ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

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Modifications in Cataract Surgery Practices in the Normalization Period of Coronavirus Outbreak: Cross-sectional Research

Koronovirüs Salgını Normalleşme Sürecinde Katarakt Cerrahisi Uygulamalarında Meydana Gelen Değişiklikler: Kesitsel Araştırma

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ABSTRACT Objective: To assess the experiences of ophthalmologists who continued elective cataract surgery practices in Turkey in the post-coronavirus disease-2019 (COVID-19) pandemic period and to examine the changes they made in their clinical practices during this period. **Material and Methods:** A self-administrated online 22-question survey was disseminated to ophthalmologists in Turkey who resumed cataract surgery practice. Data about the demographics, occupational risk, changes in their practice regarding elective cataract surgery performance pre/per/post-operatively due to COVID-19 risk was collected. **Results:** One-hundred twenty-two ophthalmologists completed the survey. Two (1.6%) participants reported hospitalization for being infected with COVID-19. Comorbidity (34; 27.9%) and age (16; 13.1%) were the leading patient characteristics when determining the indication for surgery. Ninety-two (75.4%) of the respondents declared using COVID-19 screening utilities pre-operatively. The majority (94; 77.1%) did not report any changes from the routine phacoemulsification technique. The mean waiting duration between the surgeries were 35.4±18.0 (15-60) minutes and 75.4% (92) reported the daily count for surgery as 1 to 4. Reducing the duration of hospitalization (26; 21.3%) and decreasing the frequency of follow-up visits (14; 11.5%) were the main post-operative adaptations. **Conclusion:** The variability of the survey answers from ophthalmologists working in different centers demonstrate the lack of a consensus about the cataract surgery implementations in the post-pandemic recovery period. Timely implementation of clear official guidelines about surgery practices with necessary updates can help decrease both the concerns of ophthalmic surgeons and the viral spread.

Keywords: Coronavirus; COVID-19; pandemic; outbreak; cataract surgery

ÖZET Amaç: Koronavirüs hastalığı-2019 [coronavirus disease-2019 (COVID-19)] pandemisi sonrasındaki süreçte Türkiye'de elektif katarakt cerrahisi uygulamalarına devam eden göz hekimlerinin tecrübelerini değerlendirmek ve bu dönemde klinik uygulamalarında yaptıkları değişiklikleri incelemek. **Gereç ve Yöntemler:** Toplam 22 sorudan oluşan bir anket, Türkiye'nin çeşitli bölgelerinde katarakt cerrahisi uygulamalarına devam eden göz hekimlerine internet üzerinden iletilmiştir. Demografik veriler, mesleki risk, elektif katarakt cerrahisinde pre/per/post-operatif uygulamalarda COVID-19 bulaş riskine karşı yapılan değişiklikler hakkındaki veriler kaydedilmiştir. **Bulgular:** Anket toplam 122 göz hastalıkları uzmanı tarafından cevaplanmıştır. İki (%1,6) katılımcı tarafından COVID-19 enfeksiyonuna bağlı hastaneye yatış öyküsü bildirilmiştir. Katarakt cerrahisi için endikasyon belirlerken katılımcılar tarafından en çok dikkate alınan özellikler; komorbidite (34; %27,9) ve yaş (16; %13,1) olarak saptanmıştır. Pre-operatif olarak COVID-19 tarama testlerini uyguladığını belirten katılımcı sayısı 92 (%75,4) olmuştur. Katılımcıların çoğunluğu (94; %77,1) rutin fakoemülsifikasyon tekniğinde herhangi bir değişiklik yapmadığını belirtmiştir. Vakalar arası ortalama bekleme süresi 35,4±18,0 (15-60) dk olarak hesaplanmıştır ve katılımcıların %75,4'ü (92) günlük vaka sayılarını 1-4 arası olarak bildirmiştir. Hastanede kalış süresinin kısaltılması (26; %21,3) ve post-operatif takip vizitlerinin sıklığının azaltılması (14; %11,5) en sık uygulanan post-operatif değişiklikler olmuştur. **Sonuç:** Farklı merkezlerde çalışmakta olan göz hastalıkları uzmanlarından alınan yanıtların oldukça çeşitlilik göstermesi, pandemi sonrası toparlanma sürecinde katarakt cerrahisi uygulamaları hakkında bir konsensusun bulunmadığını göstermektedir. Bu zorlu süreçte, cerrahi uygulamalar hakkında gerektikçe güncellenen belirli bir kılavuzun oluşturulması, hem göz hekimlerinin endişelerinin hem de virüs yayılımının azaltılması açısından faydalı olacaktır.

Anahtar Kelimeler: Koronavirüs; COVID-19; pandemi; salgın; katarakt cerrahisi

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Initially outbreak, pandemic, quarantine, shutdown; and then normalization with social distancing, preventive measures, personal protective equipment (PPE) utilization. All these terms rapidly became inseparable parts of our lives all over the world since the World Health Organization declared the coronavirus disease-2019 (COVID-19) caused by a novel virus called severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) as a global pandemic on March 11, 2020.[1] The first case of COVID-19 in Turkey was reported on that very same day as well, after which an accelerated increase was observed in the number of cases, causing interruptions in countless parts of our lives including the health care system.[2] Ophthalmology was among the mostly challenged medical specialties due to the transmission risk through ophthalmic involvement; ever since Dr. Li Wenliang, an ophthalmologist from Wuhan, drew attention to the impending pandemic by means of his glaucoma patient affected by COVID-19.[3-5] The battle was fought against SARS-CoV-2 through swift and strict restrictive measures including limiting the surgical procedures to only emergencies and withholding all elective surgeries, leaving an excessive volume of surgery backlog behind.[6,7] While the pandemic is still ongoing, the start of the normalization period has been given including the elective surgeries, in order to repair the disruptive effects of the suspension period. But how are the ophthalmologic surgeons prepared to confront this normalization period and what are the precautions taken in order to prevent any undesirable transmissions while gradually returning to the daily routine of professional practice?

This study was conducted in order to assess the experience and perception regarding COVID-19 risk of ophthalmologists who resume to perform cataract surgery all over Turkey, as well as evaluating the changes in their clinical practice pre/per/post-operatively including screening protocols and risk mitigation strategies. To our knowledge, there are no other reports in the literature evaluating the effect of COVID-19 normalization period on cataract surgeries after the resumption.

MATERIAL AND METHODS

A self-administrated, anonymous, online survey consisting of 22 questions was created using SurveyMonkey.com (SVMK, Inc.-San Mateo, CA). Survey invitations were disseminated via email and the WhatsApp messenger application to ophthalmologists in Turkey who are employed at hospitals/private clinics which have started to perform elective cataract surgery operations during the normalization period of COVID-19 outbreak. The survey was opened on August 13, 2020 and was available online for 45 days for voluntary participants to answer. The survey questions were multiple-choice and included open-answer options for additional comments as well, where applicable. It was mandatory to answer all of the questions. Data collection aimed obtaining information about demographic properties and COVID-19 tasking, occupational risk and awareness status of the participants, as well as assessing the changes in their practice during elective cataract surgery performance in terms of both clinical practice attributes and PPE utilization due to COVID-19 infection risk. The questions included in the survey was summarized in Table 1. This study was conducted in accordance with the principles of the Declaration of Helsinki and approved by both the institutional ethical committee board of Prof. Dr. Cemil Taşcıoğlu State Hospital, İstanbul (no: 328, date: 11.08.2020) and Republic of Turkey, Ministry of Health. Approval from the Ministry of Health was obtained for this study. The participants were informed about that their responses were collected for scientific research purposes and did not include any personally identifiable information.

All collected data were exported to Microsoft Excel program and mean, frequency, percentage values were used in descriptive statistical analyses. The included graphics were constructed using Microsoft Excel (2013, Microsoft Corporation, Seattle, WA, USA).

RESULTS

A total of 122 ophthalmologists completed the survey. Demographic characteristics of the participants are summarized in Table 2.

TABLE 1: Summary of survey questions.

Questions
1. Age
2. Sex
3. Primary workplace
4. Position
5. Situation about redeployment to COVID-19 related duties
6. Situation about being infected with COVID-19
7. Situation about COVID-19 testing and test results
8. Modifications in indications for performing cataract surgery, if any
9. Use of pre-operative COVID-19 screening utilities
10. Duration for performing the cataract surgery after the PCR-testing results
11. Use of written informed consents specially prepared for COVID-19
12. Number of people present at the same time in their operating room during cataract surgery
13. Disinfectant solution used during the operation room cleaning procedure
14. PPE utilization for the surgeons themselves
15. PPE utilization for the patients
16. Preference about performing cataract surgery under general anesthesia or not
17. Opinion about whether phacoemulsification increases the transmission risk via aerosols or not
18. Modifications in the routine phacoemulsification procedure, if any
19. Waiting duration between the cataract surgeries
20. Counts for cataract surgeries performed in a day
21. Modifications in post-operative implementations after cataract surgery, if any
22. Situation of patients who underwent cataract surgery being infected with COVID-19
TOTAL: 22 questions

PCR: Polymerase chain reaction; PPE: Personal protective equipment.

TABLE 2: Demographic characteristics of the survey participants.

Variables		
Age (years)	Mean±SD (Range)	38.0±9.2 (25-70)
Sex	Female	44 (36.1%)
	Male	78 (63.9%)
Primary workplace	University hospital	16 (13.1%)
	State hospital	16 (13.1%)
	Training and research hospital	70 (57.4%)
Position	Private hospital/clinic	20 (16.4%)
	Ophthalmology resident	18 (14.8%)
	Ophthalmology specialist/subspecialist	60 (49.2%)
	Associate professor	36 (29.5%)
	Professor	8 (6.6%)
TOTAL		122

SD: Standard deviation.

Before the commencement of normalization period of COVID-19 pandemic, 56 (45.9%) participants reported redeployment to COVID-19 related duties in non-ophthalmology services; and 64 (52.5%) participants continued their practice in ophthalmology services; whereas 2 (1.6%) of them suspended their all clinical practices. Among the redeployed ophthalmologists, 52 (42.6%) were in the COVID-19 polyclinic/service area, and 4 (3.3%) of them were in the intensive care unit for COVID-19 patients. According to the results from questions assessing occupational risk; 2 (1.6%) participants were infected and hospitalized for being infected with COVID-19, and 2 (1.6%) of them reported self-quarantining due to possible exposure, whereas the remaining 118 (96.7%) denied any history of infection/exposure. While 74 (60.7%) respondents were not tested for COVID-19 at all; 34 (27.8%) reported being tested with polymerase chain reaction (PCR)-testing (32 negative, 2 positive results), and 14 (11.5%) reported being tested with serologic tests (all negative results).

When the changes in clinical practice attributes regarding preparation for elective cataract surgery after the lockdown were questioned, the results revealed modifications in terms of both appropriate patient selection eligible for surgery and additional screening tests as well as informed consents. Comorbidity (34 responses, 27.9%) and age (16 responses, 13.1%) were the leading patient characteristics when determining the indication for performing cataract surgery in the course of resumption of regular clinical practices. On the other hand, 18 (14.8%) of the participants reported taking patients' ophthalmologic conditions into account when selecting appropriate patients, including visual acuity level of the other eye and accompanying ocular pathologies such as trauma or retinal pathologies necessitating vitreoretinal surgery. The remaining 68 (55.7%) respondents denied any restriction in patient selection when compared to their routine practice. A total of 92 (75.4%) respondents declared the use of COVID-19 screening utilities: a query form in 72 (59.0%), PCR-testing in 42 (34.4%), thorax computed tomography (CT) imaging in 14 (11.5%), and serological testing in 10 (8.2%). Figure 1 demonstrates the detailed summary of preoperative COVID-19 screening utilization. The mean duration for performing the cataract surgery after the PCR-testing results were 3.5±2.4 days. Written in-

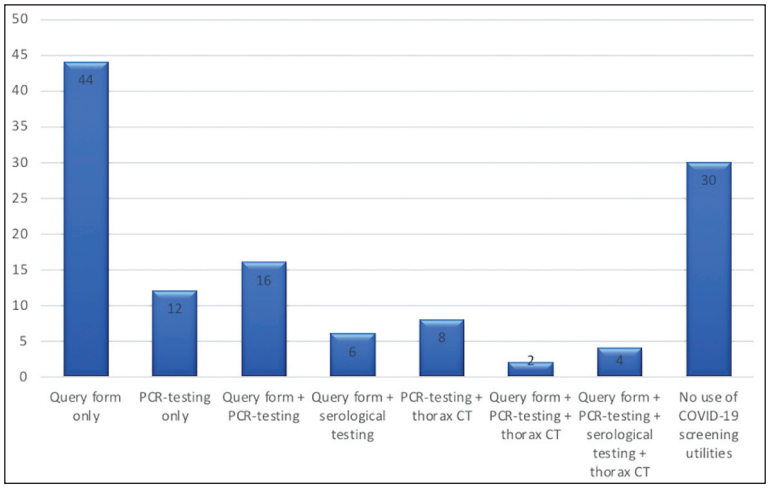

FIGURE 1: Summary of pre-operative COVID-19 screening utilization. PCR: Polymerase chain reaction; CT: Computed tomography.

formed consents specially prepared for COVID-19 were taken from the patients undergoing elective cataract surgery by 72.1% (88) of the participants, whereas 27.9% (34) did not prefer it.

The risk mitigation strategies regarding operating rooms necessitated recent rearrangements and use of additional equipment. The majority of the respondents reported the number of people present at the same time in their operating room during cataract surgery as 3 (48 responses, 39.3%) or 4 (42 responses, 34.4%); while it was 2 for 9.8% (12) and 5 or more for 16.4% (20) of the participants. Nearly half of the participants (52, 42.6%) were unaware of the disinfectant solution used during the operating room cleaning procedure. Alcohol with 70% concentration was the most preferred choice with 36 responses (29.5%), and was followed by sodium hypochlorite (30 responses, 24.6%), sodium dichloroisocyanurate tablets (18 responses, 14.8%), and hydrogen peroxide (12 responses, 9.8%), respectively. The information about the materials used for operating room disinfection are summarized in Figure 2. The summary for PPE utilization for both the surgeons and the patients is demonstrated in Table 3.

Per-operative and post-operative regulations underwent several modifications in order to minimize the infection risk during elective cataract surgery procedure. Eighty-two participants (67.2%) reported avoiding cataract surgery under general anesthesia because of the infection transmission risk during

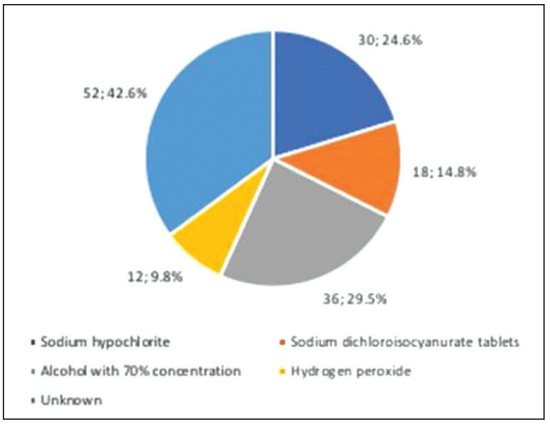

FIGURE 2: Summary of solutions used for operation room disinfection.

aerosol generating procedures. As for the routine phacoemulsification procedure, the vast majority (94 respondents, 77.1%) did not report any changes from the conventional technique. Using a different phaco cassette for each patient (24 responses, 19.7%), applying viscoelastic material to the phaco wound (6 responses, 4.9%), and irrigating the anterior chamber (6 responses, 4.9%) were the alterations the respondents implemented in order to minimize the infection risk. Two (1.6%) surgeons reported that their operating room together with the surgical equipment were disinfected with ultraviolet C radiation for 30 minutes in between the cases. Whether phacoemulsification increases the transmission risk via aerosols was a controversial issue according to the answers since 49.2% (60) of the participants replied as positive and

TABLE 3: Summary of personal protective equipment utilization.

PPE	Surgeon	Patient
Surgical mask	68 (55.7%)	110 (90.2%)
N95/FFP3/FFP2	78 (63.3%)	16 (13.1%)
Protective goggles/face shield	30 (24.6%)	-
Disposable surgical cap	66 (54.1%)	72 (59.0%)
Disposable shoe covers	14 (11.5)	28 (23.0%)
Double sterile surgical gloves	14 (11.5)	-
Disposable coveralls	4 (3.3%)	-
Double sterile surgical drape/cover	-	36 (29.5%)

PPE: Personal protective equipment.

50.8% (62) replied as negative. However, none of the participants preferred to apply any other technique other than phacoemulsification for cataract surgery. The mean waiting duration between the surgeries was 35.4±18.0 (15-60) minutes. The average counts for cataract surgeries performed in a day were as follows: 1 to 4 (92 responses, 75.4%), 5 to 8 (26 responses, 21.3%), and more than eight (4 responses, 3.3%).

Fifty six (45.9%) of the respondents reported that they adopted some modifications in post-operative implementations. Reduction in the duration of post-operative hospitalization (26 responses, 21.3%), decrease in the frequency of post-operative follow-up visits (14 responses, 11.5%) or applying both at the same time (16 responses, 13.1%) were the main adaptations. Together with these alterations, 12 of the participants (9.8%) recommended their patients also self-isolation for the post-operative period. None of the answers revealed any modifications in the post-operative treatment regimen. Table 4 demonstrates the detailed summary of post-operative modifications. Eight (6.6%) surgeons declared that they had experienced COVID-19 infection in the post-operative 2-week period of their patients who underwent cataract surgery.

DISCUSSION

Cataract is the leading cause of treatable vision impairment in the world, with a prevalence of 65.2 million according to the World Health Organization, which continue to rise with population growth and increasing life expectancy.[8] The demand for cataract surgery is also growing with the recent advancements and innovative management techniques in the aging population.[9] However, the COVID-19 pandemic caused an interruption in this escalating curve of cataract surgeries, as it did for all other elective surgeries.[7] While the world has been going into the normalization period after the great halt, elective cataract surgeries has been re-started in many centers in Turkey, yet bringing some obligatory modifications with it.

In order to comprehend the aftermath of COVID-19 pandemic on the attitudes of cataract surgeons, the experience and awareness of occupational risk among ophthalmologists should be evaluated first. While the increased risk of transmission during ophthalmological practice has been demonstrated in recent publications, many ophthalmologists were also redeployed to COVID-19 related duties in non-ophthalmology services.[10] On April 7-16, Khan et al. reported on a 3.2% rate of re-deployment among second year vitreoretinal surgery fellows in U.S, and 30.6% indicated an imminent re-deployment.[11] As the extents of the outbreak expanded by time, increased number of ophthalmologist were assigned to COVID-19 related duties, with a 45.9% ratio from Turkey at the time of this study. They also reported COVID-19

TABLE 4: Summary of modifications in routine post-operative implementations.

Modifications	Number (percent)
Reduction in the duration of post-operative hospitalization	26 (21.3%)
Decrease in the frequency of post-operative follow-up visits	14 (11.5%)
Both reduction in the duration of post-operative hospitalization and decrease in the frequency of post-operative follow-up visits	16 (13.1%)
Recommendation to the patient for self-isolation in the post-operative period	12 (9.8%)
Modifications in the post-operative treatment regimen	None
Total number of respondents adopting post-operative modifications	56 (45.9%)

exposure in 19.4% of the respondents, in addition with 14.5% possible exposure rate. A survey conducted by Nair et al. on Indian ophthalmologists revealed that more than half of the respondents had a perception of greater COVID-19 infection risk in comparison to other specialties.[12] While the exposure rate was not high among the cataract surgeons included in our study, 2 of them reported hospitalization because of contracting COVID-19. The implementation of routine testing for healthcare workers is not provided yet as it is reported from several countries, and similarly the results of the present survey revealed that the majority (60.7%) of the respondents were not tested for COVID-19 at all.[11,13] The experience of the participants about occupational risk from the beginning of the outbreak may possibly have an impact on their choices while re-starting cataract surgery in terms of eligible patient selection and adoption of preventive measures throughout the surgery process.

In the absence of definite guidelines about when and to whom to perform cataract surgery in the resumption period, ophthalmic surgeons are unclear about the pre-operative preparation process due to COVID-19 contraction risk. First of all, the issue of eligible patient selection for elective cataract surgery during the normalization period is controversial. Given that the majority of patients who are candidates for cataract surgery are in vulnerable age group for COVID-19 with accompanying comorbidities which increase COVID-19 contraction risk even more, the ophthalmic surgeons performing cataract surgery need to be meticulous about patient selection in the resumption period.[7,14] On the other hand, it should be kept in mind that, while putting the patients in the vulnerable group for infection, the age factor also exposes this elderly patient group to the risk of fractures from falls associated with impaired vision due to cataract progression.[7,15,16] Furthermore, the excessive surgical backlog created by the suspension period is inevitable as pointed out in recent studies; thus it seems essential to perform a sufficient number of surgeries in order to meet the demand and prevent the prolonged waiting times for surgery in the future.[6,7,14] This increased demand and concern for the general health of patients with low vision may be responsible for 55.7% of the responses in our study denying any restriction in patient selection for elective cataract surgery during post-pandemic recovery period when compared to the routine practice. Another issue tempting the surgeons to perform a substantial number of cataract surgeries in this resumption period may be their concern and enthusiasm about the surgical training of ophthalmology residents which is obviously negatively affected from the lockdown period.[7,17,18]

After establishing the criteria for choosing eligible patients for elective cataract surgery, ophthalmic surgeons need to determine the pre-operative COVID-19 screening protocol. As Nair et al. indicated, the possible presence of asymptomatic/presymptomatic COVID-19 positive patients who are planning to undergo elective cataract surgery constitute a noteworthy risk for the infection spread.[12,16] Moreover, it was concluded in a case series reported from China that the mortality rate was as high as 20% among their 34 asymptomatic patients undergoing elective cataract surgery during COVID-19 incubation period.[19] Therefore, it seems reasonable to perform pre-operative testing for COVID-19 prior to elective cataract surgery in order to detect these patients and minimize the potential spread risk throughout the surgery process.[13] According to the results of a survey conducted during the lockdown period, 20.6% of the participating Indian ophthalmologists stated that they were planning to perform pre-operative screening for COVID-19 when they resume elective surgeries, while the majority (62.8%) was unsure about what their pre-operative prevention strategy should be.[12] A report from Frankfurt published on May 22 announced that all cataract patients were being tested for COVID-19 before admitting to the hospital.[17] The rate of COVID-19 screening utilization among our respondents were as high as 75.4%; however 36.1% of this ratio belonged to query form only, and testing for COVID-19 (PCR or serological) was being performed by 42.6% (with or without the additional use of other screening modalities). Apart from the ambiguous pre-operative screening protocol, medical liability and ethical aspect of performing elective cataract surgery with COVID-19 contraction risk and without the presence of specific protective provisions constitute another concerning issue for ophthalmic surgeons, which should be responsible

for the majority (72.1%) of our respondents applying special written informed consents for COVID-19 pre-operatively.[16,20]

Utilization of PPE has become one of the most contentious issues of the healthcare services from the beginning of the outbreak in terms of both supply shortages and the kinds that should be used for certain types of procedures. Whether phacoemulsification increases the SARS-CoV-2 transmission risk via aerosols is discriminator in determining the type of mask use that should be implemented during cataract surgery.[21] In recent publications, aerosol generating procedures are defined as techniques performed using high speed devices in which fine droplets are created due to appliance of mechanical energy to an air-water interface.[21,22] Although the ultrasonic probe movement of contemporary phacoemulsification devices exceeds 40kHz which can be classified as 'high speed', it is not yet proven that phacoemulsification is an aerosol generating procedure.[21,23] In a recent study on experimental models, it has been demonstrated that aerosols or droplets are not generated during phacoemulsification procedure.[22] Another recent publication presenting the results of experiments on human cadaveric eye reported that, even if SARS-CoV-2 is present in intraocular contents, either removing aqueous humor with irrigation and aspiration (which was implemented by 4.9% of our respondents) or displacing it with viscoelastic material at the beginning of the surgery are adequate to clear away the virus from anterior chamber without generating aerosols.[24] While the presence of SARS-CoV-2 in aqueous humor or the generation of aerosols are still disputable issues without robust evidence as it was also demonstrated in the results of our survey, it is better to take all possible precautions in case of the probability. Apart from using N95/FFP3/FFP2 masks when supplies are sufficient; minimizing the number of people in the operating room, proper disinfection of the operating instruments with adequate waiting time, preference of topical/local anesthesia over general anesthesia, and use of additional surgical drapes are several other preventive measures suggested for elective surgeries recently in the literature.[18,20,21,23] Furthermore, as it is suggested in the recent reports about the new normal for cataract surgery in the COVID-19 period, performing cataract surgeries bilaterally may help reducing the exposure risk of patients.[17,25] Similarly, limiting the operating staff by senior surgeons especially for complex cataract cases may serve to the same goal as it shortens the duration of surgery.[7]

When the modifications regarding the post-operative period of elective cataract surgeries due to COVID-19 are analyzed, minimizing the number of post-operative visits is considered and adopted widely from United Kingdom to India, similar to 24.6% of our respondents.[7,20] Utilization of telemedicine has also become very popular after COVID-19, and its use for post-operative reviews has shown to be cost-effective and safe; however it may not be suitable for many centers due to lack of digital capability.[7,18,20] Legitimatizing this suggestions was the answers to our survey with none of our participants reporting the use of telemedicine at the time of this study. However, this period of suspension may be turned into an opportunity to adapt higher number healthcare centers to the advancements of digital era for future applications.

Among the limitations of our study, the restricted number of respondents may be explained by our urge to present the early results of cataract surgery experiences in the normalization period from our country, and thus limiting the availability of the survey by 45 days. Besides, questions can be elaborated in order to get more detailed information about cataract service re-design (i.e. the distribution of complex cataract cases performed by residents/specialists which affects the duration of surgery and thus the infection transmission risk, the modifications in the admission process in order to reduce the patients' waiting time in hospital), however we wanted to keep the average total answering time for the survey short in order to increase the number of respondents.

CONCLUSION

In conclusion, the variability of the answers to our survey questions from ophthalmologists with different positions working in different centers demonstrate the lack of a consensus about the cataract surgery implementations in the post-pandemic recovery period.

Timely implementation of clear official guidelines about surgery practices with necessary updates from week to week or even daily according to the changing circumstances can help decrease both the concerns of ophthalmic surgeons and the viral spread. Healthcare services should be agile to modifications and be able to adapt to new protocols swiftly.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Serap Yurttaşer Ocak, Aslı Kırmacı Kabakcı;* ***Design:*** *Serap Yurttaşer Ocak, Aslı Kırmacı Kabakcı;* ***Control/Supervision:*** *Serap Yurttaşer Ocak;* ***Data Collection and/or Processing:*** *Aslı Kırmacı Kabakcı;* ***Analysis and/or Interpretation:*** *Aslı Kırmacı Kabakcı;* ***Literature Review:*** *Aslı Kırmacı Kabakcı;* ***Writing the Article:*** *Aslı Kırmacı Kabakcı;* ***Critical Review:*** *Serap Yurttaşer Ocak.*

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