

Editorial

Cerebral Palsy Oral Health: Impact of Drooling and Dental Caries

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Cerebral Palsy (CP) is defined as a group of disorders of development of movement and posture, causing activity limitations that are attributable to non progressive disturbances, which have occurred in the developing foetal or infant brain [1]. CP is a major severe childhood disability and its prevalence is increasing, particularly among premature low birth weight newborns [2].

CP causes structural changes in the oro-facial region and para-functional oral habits associated with neuromuscular deficits giving rise to an array of dental disorders ranging from dental caries and periodontal diseases, malocclusion, drooling, bruxism to developmental enamel deficits [3-9].

Excessive salivation and drooling can be a normal occurrence in the first 6-18 months of life until oral-motor function is developed. It is considered abnormal for a child older than 4 years to exhibit persistent drooling and this problem is most commonly seen in CP or other conditions with severe neurological impairment.

Drooling may be referred to as anterior when the saliva is spilled from the mouth that is clearly visible and posterior where saliva is spilled into the pharynx possibly creating a risk of aspiration [10]. The problem is not normally overproduction but inefficient voluntary swallowing of saliva. In this group, there may be a lack of appreciation of external salivary loss, intra-oral sensory dysfunction, intra-oral motor impairment or a combination of these factors. Tahmassebi et.al (2003) concluded that drooling in CP children is not due to hypersalivation but rather due to swallowing defect [11]. Other contributing factors to drooling include malalignment of teeth and the lack of control of the muscles within the mouth. It can also be made worse by a lack of head control, poor posture and lack of sensation around the mouth, impaired concentration or an obstruction within the nasal cavity [2]. Dental caries is an oral health burden in individuals with CP, not only in primary but also in permanent dentition, with higher percentages of decayed and missing teeth. Children with CP can present a reduced unstimulated salivary flow rate, pH and buffer capacity, which may compromise the protective function of saliva, resulting in increased risk of oral disease [12]. Dental caries in individuals with CP could also be related to intellectual disability, oro-motor dysfunction, the regular use of surgery, anticonvulsant drugs, shorter mastication duration time, biting reflex and worse quality of life [13-18]. The mandibular

anterior teeth are less affected by dental caries than the maxillary anterior teeth. This could be explained by tongue movement and by the fact that a greater salivary film velocity occurs lingual to the mandibular incisors [12].

Hedge et.al (2008) reported that drooling may not predispose the individual to dental caries [19]. Also, it was found by Diniz MB et.al (2015) that CP classification has no influence on caries experience in these individuals [12]. Guare and Campioni (2003) reported that children with CP had greater prevalence of dental caries in the primary dentition than normal children [6]. On the contrary, one study by Du Ry et.al (2010) showed that children with and without CP had similar caries experience [9]. The caries indices in primary ad permanent dentition increase markedly with age in patients with CP [20].

Patients with CP present a reduced self-cleansing function of the oral cavity; due to the account of drooling and abnormal movements of tongue and facial muscles in addition, their caregivers may have difficulties in complying with an appropriate oral hygiene. Kumar and Sharma associated medical diagnosis, IQ level, parent level of education and economic status as elements that apparently contributed to impairment in periodontal health [21].

There is a paucity of studies concerning oral health status among special health groups like CP, esp. in India. The oral hygiene of these individuals affects their dietary intake, gradually worsening their quality of life. This poses a dire need to not only create awareness, but also provide evidence base on education of parents regarding positioning during feeding, use of external aids (if required), regular visits to a dental clinic, and intervention strategies to manage problems of drooling to improve the health status of individuals with CP.

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