

Iraqi Dentist Response to the Covid-19 Spreading

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Abstract

Introduction: These new generations of virus “COVID -19” now are not the chines nightmare only however soon as speedy as feasible spread all over the world and grew to be the most existence threatening health disorder in the world.

Aim: This descriptive research aim to measure the commitment of Iraqi dentists to the Iraqi dental association recommendations at the time of lockdowns during the corona virus infection.

Result: In this study the Iraqi dentists who had participated in it were 169 from all over the country, this descriptive research shows great response of the Iraqi dentists to control infection and reduce the spread of “COVID-19”.

Discussion: “COVID -19” is a pandemic disease lead to large changes all over the world, actually dentistry were one of the careers affected by this disease, the dentist during the daily work with dental slow speed handpiece or high speed turbine produce droplets and aerosols which probably are contaminated with the virus “COVID -19”.

Conclusion: This study had been showed that the Iraqi dentists have a great commitment toward the society during the period of curfew they had been attend to close their privets clinic in order to reduce the viral spread and control the infection.

Keyword: COVID-19, infection control, Iraqi dentist, toxicity; patients

Introduction

In the late December 2019, a number of signs and symptoms of pneumonia infection have been noticed in Wuhan City which is one of a vital chine’s metropolis⁽¹⁾, The medical sings have been stated fever, cough, and myalgia or fatigue with bizarre chest CT, and different minor symptoms have been sputum production, headache, hemoptysis, and diarrhea^(2,3). Some of the clinical symptoms had been distinctive from the severe acute respiratory syndrome (SARS) triggered with the aid of SARS coronavirus (SARS-CoV) that befell in 2002–2003^(4,5,6). On January 8, 2020, formally announced that a novel coronavirus is the causative pathogen of “COVID-19” by way of the Chinese Center for Disease Control and Prevention⁽⁷⁾.

These new generations of virus now are not the chines nightmare only however soon as speedy as feasible spread all over the world and grew to be the most existence threatening health disorder in the world^(8, 9). The novel coronavirus used to be initially named 2019-nCoV and formally as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

According to previous researches, this virus recorded as zoonotic in the mode of transmission which is comparable to ‘SARS-CoV and MERS-CoV’ and as a consequence suggested the virus have the potential to transmitted from animals to human, then the virus had been shown the capacity to transmit from human-to-human, It is now believed that its interpersonal transmission takes place in most cases through respiratory droplets and contact transmission^(10, 11). Moreover fecal-oral transmission may be reflecting in consideration as a hazard in the spreading of the infection, as researchers have recognized SARS-CoV-2 in the stool of patients

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from China and the United States ^(12,13,14).

The virus indicated exceptional role of transmission with a high survival potential in a variety of conditions in assessment with ‘SARS-CoV and MERS-CoV’ moreover the length of incubation for the contaminated affected persons have been reported to be (1–14 days), however it had been verified that the human without sign and symptoms can lead to spread the infection ^(4,5,15), so in accordance to all of these previous presentations the most individual who exposed to the infection with the virus have been the medical group of workers and the human who have been in contact with the affected persons carrying the virus and the most vital job in the medical worker force who face the hazard of contamination with the corona virus is the dentist and his assistant ⁽¹⁶⁾, these worker forces exposed to pathogenic microorganisms, such as viruses and micro-organisms that infect the oral cavity and respiratory tract. Infection can take place due to face-to-face conversation with patients, and widespread exposure to saliva, blood, and variety of body fluids, also the dealing with sharp instruments. The pathogenic microorganisms can be transmitted in dental settings by inhalation of airborne microorganisms that can stay suspended in the air for lengthy interval ^(17,18). To minimize the contamination of this viral infection the dentist has to guard himself by way of numerous procedures as wearing mask, gloves, face shield, use appropriate ventilation in the private clinic and sterilize the instrument with autoclave in the health center daily ⁽¹⁹⁾.

Aim

This descriptive research aims to measure the commitment of Iraqi dentists to the Iraqi dental association recommendations at the time of lockdowns

during the corona virus infection.

Material and Methods

The study had been performed as a descriptive survey of private dental practices in Iraq, several questions had been designed to gain statistics about whether the Iraqi dentist have been committed to the recommendation of their association during the period of viral outbreak and what is the most appropriate ways that the dentist follow in their private clinic in Iraq country to minimize or prevent cross-infection of corona virus. These questionnaires had been pre-tested, revised before used. The study population included several dentists in all over the country in April 2020 (n=169) to whom the questionnaires were submitted. Questionnaires data collected via a special program have been designed for this research in which the questionnaires sent to the dentists through a web site for collecting the data on it, because the research had been done in the time of viral spread and to reduce face-to-face interviews. The questionnaires involve several items as if the Iraqi dentist have been committed to the curfew and completely close their private clinic or partially open the clinic to receive the emergency cases only or whether they receive all the cases, additionally which protocol of cross infection control they have been depend on it in their private clinic as wearing gloves, mask, use of rubber dam, the use of high suctioning, the method of storing instruments and disposal, the methods of contaminated material etc. and method of sterilization utilized in the clinic.

Result

This chart (figure 1) had been shows the response of the Iraqi dentist to the Iraqi dental association during the period of curfew and the spread of virus in percentage

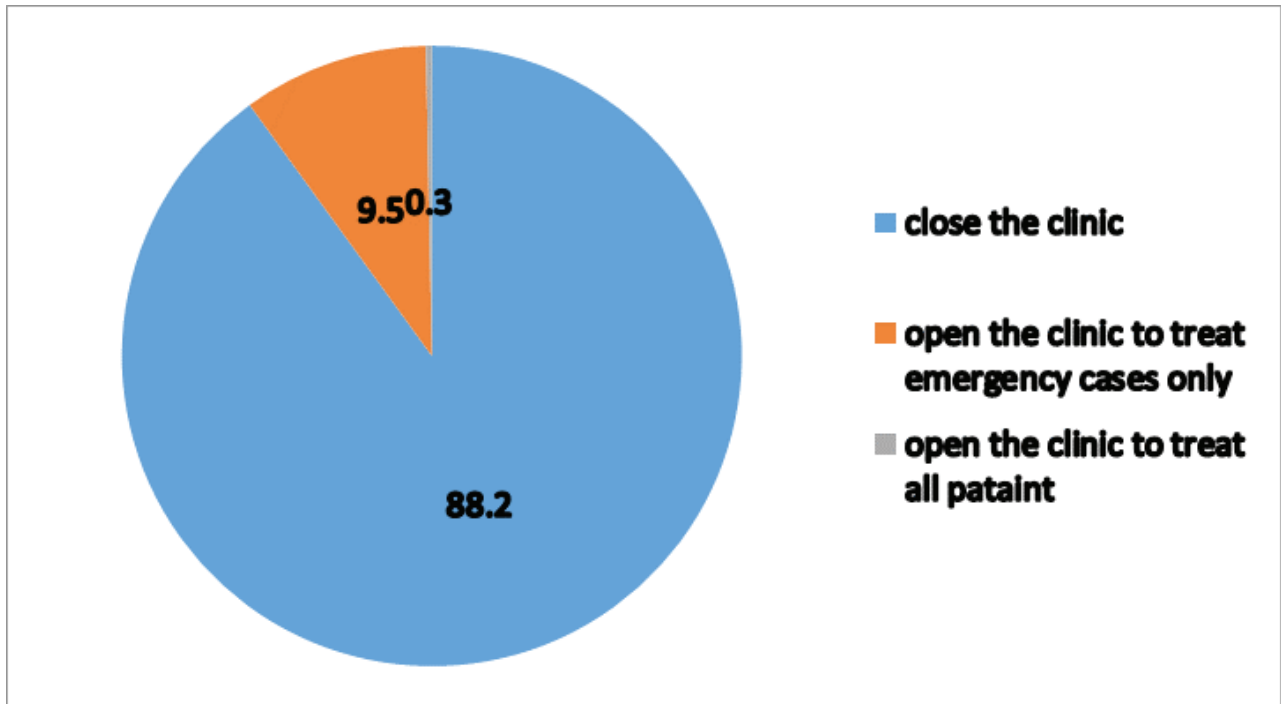


Fig:1 opening of the private clinic during the curfew in Iraq

This chart explains the role of sterilization and the substance which the Iraqi dentists and their team workers utilized in the private clinic (figure2).

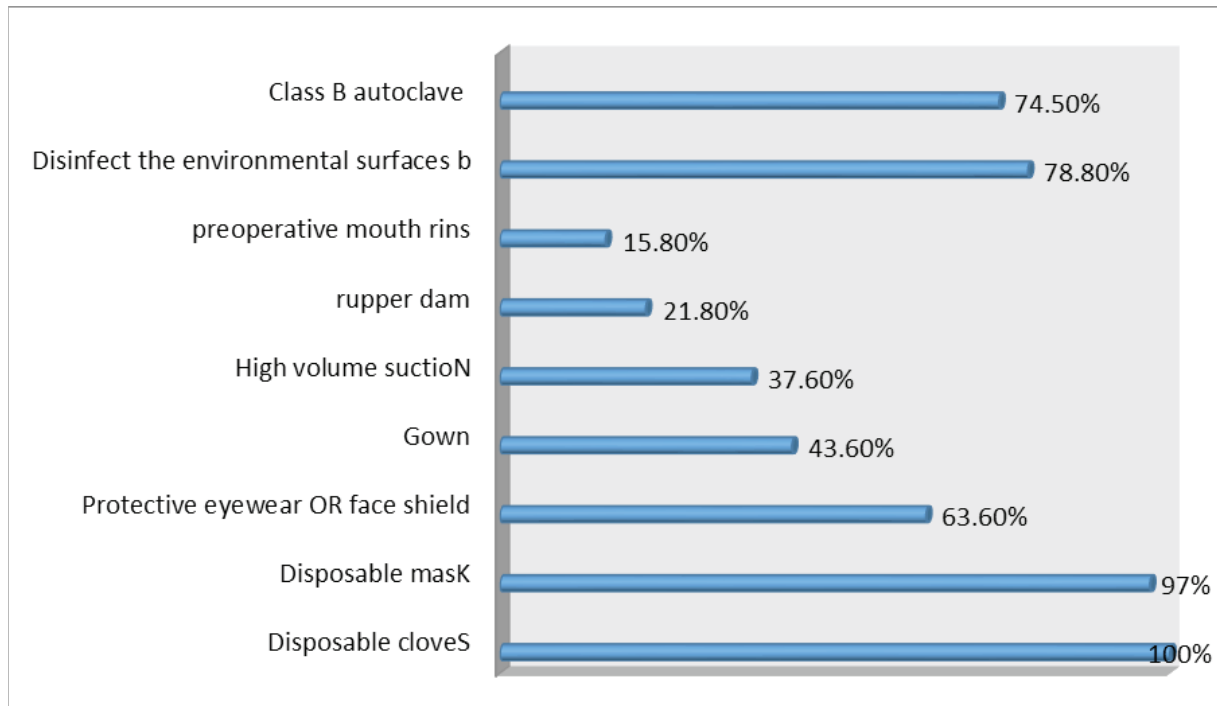


Fig: 2 Protective measures used by the dentists on their daily work

Discussion

“COVID – 19” is a pandemic disease lead to large changes all over the world, actually dentistry were one of the careers affected by this disease the dentist and their team works during the daily work with dental slow speed handpiece or high speed turbine produce droplets and aerosols which properly are contaminated with the virus “COVID – 19”.⁽²¹⁾ A very small Particles of droplets and aerosols enough to stay airborne for an extended period before they reach any surfaces in the clinic or dental units or enter the respiratory tract of the dentist and the workers team.⁽²⁰⁾

Control strategies have been needed to prevent the spreading of “COVID – 19” especially for dental clinic because it is the most suitable area for viral transmission and infection.⁽²¹⁾

Several recommendations have been introduced from WHO, ADA, CDA and the Iraqi dental association promoted the dentist to close the private clinic and to restricted the work in the private clinic with treating only highly emergency cases if there is no national hospital receive the patient and these rules have been placed to control the viral infection and minimize the rout of transmission.⁽²²⁾

Some of dental clinics established measuring the temperature of every patient and consider it as routine procedure before the diagnosis for any patient in the same time take an illness history from the patient and if the patient had been travel or in contact to a person who were travel in the last few days⁽²³⁾

Emergency treatments should be done in a short period and immediately. Dentist should apply a rubber dams and saliva ejectors highly suction with running water to minimize aerosol in dental treatment. Furthermore, face shields and goggles are essential with use of high- or low-speed drilling with water spray⁽²⁴⁾

In this descriptive statistic, the study showed a highly response from the Iraqi dentist (88.2%) to close their private clinic during the period of curfew in order to reduce the viral spread and control the infection thus refer to the highly attitude and knowledge of those population and their aim to control the infection and return to the normal life as fast as possible, in the same time the study shows in about (9.5%) of the dentist who participate in

the research receive only emergency cases who difficult to reach the national hospital because of lockdown while very few percentage (0.3%) open the private clinic and not response to the instruction of the dental association at the time of infection spreading which could be due to financials issues. Moreover the result of infection control procedure whose the dentists and their workers follow in their daily work were promising with positive result, all of the dentists who take part in this study have been wearing to minimize transmission of infection from the hands of operator to the patients, also wearing gloves prevent contact of blood and saliva with the hands of operator⁽²⁵⁾ and (97%) of the dentist participate in the study wearing face mask, while unfortunately only (63.6%) of the dentist use face shield or eye goggle, the use of face shields or eyewear as protection against splatter during dental treatment also the study explained that most of the dentist wearing mask, face shield or eye goggle and follow the CDC and ADA recommendation in cross infection control^(26,27,28) several studies have been found that most affected area in the face involve the nose and inner corner of the eyes are at high risk of contamination so wearing face shields or eye goggle very important to reduce the cross infection⁽²⁹⁾ This study shows (15.8%) of dentist motivate the patient to use mouth wash before any dental treatment, this can reduce the number of oral microbes⁽³⁰⁾ also only (37.6 %) of the dentist participate in the research have been wearing gown which consider low percentage in compromise to its important role which have been utilized to reduce the transmission of the viral infection through the cloth according to the guideline for isolation precautions of the CDC and Prevention the health care, workers should be instructed to wear isolation gowns during patient-care activities⁽³¹⁾, while using a high volume suctioning approximately (37.6%). Research shows that aerosols and splatter have been produced via ultrasonic and polishing treatments mostly contain saliva, blood and bacteria. Once these particles can remained in the operation field for an hour or more till finally lands on the surfaces in the clinic. This poses a risk for the spread of the common cold and influenza viruses, herpes viruses, pathogenic streptococci or staphylococci, severe acute respiratory syndrome (SARS), and tuberculosis (TB)^(32,33), additionally the number of clinician who's used rubber dam and have been participated in this research in about (21.8%), the rubber dam improved better cross-

infection control for the clinicians, team workers and the patients, especially in cases of communicable diseases such as HIV (AIDS) and hepatitis ⁽³⁴⁾, while (78.8%) represent the clinician who's disinfect the surface and dental unit after each patient according to CDC infection control guidelines⁽³⁵⁾, otherwise the research shows only (74.5%) used the class B autoclave to sterilize the instrument. Several studies found that utilize of autoclave in the sterilization process relatively the best method to sterilize of the instrument Proper cleaning and sterilization prevent cross-contamination in dental instrument.^(36,37)

Conclusion

This study had been showed that the Iraqi dentists have a great commitment toward the society during the period of curfew they had been attend to close their privats clinic in order to reduce the viral spread and control the infection.

Recommendations

A better the acknowledgement in control infection process have been essential for the safety of clinician, teamwork and the patient. Also, the acknowledgment will certainly ensure the provision the improvement and development of dental health-care services for the people.

Ethical Clearance

The Research Ethical Committee at scientific research by ethical approval of both MOH and MOHSER in Iraq

Conflict of Interest: None

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