

Editorial: COVID-19 and Endodontic Emergencies

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A novel coronavirus was first reported in Wuhan, China in late December 2019. The virus has rapidly spread to numerous countries worldwide, and announced as a pandemic outbreak by the World Health Organization. The causative pathogen was named severe acute respiratory syndrome coronavirus-2 (SARS-COV-2), and the disease deriving from SARS-COV-2 was termed COVID-19; this virus has become a major public health challenge worldwide [1]. Unfortunately, as of 27 April 2020, a total of 3,004,887 cases of COVID-19 has been confirmed globally including 207,254 deaths [2].

COVID-19 has clinical features varied from asymptomatic in approximately 80% of cases to severe respiratory problems. The common symptoms include fever, dry cough, and myalgia. SARS-COV-2 is mainly transmitted through direct-(person-to-person) and indirect contact (close contact less than 6 feet, inhaled droplets, aerosol, and oro-nasal-ocular routes) [3].

Given the nature of the dental setting and droplet/aerosol generating procedures, clinicians, personnel and patients in the dental office are at high risk of COVID-19 disease transmission when treating the asymptomatic carriers as well as symptomatic patients. Hence, it is recommended by the Centers for Disease Control and Prevention (CDC) to provide only *emergency dental care* for non-COVID19 patients [4].

Emergency endodontic treatment will be carried out when there is a symptomatic irreversible pulpitis, symptomatic apical periodontitis, acute apical abscess, and dental injuries *i.e.* avulsion/luxation or tooth fracture resulting in pain [5]. Currently, the people may fear to go to public places including dental offices, and hence the need and access patterns of emergency dental services have drastically changed. It was reported in Wuhan University that during the COVID-19 outbreak, the greater portion of patients requiring emergency dental treatment were suffering from symptomatic irreversible pulpitis (50.26%) [6]. Logically, reducing endodontic emergency treatment time span and exposure of the dental care team to the generated droplets/aerosols are critical factors for decreasing the risk of SARS-CoV-2 virus spreading for both symptomatic irreversible pulpitis and other less common emergencies.

It has been shown that complete pulpotomy treatment with endodontic biomaterials had superior pain reduction effect than root canal therapy in permanent teeth with irreversible pulpitis [7]

and more importantly, it was a *definitive treatment* for irreversible pulpitis and not just an interim emergency treatment [8]. Furthermore, the treatment time span of pulpotomy treatment was approximately three times less than conventional root canal therapy [9]. We may conclude from this information that during COVID-19 outbreak, vital pulp therapy *i.e.* full pulpotomy might be beneficial in terms of reducing treatment time and postoperative pain, and therefore lowering risk of exposure to the noxious virus; benefiting both practitioner and patient and allowing the pulp to remain vital.

Reference

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