Brazilian Dental Journal (2020) 31(6): 567-567
http://dx.doi.org/10.1590/0103-6440202003760

ISSN 0103-6440

Letter to the Editor
The Importance of Rubber Dam Isolation in Endodontics Throughout COVID-19 Outbreak

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Dear Editor,

Due to the recent pandemic outbreak in the 21st century, COVID-19 has impacted the daily activities of patients and healthcare professionals, particularly dentists. Once the COVID-19 infection was considered highly contagious, security conditions were adopted, such as social isolation and distancing. However, recent studies have shown that during social isolation, dental emergency rates related to the irreversible pulpitis diagnosis increased significantly (1,2).

The main reason why COVID-19 has severely impacted dentistry is the aerosol created by high-speed handpieces, saliva aspirator suction tips, dental chair spittoons and other devices (3). A recent study shows that the coronavirus is present in the human enzymes located in the salivary glands (4), which aerosols from the high-speed handpieces may disseminate throughout the environment and would be the main contamination route for dental surgeons (5).

During the COVID-19 outbreak, countries such as Brazil have allowed dentists to perform emergency treatments only. However, these treatments must be performed according to the international guidelines for the COVID-19 infection prevention and control (6), which provide guidance on personal protective equipment and disinfection methods.

Most urgent treatments are related to pulp and periapical pain origin. The rubber dam isolation device, developed in the 19th century by Saford Barmun (7), must be used in these endodontic treatments. The absolute isolation procedure has become routine in Endodontics due to its numerous advantages, such as the significant reduction in accident risks and the preservation of aseptic protocol.

However, some professionals neglect this procedure, reporting difficulties in its handling (8,9). In order to increase the safety of dentists during the COVID-19 pandemic, the use of rubber dam isolation, mainly in endodontic procedures, is essential to the coronal access once the high-speed handpiece produces higher aerosol volume (9). This conduct can reduce at least 70% of patients' salivary fluids in the composition of the aerosols (10,11) and thereby, significantly reduces the microorganism suspension in the environment (11,12).

Thus, while COVID-19 pandemic continues, new cases are still being reported and vaccination is not yet released for the population, the worldwide recommendation is the mandatory use of rubber dam isolation in dental procedures, as a mean to reduce the chance of contamination and to contribute to keep dental office teams and patients safe and protected.

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Received June 21, 2020
Accepted August 25, 2020