What Do We Know About COVID-19?: Maxillofacial Surgeons Survey

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Abstract: Coronavírus disease 2019 (COVID-19) is a virus of mass dissemination, with an impact on international public health, leading to hospitalizations and death. The main symptoms of COVID-19 are fever, fatigue, dry cough; however, myalgia and dyspnea and the transmission routes include direct transmission by cough, sneeze, droplet inhalation, or contact transmission with the oral, nasal, or eye mucous membranes. The dental professionals are the main risk group to COVID-19 due to the transmission routes that are directly related to the dental practice. In addition, the oral and maxillofacial surgeons (OMFS) are even more exposed, due to increased contact with the population in hospitals and emergency services. OMFS should be able to identify a suspected case of COVID-19, its symptoms, risk groups, disease severity, laboratorial and computed tomography alterations, and treatment guidelines. In the present study, the authors performed a nationwide survey with Brazilian OMFS to evaluate the knowledge of these professionals about the pandemic status of the COVID-19. A total of 142 OMFS replied the survey and the results brings light to an incomparable health public problem that the OMFS in Brazil are no able to protect itself, diagnose the suspicious and probable cases, request and interpret the correct laboratorial examinations for the treatment of the COVID-19 patients.

Key Words: Coronavirus-19, COVID-19, oral and maxillofacial surgeons

Coronavirus is from a large family of viruses encountered in different type of animals like camels, cattle and bats. Infrequently, animal coronavirus can pull out and infect humans. The novel coronavirus strain was first identified in late December 2019 due to an increase of respiratory disease cases in the city of Wuhan, Hubei, China. Further studies revealed that the causative virus was SARS-CoV-2, being named by World Health Organization (WHO) as Coronavirus Disease 2019 (COVID-19). After only 4 months from the initial cases of the COVID-19, the WHO recognized the status of pandemic.[1,2]

The main symptoms of COVID-19 are fever, fatigue, dry cough; however, myalgia and dyspnea can also be observed. The uncommon symptoms are headache, hemoptysis, sputum production and diarrhea. According to the severity of the symptoms, the patients can be classified as mild, moderate, severe, and critical. Severe and critical patients can present acute dyspnea, low blood oxygen saturation, developing respiratory failure, septic shock and/or multiple organ dysfunction.[2–4]

The common transmission routes include direct transmission by cough, sneeze, droplet inhalation, or contact transmission with the oral, nasal, or eye mucous membranes. Also, the routes for transmission of the COVID-19 are well established by airborne, contact with the mucosa and by contaminated surfaces.[1–4] Dental professionals are the main risk group to COVID-19 due to the transmission routes that are directly related to the dental practice. In addition, the oral and maxillofacial surgeons (OMFS) are even more exposed, due to increased contact with the population in hospitals and emergency services. OMFS should be able to identify a suspected case of COVID-19, its symptoms, risk groups, disease severity, laboratorial and computed tomography (CT) alterations, and treatment guidelines.[1]

In the present study, the authors performed a nationwide survey with Brazilian OMFS to evaluate the knowledge of these professionals about: the pandemic status of the COVID-19, clinical characteristics, symptoms, CT status, oral manifestations of the disease, laboratorial alterations and treatment guidelines.

A total of 142 OMFS replied the survey, from all Brazilian states. The most common time of experience in the field of OMFS was 6 to 10 years (28.9%), followed by residents (19.7%). Concerning transmission routes of COVID-19, the most remembered one was droplet inhalation (98.6%) followed by oral mucous membrane (89.4%), cough (85.6%), and eye mucous membrane with 33.8%. Other routes, nonrelated with COVID-19 were remembered as well, like semen, blood, and sweat.

On the symptoms topic, fever was the most reported with 98.6%, followed by dry cough (88.7%), dyspnea (71,8%), fatigue (57%), desaturation (35.2%), headache (32,4%), diarrhea (30.3%), and myalgia (25.4%). Hemoptysis and sputum production were the symptoms with fewer citations with 0.7% and 12.7%, respectively. Others symptoms, nonrelated with covid-19, were remembered as nausea, eye pain, loss of appetite, cutaneous rush, and hypothermia.

The laboratorial findings have the worse result reported in this survey being the most relevant exams leukopenia and lymphopenia remembered only 16.9% and 14.8%, followed by creatininekinase alterations (11.3%). Other less relevant examinations as C-reactive protein with 64.8% and inflammatory cytokines alterations with 28.9% were remembered as well. Others alterations, nonrelated with COVID-19 were described like leukocytosis, lymphocytosis, and thrombocytopenia.

The majority of the OMFS recognized that COVID-19 has no oral manifestations described until today, with 97.1% and almost 79.6% of the participants of the survey related that COVID-19 presents image alterations in the CT of the lungs.

Concerning local measures to avoid contamination with the virus, washing hands was the most described procedure with 97.9%, mouthwash with hydrogen peroxide 1% (66.4%), washing hands with alcohol, and mouthwash with povidone (27.1%). Other local measures as mask or triple filtration mask usage were remembered as well.

The quarantine isolation was the most preconized treatment with 95.8%, followed by symptomatic medications (68.3%). Other
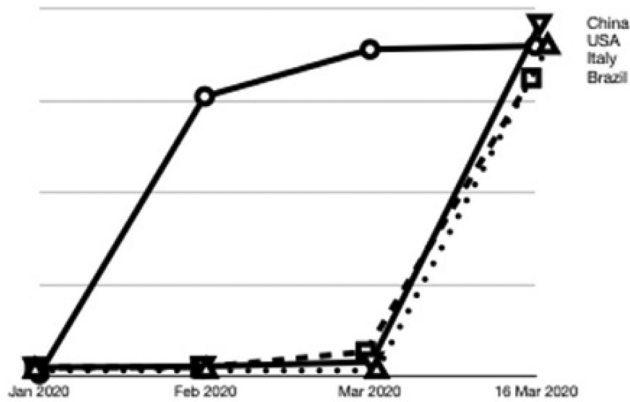
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FIGURE 1. Tendency lines of COVID-19 infection: Brazil vs other countries.

treatment methods as antibiotics and antiretroviral medications were cited as well, with 2.1% and 16.2%, respectively. All the descriptive statistics are summarized in Supplemental Digital Content, Table 1, http://links.lww.com/SCS/B482.

The analysis of the results together with the tendency lines for the community infection by the SARS-CoV2 virus in Brazil (Fig. 1) brings light to an incomparable health public problem that the OMFS in Brazil are no able to protect itself, diagnose the suspicious and probable cases, request and interpret the correct laboratorial examinations for the treatment of the COVID-19 patients. Many of the responses of the survey were based on information described on the media, internet or direct communication, leaving aside the scientific literature on the topic.

In conclusion, Brazilian entities should propose a nationwide program of education of health professionals on the care of suspicious or confirmed cases of COVID-19.

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