How to Face the Post-SARS-CoV-2 Outbreak Era in Private Dental Practice: Current Evidence for Avoiding Cross-infections

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has shocked the whole planet, forcing the entire world population to reconsider all the habits of relationship and mutual contact to avoid the continuous spread of the epidemic.

The professional category of dentists is one of the most exposed to both the contraction of the infection and, inevitably, its spread; this is due both to the reduced distance between the doctor and the patient and to the fact that most dental procedures generate aerosols, the main way of spreading the virus. It has also been shown that infected subjects are contagious from the first moments of contact with the virus and that diagnostic techniques may not reveal such contact if they are performed after less than 2–3 days from such contact.[1,2]

These evidences can be disastrous for the category of dentists as they are exposed to a substantial reduction in the number of patients who can be treated. Patients' reduction is a consequence of both the inevitable social distancing imposed by infection prevention strategies and their psychosis. In fact, such fear pushes patients to avoid any type of contact with medical personnel if not strictly necessary because of the inevitable associated risks.[3]

In light of this, it is necessary to adopt behaviors and precautions that minimize the spread of the virus. A sense of security has to be given to patients by encouraging them to go back to dental offices for all the necessary therapies, checkups, and preventive visits. In fact, it has been shown that oral health worsening can have harmful effects on general health.[4-6] Strategies that could induce patients to be treated involve the use of the Internet: social media to provide online consultations, virtual games for pediatric patients, or webinars on topics of particular interest.[7]

University clinics or structures of the national health service can count on state subsidies or be in close contact with the legislative bodies of the Ministry of Health that provide guidelines and methodological recommendations to deal with the so-called phase 2 of the epidemic or postoutbreak phase. On the contrary, private dental practices may have to face huge costs to equip themselves with all the necessary devices.

The purpose of this editorial is to provide the most recent evidence on the methods to be put in place to combat the spread of SARS-CoV-2 in the postepidemic phase.

Tasks Entrusted To the Patient's Reception Staff and Dental Assistants

1. The day before the appointment, the secretaries or dental assistants should telephone the patients asking them to measure their body temperature in the subsequent day as soon as they wake up and warn them that they will be given an anamnestic questionnaire on their arrival at the dental office; in that questionnaire, aimed at verifying any positivity to SARS-CoV-2, they must self-certify that they have performed the measurement of body temperature and write it down. Before the patient can have access to the operating rooms, the temperature will be measured again. If available, this should be measured through a remote thermo scanner.
2. Concerning the presence or absence of fever and a predictive history of possible contagion, different scenarios are proposed:
   a. Positive history and fever >37.3°C = immediate quarantine and reporting the case to the hygiene and public health department of the nearest hospital.
   b. Positive history and fever <37.3 °C = treatment must be delayed of at least 14 days.
   c. Negative history and fever >37.3 °C = the patient has to be sent to the nearest hospital for appropriate diagnostic examinations.
   d. Negative history and fever <37.3 °C = treatment possible with all required protections.
3. The waiting room must be isolated from all the operating rooms and with a minimum distance of 2 m between waiting patients. Hand hygiene devices (alcohol-based antiseptics) and face masks must be available. The environment must be periodically ventilated and the air conditioning systems sanitized twice as often as normal. If natural ventilation and air conditioning systems coexist the latter must be turned off in favor of natural ventilation. If artificial ventilation is the only available option systems must be used with recirculation mode blocked. To ensure that the proper room sanitation procedures are carried out, only one patient will be admitted to the operating rooms every hour and a half.

4. An operator will take the patient to the operating room; the patient will sit on the dental chair, and he/she will make a mouth rinse before any procedure: 1% hydrogen peroxide or 0.2% povidone-iodine is useful for lowering the viral load of SARS-CoV-2; chlorhexidine is not effective. The mouthwash will then be aspirated and not spit by the patient.

Tasks Entrusted to the Dentists

5. Dentists (and all dental staff) have to measure their body temperature every day before the start of clinical activities. The same scenarios presented for patient management must also be applied to all dental staff.
6. Whenever possible, the dentist should treat the patient in the shortest number of appointments. This guarantees the reduction of both contagion and economic risks.
7. The use of rotating instruments not equipped with backflow valves is prohibited.
8. Anyone who comes in contact with any patient must wear filtering facepiece-3 masks, gloves, disposable water-repellent medical gowns (to be changed for every patient), goggles, or visor and hair caps; if the patient is an ascertained case of positivity to SARS-CoV-2 (and the treatment is urgent), shoe covers, full protective gown, and full-face helmet are to be added; the dressing and undressing procedures must be carried out in dedicated and frequently sanitized environments as to keep them clean at every access.
9. Both bare and wearing gloves hands (the gloves only if they cannot be replaced) must be sanitized frequently (and in any case whenever a risky surface has been touched) with handwashing with water and emulsion of soap for at least 30–60 s or with alcoholic gel >70% v/v for a minimum of 30 s.
10. High-power aspirators and the presence of a second operator are indispensable requirements to avoid the dispersion of fluids and aerosols.
11. The use of the air–water spray must be minimized.
12. The rotating instruments and the air–water spray (if used) must be replaced and sterilized for each patient treated.
13. Intraoral radiographs should be avoided because they stimulate salivation; orthopantomography or computerized tomography is strongly suggested.
14. All conservative and endodontic (including pediatric) treatments must be performed using two high-power salivary aspirators and isolating the operating field with the rubber dam.
15. The use of absorbable surgical sutures must be preferred.
16. After every dental treatment is completed, the cleaning procedures must be stringent: careful disinfection and particular attention must be paid to the use of personal computer keyboards. The products to be preferably used are the ones with sodium hypochlorite: 1% (or 0.1% diluted) for all surfaces and 5% (or 0.5% diluted) for the disinfection of visible biological fluid stains. For the surfaces of electro-medical devices or for surfaces sensitive to the oxidizing activity of sodium hypochlorite, ethanol >70% v/v or isopropyl alcohol (with subsequent ventilation) is to be preferred taking care not to use them on hot or electric instruments as they are flammable.

The knowledge of the strategies to be put in place to counter the spread of SARS-CoV-2 is a fundamental prerequisite both in the current phase and in the one that will start when the production activities will restart at full speed. It is crucial that the medical-dental staff is at the forefront of the control of cross-infections to protect the health of patients and to help encourage them to go back to take care of their oral health. These aspects will be guaranteed if operators comply with appropriate guidelines that will be updated as soon as data with greater statistical power are obtained.[8,9]

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Conflicts of interest

There are no conflicts of interest.

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