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ORIGINAL ARTICLE

Evaluation of teleconsultation system in the urological patient during the COVID-19 pandemic[☆]



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KEYWORDS

COVID19;
SARS-CoV-2;
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Telemedicine;
Teleconsultation;
Satisfaction.

Abstract

Introduction: The global pandemic of COVID-19 has led to rapid implementation of telemedicine, but there is little information on patient satisfaction of this system as an alternative to face-to-face care.

Objective: To evaluate urological patient satisfaction with teleconsultation during the COVID-19 pandemic.

Material and methods: Observational, prospective, cross-sectional, non-interventional study carried out by telephone survey during the period considered as the peak of the pandemic (March–April 2020). A quality survey composed of 11 questions on urological care provided by physicians during the COVID-19 pandemic was conducted, selecting a representative sample of patients attended by teleconsultation.

Results: Two hundred patients were contacted by telephone to answer a survey on the quality of teleconsultation. The distribution of patients surveyed among the specialized consultations was homogeneous with the number of consultations cited in the period; 18% of them required assistance from family members. Sixty percent of patients avoided going to a medical center during the pandemic. Of the surveyed patients, 42% had cancelled diagnostic tests, 59% had cancelled medical consultations, 3.5% had cancelled treatments and 1%, had cancelled interventions. Ten percent reported a worsening of urological symptoms during confinement. According to physicians, consultations were effectively delivered in 72% of cases, with teleconsultation being carried out by their usual urologist in 81%. Teleconsultation overall satisfaction level was 9 (IQI 8–10), and 61.5% of respondents consider teleconsultation as a health care option after the healthcare crisis.

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PALABRAS CLAVE

COVID19;
SARS-CoV-2;
Urología;
Telemedicina;
Teleconsulta;
Satisfacción.

Conclusion: Teleconsultation has been evaluated with a high level of satisfaction during the COVID-19 pandemic, offering continuous care to urological patients during the healthcare crisis. The perceived quality offers a field of optional telematic assistance in selected patients, which should be re-evaluated in a period without confinement measures.

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Evaluación de la teleconsulta en el paciente urológico durante la pandemia COVID-19**Resumen**

Introducción: La pandemia global de COVID 19 ha provocado una rápida implantación de la telemedicina, pero existe escasa información sobre la satisfacción percibida por el paciente como alternativa a la asistencia presencial.

Objetivo: Se evalúa la satisfacción del paciente urológico con la teleconsulta durante la pandemia COVID19.

Material y métodos: Estudio observacional, prospectivo transversal, no intervencionista, mediante encuesta telefónica durante el periodo considerado pico de pandemia (marzo-abril 2020). Se realiza una encuesta de calidad compuesta por 11 preguntas, sobre la atención urológica durante la pandemia COVID 19 por los facultativos, seleccionando una muestra representativa de los pacientes atendidos en el periodo por teleconsulta.

Resultados: 200 pacientes fueron contactados telefónicamente para responder a una encuesta de calidad sobre teleconsulta. La distribución de pacientes encuestados entre las consultas monográficas fue homogénea entre el número de consultas citadas en el periodo, requiriendo 18% de ellos ayuda por familiar. Un 60% de los pacientes evitaron acudir a un centro médico durante la pandemia. El 42% de los pacientes encuestados tenían cancelada alguna prueba complementaria, 59% alguna consulta médica, 3,5% tratamientos y un 1% intervenciones. Un 10% apreció un empeoramiento de su sintomatología urológica durante el confinamiento. La resolución subjetiva de la consulta por el facultativo fue alcanzada en 72% casos, siendo la teleconsulta por el urólogo habitual en el 81%. El grado de satisfacción global con la teleconsulta fue de 9 (RIQ 8-10) considerando la teleconsulta como una "opción de asistencia sanitaria" pasada la crisis sanitaria por el 61,5% de los encuestados.

Conclusión: La teleconsulta ha sido valorada con un alto grado de satisfacción durante la pandemia COVID 19, ofreciendo asistencia continuada a los pacientes urológicos durante la crisis sanitaria. La calidad percibida ofrece un campo de asistencia telemática opcional, en pacientes seleccionados, a reevaluar fuera de una situación de confinamiento.

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Introduction

The new coronavirus, known as SARS-CoV-2, has been responsible for a public health crisis in the Chinese province of Wuhan, which began in December 2019. The exponential increase in infections leads the WHO to declare a pandemic risk for what has been called coronavirus 19 disease (COVID-19). The first cases were objectified in Spain, in the city of Madrid, in February 2020.

For the first time in the life of a large part of the Spanish population, a virus puts the health system in check. Hospitals collapse and declare a disaster situation. The infections that affect healthcare professionals reach the highest figures among our neighboring countries. In this situation of high risk of contagion and lack of protective measures for healthcare providers and patients, remote medical assistance takes a leading role. Its objective is to reduce the rate of infections and save on personal protective equipment (PPE).

Given the lockdown situation during the recently exposed global health crisis, a remote option to offer clinical services to urological patients has been required. Telemedicine has been defined in the literature as the application of technology tools for the diagnosis and treatment of disease.¹ Likewise, teleconsultation implies the use of communication devices (computer, telephone or laptops)

to carry out a consultation between a patient and a healthcare professional (teleconsultation) or between two physicians (inter-professional consultation or eConsult).

There are few data in the literature about teleconsultation regarding the urology specialty, and these indicate that it is well received by urology patients.² To date, some urology referral centers already include teleconsultation as an alternative to face-to-face care in the postoperative follow-up of prostate cancer patients.³

The information published so far on the use of teleconsultation mentions the actions carried out by health care institutions and the types of teleconsultations that can be implemented. There is currently a growing volume of publications on the COVID-19 pandemic. Some of these publications address the impact of SARS-CoV-2 in urology patients, but there is no information on the impact and perception of teleconsultation on patients treated by the urology specialty.⁴⁻⁶

The objective of this study is to evaluate the quality and satisfaction perceived by patients with urology teleconsultations in the outpatient clinic of a tertiary hospital in the city of Madrid during the COVID-19 pandemic.

QUALITY SURVEY ON UROLOGY TELECONSULTATIONS

1. Did you need help from a family member during the teleconsultation?
2. Did you avoid going to the doctor's office during the pandemic period? Why?
3. Have you had any diagnostic test, visit or intervention suspended?
4. Have you felt or are you feeling that your urological disease is progressing during the COVID 19 epidemic?
4. Do you think the time spent on your teleconsultation has been enough to address your problem?
6. Rate the clarity of the information received from the urologist (1-10)
7. Rate the attention and kindness of the urologist (1-10)
8. Have you been contacted at an appropriate time?
9. Rate the result of the teleconsultation (1-10 resolution)
10. Rate the satisfaction of the telephone consultation (1-10)
11. Once you are back to normalcy, do you think telemedicine can be incorporated as an option for your condition?

Fig. 1 Quality survey on urology teleconsultations.

Material and methods

An observational, prospective, cross-sectional, non-interventional study was carried out by telephone survey in a sample of patients from the urology outpatient clinic of a tertiary hospital in the city of Madrid.

Considering the peak period of the pandemic of 30 days, from March 16, 2020 to April 17, 2020, 4639 patients have been treated by teleconsultations of the urology department. Prior to the study, there was no telemedicine experience in this department.

Teleconsultation is defined as a telephone consultation carried out with the patient, family member or caregiver of their choice, either from the hospital or from the urologist's home, through the electronic medical records software implemented in the hospital. In this way, the telephone anamnesis is carried out, and the results of the complementary tests are analyzed with the patient or family member. When the consultation is considered to be resolved, the next appointment is requested, together with the complementary tests, which are sent by ordinary mail to the patient. If, in contrast, the teleconsultation is considered insufficient or incomplete, an appointment is arranged for a face-to-face evaluation of the patient by their usual urologist.

There are no video consultation systems implemented to carry out more sophisticated types of telemedicine.

In a prospective manner, without the physicians having prior knowledge, a survey of patient perceived quality of urological care during the COVID-19 pandemic through teleconsultation is proposed, with a quality survey consisting of 11 questions (Fig. 1). The surveyed patients receive information on the objective of the study, and since the consultation is by telephone, their oral consent is requested for their participation. An estimate of the sample size was made from the total number of patients treated by telephone consultation during the selected period, considering a variability of 10%, an alpha error of 5% and a nonresponse substitution of 30%. Thus, the estimated number of patients was 200.

Of a total of 4639 patients with appointments for urology consultations during the period of study (2760 in specialty medical centers and 1879 dedicated outpatient clinics), 200 patients were randomly selected from specialized consultations. A total of 205 patients were evaluated in face-to-face visits, as these were concerning

pathological anatomy results. Randomization was carried out by the OxMaR (Oxford Minimization and Randomization) program,⁷ and patients were identified and distributed homogeneously among the various subspecialties (andrology, reconstructive, functional, neurourology, lithiasis, BPH, general urologic oncology, advanced oncology). Descriptive analysis of the data was carried out using SPSS software.

All information related to the study is strictly confidential according to the Organic Law 15/1999 of December 13 on Protection of Personal Data (LOPD, its acronym in Spanish). Access to medical records as well as collection and management of confidential data were carried out exclusively at the computer system of Hospital Universitario La Paz. The data obtained was protected by assigning a new code number to each medical record which was stored in a file with forbidden access to anyone outside the study or its evaluation, so that subsequent use of the information collected in the data sheet is carried out anonymously. The study has the approval of the Ethics Committee for Research with medicinal products (ECRmp).

Results

Two hundred patients, with a mean age of 65,9 years (21–91), were contacted by telephone to respond to a quality survey made up of 11 questions. Forty-five (22.5%) were women and the most frequent civil status was married (18% single, 62% married, 20% widowed). During the teleconsultation, 18% of them needed help from a family member or caregiver. The distribution of patients surveyed among the specialized consultations was homogeneous to the number of consultations cited in the period, with a greater representation of urologic oncology patients (Figs. 2 and 3), 92% being subsequent consultations and the remaining 8% were initial consultations.

During the pandemic period, 60% of patients avoided going to a medical center. The main reason for not attending was medical advice in 66 patients (55%) and fear of exposing themselves to risk of contagion in 42 (35%), the remaining causes were transport issues or other. Only 2 (1%) of the surveyed patients were positive for SARS-CoV-2 by PCR. The modification or suspension of consultations and tests was frequent (68.5%) during the healthcare crisis. In terms of cancellations, 42%, 59%, 3.5% and 1% of the surveyed patients had canceled complementary tests, medical consultations,

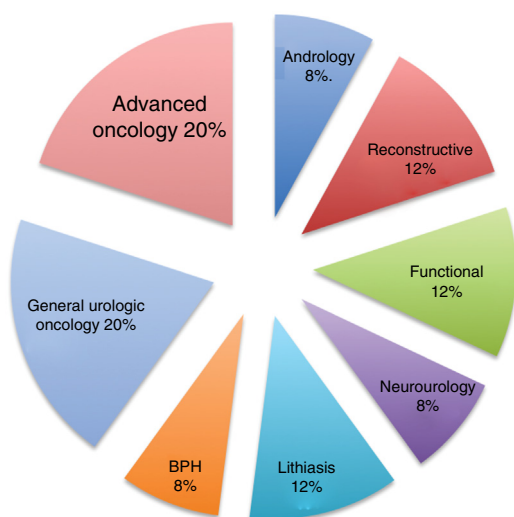


Fig. 2 Subspecialty distribution.

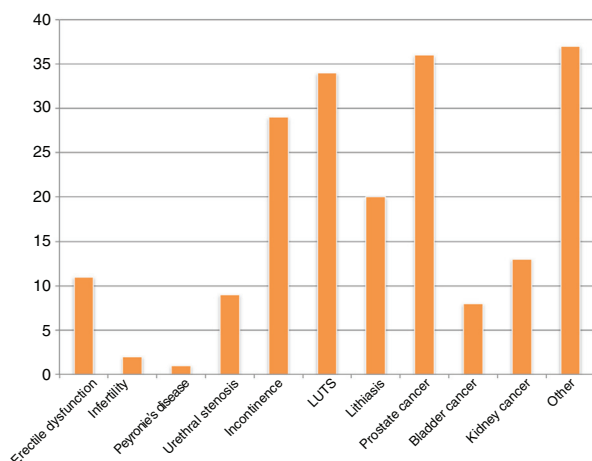


Fig. 3 Distribution of teleconsultation pathologies.

treatments, and interventions, respectively. There were no elective surgeries performed in our center during the month of study, due to the unavailability of operating rooms, and 100% of oncological procedures were deferred in the period described.

Despite maintaining the activity of telematic consultations by physicians, 20 patients of the surveyed patients (10%) experienced worse urological symptoms during lockdown. With a scale from 1 to 10, with 10 being the highest score in each question, the median clarity of the teleconsultation scored 9 (8–10 IQR) and patient-perceived clinician kindness scored 9 (8–10 IQR). The time spent in teleconsultation was < 5 min in 30% of the consultations, 5–8 min in 50%, and 8–12 min in 20%, being the patient-perceived impression of the time spent of 9 (8–10 IQR) and carried out in the appropriate schedule in 96.5% (88% morning shift and 12% afternoon shift). The median number of patients per teleconsultation was 21 (18–25 IQR). When receiving the telephone call, 46% had all the requested tests completed for the performance of the teleconsultation.

Physicians considered that the subjective resolution of the consultation was achieved in 144 (72%) cases; 15 (8%) did not know and 39 (20%) said it was not resolved-delayed. Patients were contacted in 162 cases (81%) by their urologist, 18 patients (9%) by another urologist, and 18 (9%) did not know who their urologist was. The global level of satisfaction with teleconsultation was 9 (8–10

Table 1 Level of satisfaction by age.

Age	Partly satisfied (0–2)	Satisfied (5–6)	More than satisfied	Very satisfied (9–10)
< 50	1	3	10	14
50–65	1	2	14	38
65–75	0	4	10	39
75–84	2	2	11	32
> 85	0	0	4	13

IQR), considering teleconsultation as a «health care option» after the health crisis by 61.5% of the survey participants.

No statistical association was found between the level of satisfaction and the fear of going to a consultation ($p=0,12$), age ($p=0,61$), nor with the consultation being performed by their urologist ($p=0,61$) (Table 1). The consultations considered to be decisive obtained a higher level of satisfaction, as well as being considered a new healthcare option: Despite a high level of satisfaction with teleconsultation, the least satisfied patients were those who consulted for lithiasis or andrology (Fig. 4). In the analysis by subspecialties, the patients who were more likely to maintain teleconsultation as an option are those with lower urinary tract symptoms and oncology (Fig. 5).

Discussion

There is consensus on the need to introduce the opinion of users in health care institutions. Models of excellence such as the European Foundation for Quality Management endorse this, promoting the maximum participation of the different actors in the healthcare process.^{3,8}

In this sense, the most relevant studies on user satisfaction refer to certain hospitals or medical centers, which can rarely be extrapolated to the specific population of a subgroup of patients who attend a specific department or consultation. The latter has been evaluated by few studies,⁹ and to date no study has been published on the satisfaction of urology patients treated by teleconsultation in Spain.

Moreover, certain patient groups that are more vulnerable to SARS-CoV-2 infection are also those that require more assistance in urology consultation (male patients, seniors, neoplastic diseases ...) which seem perfect for teleconsultation during the COVID-19 pandemic.

The results of this study show a high level of satisfaction, with a median score of 9 out of 10, and 61.5% of the patients have considered teleconsultations as an appropriate option to be incorporated into the organizational chart. These satisfaction rate could even increase if patients are warned in advance about receiving the telephone call.

Likewise, the response rate of the telephone survey has been high, even more than those reported in the literature, delivered through other means such as postal mail.^{10,11}

Considering that the COVID-19 pandemic circumstances may have generated a certain feeling of healthcare isolation due to difficulty in accessing the system, the evaluated population has been very receptive to teleconsultation. Therefore, a limitation of the study could be that the fear of going to the healthcare center during the pandemic period may have increased the perceived satisfaction, so our results could not be extrapolated to an ordinary situation. However, no statistical association has been found between fear of contagion and satisfaction, age, or patients being treated by their urologist.

Another limitation of the study may be the time elapsed from teleconsultations until the performance of the survey, one month

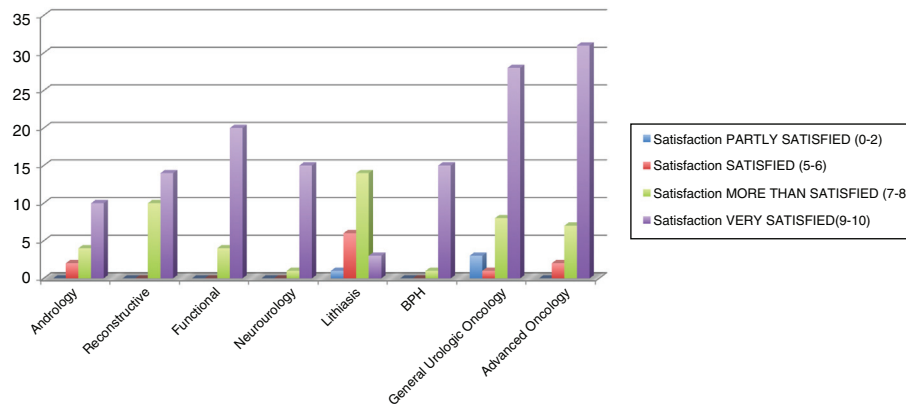


Fig. 4 Level of satisfaction by subspecialty.

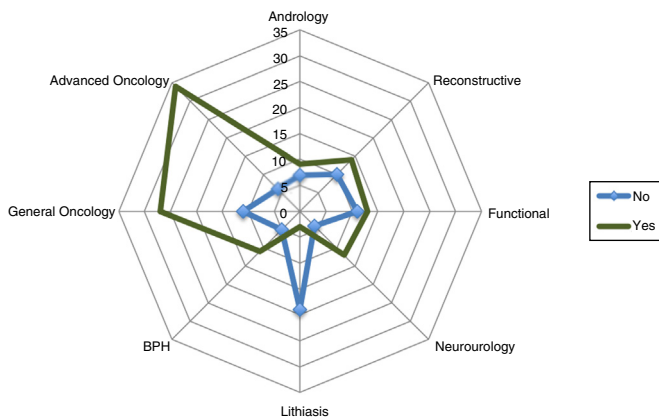


Fig. 5 Considers maintaining teleconsultation (grouped by subspecialty).

in several cases, which can be somewhat long, and patient’s perceptions could have been forgotten.

However, there is no Hawthorne effect bias, since the healthcare providers were not aware of being evaluated during the teleconsultations, as it was posed a posteriori, so the aspects on the physician’s attitude during the interview should not be biased (treatment, kindness, information received), and these obtained very high scores from patients.

No significant differences have been found between the pathology and the level of satisfaction, since satisfaction has been very high in all subgroups. However, the least satisfied patients have been those monitored for lithiasis or andrology, and the most satisfied patients were those consulting for urologic oncology and lower urinary tract symptoms. If we look for the ideal urological patient profile for teleconsultation, we could start with this group of patients.

Regarding the usefulness of teleconsultation, having all the complementary tests performed was a determining factor for the resolution of the consultation. The outcomes in the pandemic scenario are probably worse, since many tests were canceled: up to 68.5% of patients have had their consultations or tests postponed, and the consultation has been carried out without having the tests performed. Despite this, the resolution rate has been high, with 72% overall resolution according to urologists. This could suggest that many of the tests requested within the various protocols could be avoided. However, there is no data on which of them, or under what circumstances.

Conclusion

Satisfaction with teleconsultations during the COVID-19 pandemic has been rated with a high score, providing continuous care to urology patients during the health crisis.

There is no statistical association between the type of urological pathology and the suitability of teleconsultation, nor with age, therefore it could be offered to all urology patients who do not require an in-person physical examination.

The perceived quality shows an optional telematic care field in selected patients, which should be re-evaluated when the confinement situation is over.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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