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COVID-19 and oral radiology

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Dear Editors,

The global coronavirus disease 2019 (COVID-19) pandemic and its impact on people's quality of life and the practice of health professionals have been the subject of many studies aiming to establish protective procedures in hospital and clinical practice environments. In dentistry, more specifically in the oral radiology field, certain procedures must be strictly followed when performing radiographic techniques to reduce the risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission.

Initially, it is important to follow the basic requirements for radiological protection in radiodiagnosis, and all health care workers and patients should be thoroughly encouraged to meticulously wash their hands for at least 20 seconds, along with disinfection with 70% gel alcohol whenever possible.[1]

Radiological clinic staff must use a full array of individual protective equipment, that is, a head cap, shoe protectors, goggles, a surgical gown, and gloves. Patients and their companions should always wear masks, protective aprons, and shoe protectors in the clinical setting, and should be carefully asked about previous risk exposure (i.e., travel and contact with possible infected persons) and whether they have experienced any symptoms in the last 14 days. Additionally, their body temperature should be measured upon entrance. It is also recommended that patients should be selected by a screening service, via internet programs and applications, that prioritizes clinical conditions for which a radiographic examination is considered crucial.[1] These conditions include dental urgency, such as extractions and coronary openings of irreversible pulpitis. Non-emergency dental procedures should be postponed, with the intention of reducing the number of patients treated per day to avoid cross-contact and proximity as much as possible.

COVID-19 has identified in the saliva of infected patients,[2] which is considered the main route of human-to-human transmission. In light of the risk of intraoral radiographic techniques causing cough stimuli, saliva secretion, and vomiting reflex in some patients,[3] extrabuccal radiographic techniques, such as panoramic radiography and cone-beam computed tomography, are preferable when possible during the COVID-19 pandemic.[3] When the use of intraoral techniques is strictly necessary, the patient should perform mouth-washing (e.g., 9 mL of 1.0%-1.5% hydrogen peroxide for 30 seconds) to reduce the number of microorganisms in the oral cavity.[1,4]

SARS-CoV-2 may persist on surfaces for a few hours or up to several days depending on the temperature of the environment.[5] For this reason, it is necessary to completely disinfect all surfaces of the X-ray room and adjacent areas with 0.5% sodium hypochlorite before and after all services, including the floor, door handles, light switch, table, support bench, and chairs. It is recommended to disinfect components of the radiographic device, such as the X-ray control panel and tube head, according to the manufacturers' guidance.[1]

Although aerosol-generating procedures are not performed in oral radiology, contact with the patient's oral cavity may result in the transmission of SARS-CoV-2. In

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order to minimize this risk, it is necessary to comply with essential biosafety procedures in the clinical environment and to pay careful attention to the criteria for prescribing radiographic examinations, as well as reducing the number of employees working and people circulating in the clinical environment.

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