

Impact of Lockdown on Private Dental Practice due to COVID-19

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ABSTRACT

To analyse how the current Covid-19 has influenced people's utilization of dental services in private practice. A before and after study was conducted on the basis of data of monthly footfall of patient from 6 dental clinics and monitored through SPSS version 25. Descriptive statistic was used. A total of 242 patients were involved majority were females (55.37%), where 41% rise was seen in emergency case post lockdown while fall in routine dental cases were reported 15%. It reveals that Covid-19 has influenced the utilization of dental care among individual and in future the dentist have to look forward a way that how they are going to handle a rise in the case and in case of emergency what new standard and developments are required.

Keywords: COVID-19, dental practice, emergency, impact, lockdown.

1. INTRODUCTION

A newly found virus suddenly evolved in 'Wuhan' the city of China named COVID-19 and which within a period became a pandemic around the globe it was found that the virus spread is more contagious than other viruses like MERS-Co9 which the human population faced and defeated. Route of transmission is the major concern of it like spread from human to human transmission by droplets from infected person, surface or objects whereas, dental practice is not far behind it as a major role of an aerosol is used in this practice which has a larger scope of viral spread that affected the dental operation and lead to patient concern.

Recent, reports have come up in India that medical staff and related paramedics are infected by Covid -19 due to taking care and providing treatment to an infected individual. Whereas, the dental clinic is not an exception for such a possibility of transmission chain but can evolve as a major risk of transmission due to close contact between patient and the dentist due to the course of treatment needed. Though under strict guidelines by Dental Council of India patients suffering from Covid -19 is not supposed to get the dental treatment it does not bar away from dental emergencies which may make the contact unavoidable.

The incubation period is relatively long, which is a major risk for transmission before any symptoms arises, before the symptom arise the person may have infected the medical staff or the fellow patients. So, the dentist should maintain a high level of awareness and integrity to combat disease and contribute to limit its spread. Certain guidelines are issued by Centre for Disease Control and Prevention (CDC) & World Health Organization (WHO) to limit its spread which includes personal protective equipment, hand wash, patient evaluation, anti-retraction handpiece, mouth rinsing before the procedure with sanitizing clinics simultaneously advisories are issued for up-gradation of knowledge about Covid -19 and means of referral.

But on the other side, it's causing fear among the general public which makes them reluctant to get their treatment done in case of emergency. Thus, there is a great challenge for the dental institution and private practice to respond to the change in utilization of dental services in public due to Covid-19. So, this study highlights the impact of Covid-19 on dental practice across and how utilization is changing among individuals for dental care.

2. OBJECTIVE

The key objective is to analyze the impact of lockdown due to COVID-19 on private dental practice.

3. METHODOLOGY

A before and after study was conducted between the period of 4th March, 2020 to 2nd April, 2020 and the data was collected from the footfall report of 6 major clinics.

A thorough literature review was done from peer-reviewed journals and database like Pubmed, Scopus, Proquest, Research Gate, etc, which include several studies related to key topics and rest were on a terms like dental care, patient perspective, and clinical practice guideline amid Covid-19. The IBM SPSS Version 25.0 was used to analyze the data. The categorical variables are presented as percentages and the continuous variables are presented as mean \pm standard deviation which is calculated using descriptive statistics.

Additionally, we used line graph and histogram to show emergency and routine dental services before and during Covid-19.

Inclusion criteria were based on key findings of words like:

1. Impact of Covid 19 on-air dental practice
2. Measures& policy that lead to a decline in transmission in dental care
3. Statistical assessment of emergency cases in dental care amid Covid -19
4. Impact of lockdown on dental care across the globe and key statistical test used to see fall and rise of cases

Exclusion criteria were:

1. Blogs, letters, non-systemic reviews and commentaries that had similar keywords
2. No full text
3. No abstract available

4. RESULT

There were 242 patients, 134(55.37%) females, and 108 (44.62%) males, involved in the present study, and their demographic characteristics were listed in Table 1. The age of the patients was between 4 years and 87 years with the mean of (34.76 \pm 16.56) years. There were more female patients than male patients before lockdown. However, the situation is the same during the lockdown period.

Table 1: Demographic characteristics of patients

	Total (n)	Age [n(%) ^a or (mean \pm SD) ^b]			Gender [n(%) ^a]	
		≤ 18 Years	> 18 Years	Average (Years)	Female	Male
Before Lockdown	170	14(8.2%)	156(91.8%)	36.39 \pm 16.98	87(51.2%)	83(48.8%)
During Lockdown	72	15(20.8%)	57(79.2%)	30.93 \pm 14.93	47(65.3%)	25(34.7%)

aCategorical Variables, **b** Continuous Variables

Figure 1 showing the transition of cases in pre and posts lockdown period was seen, which reveals surge in emergency cases as lockdown period goes ahead and with a dip in routine dental cases (non-emergency cases).

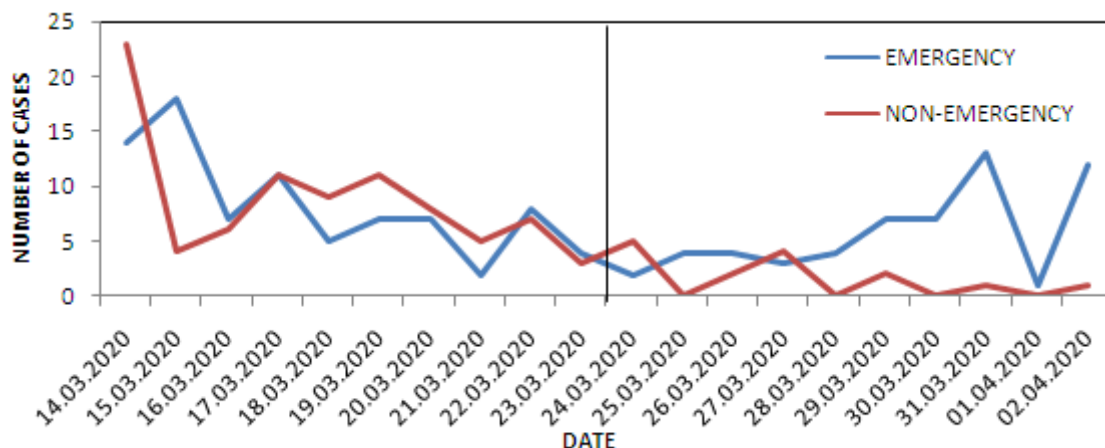


Figure 1: Line graph depicts the flow of cases before and after the lockdown period

Figure2 Showing the distribution of patients before and at the beginning of the Covid-19 epidemic (N=242). There were 59% emergency cases and 85% routine dental care cases before Covid-19 (14th March 2020 – 23rd March 2020) which is reduced to 41% and 15% during Covid-19 respectively.

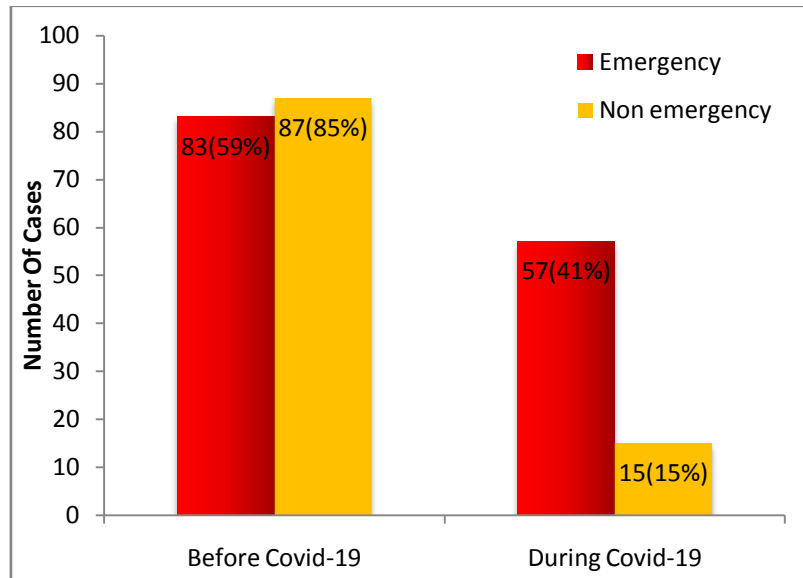


Figure 2: Distribution of patients who utilized emergency and routine dental (Non-emergency)cases before and at the beginning of COVID-19 epidemic

Table 2: Distribution of utilization of dental practice according to gender

Case(Gender)	Before Covid-19		During Covid-19	
	Frequency(n)	Percent(%)	Frequency(n)	Percent(%)
Emergency (Female)	48	28	42(58%)	58
Non-Emergency (Female)	35	21	15(21%)	21
Emergency (Male)	39	23	05(7%)	07
Non-Emergency (Male)	48	28	10(14%)	17

Thus the overall scenario depicts that the pattern of the utilization of dental care is changing among individual irrespective of the gender. More than half of the patients after lockdown (during Covid-19) were females (58%) for emergency treatment and only few men patients (7%) utilized the emergency services after the lockdown implemented (Table 2).

5. DISCUSSION

The study applies a descriptive analysis of the data and presents relevant findings from it. We analyzed that there was a significant fall in routine dental care cases which proves that Covid 19 has influenced people's dental care utilization behavior.

As most of the dental care was not available during the epidemic, mostly patient was taking emergency services only. Under strict measures taken by the Government of India people were reluctant to visit outside and go to dental institutions but still, their emergency needs forced them to visit a nearby private clinic which shows in Fig 2 of around (41%). Other studies that were reviewed reveals that respiratory tract infection has a high risk of spreading through aerosol during the procedure which highlights in our collected data that several patients have declined over post lockdown period as in Table 1.

Although it's seen in monthly footfall report that there was a slight difference in many men and women (134 vs. 108), while other pieces of literature that we reviewed shows that males seeking more dental care while in our it depicts female are taking more of overall dental care in Table 2. It might be because males are more apprehensive about seeking dental treatment because of Covid-19. Our study also reveals that nonemergency cases were (15%) that clearly outlines the patient that doesn't have emergency went to emergency clinics, which may be due to lack of clear guidelines and awareness among dentists and patients. However, at the beginning of lockdown now urgency cases were in rising but it fell them after (Figure1).

Though right knows most of the concern and care is on Covid-19 situation and its measure by overlooking the health of the patient, based on our study we can reflect that in the post-Covid-19 period the number of dental care cases is going to raise simultaneously care and measure have to be also overlooked. We even suggest that there should be more studies on long term exposure and impact of COVID-19 on dental practice.

Limitation:

- Small sample size
- The short period in pre and post lockdown period
- Less literature available
- Better statistical analysis can be done

CONCLUSION

It is prudent for the practitioner to keep them abreast with the latest development on Covid-19. So that they may provide appropriate dental practice which ensures maximum care and protection for both staff and fellow patients, which may help to change the utilization pattern among care-seeking individuals and help to build in trust and reduce fear against coronavirus.

Thus, the decision on care and practice remains on clinician depending on the level of risk assessment and developed services they can provide in their practice according to national and board guidelines ordered.

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CONFLICT OF INTEREST

There is no conflict of interest among authors.

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