

Oral Hygiene Care in Children with Obese and Diabetes during Covid-19 Times: A Mini-Review

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Abstract

This work presents a mini review of the literature on oral hygiene care for obese and diabetic children, with emphasis on the Covid 19 pandemic time. Obese and diabetic children are at a higher risk for developing oral complications of COVID-19, particularly in certain therapies, but there is a lack of information about this subject.

Keywords: Oral Health; Diabetes Mellitus; Obesity; Coronavirus Infections; Child

The incidence of overweight and obesity among children has increased dramatically in recent decades. Children who are obese are at a significantly elevated risk for adverse health outcomes including both medical and psychological problems. The most common medical co-morbidities associated with obesity include metabolic risk factors for T2D including high blood pressure, high cholesterol, impaired glucose tolerance, and metabolic syndrome. Orthopedic problems, sleep apnea, asthma, fatty liver disease and dental problems are also common comorbidities of obese children and adolescents [1,2].

COVID-19 epidemic is caused by an influenza-like virus strain (SARS-CoV-2). It is known that malnutrition (both under- and over-nutrition) is linked to a worse prognosis of the viral infection. Obesity and diabetes lead to a higher mortality as well as a more prolonged duration of illness even if the subjects were without other chronic conditions that increase the risk of influenza-related complications [3,4].

The COVID-19 epidemiological and clinical characteristics are still being collated but children's symptoms seem to be milder than those that adults experience. It is unknown whether certain groups, for example children with comorbidities, might be at a higher risk of more severe illness. Emerging data on disease spread in children, affected by COVID-19, have not been presented in detail [5].

Due to indirect complex effect, intensified COVID-19 therapies and multi-drug treatment, it is believed that some oral conditions could be aggravated by COVID-19 disease, particularly those with autoimmune aetiology, linked to compromised immune system or long-term pharmacotherapy [6]. Oral symptoms are prominent before fever and cough occur. Dental professionals may play an important role in early identification and diagnosis of patients with COVID-19 [7].

There is a lack of reliable data about the relationship between SARS-CoV-2 and oral diseases, but it could be easy to imagine that a vast proportion of COVID-19 symptomatic and intensely treated patients must develop some sort of oral problems and pathological. Some of immune-related long-term oral medicine conditions (pemphigus, lichen planus, pemphigoid) may potentially exacerbate in SARS-CoV-2-positive patients who were advised to discontinue such therapy. On the other hand, in theory, as some patients with oral conditions and other co-existing comorbidities are already on specific anti-inflammatory medications (Sjogren's syndrome) due to eg. rheumatoid arthritis, they might benefit from these drugs, protecting them against severe COVID-19 complications [8].

Many bacteria which cohabit the oral cavity - especially the biofilm on the back of the tongue and the periodontopathogenic biofilm can lead to even worse injuries and with outcomes gloomy clinicians. There is strong scientific evidence that aspiration pneumonia has its etiology in oral biofilms that colonize ecosystems on the dorsum of the tongue, and also on the periodontal tissues of the posterior teeth of the oral cavity, as bacterial pneumonia is the result aspiration of the oropharynx microbiota into the lower respiratory tract when poor hygiene or even failure of the natural defense mechanisms [9].

During the epidemic period of corona virus disease, appropriate oral health management and disease prevention of children is very important for children's oral and general health. In order to prevent the occurrence of cross-infection and epidemic spreading of COVID-19 during dental practice, the recommendations to parents include: not only training children to maintain hand hygiene at home, exercise appropriately, strengthen physical resistance, but also helping children develop good oral and diet habit such as effective brushing and flossing to avoid oral diseases and emergency. If non-emergency oral situation occur, parents could assist their child to take home based care such as rinsing to relieve the symptoms [10].

The global pandemic of COVID-19 (the disease) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It is becoming clear that several factors put people living with obesity at greater risk of the disease. Of course, obesity prevalence is higher in older adults compared to the young, and its complications, such as hypertension, diabetes and cardiovascular disease, increase with increasing obesity severity and duration. It is clear from this evidence that those with obesity, and particularly its complications, such as diabetes and hypertension, may be more liable to develop a more serious illness, requiring hospital admission [11].

Oral health status must be considered in the care of children with Obesity (OB) and Diabetes Mellitus (DM). The health of these patients' mouths may have significant effects on their overall health and evolution of their disease. Maintaining oral health will prevent oral chronic diseases and ameliorate the consequences of chronic inflammatory processes [12].

Full mouth disinfection recommendation: hygiene of the back of the tongue, correct and routine use of dental floss, toothbrushing with a soft, White bristle brush (to see if bleeding occurs) with fluoride containing toothpaste or therapeutic agentes (except triclosan), use of mouthwashes (good inactivation capacity of Covid-19 for hydrogen peroxide 10v) and disinfection of brushes and lingual sanitizers [13,14].

Conclusion

There is a lack of information about the oral manifestations of Covid-19. Obese and diabetic children are at greater risk for oral and general heath impairments, particularly in this pandemic. The correct oral hygiene is a very importante measure.

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