

Review Article

Dental team and infection control for the COVID-19: (A short review of the current guidelines)

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ABSTRACT

Background: In December 2019, a series of unusual pneumonia has been reported in Wuhan, China. This pneumonia was related to beta-coronavirus cluster which was named COVID-19. The aim of this study is to review the published paper on COVID-19 protections guide lines and attempt to summarize different suggested guide lines in order to help dental/oral healthcare to have better protection against COVID -19

Materials and Methods: An electronic literature search was conducted via google scholar, PubMed, and dental associations' of different countries' website using the key word "COVID-19, Dental team, Guide lines and Recommendation". A total of seven guidelines were found suitable to be included in this review.

Conclusion: Individuals with 'possible' or 'confirmed' COVID-19 should not be seen for routine dental care. Multi-step approach should begin before the patient arrives on the office and includes guidance regarding their arrival and it should be completed duration of the affected patient's presence in the practice. Accurate travel history, fever or history of fever, acute respiratory infection and severe respiratory infection without fever requiring hospitalization should be checked by staff via patients telephoning to make an appointment and finally the primary infection control goal is to prevent transmission of disease. These treatment guidelines are based on very limited evidence from the literature and should be revised as soon as more evidence about the infection control advices for dental team regarding COVID-19.

Key Words: COVID-19, dental team, guideline, infection control

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INTRODUCTION

In December 2019, a series of unusual pneumonia has been reported in Wuhan, China. This pneumonia was related to beta-coronavirus cluster which was named COVID-19 by WHO on January 2020 and its infection has spread worldwide.^[1,2]

It is associated with human to human transmission and causes by droplet contact related to respiratory activities. Transmission can accrue before appearance of disease symptoms^[1] so there remains much to be learned about how COVID-19 spreads.

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Recently, COVID-19 was detected in saliva of infected persons. so inhalation of airborne particles and aerosols during dental procedures on infected persons with COVID-19 is high-risk activity for dentists which are directly exposed.^[2]

A recent clinical study reported that %29 of infected patients in Wuhan were healthcare workers, it is a reminder for dental professionals to be aware of protecting against infectious disease.^[2] In this study references were selected from an electronic literature search which was conducted via google scholar, PubMed, and dental associations' of different countries' website using the key word "COVID-19, Dental team, Guide lines and Recommendation".

The aim of this study is to review the published paper on COVID-19 protections guide lines and attempt to summarize different suggested guide lines in order to help dental/oral healthcare to have better protection against COVID -19

MATERIALS AND METHODS

An electronic literature search was conducted via google scholar, PubMed, and dental associations' of different countries' website using the key word "COVID-19, Dental team, Guide lines and Recommendation". A total of seven guidelines were found suitable to be included in this review.

RESULT

Effective infection control protocols

Washing hands has been recommended for reducing the risk of transmitting microorganism to patients. The National Health commission of China recommended that all health care workers use protection measures.^[3]

Patients with acute dental problem

Patients with an acute respiratory illness may present for acute dental problem at outpatient dental settings. The primary infectious control goal is to prevent transmission of disease. NHS Scottish guideline on COVID-19 - guidance for dental teams^[4] and also American Dental Association (ADA) guidelines for dentists^[5] recommended that patients diagnose with 'possible' or 'confirmed' case presents with an acute dental problem requiring urgent dental care, will need to be referred for management in an appropriate setting with infection prevention and control measures in place. Standard precautions should be taken with all patients, at all times. Centers for Disease

Control (CDC) recommends a multi-step approach that begins before the patient arrives at the practice and includes guidance regarding their arrival and for the complete duration of the affected patient's presence in the practice. It may not be possible to know the cause of any patient's illness so it is important to follow this guidance and standard precautions at all times.^[6]

Patients with routine dental care

While the NHS Scottish guideline on COVID-19 - guidance for dental teams and The National Health commission of China^[3] recommend that patients diagnosed with possible or confirmed COVID-19 should not be treated for routine dental care the American Dental Association recommended to follow CDC multi-step approach that begins before the patient arrives at the practice. It includes guidance regarding their arrival and for the complete duration of the affected patient's presence in the practice. The Centers for Disease Control and Prevention provides important and up-to-date information to the public and healthcare providers on the status of reported cases of 2019 Novel Coronavirus (COVID-19) across the United States. Dentists are urged to view the CDC COVID-19 situation summary web page for current insight.^[6]

Infectious control issues during patient assessment^[7]

- Patients with an acute respiratory illness should be identified at check-in and placed in a single-patient room with the door kept closed.
- Seek to prevent the transmission of respiratory infections in healthcare settings by adhering to respiratory hygiene/cough etiquette infection control measures at the first point of contact with any potentially infected person
- Offer a disposable surgical mask to persons who are coughing; and provide tissues and no-touch receptacles for used tissue disposal.
- Ill persons should wear a surgical mask when outside the patient room.
- Dental healthcare personnel assessing a patient with influenza-like or other respiratory illness should wear disposable surgical facemask,^[8] non-sterile gloves, gown, and eye protection (e.g., goggles) to prevent exposure.
- Patient and dental healthcare workers should perform hand hygiene (e.g., hand washing with non-antimicrobial soap and water, alcohol-based hand rub, or antiseptic handwash) after possible contact with respiratory secretions and contaminated objects/materials.

- Routine cleaning and disinfection strategies used during influenza seasons can be applied to the environmental management for COVID-19.

Managing the risks in general dental practice

Dentists' responsibility

Royal college of dental surgeons of Ontario provide a self-audit checklist mentioned “it is the dentist’s responsibility to ensure that staff members are adequately trained in Infection Prevention and Control (IPAC) policies and procedures, and that the necessary supplies and equipment are available, fully operational, up to date and routinely monitored for efficacy”^[9] UK guidance for primary care regarding COVID-19 recommended Primary health care worker to follow these steps: identify potential cases as soon as possible prevent potential transmission of infection to other patients and staff avoid direct physical contact, including physical examination, and exposures to respiratory secretions isolate the patient, obtain specialist advice and determine if the patient is at risk of COVID-19.

Dental team staffs’ responsibility

Royal college of dental surgeons of Ontario provide a self-audit checklist^[5] recomende “All Oral Health Care Workers (OHCWs) must maintain current knowledge of Infection Prevention and Control (IPAC) policies and procedures and apply and maintain them appropriately and consistently:.

Australian Dental association guidelines for dental team recommended following steps:

Ask reception staff to check with patients telephoning to make an appointment if they had:

- 1) Fever or history of fever AND acute respiratory infection (shortness of breath or cough or sore throat) or severe acute respiratory infection without fever requiring hospitalization
- 2) Epidemiological criteria Travel to (including transit through) mainland China in the 14 days before onset of illness. OR Close contact^[10] in 14 days before illness onset with a confirmed or suspected case of 2019-nCoV.
- 3) Close contact within 14 days of symptom onset with any of the following:
 - A confirmed or suspected case of 2019-nCoV;
 - A healthcare facility in China.

If so then recommend that they delay making any non-urgent dental appointments.

It might also be wise to put a sign up in the practice for those patients who walk in to make an appointment.

CONCLUSION

Routine dental care for patients diagnosed with possible or confirmed COVID-19 should not be treated. patients diagnose with ‘possible’ or ‘confirmed’ case presents with an acute dental problem requiring urgent dental care, will need to be referred for management in an appropriate setting with infection prevention and control measures in place. The primary infectious control goal is to prevent transmission of disease. These treatment guidelines are based on very limited evidence from the literature and should be revised as soon as more evidence about the infection control advices for dental team regarding COVID-19.

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