was checked by "Shapiro-Wilk" test. When the differences between two groups were to be evaluated, "Student's t Test" was used when the prerequisites for parametric tests were met and "Mann Whitney-U test" was used when they were not met.

Relationships between categorical variables were evaluated by Pearson chi-square and Fisher's exact test. The predictive performance of the age parameter according to the Hospital with Covid Service was evaluated by Receiver Operating Characteristic (ROC) curve analyses. The effect of parameters on hospital with covid service was evaluated by Logistic regression. $p < 0.05$ value was considered statistically significant.

RESULTS

The total number of patients was 315, 92 of these patients accepted to participate in the questionnaire study. The number of male patients was 67, the number of female patients was 25. The number of patients in Group 1 was 33, the number of patients in Group 2 was 59. The median age was 53.03 ± 15.98 and 47.53 ± 15.8 (mean $\pm$ SD) in Group 1 and Group 2, respectively. There was no statistical difference between the two groups ($p=0.119$). Sixteen patients were admitted to the outpatient clinics because of renal colic, 22 patients because of dysuria, 6 patients because of high fever due to urinary infection and 11 patients because of hematuria. 23 patients had urinary calculi, 21 patients had urinary infection, 11 patients had bladder tumour and 9 patients had prostate cancer (Table 1). The number of patients admitted to the urology outpatient clinic in the hospital without COVID service was statistically higher ($p=0.001$). 48.91%

(45/92) of the admitted patients were admitted to the urology outpatient clinic due to urological emergencies (haematuria, high fever, renal colic). In addition, urinary tract infection (UTI) was found in 18 of these patients, bladder tumour in 5, kidney tumour in 5, prostate adenocarcinoma in 8, urinary calculi in 20, which is statistically higher than the number of patients with the same diagnosis in the other group ($p=0.001$). In terms of anxiety, we found that the presence of a COVID-19 services adversely affected the psychological status of the

patients. 96% (58/60) of the patients with severe anxiety applied to the urology outpatient clinic of the hospital without COVID-19 service ($p=0.001$) (Table 2). According to the results of multivariate analysis, patients whose treatment should be started as soon as possible are more likely to be admitted to the urology outpatient clinic of the hospital without COVID service (odds ratio (OR): 1.284; 95% confidence interval (CI): 1.051-1.567; $p=0.014$) (Table 3).

Table 1: Demographic characteristics of 92 patients.

Demographic characteristics	N (%)
Age in years (mean$\pm$SD)	49.5 $\pm$ 15.99
Gender	
Male	67 (72.8)
Female	25 (27.2)
Covid service	
Hospital with covid ward	33 (35.9)
Hospital without covid service	59 (64.1)
Anxiety Score	
Lightweight	16 (17.4)
Centre	16 (17.4)
Severe	60 (65.2)
Reason for hospitalisation	
Renal colic	16 (17.4)
Dizüri	22 (23.9)
Fire	6 (6.5)
Haematuria	11 (12)
Control purpose	36 (39.1)
Dysuria and haematuria	1 (1.1)
Urological disease	
No urological disease	2 (2.2)
urinary system infection (UTI)	21 (22.8)
bladder tumour	9 (9.8)
prostate tumour	11 (12)
kidney tumour	6 (6.5)
testicular tumour	1 (1.1)
urinary stone disease	23 (25)
erectile dysfunction	6 (6.5)
Benign prostatic hyperplasia (BPH)	7 (7.6)
Kidney cyst	3 (3.3)
Overactive bladder	1 (1.1)
Anogenital condilom	1 (1.1)
UTI and BPH	1 (1.1)
Sideways diseases	
None	38 (41.3)
Hypertension (HT)	24 (26.1)
Diabetes mellitus (DM)	18 (19.6)
Goiter	2 (2.2)
Colon carcinoma	1 (1.1)
Coronary artery disease	1 (1.1)
HT and DM	7 (7.6)
HT and coronary artery disease	1 (1.1)

UTI: USrinary tract infection, BPH: benign prostatic hyperplasia, HT: hypertension.

Table 2: Comparison of the parameters of patients according to the categories of hospitals with COVID-19 service.

	Hospital without COVID-19 service	Hospital with COVID-19 service	Test statistics	P value
Age in years	47.53±15.8	53.03±15.98	-1.560	0.119 [†]
Gender				
Male	39 (58.2)	28 (41.8)	3.758	0.053 ^{&}
Female	20 (80)	5 (20)		
Anxiety Score			79.520	0.001 ^{&}
Lightweight	0 (0)	16 (100)		
Centre	1 (6.3)	15 (93.8)		
Severe	58 (96.7)	2 (3.3)		
Reason for hospitalisation				
Renal colic	14 (87.5)	2 (12.5)	24.08	0.001 ^{&}
Dizüri	19 (86.4)	3 (13.6)		
Fire	6 (100)	0 (0)		
Haematuria	6 (54.5)	5 (45.5)		
Control purpose	14 (38.9)	22 (61.1)		
Dysuria and haematuria	0 (0)	1 (100)		
Urological disease				
No urological disease	0 (0)	2 (100)	40.192	0.001 ^{&}
Urinary system infection (UTI)	18 (85.7)	3 (14.3)		
Bladder tumour	5 (55.6)	4 (44.4)		
Prostate tumour	8 (72.7)	3 (27.3)		
Kidney tumour	5 (83.3)	1 (16.7)		
Testicular tumour	0 (0)	1 (100)		
Urinary stone disease	20 (87)	3 (13)		
Erectile dysfunction	3 (50)	3 (50)		
Benign prostatic hyperplasia (BPH)	0 (0)	7 (100)		
Kidney cyst	0 (0)	3 (100)		
Overactive bladder	0 (0)	1 (100)		
Anogenital condilom	0 (0)	1 (100)		
UTI and BPH	0 (0)	1 (100)		
Sideways diseases				
None	25 (65.8)	13 (34.2)	7.216	0.407 ^{&}
Hypertension (HT)	15 (62.5)	9 (37.5)		
Diabetes mellitus (DM)	14 (77.8)	4 (22.2)		
Goiter	1 (50)	1 (50)		
Colon carcinoma	0 (0)	1 (100)		
Coronary artery disease	0 (0)	1 (100)		
HT and DM	4 (57.1)	3 (42.9)		
HT and coronary artery disease	0 (0)	1 (100)		

UTI: urinary tract infection; BPH: benign prostatic hyperplasia; HT: hypertension. Numerical variables are given as mean±standard deviation. ‡: Independent samples t test, †Mann-Whitney U test: &: Chi-square analysis, η: Fisher exact test.

Table 3: Results of multivariate analyses.

	B	S.E.	Wald	df	Sig.	Exp (B)	95% CI	
							Lower	Upper
Fixed	-60.034	120583.991	0.000	1	0.999	0.000		
Age	0.030	0.017	3.007	1	0.083	1.031	0.996	1.067
Gender	-0.441	0.671	0.431	1	0.512	0.644	0.173	2.398
Anxiety score	18.242	40194.664	0.000	1	0.999	83601696.980	0.000	
Reason for hospitalisation	0.690	0.192	12.943	1	0.069	1.994	1.369	2.904
Urological disease	0.250	0.102	6.002	1	0.014	1.284	1.051	1.567
Sideways diseases	0.103	0.154	0.451	1	0.502	1.109	0.820	1.500

CI: confidence interval.

DISCUSSION

Although the World Health Organization declared the COVID-19 outbreak to be out of emergency status on 5 May 2023, the outbreak still continues. The outbreak, which has been going on for about 4 years, has seriously affected the education, economy and health sector.^{12,13} Patients with bladder cancer did not apply to the hospital due to concerns about COVID-19 infection. In the study conducted by Travassos et al 52% of patients with bladder cancer applied to the urology outpatient clinic at an advanced stage.¹⁴ Faris et al, noted that patients with bladder cancer did not want to come to the hospital during the pandemic period and wanted to receive individual service.

The fact that such service was not possible for patients during the intense pandemic period caused these patients to remain without follow-up and treatment.¹⁵ In the review by Tachibana et al, significant progression was noted in bladder, kidney, testicular, prostate and penile cancers during the pandemic period.¹⁶ We conducted our study after the COVID-19 outbreak left the emergency status. Despite this, patients are still worried about COVID-19 infection. Patients still prefer hospitals without COVID service. In our study, the number of patients diagnosed with bladder tumour, prostate cancer, kidney tumour, urinary tract infection in the urology outpatient clinic of the hospital without COVID service is higher than the number of patients with the same diagnosis in the urology outpatient clinic of the hospital with COVID service ($p=0.001$).

The meta-analysis by Luo et al including 62 articles revealed that the COVID-19 pandemic seriously affected the psychological status of both patients and healthcare professionals, especially nurses.¹⁷ This meta-analysis suggests that psychological counselling should be provided to healthcare professionals as well as patients during the epidemic period. According to the results of our survey study, 96% (58/60) of patients with severe anxiety scores were admitted to the urology outpatient clinic of the hospital with COVID 19 service. Therefore, our study showed that COVID-19 infection seriously affected the psychology of people ($p=0.001$). Based on the results of our study and other studies, the establishment of outbreak-oriented clinics in all hospitals based on the results of our study and other studies will cause many oncology patients to delay treatment or not receive treatment. We also think that it would be useful to provide psychological support through online, social networks, television, radio during the epidemic period.

The deficiency of our study is that the number of patients is small and randomization is not performed.

CONCLUSION

As a result, although the COVID-19 outbreak has ceased to be an emergency, it still affects the psychological state

of people. Authors think that in future outbreaks, it would be more efficient to allocate certain hospitals for infected patients both for the management of the outbreak and for oncology patients whose treatment should not be delayed. In addition, we believe that it is very important to provide psychological support to the community from the beginning of the epidemic.

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