



## Herpes and Its Implications in Children Treated at Dental Teaching Clinics: An Expanding Reality?

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## Abstract

This opinion piece is based on experiences during activities at the comprehensive children's clinics of the UFPE Dentistry Course between 2022 and 2025. With approximately 832 children up to 9 years of age receiving care, cases of herpes simplex on the lips and inside the mouth appear to be on the rise. The difficulty lies in controlling the recurrence of painful symptoms and the general condition of these children. Possibilities arise here that need to be properly proven with studies that provide robust evidence. However, there remains the question of how the immunity of this target audience is doing and the responsibility of the dental surgeon in the face of this painful, uncomfortable condition, which can result in greater complications for the quality of life of this target audience in certain associated contexts. And, thus, enable strategies in this context.

**Keywords:** Herpes simplex; Comprehensive health care; Pediatric dentistry

## Opinion Article

Herpesviruses, members of the Herpesviridae family, are double-stranded DNA viruses with a distinct four-layered structure: a DNA core, an icosahedral capsid, a tegument, and a lipid bilayer envelope with glycoproteins. Among the more than 200 herpesvirus species, eight affect humans, including herpes simplex virus (HSV) 1 or 2 and varicella-zoster (VZV), which leads to chickenpox as the initial infection and subsequently to herpes zoster [1]. These viruses are capable of infecting a wide range of cell types, but they typically establish latent infections in specific tissues or cells, which can reactivate under certain conditions, such as stress, fever, trauma, or immune system changes [1,2]. HSV-1 is highly infectious, with most individuals

being exposed to the virus at some point in their lives, leading to lifelong latency. It is transmitted by direct contact with lesions or bodily fluids like saliva or genital secretions. Viral shedding rates are higher in immunocompromised individuals and during the prodromal stages of infection [2,3]. Oral herpes virus is a very common and often debilitating infectious disease for patients, affecting oral health and having important psychological implications. It manifests as primary herpetic gingivostomatitis (PHGS) in 13-30% of cases, with painful blisters (vesicles) in the mouth, lips, gums, fever, irritability, excessive salivation, difficulty eating or drinking, and is common between the ages of 1 and 5. In newborns, the signs are more severe, such as convulsions, breathing difficulties, jaundice and lethargy; requiring immediate medical attention and occasionally requiring

hospitalization [2-4]. This opinion piece is justified from the observation of a growing number of children treated at a dental teaching clinic in the city of Recife, in north-eastern Brazil, presenting signs and symptoms related to herpes simplex, with a confirmed diagnosis. This was particularly relevant between 2023 and 2025, associated with rapidly progressing debilitating conditions and the need for hospital care. The group of individuals comprised children up to nine years of age, with the condition observed in both preschool-aged children ( $\leq 5$  years) and school-aged children (6–9 years). In addition to signs and symptoms often associated with these viruses, acute abscesses and cellulitis were observed, with simultaneous involvement of the upper airways. Surveys have been conducted in search of scientific evidence that can map these conditions and lead to increased immunity in these children and a better quality of life.

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