Original Article

Scenario of Clinical Practice in Dentistry During and After Lockdown Due to COVID-19 Outbreak

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Abstract

Background: The objective of the study is to reflect the present scenario of clinical practice in dentistry in the Northern part of India during and after lockdown due to the COVID-19 outbreak in India and worldwide. **Materials and Methods:** A descriptive cross-sectional survey was conducted among different dental clinics in northern states of India such as West Bengal, Bihar, Jharkhand, Uttar Pradesh, Delhi, and Punjab. All the points of discussion were prepared before and discussed with the clinicians, both closed-ended and open-ended questionnaire was prepared. **Results:** The outcome of the study is very disturbing as a condition of clinician practice in dentistry is deteriorating day by day during lockdown and even after lockdown, many clinics have been shutting down post-COVID as clinician were unable to maintain the expenses to run clinics. **Conclusion:** It is concluded that the novel coronavirus and the Indian government harsh attitude towards dental clinics has badly affected the clinical practice in dentistry in India which leads to miserable condition of practicing dentist.

Keywords: COVID-19, SARS CoV-2, Dental practice.

Introduction

India is densely populated country and outbreak of pandemics is matter of concern and alarming situation in clinical practice in dentistry. In recent years several epidemics have come such as H1N1, H5N1, Avian Influenza, Ebola, SARS, Zika, and Nipah among all Coronavirus disease 2019 (COVID-19) has badly affected the clinical practice of dentistry and in the present scenario, practicing dentistry is very challenging for clinician.[1]

The first Case of novel coronavirus (CoV) was observed in the city of Wuhan, China, and was referred as Wuhan CoV later it was designated as severe acute respiratory syndrome (SARS)-CoV-2 and on 30 January 2020, the World Health Organization (WHO) declared the Chinese outbreak of COVID-19 as deadly virus and matter of concern worldwide.[2,3] Since 2020 the Indian government is imposing a national wide lockdown at different time intervals to overcome from spread of CoV. The outbreak of COVID-19 has forced health regulatory bodies all over India to restrict dental care to only emergency procedures (urgent care needed to control pain, bleeding, or infection),[4] even in some part of the country complete closure of dental clinics were ordered by administration and health regulatory. Even after reopening of dental clinics to post lock down the number of patient has fallen suddenly and patient is not capable to afford the treatment due the rise in unemployment and inflation.

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Materials and Methods

A descriptive cross-sectional survey was conducted among different dental clinics in northern states of Uttar Pradesh, Delhi, Haryana, Punjab, Bihar, Jharkhand, West Bengal. Cites are as Kolkata, Patna, Ranchi, Lucknow, Bhagalpur, Muzaffarpur, Araria, Sultanganj. Prior to the study, all necessary data were prepared for picking states and cities of

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Northern states of India, Clinicians from different states and cities were selected on the basis of location and feasibility. Official permission was obtained from the concerned dental clinics. A total of 240 dental clinics were included in the study in the different states of Northern India (Table 1) and out of 240 clinics 190 clinicians have attended the surveyor (Table 2). Informed consent was obtained from each participating clinicians in the study. The proposed study was reviewed by all the clinician of dental clinics and explained thoroughly by the surveyor. Prior to the scheduled survey, the investigator visited the respective dental clinics to obtain the permission and fix the date and time. The clinicians were requested to be present on the scheduled date and time for assessment.

All the points of discussion were prepared before and discussed with the clinicians, both closed-ended and open-ended questionnaire was prepared (Table 3). It contained questions on awareness of patients regarding dental treatment, number of patients per day during and after lockdown due to COVID-19, attitude of patients toward the dentist during and after lockdown due to COVID-19, paying capacity of the patients during and after lockdown due to COVID-19 and others points were also discussed. A pilot survey was undertaken to test the feasibility of the study including the assessment of clarity, validity, and applicability of the questionnaire. Confidentiality of information was guaranteed for every individual participated in the study. Participants were requested to answer honestly without any discussion with other participants. Data comparison was done by applying statistical tests (Chi-square test) between groups and Significance for statistical tests was predetermined at probability value of 0.05 or less.

Table 1: Numbers of Clinic visited in Different States of Northern India

S. No.	States	No of clinic visited
1.	West Bengal	39
2.	Bihar	54
3.	Jharkhand	25
4.	Uttar Pradesh	72
5.	Delhi	25
6.	Punjab	15
7.	Haryana	10

Table 2: Numbers of clinic in states where dentist attended the surveyor

S. No.	States	No of attended dentist
1.	West Bengal	35
2.	Bihar	45
3.	Jharkhand	18
4.	Uttar Pradesh	52
5.	Delhi	20
6.	Punjab	12
7.	Haryana	08

Table 3: Closed ended and open ended questionnaire prepared for participants

S. No.	Key areas of interest surveyor discussed to participants
1.	Number of patients visits per day for treatment
2.	Awareness of patients towards dental treatment
3.	Attitude of patients towards dental treatment
4.	Paying capacity of the patients

Results

The outcome of the study is very disturbing as conditions of clinical practice in dentistry are deteriorating day by day during lockdown and even after lockdown resulted in huge financial losses sustained by dental practices in northern states of India. The respond of clinician to survey was reciprocated by 190 clinicians in various part of Northern India and this survey data were used for the analysis of the study, clinician from Uttar Pradesh were the highest participant in the study, and the lowest participants from the state of Haryana. After the outcome of COVID-19 the dental treatment is limited to dental emergencies such as uncontrolled bleeding, airway obstruction due to extraoral or intraoral swelling, diffuse soft tissue swelling, cellulitis, facial trauma involving facial bones need urgent intervention and the urgent dental needs are severe dental pain from pulpal inflammation, pericoronitis, surgical postoperative osteitis, dry socket dressing changes, abscess or localized bacterial infection resulting in localized pain and swelling, Trauma with avulsion/luxation, faulty restoration, and biopsy for abnormal growth. The clinician also reported that huge financial loses results in psychological stress to the clinician and family member and some of the clinician also reported that they are planning to shut down the clinics and find alternate way of employment.

The governments and health regulatory bodies of developed countries are trying to help practices to evolve from this difficult situation but on the other hand, there is no visible policy from the underdeveloped countries that could help dental practice to save their practices from closing due to monetary constraints. In the Northern part of India, the states governments are not interested in new vacancy in the field of dentistry despite of vacant post. The clinician of Bihar reported that specialized posts in the field of dentistry in completely vacant in states of Bihar and state government is not interested for new vacancies.

Discussion

Current dental practice globally is limited only to the provision of emergency treatments (Table 4). This step is appreciative as it curtails the spread of COVID-19 but has resulted in huge financial losses sustained by dental practices worldwide. The governments and health regulatory bodies of developed countries are trying to help practices to evolve from this difficult situation but on the other hand, there is no visible policy from the underdeveloped world that could help dental practices to save their practices from closing due to monetary constraints, in addition, all governments should support the

Table 4: Provision of emergency treatments, needs treatment immediately

S. No.	Dental emergencies	Urgent dental care
1.	Bleeding (uncontrolled)	Severe dental pain from pulpal inflammation, Pericoronitis
2.	Air way obstruction due to extraoral or intra oral swelling, diffuse soft tissue swelling, cellulitis.	Surgical postoperative osteitis, dry socket dressing changes, Abscess or localized bacterial infection resulting in localized pain and swelling
3.	Trauma involving facial bones needs urgent intervention.	Trauma with avulsion/luxation, faulty restoration, biopsy for abnormal growth

profession of dentistry by helping the dental practice morally and monetarily.

The novel COVID-19 came under the attention in December 2019. It has been declared as a pandemic after its global spread in multiple countries by the WHO on March 11, 2020.[5] The COVID-19 fits in the family of single-stranded ribonucleic acid viruses called Coronaviridae.[6] This family of viruses is believed to spread from animals to humans and evidence has shown that this novel coronavirus has a resemblance to coronavirus species found in bats, making it zoonotic in nature.[7] The SARS-CoV and the Middle East respiratory syndrome CoV (MERS-CoV) belong to the same family which was discovered in 2002 and 2012, respectively.[8] The International Committee on Taxonomy of Viruses has given this novel coronavirus the named SARS-CoV-2,[9] although its other more popular given name is COVID-19 due to the similarity of its published genome sequence with that of *b*-coronaviruses like SARS-CoV and MERS-CoV. The CoVs can be considered as major pathogens of evolving respiratory disease outbreaks as they can cause human illnesses ranging from a common cold to severe respiratory diseases, as seen in patients affected by SARS-CoV and MERS.[9] In humans, the SARS-CoV-2 can be found in salivary and nasopharyngeal secretions and can spread via direct contact or respiratory droplets.

Dentistry is preferred by many students to be taken up as a professional career.[10] However, due to the current scenario of dentistry during and after lockdown, many students are not interested to be taken up as professional career. Indian govt should come forward and take solid steps to come out from the present scenario of dentistry otherwise a novel profession like dentistry will be degraded day by day and patients will suffer directly or indirectly.[11]

In this article, the study was reviewed by all the clinician of dental clinics and explained thoroughly by the surveyor. Prior to the scheduled survey, the investigator visited the respective dental clinics to obtain the permission and fix the date and time. The clinicians were requested to be present on the scheduled date and time for assessment. All the points of discussion were prepared before and discussed with the clinicians, both closed ended and open-ended questionnaire was prepared. It contained questions on awareness of patients regarding dental treatment, number of patients per day during and after lockdown due to COVID-19, attitude of patients toward the dentist during and after lockdown due to COVID-19, paying capacity of the patients during and after lockdown due to COVID-19 and others points were also discussed. A pilot survey was undertaken to test the feasibility of the study including the assessment of clarity, validity, and applicability of the questionnaire. Confidentiality of information was guaranteed for every individual who participated in the study. Participants were requested to answer honestly without any discussion with other participants. Data comparison were done by applying statistical tests (Chi-square test) between groups and Significance for statistical tests was predetermined at probability value of 0.05 or less.

Conclusion

It is concluded that the novel coronavirus and the Indian government harsh attitude toward dental clinics has badly affected the clinical practice in dentistry in India which leads to the miserable condition of practicing dentist.

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