

THE IMPACT OF THE COVID-19 ON THE UTILIZATION OF DENTAL HOSPITAL SERVICES: A RETROSPECTIVE STUDY FROM A TERTIARY CARE DENTAL HOSPITAL**Dr. Mohamad Arshid Khanday^{*1}, Dr. Nazia Lone², Dr. Mohsin Sidiq³ and Dr. Ashiq Hussain Qureshi⁴**¹M.D.S; Registrar in Department of Pedodontics and Preventive Dentistry Govt Dental College and Hospital Srinagar.²M.D.S. Professor and H.O.D –Department of Pedodontics and Preventive Dentistry Govt Dental College Srinagar India.³Lecturer in Department of Pedodontics and Preventive Dentistry Govt Dental College and Hospital Srinagar.⁴Tutor Department of Pedodontics and Preventive Dentistry Govt Dental College and Hospital Srinagar.***Corresponding Author: Dr. Mohamad Arshid Khanday**

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ABSTRACT

Background/Purpose: To assess how the current COVID-19 pandemic influenced peoples' utilization of emergency dental services in Kashmir, India. **Methods:** The patients seeking emergency dental services before or at the beginning of the COVID-19 epidemic were retrieved. A retrospective analysis was conducted so as to retrieve patients seeking emergency dental services in govt dental college and hospital. The test period of the COVID-19 pandemic was between April 2021-December-2021. The control period was pre-COVID-19 pandemic between April-2019-December-2020 when there was no policy factors or personal considerations about the pandemic. **Results:** There were 86547 patients involved in the present study. Of these 26297 visited during the COVID- period and 60250 during the Pre-COVID period. 30.4% fewer patients visited the hospital at the beginning of the covid -19 compared to the same time period before covid 19 (26297 vs 60250). **Conclusion:** Within the limitation of this study, the COVID-19 epidemic had a strong influence on the utilization of emergency dental services.

INTRODUCTION

Since the outbreak of coronavirus disease 2019 (COVID-19) in December 2019, the epidemic has rapidly spread across China and many other countries. The numbers of diagnosed cases, suspected cases and deaths have continued to rise, and the general population is susceptible. The common transmission routes of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) include direct transmission (coughing, sneezing and inhalation of respiratory secretion droplets) and contact transmission (contact with oral, nasal and eye mucous membranes).^[1] The pathogenic microorganisms could be transmitted in dental settings through the inhalation of airborne microorganisms that can remain suspended in the air for long periods; contact with nasal or oral mucosa and the droplets and aerosols containing the microorganisms generated by an infected individual, and propelled a short distance by talking or while performing an oral examination without a mask; and indirect contact with contaminated instruments and/or surfaces in the examination room environment.^[2]

Nevertheless, dentistry has been considered an essential service during the pandemic, but its impact on the profession and patients has not been evaluated yet. The

first infection wave was followed by so far two others with higher infection numbers. Even though vaccines became available in January 2021, the population remains in a state of uncertainty because of several new COVID-19 variants. This uncertainty in the development of the pandemic calls for a detailed analysis of demand for as well as specifics of dental treatment during the first infection wave in order to predict and plan dental care in the future.^[3]

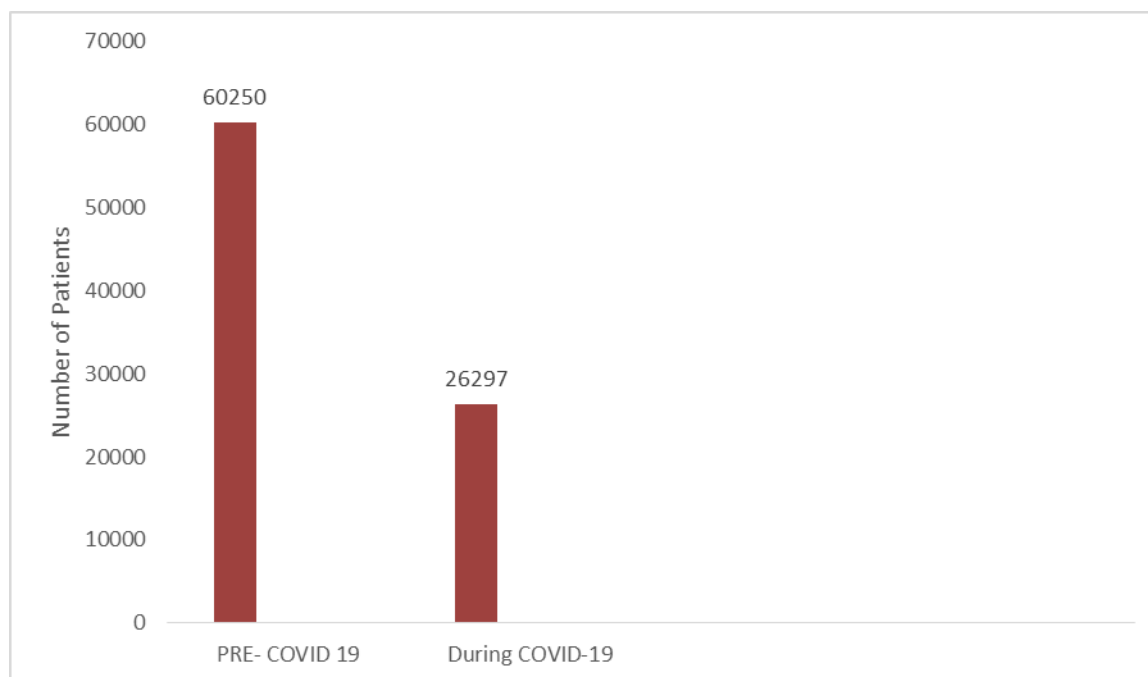
Since late January 2020, the health authorities recommended that people go to crowded places as little as possible to avoid cross-infection. On the other hand, people's fear of COVID-19, because of its novel and rapid transmission, make them reluctant to go to public places including medical and dental hospitals. The literature shows that many dental procedures produce aerosols and droplets that are contaminated with bacteria, viruses, and blood, and have the potential to spread infections to dental personnel and other people in the dental office. The health authorities ordered the dental institutions to suspend general non-emergency dental treatment while providing emergency dental services only. Policy factors and personal considerations alike deterred patients from seeking dental care except in an

emergency. Therefore, a critical challenge is to determine how dental emergency institutions should respond to utilization changes in the general population created by the COVID-19 epidemic. In this study, we aimed to assess how the current COVID-19 epidemic influenced peoples' utilization patterns of emergency dental services in Kashmir.^[4,5]

RESULTS

Data was obtained from the patient records from the registration office, following the ethics committee

approval, for the periods between April 2019–December 2019 and April 2020–December 2020. There were 86547 patients involved in the present study. Of these 26297 visited during the COVID- period and 60250 during the Pre-COVID period. 30.4% fewer patients visited the hospital at the beginning of the covid -19 compared to the same time period before covid 19 (26297 vs 60250). A significant reduction was found in b total visits during the pandemic period.



Histogram showing the distribution of patients who utilized emergency dental service before and at the beginning months of the COVID-19 epidemic.

DISCUSSION

This study applies a descriptive analysis to dental data in the special period and presents salient and meaningful findings of emergency dental visits. We observed significant utilization reductions in emergency dental services at the beginning of the COVID-19 epidemic. The results strongly suggest that COVID-19 significantly influenced people's dental care-seeking behavior. During the pandemic of COVID-19, Dental diseases cannot be diagnosed and treated in time as usual, because of not only the lockdown but also the fear of the high risk of infection of SARS-CoV-2, which transmitted through droplets and aerosols when using some dental instruments such as high-speed turbines. During the first ten months of the pandemic, a drop in patients was observed. A similar decrease in patients was observed in several countries.^[6] Fear of contracting COVID-19 at the dentist as well as recommendations to suspend elective dental care by regulatory institutions during the first lockdown have been reported as reasons. In the United States, a similar decrease in routine visits was observed; however, it was accompanied by an increase in tooth extractions, which has been attributed to loss of

insurance due to increasing unemployment. As a consequence, it may be assumed that the pandemic could have long-term effects on the prevention and progression of oral diseases. This is underlined by the fact that only patients with acute pain remained constant, of which almost all received urgent interventions. Less acute but nevertheless existing dental problems were neglected, which was mainly noticed by a reduction in restorative, endodontic, as well as surgical interventions during the first lockdown. This change could have impaired people's oral health within the respective time period and emphasizes the importance of a working oral health care system during a pandemic. It even has been reported that urgent interventions could not be administered because of limited access to dental practices.^[7]

The lack of sufficient basic PPE was the most common reason for closures of dental practices. Therefore, the provision and storage of PPE could help to avoid such closings in order to guarantee dental care during acute infection waves. Additionally, during the first lockdown, testing infrastructure was limited, and upon suspected COVID-19 infection, patients were required to be treated

as such. This access limitation is especially true for rural areas, private dental practices, or upon the emergence of new diseases.^[8]

The shift to emergency telephone advice may have led to an increased availability of dentists for patients requiring urgent care. Patient's with pain and infections may now find it easier to get in touch with a dentist and receive telephone advice or an antibiotic prescription if required without the need to attend the hospital. Dentists may now also have a lower threshold for antibiotic prescriptions due to the new non-face-to-face measures in place and in an attempt to reduce the pressures on secondary and tertiary care during these unprecedented circumstances. However, patients with localised abscesses may be avoiding seeking hospital treatment until symptoms become more severe, this is supported by the increase in proportion of patients presenting with severe infections requiring admission during the COVID-19 outbreak. This may mean that those patients who had previously attended and received simple incision, drainage, and antimicrobials are hesitant to seek help in the first instance. These patients may now be presenting later with severe infections requiring more invasive intervention involving theatre time, anaesthetists, and a hospital bed, thus placing more pressure on an already overstretched service.^[9,10]

Although most of the public attention is focusing on the direct causes and control measures of COVID-19, possible health consequences resulting from people's fears of it should not be overlooked. Understanding the presents situation is helpful in terms of predicting future dental needs. Based on the results of this study, we have reasons to speculate that people's requirements for dental services might grow explosively in the post-COVID-19 period.^[11] The strengths of administrative departments of the government are suggested to be coordinated to implement comprehensive prevention and control measures in future dental care. However, there should be further studies about the real state of long-term dental services influenced by the COVID-19 epidemic owing to the present limited data collected.^[12]

COVID-19 has led to closure and reduced hours of dental practices except for emergency and urgent services, limiting routine care and prevention. Dental care includes aerosol-generating procedures that can increase viral transmission. As a result, access to dental care substantially decreased. The COVID-19 pandemic presents an opportunity for the dental profession to shift from an approach focused on surgical intervention to one emphasizing prevention. Embracing nonsurgical, nonaerosolizing caries prevention and management will be critical in this endeavor. The profession has always supported community water fluoridation, and dental hygienists are considered prevention experts. Guidelines have been developed to shift the dental care paradigm to a more preventive focus. Strategies include reduction in common risk factors such as tobacco and alcohol use,

promotion of a healthy diet low in sugars, community water fluoridation, topical fluorides, and promotion of oral health in community settings.^[13] These oral health messages and interventions should be integrated into medical sites such as primary care and pediatric offices. Prevention and nonsurgical caries management include many options. Evidence-based materials include dental resin sealants, glass ionomers as sealants or as part of atraumatic restorative treatment performed with hand instruments, silver diamine fluoride, sodium fluoride varnish, and other self-applied and professionally applied topical fluorides.^[14,15]

Within the limitation of this study, our results suggest that the COVID-19 epidemic has a strong influence on emergency dental services. The number of emergency dental visitors reduces, the proportion of dental and oral infection increases and those of dental trauma and nonurgency decrease at the beginning of COVID-19 epidemic.

CONCLUSION

Suspension of routine dental care may cause an increased dental treatment requirement of patients during the post-pandemic period. Therefore, concerning a potential post-pandemic increase in treatment demand, meticulous future planning and proper regulation of dental care should be provided for better oral health and children's quality of life. Local health authorities should designate prevention strategies with consultation to dental professionals.

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