



DENTAL PRACTICE IN THE CONTEXT OF THE COVID-19 PANDEMIC IN THE MOSCOW REGION

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ABSTRACT

The Covid-19 pandemic, which began in early 2020, has made a difference in everyday and professional life. Vaccinations and work to prevent the spread of the virus are being actively carried out, but globally, the incidence of Covid-19 unfortunately cannot be reduced. In order to minimize the risk of viral infection in private clinics, patients are admitted to a formed, permanent team consisting of an administrator, a dentist, a doctor's assistant. In state clinics, while providing assistance to the sick, the dentist and medical personnel who came into contact with sick and infected patients were isolated for 2 weeks. An acute problem for the further work of medical institutions in the whole world and in Russia in particular is the protection of medical personnel and patients. Therefore, it is necessary to organize the work of dental clinics, taking into account the new conditions. An acute problem for the further work of medical institutions in the whole world and in Russia in particular is the protection of medical personnel and patients.

The purpose of study is to analyze the situation at dental appointments in clinics in Moscow, Russia in the context of the Covid-19 pandemic. Materials and methods: A survey of 100 doctors in Moscow was carried out (average age 42.3 ± 0.8). The survey questions included: analysis of work under severe constraints in spring 2020, analysis of work at the reception at the present time.

Conclusion: strict adherence to new protocols both at work and in everyday life has a positive effect on preventing the spread of Coronavirus infection.

KEYWORDS: infection in dental office, o Covid-19 pandemic.

INTRODUCTION

The Covid-19 pandemic, which began in early 2020, has made and continues to make changes in our everyday and professional lives. After a year from the first wave of the pandemic, there is a third surge in the incidence of Covid-19. According to the World Health Organization (WHO), at the beginning of October 2021, 235 128 834 people were infected, of which 4 807 168 people died. Despite the beginning of vaccination, and work to prevent the spread of the virus, the incidence of Covid-19 cannot be globally reduced. This means that work, in particular in the dental office, will need to continue, taking into account the new conditions.

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An acute problem for the further work of medical institutions in the whole world and in Russia in particular is the protection of medical personnel and patients.

In conditions of strict isolation in March-April 2020, all Moscow clinics switched to the ambulance mode [FSS, 2020; MMD 2020; Razumova S et al, 2020].

In order to minimize the risk of viral infection in private clinics, patients are admitted to a formed, permanent team consisting of an administrator, a dentist, a doctor's assistant. In state clinics, while providing assistance to the sick, the dentist and medical personnel who came into contact with sick and infected patients were isolated for 2 weeks.

After the removal of strict restrictions in June 2020, restrictions on dental reception of the population in the Moscow region have been lifted to date.

But the requirements for preventing the spread

of Covid-19 remain relevant. For the dentist, it is recommended to wear a protective disposable gown over the uniform for treatment, which is removed after receiving the patient, disinfected and disposed of in the same way as a mask, a cap, and gloves. Safety goggles, the face shield are disinfected. The time between patient appointments is increased to treat working surfaces immediately after admission and before the next patient to precipitate an air-dust cloud [Harrel S et al., 2004].

In a review article by Bordea I and co-authors (2021) the following databases were reported: PubMed and Google Scholar according to the preferred reporting clauses of systematic reviews and meta-analyzes. The authors concluded that informative updated standardized protocols are needed as the pandemic continues. In addition, there is a need for evidence-based protective measures to be regularly changed and updated until a safe vaccine is produced [Bordea I et al., 2021].

Razmara, F. and co-authors (2021) in their review outlined updated guidance and research on the relevance of dental advice in the era of the COVID-19 pandemic. This literature review reviews patient classification for dental treatment, protective precautions for dental practice, recommendations for prescribing dental drugs and oral manifestations of the disease [Razmara F. et al, 2021].

During the pandemic, the American Dental Association (ADA) mandated that only emergency dental care should be provided through telephone consultation, with or without appropriate treatment based on the clinical judgment of the dentist. Non-steroidal anti-inflammatory drugs, paracetamol,

and opioids are used in dentistry to relieve pain. It is important to note that most opioids can enhance viral pathogenesis by modulating immune responses, but the current evidence is very weak. The ADA has proposed that emergency dental procedures be carried out as minimally invasive as possible. Therefore, bleeding, severe infec-

tions and trauma, pulpitis, periostitis, and abscesses should be treated in the dental department according to the ADA guidelines [ADA, 2020].

Demand for dental care at the beginning of the Covid-19 outbreak fell by 38%, while the proportion of oropharyngeal infections increased from 51.0% to 71.9% during this period Guo H. and co-authors found that the number of patients not in need of emergency care decreased by 70% [Guo H et al., 2020].

Long L and co-authors also recognized a 57% decrease in daily clinic appointments for dental abscesses, while the proportion of abscesses requiring hospitalization increased markedly from 35% to 80%, reflecting the significant lack of emergency dental care during a pandemic [Long L., Corsar K., 2020].

Alharbi and co-authors (2020) proposed guidance whereby dental professionals would be able to divide patients into five groups after thoroughly screening them for COVID-19 infection: A (asymptomatic, unexpected, unconfirmed), B (symptomatic / suspect, unconfirmed). C (stable, confirmed: mild infection without hospitalization / oxygen therapy), D (unstable, confirmed: severe and critical cases) and E (recovered, confirmed: asymptomatic for at least 30 days after the last negative laboratory test). The authors also categorized different types of dental treatment into five classes to facilitate dental decision-making, categorizing each patient category into specific dental treatment classes that can be implemented for patients. In accordance with this guidance, the infectious status of COVID-19, together with the urgency of dental treatment, leads to informed decision-making about patient care, provided that adequate protective measures are taken. Although the authors have suggested that full dental treatment can be performed for recovered patients with COVID-19 [Alharbi A et al., 2020].

Chen D. and co-authors reported a case of SARS-CoV-2 recurrence during convalescence, highlighting the active surveillance of the virus to assess infectivity [Chen D et al., 2020].

Loconsole D and co-authors reported reactivation of COVID-19 in a patient after more than 30 days of negative test result and highlighted the fluctuating presence of the virus and the possible occurrence of false negative results [Loconsole D. et al., 2020].



To overcome it is possible, due to the uniting the knowledge and will of all doctors in the world

Peditto M., Scapellato S. (2020) shared a workflow experience that takes into account many aspects of risk for dental practitioners in the COVID-19 era and focuses on assessing the level of risk to patients, two-step management of dental procedures (online and face-to-face), and the use of specific preventive measures. The following preventive strategies have been adopted at the Italian University Hospital Dental School during the COVID-19 era. These measures have been approved by the University Hospital of Messina, which currently houses a dedicated COVID-19 center to manage the area, which is home to some 627,000 citizens. The dental department is equipped with 20 dental chairs on two different floors. Three separate operating areas were defined: one on the first floor of the clinic, the other two on the second floor. There are 4 dental chairs in each work area. In the case of finding several dental chairs in one office, the appointment was carried out on only one chair. Over a two-month period using this protocol, no cases of COVID-19 infection have been identified among patients and dental staff. This workflow appears to be a promising and effective solution for managing dental procedures during the COVID-19 outbreak and can be implemented in both public and private practice until the emergency is resolved [Peditto M. et al., 2020].

With regard to airborne transmission of the virus in dental settings, the use of protective equipment such as gloves, face masks, waterproof long-sleeved gowns, shoe covers, goggles and face shields are of paramount importance in the COVID-19 era [Izzetti R, 2020].

Although surgical masks protect the mucous membranes of the nose and mouth from splashing drops, they do not provide complete protection against inhalation of airborne agents, as stated by the Centers for Disease Control and Prevention. However, patients should be asked to re-wear a surgical facemask after completing dental treatment, when they leave the treatment area, and when they enter the dental office [GDS-CDC, 2020].

Working in close contact with patients requires the use respirators such as Filtering Face Piece (FFP) a level 2/3 or N95 [Lu C., 2020].

The use of goggles and face shields is mandatory when performing an aerosol-generating pro-

cedure, since COVID-19 can be transmitted through the epithelium of the human conjunctiva [Izzetti R., 2020].

The role of dental practitioners in preventing the transmission of COVID-19 is critical.

The purpose of our study: to analyze the situation at dental appointments in clinics in Moscow in the context of the Covid-19 pandemic.

MATERIALS AND METHODS.

A survey of 100 doctors in Moscow was carried out (average age 42.3 ± 0.8). The survey questions included: analysis of work under severe constraints in spring 2020, analysis of work at the reception at the present time.

RESULTS

Of all the respondents, 58% (58) of doctor's work in public clinics, 30% (30) in private and 12% combine work in private and public clinics (12). When analyzing the working conditions during the pandemic, the clinics of the public and private sectors did not differ, since the decree of the Ministry of Health and the decree of the government of the Russian Federation was fulfilled. 100% (100) doctors were trained to work in the Covid-19 pandemic, and 70% worked (70). On the basis of state dental clinics, mobile teams were created to provide assistance for acute pain (usually surgical). Under the severe restrictions of the pandemic, 30% of doctors did not work. Currently, all 100% of the respondents are working on a full schedule.

Of the respondents, 37 (37%) people have had Covid-19. Of all those who had recovered, symptoms of fever, loss of smell and weakness were noted in 90% of cases. In 9% of cases, lung damage was noted, in 9% of cases of joint damage. Of all those who had been ill, 12 people (32%) noted that they got infected at work (contact with a sick person) and 25 people (68%) noted something else (transport, public places).

At present, 23% of respondents have antibodies to Covid-19, no antibodies have been detected in 50%, and 27% have not been tested. Family members were ill in 32% of the respondents.

According to the results of the survey, all doctors who worked in the clinic in the spring of 2020 used all protective equipment: disposable gowns, hats, masks, gloves and goggles or screens. Addi-

tionally, 8% of respondents used antiviral drugs in the form of applications on the nasal mucosa and 28% of respondents took vitamins and dietary supplements. Currently, 100% of respondents use all protective equipment at a dental appointment. 19% of respondents replaced conventional surgical masks with masks with FFP2 and FFP3 filters. All 100% of respondents use disposable hats and gowns. In 95% of the questionnaires, doctors noted that clinics have lengthened the interval between patients and introduced additional UV sterilization of treatment rooms between patient appointments.

DISCUSSION

The issue of maintaining the health of a dentist working in the conditions of Covid-19 is urgent. Most clinics in Russia and the world have introduced additional protective measures for dentists. The experience of Italian doctors [Peditto M et al., 2020] in organizing dental appointments has shown high efficiency in the prevention of diseases among doctors [ADA, 2020]. According to the results of our data, 32% of doctors (12 people) who fell ill with Covid-19 noted that they had contact

with infected patients, despite the preventive measures taken. Restrictions adopted on dental admission by the American Dental Association to protect doctors have a negative impact on the condition and course of patients' dental diseases [Long L., Corsar K2020]. The absence of these restrictions in the Russian Federation shows a relatively high (37%, 37 people) morbidity among dentists, established according to the results of our study.

CONCLUSION

According to the results of the survey, it was found that 37% of doctors had been sick with Covid-19 in the period from May 2020 to May 2021, of which 12% noted that they were infected at work. After the start of the pandemic, many doctors increased the use of personal protective equipment at the reception: 100% of respondents use disposable gowns and 19% use masks with FFP2 and FFP3 filters, antiviral drugs in the form of applications on the nasal mucosa, 8% of respondents.

The authors would like to express their gratitude to all healthcare professionals who are fighting coronavirus infection around the world.

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