## **ODOVTOS** International Journal of Dental Sciences

https://revistas.ucr.ac.cr/index.php/Odontos | ISSN: 2215-3411

## LETTERS TO THE EDITOR

DOI: 10.15517/IJDS.2022.50803

Received: 5-I-2022 Incidence of Dental Caries in Children During the COVID-19 Pandemic

Accepted: 16-II-2022

Published Online: 20-IV-2022

Incidencia de caries dental en niños durante la pandemia de COVID-19

Hilda Lourdes Antonella Ramírez Castellares<sup>1</sup>; Italo Iván Vela Flores<sup>2</sup>; Claudia Sofía Cruz Guillén<sup>3</sup>

 Estudiante, Facultad de Odontología, Universidad Nacional Mayor de San Marcos, Lima, Perú. https://orcid.org/0000-0002-5172-9550
Estudiante, Facultad de Odontología, Universidad Nacional Mayor de San Marcos, Lima, Perú. https://orcid.org/0000-0001-8666-4374
Estudiante, Facultad de Odontología, Universidad Nacional Mayor de San Marcos, Lima, Perú. https://orcid.org/0000-0001-9837-1544

Correspondence to: Hilda Lourdes Antonella Ramírez Castellares - hilda.ramirez2@unmsm.edu.pe

PhD Jessie Reyes-Carmona Editor-in-Chief ODOVTOS-International Journal of Dental Sciences

Due to the high incidence of infections and the measures proposed by the authorities in charge to cope with the current COVID-19 pandemic (1-3), repercussions were identified in terms of oral health, such as an increase in the appearance of caries. This for different reasons (distance from dental consultations, change in diet, increase in cariogenic foods, etc.); therefore, the objective of this letter is to address the incidence of dental caries as a consequence of the context generated by the COVID-19 pandemic.

The confinement established by the different countries as a preventive measure against COVID-19, had as a consequence the distancing of preventive dental care in children (4). If we add to this the high consumption of sugars in the diet that exists today, coupled with poor oral hygiene, favorable environments are created for the increase in the number of children who can develop dental caries.

The restrictions imposed by the pandemic have meant that children are locked up at home most of the time, therefore, they have adapted to a sedentary lifestyle and their diet has been altered (either due to anxiety, the desire junk food, time in front of the computer). These are some of the factors that are being related to the increased incidence of dental caries in children (5). It is known that if they are not treated over time they can evolve into larger cavities and lead to a more complicated treatment.

Among the most important risk factors for caries formation in children are the increased consumption of cariogenic diets, poor oral hygiene, dental crowding, and parental education. All of them cause changes in dental structures, starting with white lesions at the enamel level and can lead to more serious lesions (6). Dental caries that is not treated in time can cause discomfort in the teeth, malnutrition due to reduced food consumption due to pain, affect self-esteem due to physical appearance and non-acceptance among peers, to possible cognitive impairment and have sleep disorders (7).

All these factors were already present before the confinement due to the pandemic caused by COVID-19; however, they have been reinforced given the measures, which is why studies tried to prove whether being confined at home increased the incidence of dental caries, resulting in children brushing their teeth daily; however, they did not floss after each meal and most do not floss (only 12% of the children surveyed used it), it was also proven that the increase in cariogenic meals was between 4 to 5 per day between meals, which, added to the aforementioned risk factors, produces an increased risk of suffering from caries (1).

What is complicated with dental caries is that, due to its subclinical progression, it is not reported by children and in this case the parents are not even aware of it, which increases the possibility that when they go to the dental office a more advanced disease will present (7), either due to painful symptoms, changes in the color of the teeth and inflammation of the gingiva that surrounds the affected pieces. Parents are the ones who should try to prevent and be aware of changes in the mouth of infants, however, the education of parents and the economic level of each family are recurrent factors in the development of this disease in children (1,8) Stress and psychological tension also negatively influenced the oral health of infants, as well as the rest of their family (3).

Although the factors associated with the development of dental caries in children are known, these, added to the situations to which families were exposed during the confinement caused by the COVID-19 pandemic, increased the incidence of dental caries in infants during the last two years, in addition to other manifestations such as injuries, oral conditions and respiratory problems in general. That is why the role of the dentist in this slow return to oral health consultations and centers is essential because they are trained to educate, promote oral health and prevent dental caries in children and in general. As well as encouraging parents and children to improve their oral hygiene measures, have a healthy lifestyle and attend dental visits every so often.

## REFERENCES

 Sotomayor Ortellado Rossana, Matiauda Otaño Alba, Ferreira Cabañas Arnaldo, Canese Krivoshein Andres. Diet, oral hygiene and risk of dental caries in school children from Concepcion, during confinement by COVID-19. Pediatr. (Asuncion) [Internet]. 2021 Apr [cited 2021 Nov 20]; 48 (1): 65-72. Available from:http://scielo.iics.una.py/ scielo.php?script=sci\_arttext&pid=S1683-98032021000100065&lng=en.https://doi. org/10.31698/ped.48012021011.

- Alzahrani S.B., Alrusayes A.A., Alfraih Y.K., Aldossary M.S. Characteristics of pediatric dental emergencies during the COVID-19 pandemic in Riyadh City, Saudi Arabia. Eur J Paediatr Dent. 2021, 22 (2): 95-97. doi: 10.23804/ejpd.2021.22.02.2.
- Pietrobelli A., Pecoraro L., Ferruzzi A., Heo M., Faith M., Zoller T., et al. Effects of COVID-19 Lockdown on Lifestyle Behaviors in Children with Obesity Living in Verona, Italy: A Longitudinal Study. Obes Silver Spring Md. 2020 Aug; 28 (8): 1382-5.
- Ortellado R.S., Otaño A.M., Cabins A.F., Krivoshein A.C. Diet, oral hygiene and risk of dental caries in school children from Concepcion, during confinement by COVID-19. Asuncion Pediatrics. 2021 Apr 17; 48 (1): 65-72.
- 5. Jayam C., Babu T.A. Dental Caries in Children During COVID-19 Pandemic Are

We Doing Enough? Indian Pediatr. 2021 Oct 15; 58 (10): 999. doi: 10.1007/s13312-021-2344-x

- Hidalgo Gato Fuentes Iliana, Duke of Estrada, Pérez Quiñones Alberto. Tooth decay. Some of the factors related to its formation in children. Cuba.[Internet] 2008. Available at:https://www.redalyc.org/ pdf/3786/378661981004.pdf
- Kim K., Han K., Yang S. Association between overweight, obesity and incidence of advanced dental caries in South Korean adults: A 10-year nationwide population-based observational study. PLOS ONE. 2020 Feb 27; 15 (2): e0229572.
- Sowmya K.R., Puranik M.P., Aparna K.S. Association between mother's behaviour, oral health literacy and children's oral health outcomes: A cross-sectional study. Indian J Dent Res. 2021 Jan 3; 32 (2): 147.



Attribution (BY-NC) - (BY) You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggest the licensor endorses you or your use. (NC) You may not use the material for commercial purposes.