

Corona Virus: Practice Management in Dental Clinic

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INTRODUCTION

The past couple of decades have observed emergence of new viruses not previously known to humankind. These viruses came into picture suddenly, cause severe illnesses and hence grab media attention worldwide. Examples include the spread of the Severe Acute Respiratory Syndrome (SARS) Coronavirus in 2002 and the Middle East Respiratory Syndrome (MERS) Coronavirus in the year 2012.

In the beginning of December 2019, a novel corona virus emerged in a Chinese seafood and poultry market in Wuhan city, China. Typically, patients who are infected from the virus develop fever, myalgia, cough or exhaustion with unusual changes in chest CT. More uncommon side effects being sputum production, cerebral pain, hemoptysis and looseness of the bowels. These side effects normally show up in 2-14 days post introduction. The irresistible specialist causing this viral pneumonia that was inescapable in Wuhan was at long last recognized as a novel Covid (2019-nCoV) which is the seventh individual from the group of Covids that are known to taint people. On eleventh February 2020, WHO named the novel viral pneumonia as "Covid Disease (COVID19)", while the worldwide board on scientific categorization of infections (ICTV) named it as SARSCoV-2.

The Centers for Disease Control and Prevention (CDC) stated that Coronaviruses are usually found in animals such as bats and camels. The current transmission however was occurring due to droplets produced by those infected when they coughed or sneezed and infected people who came in contact with these droplets.

An interesting finding was the outbreak of Covid 19 matched that of seasonal flu, which also presents similar signs and symptoms and hence could be a confounder in proper diagnosis. Three key points that can help clinicians differentiate whether a patient has COVID-19 and not common flu includes:

A travel history from Wuhan City, China, in previous 14 days before hand the commencement of symptoms.

Interaction with a person suspected for COVID-19 while that person was ill in the last 14 days before the onset of symptoms.

Close contact with a confirmed COVID-19 patient, who shows signs and symptoms in the last 14 days.

Dental experts assume fundamental parts in forestalling the transmission of Covid 19, by suggesting and actualizing compelling disease control measures in their dental practice to hinder the patient-to-tolerant transmission courses in dental centers.

CONCEIVABLE TRANSMISSION ROUTES OF COVID 19 IN DENTAL CLINICS (Figure 1)

Dental centers and medical clinics convey high danger of spreading Covid 19 disease because of the immediate up close and personal correspondence with patients and defilement with their body liquids, mostly salivation, blood. It can likewise spread through inward breath

of airborne microorganisms which endure noticeable all around for significant stretches and through the contact of conjunctival, nasal, or oral mucosa with beads and mist concentrates containing microorganisms. These can be sent by hacking and talking without a veil and furthermore through roundabout contact with debased instruments or potentially natural surfaces.

AIRBORNE SPREAD

Aerosols and droplets are produced during dental procedures mixed with patient's saliva and/or blood and can be transmitted from infected patient's cough and breathing. These particles are very tiny and they remain in air for a prolonged duration before settling on environmental surfaces entering the respiratory tract.

CONTACT SPREAD

A dental professional frequently comes in contact with human fluids and other patient contaminated objects like dental instruments, dental materials or environmental surfaces, directly or indirectly. Dental specialists and different patients may contact their conjunctival, nasal or oral mucosa with beads and mist concentrates containing microorganisms which are created from a Covid contaminated individual and are pushed to a short separation when the patient hacks or talks without wearing a cover.

PRECAUTIONS TO BE FOLLOWED FOR INFECTION CONTROL IN DENTAL PRACTICE

Since aerosols and droplets are the primary routes of spread of Covid 19, stringent infection control measures should be adopted in the dental office.

PATIENT EVALUATION

Infected patient with COVID-19 (acute febrile phase): Such patients should not visit the dental clinic.

If it does occur: Identification of the patient with suspected Covid 19 infection is important. The patient ought to be promptly answered to the disease control office, without performing dental treatment.

Next, is recording certain important parameters. These include:

- A. Thermal screening by forehead thermometer is strongly suggested.
- B. Recording the patient's oxygen saturation using devices like a pulse oximeter.
- C. Screening each patient for their general and medical history before they enter the dental clinic.

THESE QUESTIONS SHOULD INCLUDE THE FOLLOWING

- (1) Have you encountered fever over the most recent 14 days?
- (2) Do you have any respiratory issues, for example, a hack or have you confronted breathing trouble in the previous 14 days?
- (3) Have you gone in the previous 14 days to any Covid 19 hotspot and its encompassing territories?
- (4) Have you interacted with a patient with an affirmed finding

of Covid 19 contamination in the previous 14 days?

(5) Have you interacted with any individual who originates from any Covid 19 hotspot and its close by zones, or with individuals around you with late reported fever or respiratory issues inside the previous 14 days?

(6) Are there in any event two individuals in close contact with you, who have encountered fever or potentially respiratory issues in recent days?

(7) Have you as of late been to any open social occasions, gatherings or had a nearby contact with a horde of unacquainted individuals?

On the off chance that patient's answer to any of the above screening questions is "yes", and the patient's internal heat level is underneath 37.3°C, at that point the dental treatment can be delayed until 14 days post the presentation occasion. The patient ought to be encouraged to self-isolate at home and report any fever experience or influenza like manifestations to the nearby doctor.

On the off chance that a patient's answer to any of the screening questions is "yes", and the patient's internal heat level is no under 37.3 °C, at that point the patient ought to be encouraged to promptly self-isolate. These patients ought to be accounted for to the disease control branch of the clinic or to a doctor.

In the event that a patient's answer to all the screening questions is "no", and his/her internal heat level is underneath 37.3 °C, at that point the dental treatment can be kept after general safety measures of disease control. Splash or vaporized producing methods should best be maintained a strategic distance from.

On the off chance that a patient's answer to all the screening questions is "no", however his/her internal heat level is no under 37.3 °C, at that point the patient ought to be alluded to the disease control center or to facilities specific for COVID-19 consideration for additional clinical feeling and care.

HAND HYGIENE

Hand-washing should be emphasised upon for preventing the spread of Covid 19. Dental professionals should wash hands repeatedly at various times like, before examining any patient, before starting dental treatment, after touching any patient, after touching the surroundings like the dental chair and/or hardware without sterilization, in the wake of contacting the patient's oral mucosa, harmed skin or twisted, or in the wake of interacting with the patient's blood, body liquids, emissions or excreta. Airborne bead course of spread is the fundamental methods for spread, especially in dental facilities and medical clinics. All the dental experts should wear customized insurance gear, which incorporate defensive eyewear, gloves, tops, veils, face shields and defensive outwear. In case protective outwear is unavailable, then the working clothes should be covered with extra disposable protective clothing.

RUBBER DAM ISOLATION

Rubber dams can suggestively be used with high-speed hand pieces and dental ultrasonic devices since they help to minimize the production of aerosol or spatter contaminated

with saliva and/or blood.

ANTI-RETRACTION HAND PIECE

Anti-retraction dental hand pieces which are specifically designed with anti-retractive valves are strongly recommended. Hand pieces without anti-retraction valves aspirate and expel the fluids produced during dental procedures. These fluids may contain microbes, including bacteria and viruses, leading to further contamination of air and water tubes inside the dental unit. These in turn increase the chances of cross-infection.

DISINFECTION

The dental clinic settings should be cleaned and disinfected in accordance with the Protocol for the Management of Surface Cleaning and Disinfection of Medical Environment (WS/T 512-2016) released by the National Health Commission of the People's Republic of China.

MANAGEMENT OF MEDICAL WASTE

According to the Protocol for the Disinfection and Sterilization of Dental Instrument (WS 506-2016) released by the National Health Commission of the People's Republic of China the reusable instrument and items should be pretreated, cleaned, sterilized, and properly stored.

PREVENTIVE PROTOCOL OF COVID 19 INFECTIONS

The incubation period of COVID 19 viral infection is around 14 days so the patient or bystander may be asymptomatic while he comes to your clinic, all dental clinics are advised to follow the necessary precautions.

Front office should necessarily

- Verify with each patient if they have any symptoms like fever, cough, running nose, sneezing.
- Verify with patient if any of them or their family members have had any foreign tours and if so have they reported to the health officials.
- It is mandatory to have contact details of the patient & proper documentation of each patient.

AVOID OR POSTPONE TREATMENT OF PEOPLE HAVING FEVER, COUGH, SNEEZING ETC. UNDERTAKEN ONLY EMERGENCY ELECTIVE TREATMENT

- If you identify or suspect any patient with any symptoms like fever, headache, drowsiness etc. for the past few days refer them for a proper medical check-up and care

Universal infection control procedures should be adhered to; all clinic staff necessarily wears personal protective equipment like masks & gloves.

- Use three layered masks and practice adequate hand hygiene procedures.
- Use hand wash after each case and followed by use of

hand sanitizers by the doctor and assistant.

- Follow universal precautions for infection control (eg:- double surgical gloves, eye wear, triple layer masks, apron for doctors and assistant).
- Proper infection control measures to be followed.

Precautionary measure for all cases in places where COVID19 has been confirmed

- Reschedule appointment for elective scaling, crown preparation, restoration to reduce splatter contamination of clinic for a suitable period of time
- Infective cases like surgical dental extraction, incision and drainages of abscess etc to be done with extra precaution
- Use of disposable drapes for patients and barrier films recommended

USE HAND SANITISERS AND SURFACE DISINFECTANTS:

Hand Sanitisers: preferably chlorhexidine with alcohol based or alcohol based(hand rub solution)

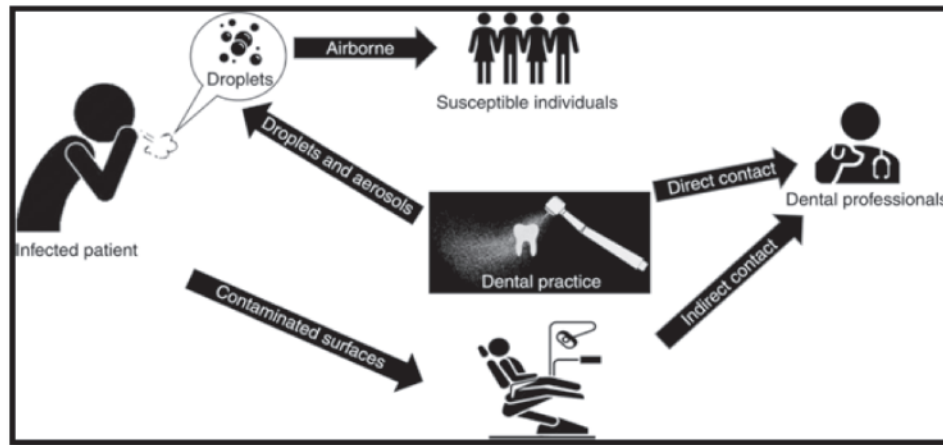
Environmental surface disinfection should be performed, preferably using accelerated hydrogen peroxide(0.5%)/ benzalkonium chloride (0.05%)/ ethyl alcohol (70%) /isopropanol (50%), sodium hypochlorite (0.05-0.5%). These are very effective against corona viruses.

- Important points to note while using disinfectants is to check the labels and use according to the manufacturer's instructions, and be aware of their potential health hazards. Eye and skin contact should be avoided. The products should be kept away from the reach of children. Different cleaning products should not be mixed and should always be used in a well ventilated area.

SUMMARY

Since December 2019, the newfound Covid 19 has lead to a worldwide pandemic. Coronavirus enters the host through human cell receptor ACE2, same like SARS-CoV, yet has a higher restricting fondness.

The current article sums up the potential courses of Covid 19 transmission, for example, the airborne or contact spread and spread through defiled surfaces. We prescribe a few clinical techniques to hinder the viral transmission and to give a reference to forestalling the transmission of Covid 19 in the dental office, which incorporates assessment of the patient, after legitimate hand cleanliness, utilizing individual defensive measures for the dental specialists, utilization of mouth washes before dental systems, utilization of elastic dam and against withdrawal hand pieces, sterilization of the dental office and clinical waste administration.



DIFFERENT TRANSMISSION ROUTES OF 2019-nCoV IN DENTAL CLINICS & HOSPITALS

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